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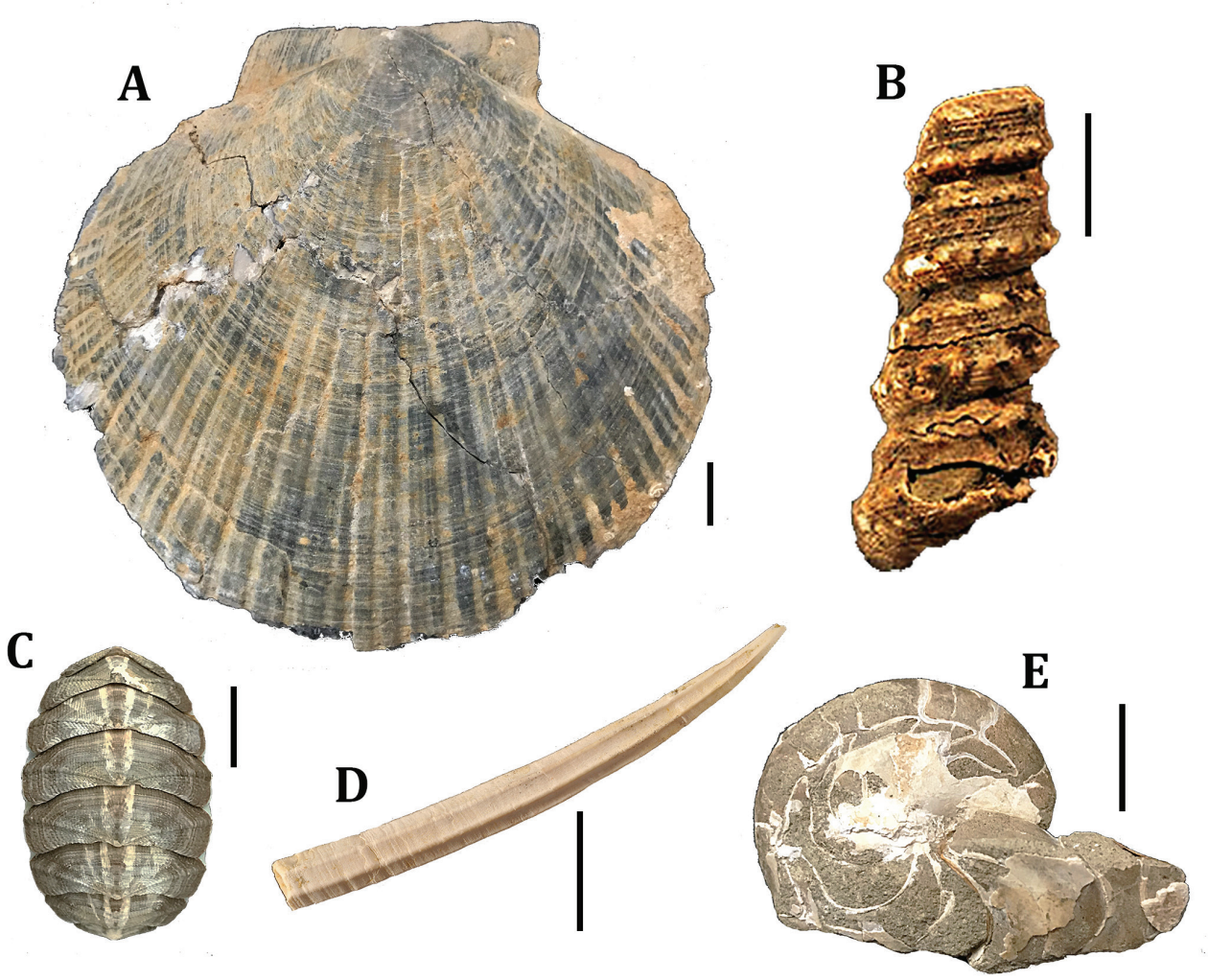

LINDSEY T. GROVES & RICHARD L. SQUIRES (2021). Checklist of California Paleogene–Neogene marine Mollusca since Keen and Bentson (1944).

"*Body fossils are obviously amongst the most powerful environmental indicators to be found in sedimentary rocks, and should be observed and identified with care.*"
Andrew P. Miall (1984: p. 41) in Principles of sedimentary basin analysis, Springer-Verlag, New York.

Cover: A representative of each class of Cenozoic California mollusks. **A**) bivalve *Patinopecten healeyi* (Arnold, 1906). **B**) gastropod *Turritella infragranulata* Gabb (1864). **C**) chiton *Mopalia muscosa* (Gould, 1846). **D**) scaphopod *Dentalium neohexagonum* Sharp and Pilsbry *in* Pilsbry and Sharp (1897). **E**) nautiloid *Aturia myrlae* M.A. Hanna (1927). Scale bars=10 mm.

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Checklist of California Paleogene–Neogene marine Mollusca since Keen and Bentson (1944)

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This checklist is a sequel to the one published by A. Myra Keen and Herdis Bentson in 1944 and is an alphabetical listing of California marine Paleogene–Neogene mollusk species or subspecies described and/or figured in the published literature spanning the interval of 1944 through 2020. The original data are given for each species and subspecies of bivalves, gastropods, chitons (polyplacophorans), scaphopods, and cephalopods. Where detected, formation names, ages, taxonomy, systematics, and specimen disposition were corrected. A total of 559 genera and 1,698 species/subspecies were tabulated, with the bivalves and gastropods being the most abundant taxa. Bivalve and gastropod diversity steadily built up during the Paleocene, nearly doubled during the Eocene warm time, declined greatly during the cool time of the Oligocene, rebounded to its highest peak in the Miocene and then declined slightly during the Pliocene. The other classes represented only minor faunal components. Chitons were only reported from the Pliocene, and cephalopods had their highest diversity during the Paleocene and Eocene. Bivalve genera having the highest diversity are: *Glycymeris*, *Macoma*, *Mactromeris*, *Nuculana*, and *Tellina*. Gastropod genera having the highest diversity are *Cancellaria* and *Turritella*. It is very likely that the *Turritella* species/subspecies complex has been significantly overnamed. The high point of research productivity of published reports on California Paleogene-Neogene mollusks was in 1990–1994, and a significant decline occurred in 1995–1996, following the closure of the Menlo Park USGS Paleontology and Stratigraphy facility. An overall decline in productivity has continued, with noticeable upticks in 2003 and in recent years.

Keywords: Bivalves, gastropods, chitons, scaphopods, cephalopods, taxonomy, biodiversity, fossil

DEDICATION

This work is dedicated to Drs. Angeline Myra Keen (1905–1986) (Fig. 1A) and Herdis Bentson (1914–2006) (Fig. 1B), authors of the first "Check list of California Tertiary Marine Mollusca." Much has been written about Myra Keen and her life summarized in a memorial by Ellen Moore (USGS Menlo Park) (1988a). This memorial contains a selected bibliography, as well as a selected biography, about her. However, since very little has been written about Herdis Bentson, her legacy has been obscured. Thanks to her son Dr. Bentson H. McFarland (of Seattle, Washington) and to several online references, we are able to provide her with some long overdue recognition.

Myra Keen

She was a world-renowned American malacologist and molluscan paleontologist, who was born in Colorado Springs, Colorado on May 23, 1905. She attended graduate school at Stanford University (M.S. degree in 1931) and then attended the University of California at Berkeley (Ph.D. in 1934), with a dissertation in psychology. Soon thereafter, she became interested in geology and paleontology and became affiliated with the Geology Department at Stanford, where she taught geology and paleontology courses. Eventually, she also became interested in malacology of the west coast of North America, and several of her graduate students at Stanford University became prominent malacologists and paleontologists including Carole S. Hickman, James H. McLean, Judy T. Smith, and Eugene V. Coan. She passed away at the age of 80 on January 4, 1986 in Santa Rosa, California.

Herdis Bentson

Herdis Bentson was an American invertebrate paleontologist, who later became interested in petroleum geology. She was born October 24, 1914 in Alameda, California to Olaf R. and Agatha E. Bentson immigrants

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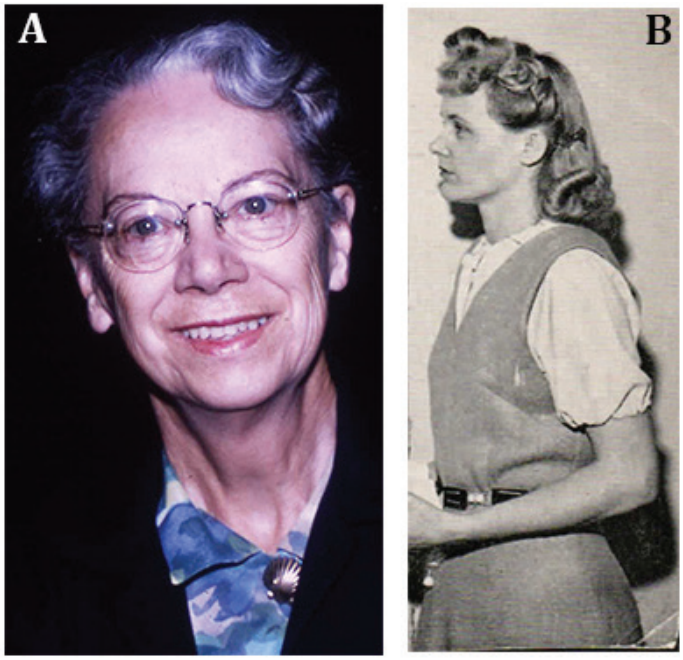

Figure 1. Images of Dr. Angeline Myra Keen (**A**, photo taken and provided by the late Dr. James H. McLean), and Dr. Herdis Bentson (**B**, photo provided by Bentson McFarland).

from Denmark. After attending public schools in Alameda, Herdis entered college, as one of the first in her family to do so, at the University of California, Berkeley where she completed her education (B.A. 1935, M.A. paleontology 1937, Ph.D. paleontology 1941). She was elected an associate member of the American Museum of Natural History in 1936, worked briefly for the Museum of Paleontology at the University of California, Berkeley (UCMP), and was the second woman to earn a PhD in paleontology from UCMP. Her doctoral thesis was on the stratigraphy and fauna of the Capay Eocene of Sacramento Valley, northern California.

Bentson started working in 1940 for the Standard Oil Company of California (now Chevron) then located in San Francisco. She was featured in the April 1945 "Standard Oiler" company magazine, which included a photograph of her giving a presentation summarizing her thesis. She became an executive with Standard Oil, where she focused on petroleum exploration and retired in 1974, with the title of "lead-compilation" geologist. While at UCMP and at Standard Oil, Herdis described four species of fossil gastropods of the genus *Exilia* and six species of fossil corals. Five species of fossils were named in her honor: three gastropods; a scaphopod; and a radiolarian (see below). As a tribute to her fossil collecting prowess Miller and Downs (1950: p. 3) noted, "In June of 1938 Miss Herdis Bentson found the only nautiloid known from the Eocene Capay shale of California," a specimen they referred to as *Eutrephoceras* sp. (hypotype UCMP 11412). Herdis married William H. McFarland in 1948 and they had one child, son Bentson H. McFarland. In retirement, Bentson was active in conservation organizations in California, maintained contact with numerous relatives in Denmark as well as in the United States, and compiled a history focusing on her family's migration to and their experiences in the Western Hemisphere. She passed away at the age of 92 on September 8, 2006.

BIBLIOGRAPHY OF HERDIS BENTSON

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TAXA DESCRIBED BY HERDIS BENTSON

Gastropoda

Exilia clarki Bentson, 1940:215–216, pl. 2, figs. 2, 3, 8, 12, 15, 17, 19, 20. **Type Locality:** CASG 183, Cowlitz Fm., Eocene, west bank Cowlitz River, Lewis Co., Washington. **Type Material:** Holotype CAS 326 (pl. 2, figs. 2, 3), paratype CAS 326-A [=CASG 70883] (pl. 2, fig. 12), locality CAS 183; paratype UCMP 12137 (pl. 2, figs. 19, 20), locality UCMP 7161; paratype UCMP 12141 (pl. 2, figs. 8, 15, 17), locality UCMP 7161.

Exilia llajasensis Bentson, 1940:212, pl. 1, fig. 28, pl. 2, fig. 16. **Type Locality:** UCMP A3042, Llajas Fm., Eocene, Simi Valley, Ventura Co., California (as Los Angeles Co., California in UCMP online database). **Type Material:** Holotype UCMP 12144 (pl. 2, fig. 16); paratype UCMP 12140 (pl. 1, fig. 28), locality UCMP 3296 [as Aliso Canyon (=Devil Canyon), Los Angeles Co., California UCMP in online database].

Exilia potreroensis Bentson, 1940:210–211, pl. 1, fig. 21. **Type Locality:** UCMP A1349, Domengine Fm., Eocene, Potrero Hills, Solano Co., California. **Type Material:** Holotype UCMP 11837 (pl. 1, fig. 21).

Exilia simiensis Bentson, 1940:211–212, pl. 2, figs. 6, 7, 22. **Type Locality:** UCMP 3296, Llajas Fm., Eocene, Simi Valley, Ventura Co. (as Aliso Canyon [=Devil Canyon], as Los Angeles Co., California in UCMP online database). **Type Material:** Holotype UCMP 12139 (pl. 2, figs. 6, 7); unfigured paratype UCMP 12484, locality UCMP A3041; paratype UCMP 12485 (pl. 2, fig. 22), locality UCMP A3041 (as Los Angeles Co., California in UCMP online database).

Cnidaria

Caryophillia*? *capayensis Bentson, 1943:291–292, pl. 50. figs. 4, 8. **Type Locality:** UCMP A1313, Capay Fm., Eocene, south bank of Smith Canyon, west of Tancred Station (now abandoned) in Capay Valley, Yolo Co., California. **Type Material:** Holotype UCMP 30442 (pl. 50, figs. 4, 8).

Turbonolia capayensis Bentson, 1943:296, pl. 51, fig. 4. **Type Locality:** UCMP A1325, Capay Fm., Eocene, from fossiliferous boulders stratigraphically above locality UCMP A1313, south bank of Smith Canyon west of Tancred Station (now abandoned) in Capay Valley, Yolo Co., California. **Type Material:** Holotype UCMP 30457 (pl. 51, fig. 4).

Flabellum clarki Bentson, 1943:291, pl. 51, figs. 12, 15. **Type Locality:** UCMP A1800, Capay Fm, Eocene, in north-south canyon in foothills north of Putah Creek west-northwest of Winters, Yolo Co., California. **Type Material:** Holotype UCMP 30441 (pl. 51, figs. 12, 15.)

Trochocyathus* (*Aplocyathus*) *durhami Bentson 1943:293, pl. 51, figs. 1–3, 6, 7. **Type Locality:** UCMP A1800 [=localities UCMP A3072 and A3359], Capay Formation, Eocene, north of Putah Creek west-northwest of Winters, just above stream bottom, Yolo Co., California. **Type Material:** Holotype UCMP 30450 (pl. 51, figs. 2, 6, 7); paratype UCMP 30451 (pl. 51, fig. 1), locality UCMP A3072; paratype UCMP 30452 (pl. 51, fig. 3), locality UCMP A3359.

Trochocyathus nomlandi Bentson, 1943:293, pl. 50, figs. 2, 3, 6, 7, 10, 11. **Type Locality:** UCMP A1800 [=localities UCMP A1315 and A3359], Capay Fm., Eocene, in north-south canyon in foothills of Putah Creek west-northwest of Winters, Yolo Co., California. **Type Material:** Holotype 30477 (pl. 50, figs. 2, 3), paratype UCMP 30448 (pl. 50, figs. 6, 7), locality UCMP A1315; paratype UCMP 30449 (pl. 50, figs. 10, 11), locality UCMP A3359.

Madracis wellsi Bentson, 1943:295–296, pl. 51, fig. 14. **Type Locality:** UCMP A1314, Capay Fm., Eocene, above locality UCMP A1313, south bank of Smith Canyon west of Tancred Station (now abandoned) in Capay Valley, Yolo County, California. **Type Material:** Holotype UCMP 30456 (pl. 51, fig. 14).

SPECIES NAMED AFTER HERDIS BENTSON

Cantharus bentsonae Turner, 1940:518; New name for *Cantharus cowlitzensis* Turner, 1938:79, pl. 16, fig. 22, preoccupied. [Gastropoda]. **Type Locality:** UCMP 7164, Cowlitz Fm., Eocene, Stillwater, Lewis Co., Washington. **Type Material:** Holotype UCMP 33208. **Remarks:** Not *Cantharus* (*Eocantharus*) *cowlitzensis* Clark, 1938b:714–715, pl. 4, figs. 7–10.

Exilia bentsonae Hickman, 1980:61–62, pl. 8, figs. 5–11. [Gastropoda]. **Type Locality:** USGS 15280, Middle member, Keasey Fm., Oligocene, upper Nehalem River Basin, northwestern Oregon. **Type Material:** Holotype USNM 251399 (pl. 8, fig. 7); paratypes, USNM 251400 (pl. 8, fig. 5), USNM 251401 (pl. 8, fig. 6), USNM 251402 (pl. 8, fig. 8), USNM 251403 (pl. 8, fig. 9), USNM 251404 (pl. 8, fig. 10), USNM 251405 (pl. 8, fig. 11); unfigured paratypes USNM 251406a–m.

Gemmula bentsonae Durham, 1944:184, pl. 14, figs. 14, 17. [Gastropoda]. **Type Locality**: UCMP A1802, Quimper Sandstone, lower Oligocene, on beach north of Woodman's Station, Discovery Bay, Jefferson Co., Washington. **Type Material:** Holotype UCMP 35454 (pl. 14, fig. 14); paratypes UCMP35455 (pl. 14, fig. 17), 35456, 35457. **Remarks:** In the genus *Procerapex*, *fide* Hickman (1976a: p. 85).

Tristylospyris* (*Tristylospyris*) *herdisae Campbell and Clark, 1944:34–35, pl. 5, fig. 12. [Radiolaria]. **Type Locality:** UCMP A3465, Miocene, below the top of the Monterey Fm. (Valmonte Diatomite), Miocene, Peck Park Canyon, Palos Verdes Hills, Los Angeles Co., California. **Type Material:** Holotype UCMP 49596.

Cadulus* (*Cadulus*) *mcfarlandae Emerson, 1957:986–987, pl. 126, fig. 4. [Scaphopoda]. **Type Locality:** UCMP A3365, Capay Fm. [="Vacaville Shale"], Eocene, Ualatis Creek, southwest of Dunns Peak, Vaca Valley, Solano Co., California. **Type Material:** Holotype UCMP 37590 (pl. 126, fig. 4); unfigured paratypes UCMP 37591–37594.

INTRODUCTION

Marine mollusks (bivalves, gastropods, chitons, scaphopods, and cephalopods) represent collectively a major component of fossil-invertebrate marine assemblages found in California. Keen and Bentson (1944) compiled a checklist of figured and/or newly described California "Tertiary" marine mollusks, excluding chitons and

cephalopods, described and/or figured from 1853 to June of 1941. Their list included coverage for new species up to June 16, 1943. Their total number apparently included subspecies, "spp.," forms, and varieties, but they did not explicitly make that clear. This checklist serves as the sequel to their compilation and begins with their closing date of June, 1944 and ends, 77 years later, in 2021. Extensive compilations like Keen and Bentson (1944), as well as this one, are not common in the literature, but they are very useful to paleontologists, geologists, evolutionary biologists, and malacologists. The term "checklist" is retained here for the sake of consistency in format, but a more descriptive term, for their work and this current one, might be "annotated catalog." Keen and Bentson (1944) used also the term "Tertiary," "Tertiary" refers to the interval of time ranging from the Paleocene Series through the Pliocene Series. The term is antiquated, and its usage is now discouraged (Gradstein et al. 2012: p. 856). Although no replacement single-word term has been proposed, Paleogene-Neogene is used in place of "Tertiary."

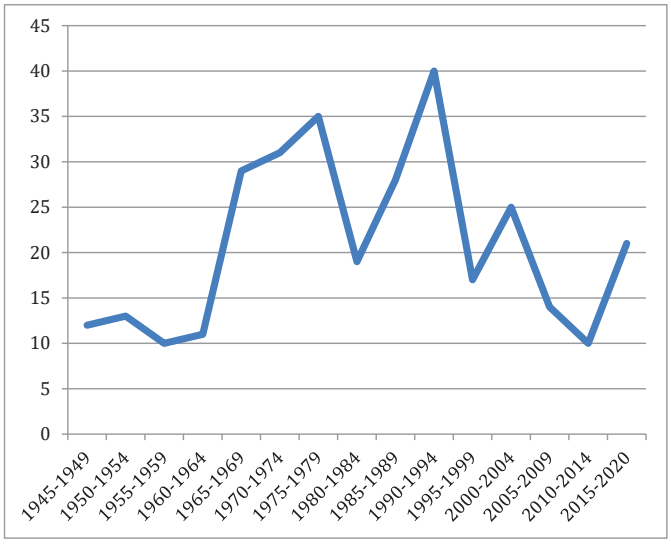
Keen and Bentson (1944) and Keen (1968) summarized the history of paleontological research on west-coast Paleogene-Neogene mollusks and concluded that 1) without economic incentives, paleontological studies tend to languish, and 2) there is a need for training new paleontologists who are competent in stratigraphy and also have a thorough grounding in the often neglected discipline of systematics. These two conclusions are still relevant today.

Addicott (1972a, 1973a), who focused on the trends of west-coast reports dealing only with Neogene (Miocene and Pliocene) mollusks, noted four periods of heightened investigation. There was the initial "discovery" phase (1840–1850), two intermediate phases associated with petroleum exploration, and a phase associated with academic interest in deciphering earth history (1960–1969).

Keen and Bentson (1944: p. 18) were concerned about the proper curation of the very important type specimens found and used by W.M. Gabb, who, starting in the 1860's, was the first paleontologist to collect substantial fossil material of west-coast marine mollusks. Yet, to date, the type specimens are still stored in three separate institutions and many still need proper curation. Ideally, high-resolution-digital images of them should be made available for online-research purposes. Keen and Bentson (1944: p. 18) were prescient also in their concern about the constant looming possibility of tenuous commitment of institutions in regard to the proper care and long-term curation of type specimens. Most institutions are, in fact, prone to fluctuations in budgets, changes in researchers' interests and priorities, and constant redistribution of available space for research. Storage of collections can also be an issue. In the last several decades, certain collections (e.g., USC, CIT, UCLA, and CSUN) have been transferred to LACMIP. The USGS collection of the Paleontology and Stratigraphy Branch, Menlo Park, California was shut down as well, and the collections were transferred to UCMP, after a short period of considerable uncertainty about the fate of these specimens. The impending closure of the Menlo Park facility was announced in 1995–1996, which followed an all-time high point of research productivity in 1990–1994 of 40 published reports of California Paleogene-Neogene mollusks. Collections at Stanford University were transferred to CASG in 1972. Since this high point, there has been pronounced decline in productivity, with an uptick in 2003 and in recent years (Fig. 2).

There have been many improvements and refinements in the way paleontological studies have been conducted since 1944. The concepts of plate tectonics, suspect terranes, greenhouse/icehouse paleoclimates, and chemosynthetic communities, as well as refined paleoenvironmental/sedimentological analyses of assemblages, and recognition of ecomorphic variation in species, have all changed the way fossils are now studied. On-going advancements in DNA-based studies of modern mollusks continue to refine the heirarchy of the classification system of mollusks. The establishment of planktonic foraminifera and calcareous nannofossil biozones, as well as the usage of paleomagnetic stratigraphy, which

Figure 2. Number of California Paleogene–Neogene publications, in five-year increments, from 1944 to mid-2020.



is largely dependent upon fossils for age control, have augmented significantly the biostratigraphic uses of molluscan fossils. Computers, high-resolution digital cameras, and scanning-electron microscopes have helped greatly in systematic studies. Digitization of data is constantly changing the way paleontologic studies are being conducted, whether by Google Earth© images, online-literature access, online-viewing of type specimens, and online viewing of modern-day representatives of invertebrate organisms. Access of online-digital images of primary type specimens of Paleogene-Neogene mollusks, which began a few years ago, will only become better in the future. CASG has already done so for many of their fossil-mollusk types, and UCMP and LACMIP have begun doing so.

Undoubtedly, despite our efforts to verify all of the specimen information listed in this present report, errors will be found. Sincere apologies in advance to all users of this compilation

MATERIALS AND METHODS

This current list is based on an exhaustive review of the published literature showing figured specimens of previously named species and new species described since the work of Keen and Bentson (1944). Publications issued between June of 1941 and the cover date of 1944 were "canvassed only for new species," Non-types only are listed here. Figured and/or undescribed species overlooked or missed by Keen and Bentson (1944), including any previously unlisted unfigured paratypes, were also included. Also included for the first time are California Paleogene–Neogene chitons (polyplacophorans) and cephalopods figured and/or described since June 1941. Known data for each entry include original generic assignment, reference, publication, formation, age, locality information, locality number, and type number(s). Any updates as to formation, age, taxonomic changes, and specimen disposition are included, under "Remarks." Visits to USNM, CASG, UCMP, and SDSNH by the senior author between 1995 and 2005 were made in order to verify data.

T.A. Conrad named numerous new species from California in 1853 through early 1857. He provided descriptions of them, and in some cases, subsequently gave paraphrased descriptions, but no figures were provided. In early 1857 and continuing for a few years, Conrad wrote additional papers and used his original names and included figures (for the first time), but did not include the dates of the original description. As a result, there has been considerable and on-going confusion in the literature regarding the dates when he published the original names. In this present report, the links between his names and their figures are provided for the first time.

The specimens used for the cover of this present paper are also listed here as entries within the checklist, except for the chiton and scaphopod because they are of Pleistocene age or younger.

Explanation of Format

Sample entry: *Acila* (*Truncacila*) *decisa* (Conrad, 1855b)[a]. [*Nucula*][b]. Squires 1988c[c]. NHMLAC CS 398[d]:17, fig. 44. Juncal Fm.?[e], Eocene[f]. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co[g]. CSUN 979 [=LACMIP 16081][h]. Hypotype LACMIP 7724[i]. **Remarks:** [j] [Nuculidae] [k].

a). Genera are listed alphabetically, and the species within each genus are listed also alphabetically, without regard to any alphabetical order of the subgenera. Genus, subgenus (if used), species, subspecies (if cited), and original author preserving the exact formulation used; an asterisk following any word indicates a misspelling which is corrected in the remarks section. In the citation of publications by G D. Hanna, it is useful to note that "his first name is G, just like that, no period. This causes no end of confusion among editors and bibliographers" (Miller 1962: p. 5). Parentheses around an author's name indicates that the species was assigned to another genus in the original description. New species, new subspecies, or n. nom. are indicated with 'n. sp.', 'n. subsp.', or 'n. nom.' following the author and listed in **bold** type. Type specimens from the same locality are mentioned within a single entry for the species. Type specimens not from the same locality are mentioned in successive separate entries. **b**). Original generic and subgeneric assignment for species transferred to another genus. **c**). Cited author and date of publication. There are some cases where there is more than one author for a surname (e.g., E.J. Moore and R.C. Moore), but there will be no reason for any confusion if one uses the year of a publication along with the author's last name, when searching the bibliography for a particular reference. **d**). Abbreviated reference (see 'Publications Abbreviations' section). Complete citations are listed in the 'References Cited' section. **e**). Formation and member (if indicated) cited by the original author. A question mark following a formation entry indicates that the original author was unsure of the correct formational assignment. If a formation is considered incorrect by the authors, an equivalent and/or correct formation name follows in brackets. Subsequent entries for the same species and same formation

by the same author(s), but from a different locality, do not re-list the formation name and age. **f**). The geologic age is as cited by original author. If necessary a corrected age follows the original citation in brackets. Geologic epochs/series are generalized (e.g., Eocene rather than early to middle Eocene). For some species or subspecies, the geologic range has been published inexactly as two epoch/series names, separated with a slash (e.g., Oligocene/Miocene). **g**). The original locality description is given in general terms in order to be in adherence to new regulations per the Paleontological Resources Protection Act (PRPA 2009) regarding the confidentiality of fossil localities on federal lands. In addition, detailed information concerning private land is generalized in order to protect the privacy of land owners. Thus, the locality description consists of brief geographic and/or geologic description, topographic quadrangle (with date if cited), and county. Locality descriptions published by the individual author(s) may differ from descriptions in institutional records. Supplemental data are given, when necessary, in brackets by the authors. **h**). Institutional locality number (when known). Locality numbers listed in brackets may not have been part of the original publication and have been added by the authors. **i**). Type-specimen designation and institutional number (when known). Type numbers listed in brackets may not have been part of the original publication and have been added by the authors. Type specimens include: Holotype; paratype(s); lectotype; paralectotype(s); syntype(s); neotype; neoholotype (an invalid term), and hypotype(s). **j**). Remarks (where necessary). Updates to the taxonomy were not included unless a reliable reference was available. If a species has been transferred to another genus, the most recent transfer (if there is more than one) is so noted in the "Remarks." In the case of *Ficus cooperiana*, for example, it would now read: "In the genus *Priscoficus, fide* Squires (2014a)." If there are any newly figured specimens of this "transferred" species, they are cited under the updated genus name (e.g., under *Priscoficus*). **k**). Family assignments [shown in brackets] are derived from modern literature: bivalves from Coan et al. (2000) and/or Coan and Valentich-Scott (2012); gastropods from Bouchet et al. (2017); chitons from Vendrasco et al. (2012); scaphopods from Steiner and Kabat (2001); nautiloids from Teichert and Moore (1964); and coleoids from Doyle et al. (1994).

Institutional Abbreviations

ABDSP, Anza-Borrego Desert State Park, Borrego Springs, CA; **ANSP**, Academy of Natural Sciences of Drexel University, Philadelphia, PA; **BMNH (= NHMUK)**, The Natural History Museum, London, England; **CASG**, California Academy of Sciences, Geology, San Francisco, CA; **CASIZ**, California Academy of Sciences, Invertebrate Zoology, San Francisco, CA; **CC**, John D. Cooper Center, Santa Ana, CA; **CGS**, California Geological Survey (collections now at UCMP and CASG); **CIT**, California Institute of Technology, Pasadena, CA (collections now at LACMIP); **CSMB,** California State Mining Bureau, Sacramento, CA (collections now at UCMP and CASG); **CSUN,** California State University, Northridge, CA (collections now at LACMIP); **GZG,** Geowissenschaftliches Museum der Universitä Göttingen, Germany; **IGPS,** Institute of Geology and Paleontology, Tohoku University, Sendai, Japan; **IU,** Indiana University, Bloomington, IN; **KU,** University of Kansas, Lawrence, KS; **LACM**, Natural History Museum of Los Angeles County, CA, Malacology Department; **LACMIP,** Natural History Museum of Los Angeles County, CA, Invertebrate Paleontology Department; **LSU,** Louisiana State University, Baton Rouge, LA; **MCZ,** Museum of Comparative Zoology, Harvard University, Cambridge, MA; **MPM**, Milwaukee Public Museum, WI; **NMB,** Naturhistorisches Museum, Basel, Switzerland; **NZGS,** New Zealand Geological Survey, Lower Hutt, NZ; **PRI,** Paleontological Research Institution, Ithaca, NY; **SAMO,** Santa Monica Mountains National Recreation Area, Calabasas, CA; **SBMNH,** Santa Barbara Museum of Natural History, CA; **SCCM,** Santa Cruz City Museum of Natural History, CA; **SDSNH,** San Diego Society of Natural History, San Diego, CA; **SDSU,** California State University, San Diego, CA (collections now at SDSNH); **SHKM,** Saito Ho-on Kai Museum, Sendai, Japan; **SU**, Stanford University, Palo Alto, CA (collections now at CASG, if type designation is unknown, specimens will be designated as SU/CASG); **UC**, University of Chicago, IL; **UCLA,** University of California, Los Angeles (collections now at LACMIP); **UCMP,** University of California, Museum of Paleontology, Berkeley, CA; **UCR,** University of California, Riverside, CA; **UCSB,** University of California, Santa Barbara, CA (type specimens now at SBMNH); **USC,** University of Southern California, Los Angeles, CA (collections now at LACMIP); **USGS,** United States Geological Survey, Menlo Park, CA (collections now at UCMP); **USNM,** National Museum of Natural History, Smithsonian Institution, Washington, DC; **WHC,** West Hills College, Coalinga, CA.

Text Abbreviations

aff., affinity to or closely related to; ***auct.,*** of authors; **cf.,** compared to **Co.,** County; ***fide,*** on the authority of (published statement); **Fm.,** Formation; **Is.,** island; **Ids.,**

islands; **Mtn(s)**., mountain(s); **n. nom.**, new name; **n. sp**., new species; **n, subsp**., new subspecies; **n. var**., new variety; **ph(s).,** photo(s); **PR,** photorevised; **quad.,** quadrangle; **yd(s).,** yard(s).

Literature-Cited Abbreviations

Acta Pala. Polon., Acta Palaeontologica Polonica; **Amer. Conch.,** American Conchologist; **AAPG,** American Association of Petroleum Geologists; **AAPG Bull.,** Bulletin of the American Association of Petroleum Geologists; **AAPG Mem.,** Memoirs of the AAPG; **AAPG Misc. Pub.,** Miscellaneous Publication of the AAPG; **AMN,** American Museum Novitates; **BAIM**, Bulletin of the Auckland Institute and Museum; **BAP,** Bulletins of American Paleontology; **BSCAS,** Bulletin of the Southern California Academy of Sciences; **Bull. BM(NH),** Bulletin of the British Museum of Natural History; **Bull. Mizunami Foss. Mus.**, Bulletin of the Mizunami Fossil Museum; **Bull. SCPS,** Bulletin of the Southern California Paleontological Society; **Calif. Geol.,** California Geology; **CDM Bull.,** California Division of Mines Bulletin; **CDMG Bull.,** California Division of Mines and Geology Bulletin; **CMPUM,** Contributions from the Museum of Paleontology, University of Michigan; **Earth Sci.,** Earth Science; **Geo-Mar. Lett.,** Geo-Marine Letters; **GSA Bull.,** Geological Society of America Bulletin; **GSA Mem.,** Geological Society of America Memoirs; **GSA Sp.Pap.,** Geological Society of America Special Papers; **Handb. Palaoz.,** Handbuch der Paläozoologie (Wenz 1938–1944); **Index Foss. N.A.,** Index Fossils of North America (Shimer and Shrock 1944); **Indo-Pac. Moll.,** Indo-Pacific Mollusca; **Inv. Foss.,** Invertebrate Fossils (Moore, Lalicker, and Fischer 1952); **Inv. Paleo.**, Invertebrate Paleontology (Easton 1960); **Jour. Moll. Studies,** Journal of Molluscan Studies; **Jour. Paleo.,** Journal of Paleontology; **Jour. Res. USGS,** Journal of Research of the United States Geological Survey; **LACM CS,** Los Angeles County Museum, Contributions in Science; **Malac. Rev.,** Malacolgical Review; **MAPS Digest,** Mid-American Paleontology Society Digest; **Min. Info. Serv.,** Mineral Information Service; **MNHN Mém.,** Mémoires du Muséum National d'Histoire Naturelle, Paris; **Mol. Phylo. Evol.,** Molecular Phylogenetics and Evolution; **MWNAN**, Monographs of the Western North American Naturalist; **NPS,** National Park Service; **NHFOC Mem.,** Natural History Foundation of Orange County Memoirs; **NHMLAC CS,** Natural History Museum of Los Angeles County Contributions in Science; **OCF,** Orange County Fossils (Stadum 1973); **OPCAS,** Occasional Papers of the California Academy of Sciences; **Palaeont,** Palaeontology; **Pal. Amer.,** Paleontographica Americana; **Paleo.3,** Palaeogeography, Palaeoclimatology, Palaeoecology; **Pr.CAS,** Proceedings of the California Academy of Sciences; **Pr. USNM,** Proceedings of the United States National Museum; **Rev. Mex. Cien. Geol.,** Revista Mexicana de Ciencias Geológicas; **SBMNH Mem.,** Memoirs of the Santa Barbara Museum of Natural History; **Sci. Rept. Tohoku Univ.,** Science Reports of Tohoku University; **SCMA,** Santa Cruz Museum Association; **SCPS Bull.,** Southern California Paleontological Society Bulletin; **SDSNH Mem.,** San Diego Society of Natural History Memoirs; **SDSNH Occas. Pap.,** San Diego Society of Natural History Occasional Paper; **SEPM,** Society of Economic Paleontologists and Mineralogists (now=Society of Sedimentary Geology); **Treatise Inv. Paleo.,** Treatise of Invertebrate Paleontology; **Tr. Proc. Pal. Soc. Japan,** Transactions and Proceedings of the Paleontological Society of Japan; **Tr. SDSNH,** Transactions of the San Diego Society of Natural History; **TSGP,** Tulane Studies in Geology and Paleontology; **UCPG,** University of California Publications, Geology or Geological Sciences; **USGS Bull.**, United States Geological Survey Bulletin; **USGS OFR,** United States Geological Survey Open-File Report; **USGS PP,** United States Geological Survey Professional Paper; **USGS SIR**, United States Geological Survey Scientific Investigations Report; **WSM Ann. Rept.,** Annual Report of the Western Society of Malacologists.

DISCUSSION

Stratigraphic Considerations

It is important to emphasize that the original stratigraphic information is reported for each species. Some of these stratigraphic names are invalid, however, because they were not formally named according to the rules of the North American Stratigraphic Code (Oriel et al. 1983). The checklist was not intended to serve, however, as a way to update or revise the nomenclature of the formations/members associated with each species. To do so would be beyond the scope of this present work and a daunting task in its own regard. Nevertheless, in a few cases, especially concerning Paleocene/Eocene strata, however, it was imperative to provide some updated information in order to obtain, at the very least, the general age of a given species. Quote marks are used for these invalid stratigraphic names.

Early workers used the term "Martinez" for Paleocene outcrops throughout California, but this broad term can only be used near its type locality area in the vicinity of the town of Martinez, Contra Costa County. The age of the Cerros Shale at UCMP 1817, in the Urruttia Creek area of the San Joaquin Valley, Fresno County, California,

has been inconsistently referred to as Paleocene or Paleocene/Eocene, but the report of Squires (1988b) indicates that the age at this locality is actually early Eocene. The age of the "Meganos Stage" strata in California has been referred to as Paleocene or Eocene, but the report of Squires (1999b), which is the most detailed for the "Meganos Stage" strata, indicates that this "stage" ranges from late Paleocene to early Eocene in age in southern California. More detailed stratigraphic studies of this "stage" are needed elsewhere. The Rose Canyon Shale (a.k.a. Rose Canyon Fm.) and the La Jolla Fm. are imprecise and abandoned stratigraphic terms so will be used in quotation marks. Both terms have the possibility of being synonymous and can also be equivalent, to one or more (see Kennedy and Moore 1971) of the following valid middle Eocene stratigraphic terms: Mount Soledad Fm., Delmar Fm., Torrey Sandstone, Ardath Shale, Scripps Fm., and Friars Fm. (in ascending stratigraphic order). The term "Tejon" (Eocene) has also been misused in a similar fashion but should only be used for the southern Tehachapi Mountains in Kern County.

The upper Oligocene to lower Miocene Vaqueros Formation is an example of a stratigraphic unit that extends far beyond to where it was first described, in Los Vaqueros Valley, Monterey County, central California. This formation has been reported from as far north as Contra Costa County to as far south as Orange county in southern California. The formation was named by Hamlin (1904) on the basis of fossils, which is not in accordance with the rules of stratigraphic nomenclature. In addition, his description of the formation was brief and did not define the boundaries of the formation. Thorup (1943) restricted the definition of the formation by describing its lithologic units. In this present report, the name Vaqueros is used without quote marks, but the validity of mapping the Vaqueros Formation as a continuous stratigraphic unit in a geologically dynamic and complex coastal area, extending from central to southern California, remains open to inquiry.

The Miocene Monterey Fm. is another example of a stratigraphic unit that has been reported at many locales in western California, but its type section, located near the town of Monterey in Monterey County, central California, is unsatisfactory because it cannot be measured or examined in any unbroken sequence (Bramlette 1946). In Los Angeles and Orange counties in southern California, the name "Monterey Formation" has been used in association with various other stratigraphic units and subunits. Additional examples are the, Imperial Fm., Latrania Fm., Latrania Sand member, and Saddleback Valley limestone. These stratigraphic terms have a range in geologic age from the Miocene to Pliocene. There is a need for a revision of all of them, and their names need to be formalized. These informal and/or invalid names are used in the checklist because that is how the original authors listed them. This present checklist is not the forum to even attempt to sort out this stratigraphic confusion.

The southern California Pliocene Fernando Fm. has not been adequately defined, nor has its type section ever been designated (Davis 1998). A few workers have restricted its use to only the Los Angeles basin (Davis 1998, Swanson 2014). To date, no formal replacement name has been proposed, thus in this present report we refer to the "Fernando Fm." in quotation marks. The similar age Pico Fm. (Pliocene) is here restricted to the Ventura basin (Swanson 2014, Swanson and Irvine 2015), including northern Los Angeles County (Squires 2012). Based on detailed stratigraphic studies (Swanson and Irvine 2015) and on cosmogenic 26A/10Be isochron burial dating by Rood et al. (2020), this formation is time transgressive and youngs westwardly from late Pliocene, in the Valencia area in the eastern part of the basin, to early Pleistocene to the west. Groves (1991a, b) reported also that the lower Saugus [=Pico] in the Santa Susana Mountains (Valencia area) is Plio-Pleistocene age. Buczek et al. (2020) reported that the Pico Fm. in the Valencia area might range into the early Pleistocene.

The Careaga Sandstone, which crops out in the Santa Marina area of Santa Barbara County in southern California, has been historically regarded as of late Pliocene age. Based on strontium-isotope data (Buczek et al. 2020) and the "shifting" of the Pliocene-Pleistocene boundary as dictated by the International Commission of Stratigraphy (see a series of online charts initiated by Cohen et al. 2009), the age of the Careaga Sandstone and its rich molluscan content has now been assigned an early Pleistocene age. Such an age would normally exclude any molluscan fauna from being included in this current checklist. However, because this new information was obtained late in the editorial-review process and because the molluscan data was already part of the checklist, it is useful to retain it, because future refinements and interpretation of new techniques in geochemical studies might change the understanding of the dynamic and complex relationships among the factors of time, tectonics, sedimentary environments, and localized shallow-marine water temperatures.

Faunal Observations

The total number of listed molluscan genera is 559,

Table 1. Numerical listing, per geologic stage, of California Paleogene–Neogene mollusk species and subspecies described and/or figured in the literature from 1944 to mid 2020. Taxa identified as "sp." not included in the table below. Abbreviations: **Ch**, chitons; **Sc**, scaphopods; **Bi**, bivalves; **Ga**, gastropods; **Ce**, cephalopods.

Time	Ch	Sc	Bi	Ga	Ce	total per stage
Pliocene	18	0	222	190	0	430
Miocene	0	5	268	258	2	534
Oligocene	0	0	24	15	0	39
Eocene	0	6	198	240	4	448
Paleocene	0	0	84	87	5	176
K/Pg	0	0	5	5	0	10
total per group	18	11	801	795	11	1637

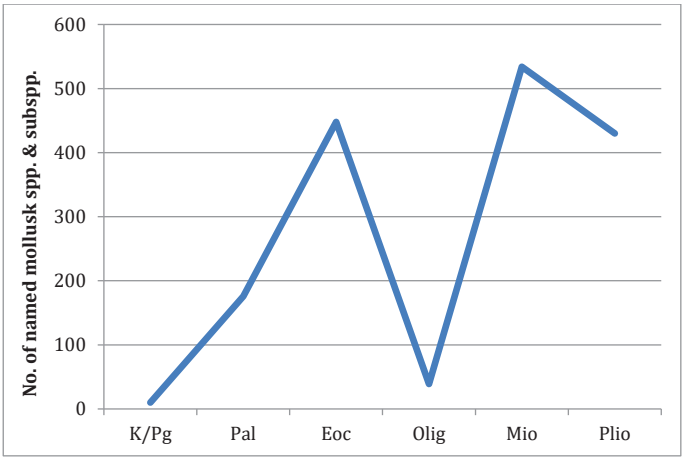


Figure 3. Number of named Paleogene–Neogene mollusk species and subspecies of California in the literature from 1944 to mid-2020. Data tabulated per epoch, starting with the Cretaceous/Paleocene boundary (K/Pg).

and is comprised of 227 bivalves, 310 gastropods, 11 chitons, three scaphopods, and eight cephalopods. The numbers of named species/subspecies per geological stage for these five groups of genera are provided in Table 1. Molluscan species/subspecies diversity in California Paleogene–Neogene strata steadily built up during the Paleocene, nearly doubled in the Eocene, declined greatly in the Oligocene, rebounded to its highest peak in the Miocene, and then declined slightly during the Pliocene (Fig. 3). Keen and Bentson (1944: p. 7) also noticed this Pliocene decline in diversity and attributed it to the reduction in the extensiveness of the marine basins of deposition during the Pliocene.

The most diverse bivalve genera (i.e., those having 20 or more species/subspecies) are listed here, with their number of species/subspecies: *Glycymeris* (20), *Macoma* (27), *Mactromeris* (29), *Nuculana* (25), and *Tellina* (42). Keen and Bentson (1944) reported that in Tertiary strata of California the bivalve genera *Pecten*, *Ostrea*, and *Spisula* each consist of more than 20 species, but these genera based on the updated taxonomy used in the present study, are represented only by the following number of species/subspecies: *Pecten* (3), "*Ostrea*" (5), and *Spisula* (0).

The most diverse gastropod genera (i.e., those having 20 or more species/subspecies) are listed here with their number of species/subspecies: *Cancellaria* (29) and *Turritella* (62). The latter genus has a greater number of species than any other molluscan genus listed in this present study. *Turritella* subspecies, furthermore, make up 60 percent of all the gastropod subspecies and it is very likely that the *Turritella* species/subspecies complex has been overnamed.

There are a few species whose geologic age is referred to here as the "latest Cretaceous-earliest Paleocene." They are predominantly found in the Dip Creek area of Lake Nacimiento, San Luis Obispo County, California. These species, some of which were figured by Saul (1986) and "bridge" the K/Pg boundary, indicate that not all Late Cretaceous mollusk species became extinct at the end of the Cretaceous. This observation is in accord with what Squires (2018d) found in his study of Late Cretaceous gastropods endemic to the northeast Pacific Ocean.

No Paleocene mollusk species, and only a very few Eocene mollusk species, can be documented as ranging into the Miocene. In contrast to the numerous Eocene, Miocene, and Pliocene mollusk species, there are relatively few Oligocene species, especially gastropods, known from California (Fig. 3). There was a profound change in the biodiversity of the shallow-marine mollusks in California at or near the end of the Eocene. This change, which was detected by early workers (e.g., Keen and Bentson 1944: fig. 3) by modern workers (Hickman 2003, Nesbitt 2003, Oleinik and Marincovich 2003, Squires 2003) affected the entire northeast Pacific Ocean, and was the result of a turnover associated with the transition from a warm, subtropical climate to a cooler climate beginning near the end of the Eocene.

CHECKLIST

MOLLUSCA Cuvier, 1795
BIVALVIA Linnaeus, 1758

Acanthocardia (*Schedocardia*) *brewerii* (Gabb, 1864). [*Cardium*]. Givens 1974. UCPG 109:48, 49, pl. 1, fig. 17. Matilija Fm., Eocene. East of confluence of Alamo Creek, Dry Canyon, and Cuyama River Valley, Reyes Peak quad. (1943 ed.), Ventura Co. UCR 4741. Hypotype UCR 4741/4. [Cardiidae].

Acanthocardia brewerii (Gabb, 1864). [*Cardium*]. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, fig. 10. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20779. **Remarks:** In the subgenus *Schedocardia*, *fide* Moore (2003a: p. 3). [Cardiidae].

Acanthocardia (*Schedocardia*) *brewerii* (Gabb, 1864). [*Cardium*]. Squires 1984. NHMLAC CS 350:49, figs. 12a, b. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6583. [Cardiidae].

Acanthocardia (*Schedocardia*) *brewerii* (Gabb, 1864). [*Cardium*]. Squires 1987. NHMLAC CS 388:65, fig. 112. Juncal Fm., Eocene. North side of side canyon to Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 359 [=LACMIP 16101]. Hypotype LACMIP 7529. [Cardiidae].

Acanthocardia (*Schedocardia*) cf. *A. brewerii* (Gabb, 1864). [*Cardium*]. Throckmorton 1988a. USGS OFR 88-59:46, pl. 8, fig. 9 (refigured in Throckmorton 1988b, pl. 1, fig. 6). Tesla Fm., Eocene. From isolated sandstone block (float?), Midway quad., Alameda Co. UCMP D8157. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Cardiidae].

Acanthocardia (*Schedocardia*) *brewerii* (Gabb, 1864). [*Cardium*]. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 21. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 671 [=LACMIP 16076]. Hypotype LACMIP 11485. [Cardiidae].

Acanthocardia (*Shedocardia*)* *brewerii* (Gabb, 1864). [*Cardium*]. Squires 1994b. SEPM Guidebook 74:52, pl. 1, fig. 6. Upper Matilija Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23688. Hypotype LACMIP 11631. **Remarks:** Error for *Schedocardia*. [Cardiidae].

....., pl. 3, fig. 6. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23710. Hypotype LACMIP 11664.

Acanthocardia (*Schedocardia*) *brewerii brewerii* (Gabb, 1864) [*Cardium*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Cardiidae):3, 4, pl. 3, fig. 10. Ardath Shale(?), Eocene. San Diego Co. Holotype (of *Cardium modestum* Conrad, 1855b) USNM 1864. [Cardiidae].

....., pl. 4, fig. 10. [Santa Susana Fm., Paleocene. Simi Valley area, Ventura Co.]. CASG 66545. Hypotype CASG 66545.01.

Acanthocardia (*Schedocardia*) *breweri* (Gabb, 1864). [*Cardium*]. Squires 2008. NHMLAC CS 517:5, fig. 47. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13448. [Cardiidae].

Acanthocardia (*Schedocardia*) *brewerii hartleyensis* (Clark and Woodford, 1927). [*Cardium*]. Moore (2003a). USGS 1228-F [electronic format] (family Cardiidae):4–5, pl. 3, fig. 11. Meganos Fm., Paleocene/Eocene. Byron quad., Contra Costa Co. UCMP 3609. Holotype UCMP 31277. [Cardiidae].

Acanthocardia (*Acanthocardia*) *kirkensis** (Clark, 1918). [*Cardium*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Cardiidae):2, pl. 3, fig. 2 (as "*Cardium*" *kirkensis*). Kirker Tuff, Oligocene. West of Kirker's Creek, Mt. Diablo quad., Contra Costa Co. UCMP 2033. Holotype UCMP 11165. **Remarks:** Error for *kirkerensis*. In the genus *Ciliatocardium*, *fide* Kafanov (2002: p. 6). [Cardiidae].

Acanthocardia (*Acanthocardia*) *reedi* (Loel and Corey, 1932). [*Cardium*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Cardiidae):1, pl. 3, fig. 1. Vaqueros Fm., Oligocene/Miocene. Anderson Creek, La Panza Mtns., San Luis Obispo Co., UCMP A504. Holotype UCMP 31772. **Remarks:** In the genus *Ciliatocardium*, *fide* Kafanov

(2002: p. 9). [Cardiidae].

Acanthocardia (*Agnocardia*) *sorrentoensis* (M.A. Hanna, 1927). [*Cardium*]. Squires 2001:17, fig. 35. Llajas Fm., Eocene. Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 22312. Hypotype LACMIP 12752. [Cardiidae].

Acanthocardia (*Agnocardia*) *sorrentoensis* (M.A. Hanna, 1927). [*Cardium*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Cardiidae):2–3, pl. 4, fig. 5. "Rose Canyon Shale," Eocene. Rose Canyon, San Diego Co. UCMP 3975. Holotype UCMP 31000. [Cardiidae].

Acesta (*Acesta*) *hamlini* (Dall, 1900a). [*Lima*]. Moore 1987. USGS PP 1228-C:C15, pl. 10, figs. 4, 7. "Fernando Fm." (Repetto Fm. in locality description), Pliocene. Third St. tunnel, Los Angeles, Los Angeles Co. USGS 3426. Holotype USNM 495186. [Limidae].

Acesta (*Plicacesta*) *haseltinei* (Dickerson, 1914a). [*Lima*]. Moore 1987. USGS PP 1228-C:C15–C16, pl. 9, fig. 10; pl. 10, fig. 10. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Camulos quad., Ventura Co. SU 61933. Holotype (of *Lima perrini* Waring, 1917) SU/CASG 303 [=CASG 61933.01]. [Limidae].

....., pl. 10, fig. 11. Martinez Fm., Paleocene. South of Stewartville, Mt. Diablo quad., Contra Costa Co. UCMP 1540. Holotype UCMP 11676.

Acesta (*Acesta*) *multiradiata* (Gabb, 1869b). [*Lima*]. Moore 1987. USGS PP 1228-C:C14–C15, pl. 10, fig. 5 (peel). Tejon Fm., Eocene. [Southeast of Lower Lake, Lake Co. USGS 4192. Hypotype (of Stanton 1896, pl. 63, fig. 7). USNM 157826. [Limidae].

....., pl. 10, fig. 8 (refigured from Gabb 1869b, pl. 33, fig. 101). Martinez Fm., Paleocene. Near Lower Lake village, Lake Co. MCZ 1055. Holotype MCZ 15016 [=MCZ 108547], missing, *fide* F. Collier (personal communication, 1996).

Acharax? *dunnensis* (Palmer, 1923). [*Solemya*?]. Moore 1983. USGS PP 1228-A:A31, pl. 4, fig. 22. Capay(?) Fm., Eocene. Near Vacaville, banks of Ulatis Creek, just south of Dunn's Peak, Vaca Valley, Solano Co. UCMP 3573. Holotype UCMP 30690. [Solemyidae].

Acharax johnsoni (Dall, 1891). [*Solemya*]. Moore 1983. USGS PP 1228-A:A31, pl. 4, fig. 23. Rio Dell Fm., Pliocene. Rio Dell side of Eel River, near Scotia-Rio Dell Bridge, Humboldt Co. Hypotype (of Roth 1979, pl. 1, fig. 12) CASG 53043. [Solemyidae].

Acharax aff. *johnsoni* (Dall, 1891). [*Solemya*]. Moore 1983. USGS PP 1228-A:A31, pl. 4, fig. 21 (not fig. 20). "Fernando Fm.," Pliocene. Standard Oil Co. Baldwin 73, Montebello Field, Los Angeles Co. USGS 13864. Hypotype (of Woodring 1938, pl. 5, fig. 14) USNM 496070. [Solemyidae].

Acharax cf. *Ach. johnsoni* (Dall, 1891). [*Solemya*]. Powell et al. 2019b. *PaleoBios* 36:3–4, fig. 4. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland Hills, Alameda Co. UCMP IP13003. Hypotype UCMP no. 410421. [Solemyidae].

Acila castrensis (Hinds, 1843). [*Nucula*]. Woodring et al. 1940 [1941]. USGS PP 195:89, pl. 11, figs. 11–17. San Joaquin Fm. (*Acila* zone), Pliocene. North Dome, Kettleman Hills, Kings Co. USGS 12353. Hypotypes (7) USNM 495718. **Remarks:** In the subgenus *Truncacila*, *fide* Coan et al. (2000: p. 75). [Nuculidae].

Acila castrensis (Hinds, 1843). [*Nucula*]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2): 174, fig. 64-9. [Pico Fm.], Pliocene. Elsmere Canyon, Los Angeles Co. CASG 710. Hypotype CASG 5727. **Remarks:** In the subgenus *Truncacila*, *fide* Coan et al. (2000: p. 75). [Nuculidae].

Acila castrensis (Hinds, 1843). [*Nucula*]. Cummings et al. 1962. CDMG Bull. 181:204, ph. 17, fig. 6. Purisima Fm. (Pomponio Member), Pliocene. Purisima Creek, Half Moon Bay quad., San Mateo Co. 645-3M. Hypotype determined here as missing. **Remarks:** In the subgenus *Truncacila*, *fide* Coan et al. (2000: p. 75). [Nuculidae].

Acila (*Truncacila*) *castrensis* (Hinds, 1843). [*Nucula*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):147–148, pl. 27, figs. 7–10. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP [4447–4450]. [Nuculidae].

Acila castrensis (Hinds, 1843). [*Nucula*]. Perry 1977. Foss. Santa Cruz Co., p. 20, lower fig. Purisima Fm., Pliocene.

[East side of Rodeo Gulch Rd., Laurel quad.], Santa Cruz Co. [SCCM 18. Hypotype SCCM 21010]. **Remarks:** In the subgenus *Truncacila*, *fide* Coan et al. (2000: p. 75). [Nuculidae].

Acila (*Truncacila*) *castrensis* (Hinds, 1843). [*Nucula*]. Moore 1983. USGS PP 1228-A:A12–A13, pl. 1, fig. 24. San Diego Fm., Pliocene. [San Diego Co. LACMIP 305]. Hypotype (of Hertlein and Grant 1972, pl. 27, fig. 8) LACMIP 4448. [Nuculidae].

Acila (*Truncacila*) *dalli* (Arnold, 1908). [*Nucula*]. Moore 1983. USGS PP 1228-A:A11, pl. 1, fig. 18. San Lorenzo Fm., Eocene/Oligocene. On the headwaters of south fork of Waddell Creek, Big Basin, Santa Cruz Co. [SU 115]. Holotype USNM 165452. [Nuculidae].

Acila (*Truncacila*) *decisa* (Conrad, 1855b). [*Nucula*]. Moore 1968. SDSNH Occ. Pap. 15:30, pl. 13, fig. a; "Rose Canyon Shale," Eocene. Rose Canyon, San Diego Co. [SDSNH 2366. Hypotype SDSNH 4164]. [Nuculidae].

Acila (*Truncacila*) *decisa* (Conrad, 1855b). [*Nucula*]. Givens 1974. UCPG 109:38, pl. 1, fig. 1. Juncal Fm., Eocene. West of Thorn Meadows, South Fork of Piru Creek area, Lockwood Valley quad. (1943), Ventura Co. UCR 4675. Hypotype UCR 4675/231. [Nuculidae].

Acila (*Truncacila*) *decisa* (Conrad, 1855b). [*Nucula*]. Moore 1983. USGS PP 1228-A:A10, pl. 1, fig. 14. Ardath Shale., Eocene. Five km north of La Jolla, San Diego Co. [UCMP 5062]. Neotype (of Schenck, 1936: p. 55) UCMP 31132 [=holotype of *Acila lajollaensis* M.A. Hanna 1927]. [Nuculidae].

Acila (*Truncacila*) *decisa* (Conrad, 1855b), unnamed form, of Vokes. [*Nucula*]. Moore 1983. USGS PP 1228-A:A10, pl. 1, fig. 17. Avenal Fm., Eocene. East side of Big Tar Canyon at end of Eocene ridge, Cholame quad., Kings Co. UCMP A1165. Hypotype UCMP 15747 (not UCMP 15477 as in text and pl. caption). [Nuculidae].

*Acilia** cf. *A. decisa* (Conrad, 1855b). [*Nucula*]. Zinsmeister 1983a. SEPM Guidebook 58:67, pl. 1, fig. 6. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 6666]. Hypotype UCR 6666/1 determined here as missing. **Remarks:** In the subgenus *Truncacila*, *fide* Moore (1983: p. A10). Error for *Acila*. [Nuculidae].

Acila (*Truncacila*) *decisa* (Conrad, 1855b). [*Nucula*]. Squires 1984. NHMLAC CS 350:41, fig. 10a. Llajas Fm., Eocene. El Toro Canyon, Santa Susana quad., Los Angeles Co. CSUN 467 [=LACMIP 16079]. Hypotype LACMIP 6564 (not LACMIP 6554 as in pl. caption). [Nuculidae].

Acila (*Truncacila*) *decisa* (Conrad, 1855b). [*Nucula*]. Squires 1987. NHMLAC CS 388:54, fig. 86. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7504. [Nuculidae].

Acila (*Truncacila*) *decisa* (Conrad, 1855b). [*Nucula*]. Squires 1988c. NHMLAC CS 398:17, fig. 44. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 979 [=LACMIP 16081]. Hypotype LACMIP 7724. [Nuculidae].

Acila (*Truncacila*) *decisa* (Conrad, 1855b). [*Nucula*]. Throckmorton 1988a. USGS OFR 88-59:46, pl. 6, figs. 10–12 (peels) (fig. 11 refigured in Throckmorton 1988b, pl. 1, fig. 19). Tesla Fm., Eocene. From roadcut on west side of Tesla Rd., Midway quad., Alameda Co. UCMP D8151. UCMP unnumbered hypotypes lost, *fide* C. Throckmorton (personal communication, 2002). [Nuculidae].

Acila (*Trunacila*)* *decisa* (Conrad, 1855b). [*Nucula*]. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 15. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 674 [=LACMIP 16082]. Hypotype LACMIP 11479. **Remarks:** Error for *Truncacila.* [Nuculidae].

Acila (*Truncacila*) *decisa* (Conrad, 1855b). [*Nucula*]. Squires 1999b. MHMLAC CS 479:22–23, fig. 49 (peel). Santa Susana Fm., Eocene. North side Simi Valley, Santa Susana quad. (1951, PR 1967), Ventura Co. CSUN 959 [=LACMIP 17189]. Hypotype LACMIP 12693. [Nuculidae].

Acila cf. *Aci. empirensis* Howe, 1922. Powell et al. 2019b. *PaleoBios* 36:6–7, fig. 5. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP 13003. Hypotype UCMP 410923. [Nuculidae].

Acila (*Truncacila*) *muta* Clark, 1918. Addicott 1973b. USGS PP 791:7, 22, pl. 1, fig. 4. Temblor Fm. (Wygal Sandstone Member), Oligocene. South side of road along Carneros Creek, Carneros Rocks quad., Kern Co. USGS M4471. Hypotype USNM 646517. [Nuculidae].

....., pl. 1, fig. 15. East wall of north-northwest-trending tributary to Zemorra Creek, Carneros Rocks quad., Kern Co. USGS M4466. Hypotype USNM 646518. [Nuculidae].

Acila (*Truncacila*) *muta* Clark, 1918. Moore 1983. USGS PP 1228-A:A11–A12, pl. 1, figs. 19, 20. San Ramon Fm., Miocene. Near Oakland/Antioch bridge, Contra Costa Co. UCMP 1131. Holotype UCMP 11196. [Nuculidae].

Acila (*Truncacila*) aff. *A. nehalemensis* G D. Hanna, 1924. Weaver and Kleinpell 1963. UCPG 43:195, pl. 27, fig. 11. Upper Gaviota Fm., Eocene. West of Arroyo El Bulito, western Santa Ynez Mtns., Lompoc quad., Santa Barbara Co. UCMP B7023. Hypotype SU 9243 [=CASG 70128]. [Nuculidae].

Acila (*Acila*) *semirostrata* (Grant and Gale, 1931). [*Nucula*]. Moore 1983. USGS PP 1228-A:A9, pl. 1, figs. 23, 25. Pico(?) Fm., Pliocene. West of San Martinez Grande Canyon, north side of Santa Clara Valley, approximately on the boundary line between Ventura and Los Angeles counties. SDSNH 442. Holotype SDSNH 370. [Nuculidae].

Acila shumardi (Dall, 1909). [*Nucula*]. Phillips et al. 1974. SEPM Guidebook, p. 123, pl. 3, fig. 6 (peel). Tumey Fm., Eocene/Oligocene. Monocline Ridge, Fresno Co. [UCMP D6528]. Hypotype UCMP 37161. **Remarks:** In the subgenus *Truncacila*, *fide* Moore (1983: p. A10). [Nuculidae].

....., pl. 3, fig. 7 (peel). Monocline Ridge, Fresno Co. [UCMP D6537]. Hypotype UCMP 37162.

Acila shumardi (Dall, 1909). [*Nucula*]. Watkins 1974. Paleo.3 15:253, fig. 7E (cast). Kreyenhagen Fm., Oligocene. Monocline Ridge, Monocline Ridge quad. (1955), Fresno Co. [UCMP D6528]. Hypotype UCMP 37161. **Remarks:** In the subgenus *Truncacila*, *fide* Moore (1983: p. A10). [Nuculidae].

....., fig. 7F (cast). Monocline Ridge, Monocline Ridge quad. (1955), Fresno Co. [UCMP D6537]. Hypotype UCMP 37162.

Acila sp. Perry 1977. Foss. Santa Cruz Co., p. 6, middle fig. San Lorenzo Fm., Oligocene. East bank of San Lorenzo River, Santa Cruz Co. [SCCM 37. Hypotype SCCM 21001]. [Nuculidae].

Acila Fowkes 1982. Coalinga Guidebook, p. 33, unnumbered fig. San Joaquin Fm. ("*Acila* Zone"), Pliocene. North Dome, Kettleman Hills, Kings Co. WHC Hypotype lost? **Remarks:** Determined here as *Acila* (*Truncacila*) *castrensis* (Hinds, 1843). [Nuculidae].

Acila (*Truncacila*) sp. Weaver and Kleinpell, 1963. UCPG 43:195, pl. 27, fig. 13. Cozy Dell Shale, Eocene. Vicinity of Cañada de Cojo, southwestern Santa Ynez Mtns., Lompoc-Pt. Conception quad., Santa Barbara Co., UCMP B6930. Hypotype SU 9245 [=CASG 68842]. [Nuculidae].

Acila (*Truncacila*) sp., not *A.* (*T.*) *decisa* (Conrad, 1855b). [*Nucula*]. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, fig. 3. Lodo Fm., Paleocene. Lowermost sand above the Cretaceous, Chounet Ranch quad., Fresno Co. CASG 31318a. Hypotype CASG 55758. [Nuculidae].

Acila (*Truncacila*) sp. B. Schenck 1936. Weaver and Kleinpell, 1963. UCPG 43:195, pl. 27, figs. 12–14. Middle Gaviota Fm., Eocene. Divide on east side of Cañada de Santa Anita, Lompoc quad., Santa Barbara Co. UCMP B7013. Hypotype SU 9244 [=CASG 68843]. [Nuculidae].

Acutostrea gaviota Squires, 2018a (n. sp.). NHMLAC CS 526:7–10, figs. 62–69, 78–79. Gaviota Fm., Eocene. Divide between Cuarta Canyon and next canyon west, Santa Ynez Range, Santa Barbara Co. LACMIP 7289. Hypotypes LACMIP 14678–14681, 14686. [Ostreidae].

....., figs. 70, 71. Gaviota Fm., Eocene, Santa Ynez Range, Santa Barbara Co. LACMIP 7261 (not 7262 as in pl. caption). Hypotype LACMIP 14682.

....., figs. 72, 73. Gaviota Fm., Eocene. Santa Ynez Range, Santa Barbara Co. LACMIP 7202. Hypotype LACMIP 14683.

....., figs. 74–77. Gaviota Fm., Eocene. Gaviota Pass, Santa Barbara Co. LACMIP 7292. Hypotypes LACMIP 14864, 14685.

Acutostrea idriaensis idriaensis (Gabb, 1869b). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C31–C32, pl. 13, figs. 2, 3 (refigured from Gabb 1869, pl. 33, figs. 103b, 103c); pl. 14, fig. 6 (refigured from Gabb 1869, pl. 33, fig. 103d); pl. 16, fig. 3 (refigured from Gabb 1869, pl. 34, fig. 103; pl. 29, fig. 4 (refigured from Gabb 1869, pl. 34, fig. 103a). Domengine Fm., Eocene. East of Hacienda at the New Idria, Priest Valley quad., San Benito Co. MCZ 1041.

Lectotype (of Stewart 1930: p. 127) MCZ 15048 [=MCZ 108500], paralectotypes MCZ 15020, 15048 [=MCZ 108497–108499]. [Ostreidae].

....., pl. 29, figs. 3, 5. Cañada (?) Fm., Eocene. Cañada del Pozo, Santa Cruz Is., California Channel Ids. [CASG 66752]. Holotype (of *Ostrea haleyi* Hertlein 1933) CASG 5526 [=CASG 66752.02]. **Remarks:** *Phygraea haleyi* (Hertlein, 1933), *fide* Squires (2018a: p. 16–18). [Gryphaeidae].

Acutostrea idriaensis? (Gabb, 1869b). [*Ostrea*]. Squires et al. 1988. SEPM Guidebook 58:185, pl. 1, fig. 6. Goler Fm., Eocene. Near head of northeast-trending ravine, Inyokern SE quad. (1972), El Paso Mtns., Kern Co. USGS M9068. Hypotype USNM 424894. [Ostreidae].

Acutostrea idriaensis idriaensis (Gabb, 1869b). [*Ostrea*]. Squires 1999c. NHMLAC CS 480:18–19, figs. 27, 28. Matilija Sandstone, Eocene. On south bank of North Fork of Matilija Creek, west of junction of Hwy. 33, Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1450 [=LACMIP 16963]. Hypotypes LACMIP 12457, 12458. [Ostreidae].

Acutostrea idriaensis (Gabb, 1869b). [*Ostrea*]. Squires 2018a. NHMLAC CS 526:4–5, figs. 4, 5. Delmar Fm., Eocene. Mouth of Soledad Canyon, San Diego Co. LACMIP 5240. Hypotype LACMIP 14649. [Ostreidae].

....., figs. 6, 9, 10, 25, 26. Delmar Fm., Eocene. Sea cliff, Torrey Pines State Beach, San Diego Co. LACMIP 199. Hypotypes LACMIP 14650, 14652, 14653, 14461.

....., figs. 7, 8. Delmar Fm., Eocene. Sea cliff, Torrey Pines State Beach, San Diego Co. LACMIP 25829. Hypotype LACMIP 14651.

....., figs. 11, 39–42. Delmar Fm., Eocene. Sea cliff, Torrey Pines State Beach, San Diego Co. LACMIP 5201 (not LACMIP 25201 as in caption). Hypotypes LACMIP 14654, 14667.

....., figs. 12, 13. Domengine Fm., Eocene. Griswold Canyon, Vallecitos syncline area, San Benito Co. LACMIP 41294. Hypotype LACMIP 14655.

....., figs. 18, 19, 22–24, 32–35. Domengine Fm., Eocene. Larious Canyon, Vallecitos syncline area, San Benito Co. LACMIP 41295. Hypotypes LACMIP 14658, 14660, 14664, 14665.

....., figs. 20, 21. Upper Goler Fm., Eocene. El Paso Mtns., Kern Co. LACMIP 41150. Hypotype LACMIP 14659.

....., figs. 27–31. Delmar Fm., Eocene. Road cut on County Road S21, Del Mar Fair Grounds, city of Delmar. LACMIP 4899. Hypotypes LACMIP 14462, 14633.

....., figs. 36–38. Unnamed formation, Eocene. Southwest side of San Nicolas Is., California Channel Ids. LACMIP 25210. Hypotype LACMIP 14666.

Acutostrea idriaensis fettkei (Weaver, 1912). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C30–C31, pl. 30, fig. 5. Martinez Fm., Paleocene. East of Lower Lake village, Lake Co. UCMP 790. Holotype (of *Ostrea buwaldana* Dickerson, 1914a) UCMP 11719. **Remarks:** *Plicatula ostreiformis* Stanton, 1896 (family Plicatulidae)=*Ostrea buwaldana* Dickerson, 1914a, *fide* Squires (2018a: p. 4). [Ostreidae].

....., pl. 32, figs. 4, 6. Delmar Fm., Eocene. At 15 m above high tide level in small gully 0.4 km (m in locality description) south of Soledad Valley, La Jolla quad., San Diego Co. UCMP 3981. Holotype (of *Ostrea crandalli* M.A. Hanna, 1927) UCMP 31072.

Acutostrea? *miguelensis* (Hertlein, 1928a). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C32, pl. 33, figs. 4, 6,7, 9. Vaqueros Fm., Oligocene/Miocene. East of Crook Pt., San Miguel Is., California Channel Ids. CASG 1163. Holotype CASG 4121, paratype CASG 4122. [Ostreidae].

Acutostrea simiensis (Zinsmeister, 1983b). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C30, pl. 34, figs. 4, 5. Simi Conglomerate [= Santa Susana Fm.?], Paleocene. Light gray concretions with abundant oyster debris, Calabasas quad., Ventura Co. UCR 6899. Holotype UCR 6899/101, paratype UCR 6899/102. [Ostreidae]. **Remarks:** *Phygraea haleyi* (Hertlein, 1933), *fide* Squires (2018a: p. 16).

Adula? *mcknighti* (M.A. Hanna, 1927). [*Lithophaga*]. Moore 1983. USGS PP 1228-A:A74, pl. 19, figs. 9, 10. Delmar

Fm., Eocene. In seacliff south of of mouth of Soledad Valley, La Jolla quad., San Diego Co. UCMP 5062. Holotype UCMP 31151. [Mytilidae].

Aeidimytilus adamsianus (Dunker, 1857). [*Mytilus*]. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):164–165, pl. 42, figs. 4, 5. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotype LACMIP [4473]. **Remarks:** In the genus *Brachidontes*, *fide* Coan and Valentich-Scott (2012: p. 112). [Mytilidae].

Aequipecten andersoni (Arnold, 1906). [*Pecten*]. Stewart 1946. USGS PP 205-C:98, pl. 17, fig. 1. Temblor Fm., Miocene. North of Kern River, about 11 mi. northeast of Bakersfield, Kern Co. USGS 6066. Hypotype USNM 498740. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45). [Pectinidae].

....., pl. 17, fig. 2. 135 ft. below the top of the first arroyo west of Big Tar Canyon, Kings Co. Hypotype USNM 498741.

....., pl. 17, fig. 3. About 12 mi. east and a little north of Bakersfield on the north side of Kern River, Kern Co. USGS 6890. Hypotype USNM 166577.

....., pl. 16, fig. 4. Northeast of Shell Ridge, Contra Costa, Co. UCMP A4926. Hypotype UCMP 34128.

Aequipecten andersoni (Arnold, 1906) [*Pecten*]. Woodring et al. 1946. USGS PP 207:27, pl. 28, fig. 11 (peel). Monterey Fm. (Altamira Shale Member), Miocene. Bluff Cove-Malaga Cove area, slope above beach at Bluff Cove, Palos Verdes Hills, Los Angeles Co. USGS 13123. Hypotype USNM 497081. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45). [Pectinidae].

Aequipecten andersoni (Arnold, 1906). [*Pecten*]. Addicott 1965b. USGS PP 525-C:C106, fig. 4m. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 649178. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45). [Pectinidae].

Aequipecten andersoni andersoni (Arnold, 1906). [*Pecten*]. Adegoke 1969. UCPG 80:98, pl. 1, fig. 13. Temblor Fm., Miocene. Sandstone ledges, Domengine Ranch quad., Fresno Co. UCMP D1078. Hypotype UCMP 36617. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45). [Pectinidae].

....., pl. 2, fig. 2. Two ledges about 10 ft. apart, outcropping across a long, narrow northeast-trending saddle, Reef Ridge quad., Kings Co. UCMP D1067. Hypotype UCMP 36618.

Aequipecten andersoni (Arnold, 1906). [*Pecten*]. Perry 1977. Foss. Santa Cruz Co., p. 9, top fig. Lompico Sandstone, Miocene. West side of Vine Hill Rd., Santa Cruz Co. [SCCM 27. Hypotype SCCM 21005]. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45). [Pectinidae].

Aequipecten cf. *A. andersoni* (Arnold, 1906), scallop [*Pecten*]. Cōcke 2015. Foss. Palos Verdes Hills, p. 83, unnumbered figs. on p. 83 (upper and lower). Monterey Fm., Miocene. George F. Canyon, Palos Verdes Hills, Los Angeles Co. Hypotype to be donated to LACMIP.

Aequipecten andersoni subandersoni (Loel and Corey, 1932). [*Pecten*]. Adegoke 1969. UCPG 80:98–99, pl. 1, fig. 11. Temblor Fm., Miocene. Beds underlying conspicuous outcrop of the "Reef" beds, Domengine Ranch quad., Fresno Co. UCMP D1070. Hypotype UCMP 36619. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45). [Pectinidae].

Aequipecten circularis subsp. ***bramkampi*** Durham, 1950 (n. sp.). GSA Mem. 43(2):63, pl. 9, figs. 2, 4, 8. Imperial Fm. [=Latrania Fm.], Pliocene. Oyster reef on ridge running west from east side of meander of stream in badland area, northwest side of Carrizo Mtn., Imperial Co. UCMP A1268. Holotype UCMP 30035, paratype UCMP 30045. **Remarks:** Determined here as *Argopecten ventricosus bramkampi* (Durham, 1950). [Pectinidae].

Aequipecten circularis eldridgei (Arnold, 1906). [*Pecten*]. Woodring et al. 1940 [1941]. USGS PP 195:91, pl. 24, figs. 10–13. San Joaquin Fm. (Cascajo Conglomerate Member), Pliocene. North of Oyster Hill, South Dome, Kettleman Hills, Kings Co. USGS 12658 [=USGS 12793 and 12794). Hypotypes USNM 495346–495349. **Remarks:** Determined here as *Argopecten ventricosus eldridgei* (Arnold, 1906). [Pectinidae].

Aequipecten circularis impostor (G D. Hanna, 1924). [*Pecten*]. Woodring et al. 1940 [1941]. USGS PP 195:91 pl. 13, figs. 3–4, 6–9. San Joaquin Fm. (*Pecten* Zone), Pliocene. North of Arroyo Robador and south of Hanford Rd., North Dome, Kettleman Hills, Kings Co. USGS 12364. Hypotype USNM 495729, 495730, 495732–495735. **Remarks:**

Determined here as *Argopecten ventricosus impostor* (G D. Hanna, 1924). [Pectinidae].

Aequipecten discus (Conrad, 1857d). [*Pecten*]. Squires and Fritsche 1978. SEPM Guidebook 13:21– 22, pl. 4, fig. 7. Santa Margarita Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 287 [=LACMIP 16085]. Hypotype UCLA 58210 [=LACMIP 10592]. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B46). [Pectinidae].

Aequipecten impostor (G D. Hanna, 1924). [*Pecten*]. Adegoke 1969. UCPG 80:99–100, pl. 2, fig. 12. San Joaquin Fm., Pliocene. Bed outcropping along the crest of hill, Reef Ridge quad., Kings Co. UCMP B6539. Hypotype UCMP 36620. **Remarks:** Determined here as *Argopecten ventricosus impostor* (G D. Hanna, 1924). [Pectinidae].

Aequipecten raymondi (Clark, 1915). [*Pecten*]. Adegoke 1969. UCPG 80:99, pl. 2, figs. 7, 10. Temblor Fm., Miocene. Uppermost *Aequipecten* and *Balanus* bed which crops out on top of a low, narrow ridge, Domengine Ranch quad., Fresno Co. UCMP D1179. Hypotypes UCMP 36622, 36623. **Remarks:** Junior synonym of *Pacipecten discus* (Conrad, 1857d), *fide* Moore (1984: p. B47). [Pectinidae].

....., pl. 2, fig. 11. Monterey Fm. (McClure Shale Member), Miocene. From basal conglomerate beds on the north bank of Garza Creek, Reef Ridge quad., Kings Co. UCMP D1086. Hypotype UCMP 36621.

Aequipecten raymondi brionianus (Trask, 1922). [*Pecten*]. Adegoke 1969. UCPG 80:99, pl. 2, fig. 1. Monterey Fm. (McClure Member), Miocene. From basal conglomerate beds on the north bank of Garza Creek, Reef Ridge quad., Kings Co. UCMP D1086. Hypotype UCMP 36624. **Remarks:** Junior synonym of *Pacipecten discus* (Conrad, 1857d), *fide* Moore (1984: p. B47). [Pectinidae].

Aequipecten cf. *A. sancti-ludovici* (Anderson and Martin, 1914) [*Pecten*]. Woodring et al. 1946. USGS PP 207:27, pl. 28, Fig. 10 (clay peel). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, west side of George F. Canyon, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotype USNM 497082. **Remarks:** In the genus *Chlamys*, *fide* Moore (1984: p. B22). [Pectinidae].

Aequipecten Fowkes 1982. Coalinga Guidebook, p. 229, unnumbered fig. (refigured in Fowkes 1983, p. 31). Temblor Fm., Miocene. Temblor "Reef," Big Tar Canyon, Kings Co. WHC hypotype lost? [Pectinidae].

cf. *Aequipecten* sp., scallop. Cōcke 2015. Foss. Palos Verdes Hills, p. 82, unnumbered figs. on p. 82 (upper and lower). Monterey Fm., Miocene. George F. Canyon, Palos Verdes Hills, Los Angeles Co. Hypotype to be donated to LACMIP.

Aligena diegoana Hertlein and Grant, 1972 (n. sp.). SDSNH Mem. 2(2B):235–236, pl. 44, figs. 1, 6; pl. 45, figs. 6, 10–11, 13. San Diego Fm., Pliocene. West side of next gully east of LACMIP 305 at the same elevation, San Diego Co. LACMIP 305A [=LACMIP 16862]. Paratypes LACMIP [4548–4552, unfigured paratypes LACMIP 4570–4614]. [Lasaeidae].

....., pl. 45, fig. 7. Southwestern San Diego Co., 2400 ft. east, 1350 ft. south of the NW cor. sec. 8, T19S, R2W, San Ysidro quad. (1943), San Diego Co. LACMIP 305. Holotype LACMIP 4547, unfigured paratypes LACMIP nos. 4553–4569.

....., [Knox Ranch Hill, San Diego Co. LACMIP 318. Unfigured paratypes LACMIP 4615–4618].

....., [Near U.S./Mexico boundary fence, San Diego Co. LACMIP 319. Unfigured paratypes LACMIP 4619–4622].

Aligena (*Aligena*) *diegoana* Hertlein and Grant, 1972. Moore 1992. USGS PP 1228-E:E7–E8, pl. 1, figs. 9, 10. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305. Holotype LACMIP 4547. [Lasaeidae].

....., pl. 1, figs. 6, 8, 12, 13. West side of next gully east of LACMIP 305 at the same elevation, San Diego Co. LACMIP 305A [=LACMIP 16862]. Paratypes LACMIP 4548, 4551.

Americardia sp. Redman et al. 2007. Palaios 22:fig. 3A. Imperial Fm. (=Latrania Fm.), Miocene/Pliocene. Fossil Canyon, Imperial Co. Hypotype probably at SDSU (current whereabouts unknown). [Cardiidae].

Amiantis callosa (Conrad, 1837). Squires 2012. [*Cytherea*]. NHMLAC CS 520:76, fig. 35. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14360. [Veneridae].

Amiantis n. sp.? aff. *A. diabloensis* (Anderson, 1905). [*Cytherea*]. Addicott 1973b. USGS PP 791:35, pl. 7, figs. 2, 3. Olcese Sand, Miocene. Twelve mi. N30°E of Bakersfield, in small arroyo tributary to Adobe Canyon from west,

Kern Co. USGS 6627. Hypotype USNM 646592. [Veneridae].

....., pl. 7, fig. 11. In southeast-trending gully east of hill 933 (Bakersfield quad.), Caliente quad. (1914), Kern Co. UCMP B1599. Hypotype UCMP 14090.

Amiantis (?) *mathewsonii* (Gabb, 1866). [*Chione*]. Weaver and Kleinpell 1963. UCPG 43:204, pl. 35, figs. 8, 9. Middle Gaviota Fm., Eocene. Near junction of Yridisis Creek with El Jaro Creek, Lompoc quad., Santa Barbara Co. UCMP B7007. Hypotype SU 9300 [=CASG 70133]. **Remarks:** In the genus *Amiantis*, *fide* Addicott (1973b: p. 35). [Veneridae].

Amiantis mathewsoni (Gabb, 1866). [*Chione*]. Addicott 1973b. USGS PP 791:7, 35, 36, pl. 7, fig. 1. Temblor Fm. (Wygal Sandstone Member), Miocene. On northeast-trending ridge on south side of Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646588. [Veneridae].

....., pl. 7, figs. 4, 8, 13. In bed of Temblor Creek, Carneros Rocks quad., Kern Co. USGS M3978. Hypotypes USNM 646589, 646590.

....., pl. 7, fig. 14. On southeast side of ridge parallelling Media Agua Creek, about 200 ft. above dirt road, Las Yeguas Ranch quad., Kern Co. USGS M3772. Hypotype USNM 646591.

Amiantis stadleri (Clark, 1915). [*Pitaria*]. Hall 1958. UCPG 34(1):54, pl. 8, fig. 1. Briones Fm., Miocene. East of Irvington, La Costa Valley quad. (1953), Alameda Co. SU 3252. Hypotype SU/CASG 8456. **Remarks:** Junior synonym of *Amiantis callosa* (Conrad, 1837), *fide* Coan et al. (2000: p. 381). [Veneridae].

Amiantis sp. Hall 1958. UCPG 34(1):54, pl. 7, fig. 6. Briones Fm., Miocene. Syncline north of Hayward Pass, Alameda Co. Hypotype SU 8457 [=CASG 69962]. [Veneridae].

Amiantis n. sp.? Addicott 1973b. USGS PP 791:7, 36, pl. 6, fig. 6; pl. 7, figs. 6, 7. Temblor Fm. (Wygal Sandstone Member), Miocene. About 30–40 ft. above unnamed stream, Carneros Rocks quad., Kern Co. USGS M3578. Hypotypes USNM 646584, 646595, 646596. [Veneridae].

Amusium lompocensis (Arnold, 1906). [*Pecten*]. Addicott 1974a. Jour. Paleo. 48(1):184, pl. 1, fig. 2. San Onofre Breccia, Miocene. East of Trabuco Canyon, Orange Co. USGS M3179. Hypotype USNM 489565 (not USNM 647084 as in pl. caption). [Pectinidae].

Amusium lompocensis (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B66–B67, pl. 2, fig. 10. Tranquillon(?) Fm., Miocene. Six km south of Lompoc, Santa Barbara Co. Holotype CASG 81. [Pectinidae].

....., pl. 2, fig. 11 (refigured from Arnold 1906, pl. 28, fig. 2). [Vaqueros Fm.?, Miocene. Ojai Valley, Ventura Co. USGS 3903]. Paratype USNM 164852.

Amussiopecten lompocensis (Arnold, 1906) [*Pecten*]. Stadum and Finger 2016. NHMLAC CS 524:38, 42, fig. 40. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Laguna Hills, San Juan Capistrano quad., Orange Co. SDSNH 4521 (not SDSNH 4512 as published). Hypotype SDSNH 83232. [Pectinidae].

Amussiopecten vanvlecki (Arnold, 1907). [*Pecten*]. Masuda 1971. Tr. Proc. Pal. Soc. Japan 84: 210–211, pl. 25, figs. 1a, b. Monterey Fm. (Saltos Shale Member), Miocene. North of Santa Barbara Canyon Ranch, Fox Mtn. quad., Santa Barbara Co. USGS M2418. Hypotype USNM 646495. [Pectinidae].

....., pl. 25, fig. 2. Branch Canyon Fm., Miocene. About 1.3 mi. southwest of the drill hole near Big Pine Rd. in Santa Barbara Canyon, Fox Mtn. quad., Santa Barbara Co. USGS M2417. Hypotype USNM 646498.

....., pl. 25, fig. 3. Santa Barbara Canyon, Fox Mtn. quad., Santa Barbara Co. USGS M2458. Hypotype USNM 646496.

....., pl. 25, fig. 4. Alamo Canyon, Fox Mtn. quad., Santa Barbara Co. USGS M3044. Hypotype USNM 646497.

Amussiopecten vanvlecki (Arnold, 1907) [*Pecten*]. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, fig. 1. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al. 1959: pp. 8, 13), Miocene. Temblor Range, Kern Co. USGS M3988. Hypotype USNM 646793b (not USNM 646793 as in pl. caption). [Pectinidae].

....., pl. 3, fig. 10. Shale Pt. quad., Temblor Range, Kern Co. USGS M3986. Hypotype USNM 646801.

Amussiopecten vanvlecki (Arnold, 1907). [*Pecten*]. Addicott 1974a. Jour. Paleo. 48(1):187, pl. 2, fig. 2. Monterey Fm. (Saltos Shale Member), Miocene. Near Santa Barbara Canyon Ranch, Santa Barbara Co. USGS M2418. Hypotype USNM 646495. [Pectinidae].

Amussiopecten vanvlecki (Arnold, 1907). [*Pecten*]. Moore 1984. USGS PP 1228-B:B69–B70, pl. 29, fig. 5; pl. 30, fig. 1. Vaqueros Fm., Oligocene/Miocene. 3 km south of Santa Ynez, west end Santa Ynez Range, Lompoc quad., Santa Barbara Co. USGS 4478. Holotype USNM 165305, paratype USNM 165306. [Pectinidae].

Amussiopecten vanvlecki (Arnold, 1907) [*Pecten*]. Stadum and Finger 2016. NHMLAC CS 524: 38, 42, fig. 39. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 83232. [Pectinidae].

Amussiopecten vanvlecki (Arnold, 1907) [*Pecten*]. Rugh 2016. Desert Symposium vol.:311, fig. 2. Topanga Fm., Miocene. Rancho Mission Viejo Sendero Marketplace site, south side San Juan Creek, Orange Co. [Hypotype at CC]. [Pectinidae].

Anadara (*Larkinia*) *camuloensis* (Osmont, 1905). [*Arca*]. Reinhart 1943. GSA Sp. Pap. 47:65, fig. 1c (modified from Osmont 1905, pl. 10, fig. 6a), pl. 7, figs. 2, 8, 9. "Fernando Group," Pliocene. One mi. north of Camulos, Ventura Co. UCMP 1637. Holotype UCMP 12006. **Remarks:** Junior synonym of *Anadara* (*Larkinia*) *multicostata* (G.B. Sowerby I, 1833b), *fide* Coan and Valentich-Scott (2012: p. 179.) [Arcidae].

Anadara camuloensis (Osmont, 1905). [*Arca*]. Nicol 1950. Jour. Paleo. 24(1):93, pl. 21, fig. 14 (refigured from Reinhart 1943:7, text fig. 1c). [Pico Fm.], Pliocene. North of Camulos, Ventura Co. Holotype UCMP 12006. **Remarks:** Junior synonym of *Anadara* (*Larkinia*) *multicostata* (G.B. Sowerby I, 1833b), *fide* Coan and Valentich-Scott (2012: p. 179). [Arcidae].

Anadara (*Anadara*) *carrizoensis* Reinhart, 1943. Moore 1983. USGS PP 1228-A:A40, pl. 7, figs. 5, 11. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. South slope of Carrizo Mtn., crest of ridge 1120 ft. northeast of mouth of Alverson Canyon, Imperial Co. CIT 738 [=LACMIP 9855]. Holotype LACMIP 4069 [*ex* CIT 3248]. [Arcidae].

Anadara devincta (Conrad, 1849a). [*Arca*]. Stewart 1946. USGS PP 205-C:98, pl. 17, fig. 7. Temblor Fm., Miocene. Reef Ridge, west side of Zapato Canyon, Kreyenhagen Hills quad., Fresno Co. USGS 14392a. Hypotype USNM 498745. [Arcidae].

Anadara devincta (Conrad, 1849a). [*Arca*]. Lutz 1951. UCPG 28(13):385, pl. 16, fig. 7. Sobrante, Miocene. Sample collected along the creek in Crow Canyon, Hayward quad., Alameda Co. UCMP A4570. Hypotype UCMP 34125. [Arcidae].

....., pl. 16, fig. 8. In large rock quarry, 1 mi. south of Pacheco, Contra Costa Co. UCMP A4929. Plastotype UCMP 34126.

Anadara devincta var. *montereyana* (Osmont, 1905). [*Arca*]. Lutz 1951. UCPG 28 (13):385, pl. 16, fig. 3. Sobrante Fm., Miocene. In trail cut 50 ft. west of UCMP 4931, Contra Costa Co. UCMP A4935. Hypotype UCMP 34127. **Remarks:** *Anadara* (*Anadara*) *montereyana*, *fide* Moore (1983: p. A39). [Arcidae].

Anadara formosa (G.B. Sowerby I, 1833b). [*Arca*]. Deméré and Rugh, 2006. Foss. Treas. Anza-Borrego Desert, p. 57, fig. 3.16C. Latrania Fm., Miocene/Pliocene. [Coyote Mtn., Imperial Co. SDSNH 2895]. Hypotype SDSNH 12026. **Remarks:** *Anadara carrizoensis* Reinhart 1943, *fide* S. Rugh (personal communication, 2019). [Arcidae].

Anadara (*Cunearca*) *hamelini* (Wiedey, 1928). [*Arca*]. Reinhart 1943. GSA Sp.Pap. 47:67–68, pl. 12, fig. 9. Vaqueros Fm., Miocene. Near junction of Little Sespe River with Big Sespe River Ventura Co. SDSNH 407. Holotype SDSNH 18. **Remarks:** In the genus *Scapharca*, *fide* Moore (1983: p. A45). [Arcidae].

Anadara (*Anadara*) cf. *lakei* (Wiedey, 1928). [*Arca*]. Reinhart 1943. GSA Sp.Pap. 47:55–56, pl. 9, figs. 1–3. Round Mtn. Silt, Miocene. Caliente quad., Kern Co. Hypotype SU 7346 [=CASG 72027]. [Arcidae].

....., pl. 12, figs. 7, 8. Temblor Fm., Miocene. Two mi. west of Simmler, San Luis Obispo Co. SDSNH 432. Holotype SDSNH 19.

Anadara (*Anadara*) *lakei* (Wiedey, 1928). [*Arca*]. Moore 1983. USGS PP 1228-A:A37–A38, pl. 6, figs. 8, 9. Temblor Fm., Miocene. West of Syncline Hill, west of Simmler, La Panza quad., San Luis Obispo Co. SU 432. Holotype SD-SNH19. [Arcidae].

Anadara (*Anadara*) *mediaimpressa* (Clark, 1918). [*Arca* (*Scapharca*)]. Moore 1983. USGS PP 1228-A:A38–A39, pl. 7, figs. 2, 3. San Ramon Fm., Miocene(?). Near Oakland/Antioch bridge, southwest of Walnut Creek], Contra Costa Co. UCMP 1131. Holotype UCMP 11174. [Arcidae].

Anadara (*Anadara*) *mediaimpressa mediaimpressa* (Clark, 1918). [*Arca* (*Scapharca*)]. Reinhart 1943. GSA Sp.Pap. 47:39, pl. 4, figs. 1, 5, 6. San Ramon Fm., San Lorenzo Series, Oligocene. Near town of Walnut Creek, Contra Costa Co. UCMP 1131. Holotype UCMP 11174, paratype UCMP 11172. [Arcidae].

Anadara (*Anadara*) *mediaimpressa submontereyana* (Clark, 1918). [*Arca* (*Scapharca*)]. Reinhart 1943. GSA Sp.Pap. 47:40–41, pl. 4, fig. 7. San Ramon Fm., Oligocene. Near Walnut Creek, Contra Costa Co. UCMP 52. Holotype UCMP 11186. **Remarks:** *Anadara* (*Anadara*) *submontereyana*, *fide* Moore (1983: p. A37). [Arcidae].

Anadara (*Anadara*?) *microdonta* (Conrad, 1855b). [*Arca* (*Scapharca*)]. Reinhart 1943. GSA Sp.Pap. 47:46, 47, pl. 6, figs. 9, 10. "Locality and geologic horizon unknown" (Reinhart 1943: p. 101). Holotype USNM 1844. **Remarks:** "*Anadara* (*Anadara*?) *microdonta* (Conrad, 1855b)," *fide* Moore (1983: A46) who considered it an indeterminate species. [Arcidae].

Anadara cf. *A. microdonta* (Conrad, 1855b). [*Arca*]. Squires and Fritsche 1978. SEPM Guidebook 13:17, 20, pl. 3, fig. 2. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 148 [=LACMIP 16102]. Hypotype UCLA 58207 [=LACMIP 10579]. **Remarks:** "*Anadara* (*Anadara*?) *microdonta* (Conrad, 1855b)," *fide* Moore (1983: p, A46) who considered it an indeterminate species. [Arcidae].

Anadara (*Anadara*) *montereyana* (Osmont, 1905). [*Arca*]. Reinhart 1943. GSA Sp.Pap. 47:47, 49, pl. 10, figs. 1, 3. "Monterey series," Miocene. Labeled as "west of Martinez" =Selby, Contra Costa Co., *fide* Reinhart (1943: p. 48). SU 1166. Holotype UCMP 11925. [Arcidae].

Anadara montereyana (Osmont, 1905) (not Conrad as in pl. caption). [*Arca*]. Hall 1958. UCPG 34(1): 51, pl. 1, fig. 9. Oursan Fm., Miocene. Northeast of Irvington, La Costa Valley quad. (1953), Alameda Co. SU 3248. Hypotype SU 8435 [=CASG 69963]. [Arcidae].

Anadara aff. *A.* (*Anadara*) *montereyana* (Osmont, 1905). [*Arca*]. Stanton 1966. Jour. Paleo. 40 (1):26, pl. 5, fig. 1 (peel). Castaic Fm., Miocene. Bottom of small canyon tributary to Haskell Canyon, Los Angeles Co. CIT 1671 [=LACMIP 2556]. [Hypotype LACMIP 4071]. [Arcidae].

Anadara (*Anadara*) *montereyana* (Osmont, 1905). [*Arca*]. Moore 1983. USGS PP 1228-A:A39, pl. 7, fig. 4. Monterey Fm., Miocene. Selby, Contra Costa Co. SU 1166. Holotype UCMP 11925. [Arcidae].

Anadara sp. cf. *A. monterayana* (Osmont, 1905). Rugh 2018. Desert Symposium vol.: p. 111, fig. 1A. Monterey Fm., Miocene. Reata Glen, northeast of San Juan Capistrano, Orange Co. [Hypotype at CC]. [Arcidae].

Anadara (*Scaphacra*?) *obispoana obispoana* (Conrad, 1857d). [*Arca*]. Reinhart 1943. GSA Sp. Pap. 47:70–72, pl. 10, figs. 6, 7. Monterey Fm., Miocene. Eastern part of the Santa Maria oil field, Santa Barbara Co. Hypotype SU 5278 [=CASG 72030]. **Remarks:** In the genus *Scapharca*?, *fide* Moore (1983: p. A44). [Arcidae].

....., pl. 10, fig. 11. Salinas Fm. (=Monterey Fm.), Miocene. South of Salinas, Monterey Co. UCMP A1159. Hypotype UCMP 32473.

Anadara obispoana (Conrad, 1857d). [*Arca*]. Hall 1958. UCPG 34(1):51, pl. 1, fig. 5. Oursan Fm., Miocene. Northeast of Irvington, Niles quad. (1953.), Alameda Co. SU 3233. Hypotype SU 8436 [=CASG 69964]. **Remarks:** In the genus *Scapharca*?, *fide* Moore (1983: p. A44). [Arcidae].

....., pl. 1, fig. 8. Northeast of Irvington, Niles quad. (1953), Alameda Co. SU 3234. Hypotype SU 8437 [=CASG 69966].

Anadara obispoana (Conrad,1857d). [*Arca*]. Perry 1977. Foss. Santa Cruz Co., p. 9, bottom fig. Monterey Fm., Miocene. Near Felton and Scott's Valley, Santa Cruz Co. Hypotype determined herein as missing. **Remarks:** In the genus *Scapharca*?, *fide* Moore (1983: p. A44). [Arcidae].

Anadara obispoana (Conrad, 1857d). [*Arca*]. Addicott et al. 1978. USGS OFR 78-446:59–60, pl. 1, fig. 3 (peel). Monterey Fm. (Hames Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M1680. Hypotype USNM 254352. **Remarks:** In the genus *Scapharca*?, *fide* Moore (1983: p. A44). [Arcidae].

Anadara obispoana (Conrad, 1857d). [*Arca*]. Addicott et al. 1980. SEPM Guidebook 6:19–20, pl. 1, fig. 3 (refigured from Addicott et al. 1978, pl. 1, fig. 3). Monterey Fm. (Hames Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M1680. Hypotype USNM 254352. **Remarks:** In the genus *Scapharca*?, *fide* Moore (1983: p. A44).[Arcidae].

Anadara (*Scapharca*?) *obispoana perdisparis* (Wiedey, 1928). [*Arca*]. Reinhart 1943. GSA Sp. Pap. 47:72, pl. 10, fig. 8. Monterey Fm., Miocene. On old road, near Zayante railroad station, Santa Cruz Co. SU 443. Paratype SU 5163 [=CASG 71524]. **Remarks:** In the genus *Scapharca*?, *fide* Moore (1983: p. A44). [Arcidae].

Anadara (*Anadara*) *osmonti* (Dall, 1909). [*Arca*]. Reinhart 1943. GSA Sp.Pap. 47:50–53, pl. 4, fig. 9. Temblor Fm., Miocene. Barker's Ranch, Kern Co. Hypotype CASG 5274. [Arcidae].

....., pl. 4, figs. 11, 13–17. Barker's Ranch, Kern Co. CASG 1070. Hypotypes CASG 5904–5906.

....., pl. 4, fig. 12. Barker's Ranch, Kern Co. CASG 65. Hypotype CASG 5907.

....., pl. 10, figs. 12, 15. ?Temblor Fm., Miocene. "Locality not definitely known" (Reinhart 1943: p. 105); possibly Devils Den, Kern Co. Holotype UCMP 11927.

Anadara (*Anadara*) *osmonti* (Dall, 1909). [*Arca*]. Moore 1983. USGS PP 1228-A:A36–A37, pl. 6, figs. 10, 11. Upper Temblor(?) Fm., Miocene. UCMP IP223, "probably from Devils Den, Kern Co." (Reinhart 1943). Holotype (of *Anadara microdonta* Conrad of Osmont 1905). UCMP 11927. [Arcidae].

Anadara cf. *An. osmonti* (Dall, 1909) [*Arca*]. Powell et al. 2019b. *PaleoBios* 36: cover (as cf. *Anadara osmonti*), 7, 8, fig. 10. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP 13003. Hypotype UCMP 412699. [Arcidae].

Anadara (*Esmerarca*) *reinharti* (Lowe, 1935). [*Arca*]. Powell 2008. USGS SIR 2008-5155:8, fig. 3d. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Point, Oasis quad., Imperial Co. (not San Diego Co. as in locality description). UCMP A1705. Hypotype UCMP 39868, missing, *fide* Powell (2008: p. 6). [Arcidae].

Anadara (*Cunearca*) *rivulata* (Wiedey, 1928). [*Arca*]. Reinhart 1943. GSA Sp. Pap. 47:68–69, pl. 5, figs. 3, 6–8. Temblor Fm., Miocene. Near the Kern River, Caliente quad., Kern Co. UCMP 2716. Hypotypes UCMP 32440, 32441. **Remarks:** In the genus *Scapharca*, *fide* Moore (1983: p. A45). [Arcidae].

....., pl. 5, fig. 5. East side of first ridge west of Syncline Hill, two mi. west of Simmler, San Luis Obispo Co. SDSNH 432. Holotype SDSNH 20.

Anadara (*Cunearca*) *santaclarana* (Loel and Corey, 1932). [*Arca*]. Reinhart 1943. GSA Sp. Pap. 47:66–67, pl. 12, figs. 12, 13. Vaqueros Fm., Miocene. Ridge west of mouth of Wiley Canyon, Ventura Co. UCMP A252. Holotype UCMP 31765. **Remarks:** In the subgenus *Scapharca*, *fide* Moore (1983: p. A44). [Arcidae].

....., pl. 12, fig. 14. One mi. east of Grimes Canyon, Ventura Co. UCMP A336. Paratype UCMP 31767.

Anadara (*Larkinia*) *santana santana* (Loel and Corey, 1932). [*Arca*]. Reinhart 1943:63–64, pl. 8, figs. 7, 8. Vaqueros Fm., Miocene. West side of Plano Trabuco opposite south end of hill on plain, Santa Ana Mtns., Orange Co. UCMP 6128. Holotype UCMP 31768. **Remarks:** In the genus *Larkinia*, *fide* Moore (1983: p. A42). [Arcidae].

Anadara santana (Loel and Corey, 1932). [*Arca*]. Squires and Fritsche 1978. SEPM Guidebook 13:17, 20, pl. 3, fig. 1. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. UCLA 4268 [=LACMIP 24268]. Hypotype UCLA 58225 [=LACMIP 10578]. **Remarks:** In the genus *Larkinia*, *fide* Moore (1983: p. A42). [Arcidae].

Anadara (*Larkinia*) *santana weddlei* (Loel and Corey, 1932). [*Arca*]. Reinhart 1943. GSA Sp. Pap. 47:64–65, pl. 8, figs. 5, 6. Vaqueros Fm., Miocene. North of road and east of summit of Reliz-Vaqueros Creek Rd., Junipero Serra quad., Monterey Co. UCMP 3675. Holotype UCMP 31771. **Remarks:** In the genus *Larkinia*, *fide* Moore (1983: p. A43). [Arcidae].

Anadara (*Anadara*?) *strongi* (Loel and Corey, 1932). [*Arca*]. Reinhart 1943. GSA Sp.Pap. 47:42–43, pl. 12, fig. 6. Vaqueros Fm., Miocene. On spur in large turn in Laguna Canyon (west side of canyon), San Joaquin Hills, Orange Co. UCMP A527. Lectotype (of Reinhart 1943: p. 42) UCMP 31762. [Arcidae].

Anadara (*Anadara*?) *strongi* (Loel and Corey, 1932). [*Arca*]. Moore 1983. USGS PP 1228-A:A41–A42, pl. 6, figs. 13, 14. Upper Vaqueros Fm., Miocene. On spur in large turn in Laguna Canyon (west side of canyon), San Joaquin Hills, Orange Co. UCMP A527. Lectotype (of Reinhart 1943: p. 42) UCMP 31762, paralectotype UCMP 31762 (on same sample as lectotype). [Arcidae].

Anadara submontereyana (Clark, 1918). [*Arca (Scapharca)*]. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 7. Temblor Fm. (*Phacoides* Sand member) (of Stinemeyer et al. 1959: pp. 12, 13), Miocene. Las Yeguas Ranch quad., Temblor Range, Kern Co. USGS M3772. Hypotype USNM 646519. [Arcidae].

Anadara (*Anadara*) *submontereyana* (Clark, 1918). [*Arca (Scapharca)*]. Addicott 1973b. USGS PP 791:7, 23–24, pl. 1, figs. 6–7, 11. Temblor Fm. (Wygal Sandstone Member), Miocene. In bed of Temblor Creek, Carneros Rocks quad., Kern Co. USGS M3978. Hypotypes USNM 646519–646521. [Arcidae].

....., pl. 1, figs. 16, 17. On southeast side of ridge paralleling Media Agua Creek about 200 ft. above dirt road, Las Yeguas Ranch quad., Kern Co. USGS M3772. Hypotype USNM 646522, not USNM 646519 as in Addicott 1972b, pl. 1, Fig. 7.

Anadara (*Anadara*) *submontereyana* (Clark, 1918). [*Arca (Scapharca)*]. Moore 1983. USGS PP 1228-A:A37, pl. 6, fig. 12. San Ramon Fm., Miocene. South of town of Walnut Creek, Concord quad., Contra Costa Co. UCMP 52. Holotype UCMP 11186. [Arcidae].

Anadara thauma Maury, 1925. [*Scapharca* (*Scapharca*)]. Smith 1989. SEPM Guidebook 63:32, pl. 3, fig. 7. Imperial Fm. (Latrania Sand Member) [=Latrania Fm.], Miocene. Coyote Mtns., Imperial Co. LACMIP 9855. [Hypotype LACMIP 8275]. [Arcidae].

Anadara (*Anadara*) *topangensis* Reinhart, 1943. Moore 1983. USGS PP 1228-A:A40, pl. 8, figs. 5–6. Topanga Fm., Miocene. On Mulholland Dr. near Laurel Canyon Rd., Los Angeles Co. UCLA 391 [=LACMIP 20391]. Holotype UCLA [UCMP in text and pl. caption] 3258 [=LACMIP 10095]. [Arcidae].

Anadara (*Anadara*) *topangensis* Reinhart, 1943. Tweet et al. 2014. MWNAN 7:76, fig. 7. Topanga Canyon Fm., Miocene. Santa Monica Mtns. National Recreation Area, Los Angeles Co. [LACMIP 20391]. Holotype LACMIP 100095 (*ex* UCLA 3258). [Arcidae].

Anadara trilineata (Conrad, 1857a) of Arnold. [*Arca*]. Woodring et al. 1940 [1941]. USGS PP 195:89–90, pl. 11, figs. 10, 19–21. San Joaquin Fm. (*Acila* Zone), Pliocene. Arroyo Vadoso, North Dome, Kettleman Hills, Kings Co. USGS 12330. Hypotypes USNM 495717, 495720–495722. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

....., pl. 11, fig. 22. Excavation for driller's mud on north side of Arroyo Hondo, North Dome, Kettleman Hills, Kings Co. USGS. 12340. Hypotype USNM 495723.

....., pl. 11, figs. 23, 24. South fork of Arroyo Pino, North Dome, Kettleman Hills, Kings Co. USGS 12363. Hypotypes USNM 495724, 495725.

....., pl. 19, fig. c (refigured in Raup and Stanley 1971, p. 21, fig. 1-12; refigured in Raup and Stanley 1978:19, fig. 1-10; refigured in Prothero 2006, p. 236, fig. 7.3). San Joaquin Fm. (*Neverita* Zone), Pliocene. Butte east of Lower Rd., North Dome, Kettleman Hills, Kings Co. USGS 12499. Hypotype USNM (slab with *Neverita reclusiana* [=*Glossaulax*), *Olivella* cf. *O. pedroana* [=*Callianax*], *Anadara trilineata*, and *Volsella* fragments) determined here as missing.

Anadara (*Anadara*) *trilineata trilineata* (Conrad, 1857a). [*Arca*]. Reinhart 1943. GSA Sp.Pap. 47:57–60, pl. 5, fig. 9. Merced Fm., Pliocene [=Wilson Grove Fm., Miocene/Pliocene]. Near West Mark Creek, Sonoma Co. SU 1218. Hypotype (of *Anadara schizotoma* (Dall, 1898)) CASG 5276. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

....., pl. 6, figs. 1–3. San Joaquin Fm., Pliocene. Kettleman Hills, sec. 6, T22S, R18E, Fresno Co. Hypotype CASG 5277.

....., pl. 6, figs. 5, 7. "Fernando Fm." [=Pico Fm.?] Pliocene. Elsmere Canyon, Los Angeles Co. SU 1257. Hypotype SU

5315 [=CASG 72043].

....., pl. 7, fig. 1. Purisima Fm., Pliocene. Above pebble bed exposed on beach, Capitola, Santa Cruz Co. SU 1204. Hypotype SU 5314 [=CASG 72044].

Anadara trilineata (Conrad, 1857a) of Arnold. [*Arca*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:82, pl. 9, fig. 2. Sisquoc Fm. (diatomaceous strata), Miocene. Pennsylvania Asphalt Mine, Santa Barbara Co. USGS 4472. Hypotype USNM 560028. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

....., pl. 9, fig. 5. Casmalia Hills, NTU Mine, vicinity of Shuman, Santa Barbara Co. USGS 14878. Hypotype USNM 560029.

....., pl. 11, fig 4. Foxen Mudstone, Pliocene. Waldorf Asphalt Mine, Santa Barbara Co. USGS 4473. Hypotype USNM 560052.

....., pl. 16, fig. 19. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotype USNM 560099.

Anadara trilineata (Conrad, 1857a) of Arnold, elongate flat var. [*Arca*]. Woodring et al. 1940 [1941]. USGS PP 195:89–90, pl. 14, fig. 7. San Joaquin Fm. (*Pecten* Zone), Pliocene. Near divide between Arroyo Vadoso and Arroyo Largo, North Dome, Kettleman Hills, Kings Co. USGS 12331. Hypotype USNM 495750. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

....., pl. 20, figs. 15, 16. San Joaquin Fm. (*Neverita* Zone), Pliocene. East fork of Arroyo Toreido, North Dome, Kettleman Hills, Kings Co. USGS 12508. Hypotypes USNM 495329, 495331.

....., pl. 20, fig. 17. South of Arroyo Dobelgado, North Dome, Kettleman Hills, Kings Co. USGS 12635. Hypotype USNM 495332.

Anadara trilineata (Conrad, 1857a) of Arnold, short inflated var. [*Arca*]. Woodring et al. 1940 [1941]. USGS PP 195:89–90, pl. 29, fig. 2. Etchegoin Fm. (Upper *Pseudocardium* Zone), Pliocene. North branch of Arroyo Doblegado, southeast of El Rascador, North Dome, Kettleman Hills, Kings Co. USGS 12406. Hypotype USNM 495784. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

....., pl. 29, fig. 6. North branch of Arroyo Torcido, east of Double Hill, North Dome, Kettleman Hills, Kings Co. USGS 12400. Hypotype USNM 495788.

Anadara trilineata (Conrad, 1857a). [*Arca*]. Anonymous 1952. Min. Info. Serv. 5(6):1, unnumbered fig. (refigured in Ransom 1964, p. 42, fig. 2). Pliocene. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. Line drawing, source specimen unknown. [Arcidae].

Anadara trilineata (Conrad, 1857a). [*Arca*]. Hall 1958. UCPG 34(1):51, pl. 1, fig. 6. Cierbo Fm., Miocene. Southeast of Pleasanton, La Costa Valley quad. (1953), Alameda Co. SU 3237. Hypotype SU. 8438 [=CASG 69953]. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

....., pl. 1, fig. 7. Etchegoin Fm., Pliocene. Kettleman Hills, Kings Co. SU 1195. Hypotype SU 8439 [=CASG 69965].

Anadara trilineata (Conrad, 1857a). [*Arca*]. Cummings et al. 1962. CDMG Bull. 181:204, ph. 17, fig. 9. Purisima Fm. (Pomponio Member), Pliocene. Near mouth of Purisima Creek, Half Moon Bay quad., San Mateo Co. 700-1M. Hypotype determined here as missing. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

Anadara (*Anadara*) *trilineata* (Conrad, 1857a). [*Arca*]. Faustman 1964. UCPG 41(2):114–115, pl. 1, fig. 10. Pullen Fm., Pliocene. Along the west bank of Eel River, Scotia quad., Humboldt Co. UCMP B7919. Hypotype UCMP 37757. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

Anadara (*Anadara*) *trilineata* (Conrad, 1857a). [*Arca*]. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 2, fig. 2 (cast). Pancho Rico Fm., Miocene/Pliocene. Ridge between Moody Canyon and Pine Valley, San Ardo quad., Monterey Co. USGS M996. Hypotype USNM 649090. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c.Arcidae].

Anadara (*Anadara*) *trilineata* (Conrad, 1857a). [*Arca*]. Noda 1966a. Sci. Rep. Tohoku Univ. 38(1): pl. 2, fig. 25. San Juaquin [*sic*] Fm., Pliocene. Locality unknown, possibly Kings Co. Hypotype current whereabouts unknown. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

....., pl. 5, fig. 1. Purisima Fm., Pliocene. Locality unknown, Santa Cruz Co.(?) Hypotype SHKM 17003.

Anadara (*Anadara*) *trilineata* (Conrad, 1857a). [*Arca*]. Moore, 1968. SDSNH Occas. Pap. 15: 36, pl. 16, figs. a, b. [San Diego Fm.], Pliocene. Reynard Way, San Diego, San Diego Co. [SDSNH 430. Hypotypes SDSNH 4121, 4122]. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

Anadara trilineata (Conrad, 1857a). [*Arca*]. Addicott 1969. Pr.CAS 37(3):62, 66, 70, pl. 2, figs. 1, 3. Merced(?), Pliocene. Cut and pipeline trench on north side of Arastradero Rd., Palo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM 650961, 650962. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

Anadara trilineata (Conrad, 1857a). [*Arca*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):154–156, pl. 28, figs. 1, 3, 4, 6. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP [4459–4461]. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

....., pl. 28, fig. 2. North of UCLA 294, (about ¼ mi.) of the U.S./Mexico boundary, at west face of a terrace on the coast, San Diego Co. UCLA 312 [=LACMIP.20312]. Hypotype UCLA 48611 [=LACMIP 9288].

Anadara trilineata (Conrad, 1857a). [*Arca*]. Alexander 1974. Jour. Paleo. 48(4):635–648, pl. 1, fig. 1; pl. 2, figs. 7, 13. San Joaquin Fm. (upper *Mya* Zone), Pliocene. Kettleman Hills, Kings Co. Hypotypes IU 13833, 13839, 13868, all missing *fide*, R. Alexander (personal communication, 1999). **Remarks:** Supplemental description and first illustrated in Conrad, 1857c.[Arcidae].

....., pl. 1, figs. 2–4; pl. 2, figs. 2, 3, 20, 22. San Joaquin Fm. (*Acila* Zone), Pliocene. Kettleman Hills, Pliocene. Hypotypes IU 13828, 13829, 13846, 13848, 13869–13871.

....., pl. 1, figs. 5–11; pl. 2, figs. 6, 8, 12, 15–19, 21; pl. 3, figs. 1–9, 11,12. San Joaquin Fm. (*Pecten* Zone), Pliocene. Kettleman Hills, Kings Co. Hypotypes IU 13815–13823,13825,13826, 13832, 13834, 13838, 13841–13845, 13847, 13872, 13878.

....., pl. 1, fig. 12; pl. 2, figs. 1, 5, 9. San Joaquin Fm. (*Neverita* Zone), Pliocene. Kettleman Hills, Kings Co. Hypotype IU 13827, 13831, 13835, 13879.

....., pl. 1, figs. 13, 14; pl. 2, figs. 10, 11, 14. Etchegoin Fm. (Upper *Pseudocardium* Zone), Pliocene. Kettleman Hills, Kings Co. Hypotypes IU 13836, 13837, 13840, 13880, 13881.

....., pl. 1, fig. 15; pl. 3, fig. 10. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. Kettleman Hills, Kings Co. Hypotypes IU 13824, 13882.

....., pl. 2, fig. 4. Etchegoin/San Joaquin Fm.? (zone unknown), Pliocene, Kettleman Hills, Kings Co. Hypotype IU 13830.

Anadara trilineata (Conrad, 1857a). [*Arca*]. Perry 1977. Foss. Santa Cruz Co., p. 21, middle fig. Purisima Fm., Pliocene. Santa Cruz Co. Hypotype determined here as missing. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

Anadara trilineata (Conrad, 1857a). [*Arca*]. Fowkes 1982. Coalinga Guidebook, p. 31, unnumbered fig. Etchegoin/Jacalitos Fm. (of Fowkes 1982: p. 31), Miocene/Pliocene. North Dome, Kettleman Hills, Kings Co. WHC hypotype lost? **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

....., p. 135, unnumbered fig. (as *Anadara* (*Arca*) *trilineata*). Road cut just northwest of the Atlas Asbestos gate, near Murietta Camp, Fresno Co. WHC hypotype lost? **Remarks:** The author figured the same specimen (p. 135 and p. 207) from different localities, therefore the actual locality is unknown.

....., p. 207, unnumbered fig. (as *Anadara* (*Arca*) *trilineata*). W-K Hill, north of Coalinga, Fresno Co. WHC hypotype lost?

Anadara (*Anadara*) *trilineata* (Conrad, 1857a). [*Arca*]. Moore 1983. USGS PP 1228-A:A40–A41, pl. 7, figs. 7, 9. San

Diego Fm., Pliocene. San Ysidro quad. (1943)], San Diego Co. LACMIP 305 Hypotype (of Hertlein and Grant 1972, pl. 28, fig. 1) LACMIP 4459. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

....., pl. 7, fig. 8. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co.. Hypotype (of Schenck and Keen 1940, pl. 1, fig. 6) SU/CASG 5304 [=CASG 71890].

Anadara trilineata (Conrad, 1857a). [*Arca*]. Perry 1988. SCMA, p. 19, fig. 10E. Purisima Fm., Miocene/Pliocene. Capitola City Beach and New Brighton State Beach areas, Santa Cruz Co. [CASG 66173. Hypotype CASG 66173.01]. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

Anadara trilineata (Conrad, 1857a). [Arca]. Squires 2012. NHMLAC CS 520:76, fig. 12. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14338. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. [Arcidae].

Anadara (*Anadara*) *trilineata* subsp. *calcarea* (Grant and Gale, 1931). [*Arca*]. Reinhart 1943. GSA Sp.Pap. 47:61–62, pl. 9, figs. 6–8. San Diego Fm., Pliocene. Well in Balboa Park, San Diego, San Diego Co. Holotype SU 436 [=CASG 61956.01]. [Arcidae].

Anadara trilineata calcarea (Grant and Gale, 1931). [*Arca*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):156, pl. 28, figs. 5, 7–10. San Diego Fm., Pliocene. San Diego well, Balboa Park, San Diego, San Diego Co. [CASG 12107]. Hypotypes CASG [=CASG 70450]. [Arcidae].

Anadara (Anadara) trilineata calcarea (Grant and Gale, 1931). [*Arca*]. Moore 1983. USGS PP 1228-A:A41, pl. 8, figs. 1, 2. San Diego Fm., Pliocene. Well in Balboa Park, San Diego, San Diego Co. Holotype SU/CASG 436 [CASG 61956.01]. [Arcidae].

Anadara trilineata (Conrad, 1857a) of Arnold, var. cf. *canalis* (Conrad, 1857a). [*Arca*]. Woodring et al. 1940 [1941]. USGS PP 195:89–90, pl. 24, fig. 7. San Joaquin Fm. (*Cerastoderma*-bearing sandstone), Pliocene. Branch of Arroyo Doblegado, North Dome, Kettleman Hills, Kings Co. USGS 12706. Hypotype USNM 495344. **Remarks:** Considered a subspecies of *Anadara trilineata* rather than a variety, *fide* Adegoke (1969: p. 91). [Arcidae].

....., pl. 31, fig. 9. Etchegoin Fm. (*Siphonalia* zone), Pliocene. Southeast slope of Las Paredes, North Dome, Kettleman Hills, Kings Co. USGS 12826. Hypotype USNM 495815.

Anadara (*Anadara*) *trilineata canalis* (Conrad, 1857a). [*Arca*]. Reinhart 1943. GSA Sp.Pap. 47: 60–61, pl. 7, figs. 3, 4. Purisima Fm., Pliocene. Pebble bed near Capitola, Santa Cruz Co. SU 1203. Hypotype SU/CASG 5304 determined here as missing. [Arcidae].

Anadara (*Anadara*) *trilineata canalis* (Conrad, 1857a). [*Arca*]. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 5, fig. 1 (cast). Pancho Rico Fm., Miocene/Pliocene. Roadcut on west side of U.S. Hwy. 101, Reliz Canyon, Wunpost quad., Monterey Co. USGS M982. Hypotype USNM 649099. [Arcidae].

Anadara (*Anadara*) *trilineata canalis* (Conrad, 1857a). [*Arca*]. Moore 1983. USGS PP 1228-A: A41, pl. 8, fig. 4. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. [SU 1203]. Hypotype (of Reinhart 1943, pl. 7, fig. 3) SU/CASG 5304, lost, *fide* Moore (1983: p. A41). [Arcidae].

Anadara Fowkes 1982. Coalinga Guidebook, p. 25, unnumbered fig. Temblor Fm., Miocene. Temblor "Reef" (of Merriam), north of Coalinga, Fresno Co. WHC hypotype lost? **Remarks:** Determined here as *Anadara trilineata* (Conrad, 1857a). [Arcidae].

Anadara sp. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. T. Cañada Fm., Eocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. [Hypotype SBMNH 60208]. **Remarks:** Determined here as indet. cardiid sp. [Cardiidae].

....., pl. 1 (pl. 2 in caption), fig. U. Vaqueros Fm. (=Temblor Fm.), Miocene. [On beach at Pozo Anchorage], Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 1827 [=SBMNH 60207]. **Remarks:** Determined here as indet. cardiid sp.[Cardiidae]

Anadara (*Arca*) Fowkes 1982. Coalinga Guidebook, p. 33, unnumbered fig. San Joaquin Fm. ("*Neverita* Zone"), Pliocene. Kings Co. WHC hypotype lost?. **Remarks:** Determined here as *Anadara trilineata* (Conrad, 1857a). [Arcidae].

....., p. 229, unnumbered fig. (refigured in Fowkes 1983, p. 31). Temblor Fm., Miocene. Temblor Reef, Big Tar Canyon, Kings Co. WHC hypotype lost?

Anapteris wardi (M.A. Hanna, 1927). [*Corbula*]. Givens 1994. Jour. Paleo. 68(1):170–171, figs. 1,2. Ardath Shale, Eocene. Sea cliff north of La Jolla, San Diego Co. UCMP 5062 (=UCR 4922). Holotype UCMP 31146, paratype UCMP 31147. [Corbulidae].

....., fig. 2 (*camera lucida* drawing). Ardath Shale, Eocene. East wall of Rose Canyon, San Diego Co. UCR 4952. Hypotype UCR 4952/471.

Angulararca californiensis Noda, 1966b (n. sp.). Saito No-on Kai Mus. Res. Bull. 35:15, figs. 5, 9–11, (refigured from Grant and Gale 1931, as *Arca terminumbonis*). Pico Fm., Pliocene. Elesmere [*sic*] Canyon, Los Angeles Co. [SDSNH 207]. Holotype SDSNH 80 [*ex* paratype of *Arca terminumbonis*], paratype SDSNH 82. **Remarks:** *Arca* (*Arca*) *terminumbonis* Grant and Gale, 1931, *fide* Moore (1983: p. A33). [Arcidae].

Angulararca terminumbonis (Grant and Gale, 1931). [*Arca*]. Noda 1966b. Saito Ho-on Kai Mus. Res. Bull. 35:16, figs. 1–3 (not fig. 10) (refigured from Reinhart 1943, as *Arca terminumbonis*). Pico Fm., Pliocene. Elesmere [*sic*] Canyon, Los Angeles Co. [SDSNH 207]. Holotype SDSNH 79. **Remarks:** In the genus/subgenus *Arca* (*Arca*), *fide* Moore (1983: p. A33). [Arcidae].

Anodontia? (*Anodontia*?) *inflata* (Wagner and Schilling, 1923). [*Phacoides*]. Moore 1988b. USGS PP 1228-D:D16, pl. 1, figs. 13, 15, 18. San Emigdio Fm., Eocene. Devil's Kitchen area, Kern Co. UCMP 3195. Holotype UCMP 11418. [Lucinidae].

Anomia hannai Wiedey, 1928. Moore 1987. USGS PP 1228-C:C10, pl. 5, figs. 4–5. Vaqueros Fm., Oligocene/Miocene. Val Celico, a little west of Pleyto, Monterey Co. SU 449. Holotype SU 514 [=CASG 71545]. [Anomiidae].

Anomia inconspicua Clark, 1918. Moore 1987. USGS PP 1228-C:C10, pl. 6, fig. 8. San Ramon Fm., Miocene. Southwest of town of Walnut Creek Concord quad., Contra Costa Co. UCMP 1131. Holotype UCMP 11205. [Anomiidae].

Anomia inornatus (Gabb, 1864). [*Placunanomia*]. Moore 1987. USGS PP 1228-C:C9–C10, pl. 6, fig. 2; pl. 7, fig. 3. Domengine Fm., Eocene. Corral Hollow, Alameda Co. Lectotype (of Moore 1987:C9) ANSP 4442. [Anomiidae].

Anomia mcgoniglensis M.A. Hanna, 1927. Givens and Kennedy 1976. Jour. Paleo. 50(5):969, 974, pl. 4, figs. 13–16. Delmar Fm. [=Santiago Fm.?], Eocene. Roadcut between Vista and San Marcos, San Diego Co. UCR 4865. Hypotypes UCR 4865/150-4865/151. [Anomiidae].

Anomia mcgoniglensis M.A. Hanna, 1927. Squires 1984. NHMLAC CS 350:45, fig. 10k. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 438 [=LACMIP 22775]. Hypotype UCLA 59280 [=LACMIP 10560]. [Anomiidae].

Anomia? *mcgoniglensis* M.A. Hanna, 1927. Moore 1987. USGS PP 1228-C:C11, pl. 5, figs. 1, 3. Delmar Fm. (as La Jolla Group in locality description), Eocene. Point on the north side of Soledad Valley formed by McConigle Canyon joining Soledad Valley, San Diego Co. UCMP 5080 [not 3981 as in text]. Syntypes UCMP 31011–31012 (as 31011 in figure caption) [unfigured syntypes UCMP 31009–31010). [Anomiidae].

?*Anomia mcgoniglensis* M.A. Hanna, 1927. Squires 2008. NHMLAC CS 517:5, fig. 41. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17849. Hypotype LACMIP 13442. [Anomiidae].

Anomia peruviana d'Orbigny, 1846. Hertlein and Grant 1972. SDSNH Mem. 2(2B):223, 224, pl. 40, fig. 2. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotype LACMIP 4531. [Anomiidae].

....., pl. 41, fig. 8. Pacific Beach, San Diego Co. CASG 1400. Hypotype CASG 70445.

Anomia peruviana d'Orbigny, 1846. Powell 1985. WSM Ann. Rept. 17:32, pl. 1, figs. 2, 3. Imperial Fm. (Latrania Sand member) [=Latrania Fm.], Miocene/Pliocene. [Siltstones cropping out on front of Indio Hills near Willis Palms, Thousand Palms quad., Riverside Co. UCMP A1417. Hypotype UCMP 37531. [Anomiidae].

Anomia peruviana d'Orbigny, 1846. Powell et al. 2019a. USGS SIR 2019-5021:3, 30, pl. 2, fig. 10. Wilson Grove Fm.,

Miocene. North of Bloomfield, Sonoma Co. CASG 54135. Hypotype CASG 78427. [Anomiide].

Anomia subcostata Conrad, 1855a. Moore 1987. USGS PP 1228-C:C10–C11, pl. 6, figs. 7, 10, 13. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Carrizo Creek, Colorado Desert, Imperial Co. Lectotype (of Moore 1987: p. C10) USNM 1865, hypotype USNM 13345a (holotype, *fide* Keen and Bentson (1944: p. 25)). **Remarks:** Supplemental descriptions in Conrad, 1855b, 1857b, and 1857e. [Anomiidae].

....., pl. 7, fig. 5; pl. 8, fig. 1. North side of Coyote Mtn., Imperial Co. CASG 684. Hypotype (of G D. Hanna 1926, pl. 23, fig. 4) CASG 1814.

Anomia subcostata Conrad, 1855a. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 60, fig. 3.15A, B. Deguynos Fm., Pliocene. Painted Gorge, Imperial Co. SDSNH 4981]. Hypotype SDSNH 97260. **Remarks:** Supplemental descriptions in Conrad, 1855b, 1857b, amd 1857e. [Anomiidae].

Anomia vaquerosensis Loel and Corey, 1932. Squires and Fritsche 1978. SEPM Guidebook 13: 16, 21, pl. 1, fig. 8. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 383 [=LACMIP 16105]. Hypotype UCLA 58217 [=LACMIP 10594]. [Anomiidae].

Anomia sp. Throckmorton 1988a. USGS OFR 88-59:46, 47, pl. 4, fig. 2 (refigured in Throckmorton 1988b, pl. 1, fig. 8). Tesla Fm., uppermost Cretaceous/lowermost Paleocene. From float 50 m above the top of the shale member of the Moreno Fm., Midway quad., Alameda Co. UCMP D8150. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Anomiidae].

Apolymetis cf. *A. dombei* (Hanley, 1844). [*Tellina*]. Woodring et al. 1940 [1941]. USGS PP 195:93, pl. 32, fig. 2. Etchegoin Fm. (*Siphonalia* zone), Pliocene. Southeast slope of Las Paredes, North Dome, Kettleman Hills, Kings Co. USGS 12826. Hypotype USNM 495817. **Remarks:** In the genus/subgenus *Psammotreta* (*Leporimetis*), *fide* Coan and Valentich-Scott (2012: p. 617). [Tellinidae].

Apolymetis cf. *A. sespeensis* (Loel and Corey, 1932). [*Macoma*]. Weaver and Kleinpell 1963. UCPG 43:207, pl. 38, fig. 2. Gaviota Fm., Eocene. Ridge between Las Varas Canyon and Dos Pueblos Canyon Goleta quad., Santa Barbara Co. UCMP B6978. Hypotype SU 9201 (not SU 9321 as in text) [=CASG 70135]. **Remarks:** Junior synonym of *Heteromacoma rostellata* (Clark, 1918), *fide* Addicott (1973b: p. 34). [Tellinidae].

Arca* (*Arca*) *filewiczi Squires, 1991a (n. sp.). Veliger 34(1):68–70, figs. 2–6. Santa Susana Fm., Eocene. North side of Simi Valley, Ventura Co. CSUN 965 [=LACMIP 16111]. Holotype LACMIP 8365, [unfigured paratype LACMIP 8366]. [Arcidae].

Arca (*Arca*) *filewiczi* Squires, 1999b. Squires 1999b. NHMLAC CS 479:23, fig. 51. Santa Susana Fm., Eocene. North side Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 965 [=LACMIP 16111). Holotype LACMIP 8365. [Arcidae].

Arca* (*Arca*) *givensi Squires, 1991a (n. sp.). Veliger 34(1):70–71, figs. 7–11. Juncal Fm., Eocene. Pine Mtn. area, Ventura Co. UCR 4667. Holotype UCR 4667/131, paratypes UCR 4667/132, 4667/133. [Arcidae].

Arca (*Arca*) *hawleyi* Reinhart, 1943. Weaver and Kleinpell 1963. UCPG 43:196, pl. 28, figs. 5–7. Cozy Dell Shale, Eocene. South of Buelton, east side of Nojoqui Canyon, Santa Barbara Co. UCMP B6932. Hypotypes SU. 9249, 9250 [=CASG 70136, 70137]. [Arcidae].

Arca (*Arca*) *hawleyi* Reinhart, 1943. Moore 1983. USGS PP 1228-A:A31-A32, pl. 5, fig. 1. Tejon Fm. (Gaviota Fm. in locality description), Eocene. East side of Nojoqui Creek, north of Gaviota Pass, Santa Barbara Co. SU 834. Holotype CASG 5343 [=CASG 72046]. [Arcidae].

Arca* (*Arca*) *leptogrammica Hall, 1964 (n. sp.). Jour. Paleo. 38(1):87–88, pl. 22, figs. 9, 10. Santa Margarita Fm., Miocene. Nipomo quad. (1952), San Luis Obispo Co. UCLA 4180 [=LACMIP 24180]. Holotype UCLA 34997 [=LACMIP 9228], unfigured paratype UCLA 34998 [=LACMIP 9229]. [Arcidae].

Arca (*Arca*) *leptogrammica* Hall, 1964. Moore 1983. USGS PP 1228-A:A32–A33, pl. 6, fig. 4. Santa Margarita Fm. (Phoenix Member) (of Hall, 1962: p. 49), Miocene. Nipoma [*sic*] quad. (1952), San Luis Obispo Co. UCLA 4180 [= LACMIP 24180]. Holotype UCLA 34977 [=LACMIP 9228]. [Arcidae].

Arca cf. *A. pacifica* (G.B. Sowerby I, 1833). [*Byssoarca*]. Powell 2008. USGS SIR 2008-5155:6, fig. 3f. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Point, Oasis quad., Imperial Co. (not San Diego Co. as in locality description). UCMP A1707 [=UCMP A1705]. Hypotype UCMP 39867. [Arcidae].

Arca pacifica (G.B. Sowerby I, 1833). [*Byssoarca*]. Rugh 2014a. Desert Symposium vol.:135, fig. 1-10 (lower specimens). Latrania Fm. (Andrade Member), Miocene. Ocotillo Canyon, Imperial Co. [ABDSP 5014.7. Hypotype ABDSP I9846]. [Arcidae].

Arca (*Arca*) *santamariensis* Reinhart, 1937. Reinhart 1943. GSA Sp.Pap. 47:26, pl. 3, figs. 7–11. Careaga Fm., Pliocene. Fugler Pt. asphalt beds, southeast of Santa Maria, Santa Barbara Co. [LACMIP 16112]. Holotype CIT 1381 [=LACMIP 4072]. [Arcidae].

Arca santamariensis Reinhart, 1937. Woodring and Bramlette 1950 [1951]. USGS PP 222:81, pl. 14, figs. 6, 7. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., brachiopod bed, Santa Barbara Co. USGS 14770. Hypotype USNM 560097. [Arcidae].

Arca (*Arca*) *santamariaensis* Reinhart, 1937. Moore 1983. USGS PP 1228-A:A33, pl. 5, figs. 2, 5. Careaga Fm. (Cebada Member), Pliocene. Asphalt beds at Fugler Pt., 10.2 km southeast (not southwest as in text) of Santa Maria, Santa Barbara Co. LACMIP 16112. Holotype LACMIP 4072 (*ex*-CIT 1381). [Arcidae].

Arca cf. *A. santamariensis* Reinhart,1937. Powell et al. 2019a. USGS SIR 2019-5021:3, 29, pl. 2, figs. 2, 3. Wilson Grove Fm., Miocene. Bloomfield Quarry, just north of Bloomfield, Sonoma Co. CASG 54135. Hypotypes CASG 78403, 78404. [Arcidae].

Arca santana Loel and Corey, 1932. Stadum 1973. OCF p. 25, pl. 3, fig. 7. Vaqueros Fm.?, Miocene. Hypotype possibly at SDSNH (current whereabouts unknown). **Remarks:** *Ex* F. and M. Grouard (Silverado, CA) collection. In the genus *Larkinia*, *fide* Moore (1983: p. A42). [Arcidae].

Arca (*Arca*) *sisquocensis* Reinhart, 1937. Reinhart 1943. GSA Sp.Pap. 47:25, pl. 2, figs. 10–12. Careaga Fm., Pliocene. Fugler Pt. asphalt beds, near Santa Maria, Santa Barbara Co. [LACMIP 16112]. Holotype CIT 1382 [=LACMIP 4073]. [Arcidae].

Arca (*Arca*) *sisquocensis* Reinhart, 1937. Hertlein and Grant 1972. SDSNH Mem. 2(2B):153–154, pl. 27, figs. 26, 27, 31–33. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP [4457, 4458]. [Arcidae].

Arca (*Arca*) *sisquocensis* Reinhart, 1937. Moore 1983. USGS PP 1228-A:A33–A34, pl. 5, figs. 6, 8. Careaga Fm. (Cebada member), Pliocene. Fugler Pt. asphalt beds near Santa Maria, Santa Barbara Co. [LACMIP 16112]. Holotype LACMIP 4073 (*ex* CIT 1382). [Arcidae].

Arca (*Arca*) *terminumbonis* Grant and Gale, 1931. Reinhart 1943. GSA Sp.Pap. 47:24–25, pl. 3, figs. 1–3. Pico Fm., Pliocene. Near SDSNH 202, Elsmere Canyon, Los Angeles Co. SDSNH 207. Holotype SDSNH 79. [Arcidae].

Arca (*Arca*) *terminumbonis* Grant and Gale, 1931. Moore 1983. USGS PP 1228-A:A33, pl. 5, figs. 3–4. "Fernando Fm." [=Pico Fm.], Pliocene. Near Elsmere Canyon, San Fernando quad., Los Angeles Co. SDSNH 207. Holotype SDSNH 79. [Arcidae].

Arca trilineata Conrad, 1857a. Hanna and Hertlein, 1943. CDM Bull. 118(2):176, figs. 65-11, 65-17. Etchegoin Fm. (*Arca* Zone), Pliocene. Kettleman Hills, Fresno Co. CASG 26805. Hypotypes CASG 5922, 5922A. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. In the genus *Anadara*, *fide* Moore (1983: p. A40). [Arcidae].

Arca (*Arca*) *trilineata* Conrad, 1857a. Shimer and Shrock,1944. Index Foss. N.A., p. 383, pl. 148, fig. 10 (refigured from Arnold and Anderson, 1910, pl. 40, fig. 1). [Etchegoin Fm.], Pliocene. Coalinga district, Fresno Co. USGS 4665. Hypotype USNM 165534. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. In the genus *Anadara*, *fide* Moore (1983: p. A40). [Arcidae].

Arca (*Anadara*) *trilineata* Conrad, 1857a. Hertlein 1951. CDM Bull. 154:191, fig. 2, 15. Merced Fm. [=Purisima Fm.], Pliocene. Near Millbrae, San Mateo Co. CASG 32670. [Hypotype CASG 8343]. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. In the genus *Anadara*, *fide* Moore (1983: p. A40). [Arcidae].

Arca trilineata Conrad, 1857a. Moore et al. 1952. Inv. Foss., p. 446, fig. 10-7.6. Miocene/Pliocene. Line drawing, source specimen unknown. **Remarks:** Supplemental description and first illustrated in Conrad, 1857c. In the genus *Anadara*, *fide* Moore (1983: p. A40). [Arcidae].

Arca n. sp. Peck 1960. UCPG 36(4):240, pl. 21, figs. 6, 9. Ohlson Ranch Fm., Pliocene. Near Gualala School, Plantation quad., Sonoma Co. UCMP B2062. Hypotype UCMP 32932. [Arcidae].

Arca (*Arca*) sp. A. Reinhart 1943. GSA Sp. Pap. 47:24, pl. 10, figs. 2, 5. Imperial Fm. [=Latrania Fm.], Pliocene(?). Alverson Canyon, Carrizo Mtns. [=Coyote Mtn.], Imperial Co. SDSNH 347B. Hypotype SDSNH 1604, determined here as missing. [Arcidae].

Arca (*Arca*) n. sp.? Givens 1974. UCPG 109: 40, pl. 1, fig. 8. Juncal Fm., Eocene. East side of south-draining tributary to Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4667. Hypotype UCR 4667/131. **Remarks:** *Arca* (*Arca*) *givensi* n. sp., *fide* Squires (1991a: p. 70, 71. [Arcidae].

Arcinella californica (Dall, 1903a). [*Echinochama*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 62, fig. 3.16A. Latrania Fm., Miocene/Pliocene. Alverson Canyon, Imperial Co. SDSNH 345. Hypotype SDSNH 12115. [Chamidae].

Arcinella cf. *A. californica* (Dall,1903a). [*Echinochama*]. Powell 2008. USGS SIR 2005-5155:15, fig. 4y. Imperial Fm. [=Latrania Fm.], Pliocene. Near Desert Shores and Travertine Rock, Imperial Co. (not San Diego Co. as in locality description). USGS M9779 [=USGS M9778]. Hypotype USNM 486908. [Chamidae].

Arcinella californica (Dall, 1903a) [*Echinochama*]. Rugh 2014a. Desert Symposium vol.:136, fig. 12 (right specimen). Latrania Fm. (Andrade Member), Miocene. Alverson Canyon, Imperial Co. ABDSP 5005.7. Hypotype ABDSP I959. [Chamidae].

Arcopsis (*Arcopsis*) *eba* (M.A. Hanna, 1927). [*Arca*]. Reinhart 1943. GSA Sp.Pap. 47:37–38, pl. 11, figs. 15, 16. "Rose Canyon Shale," Eocene. At the junction of San Clemente and Rose canyons, La Jolla quad., San Diego Co. UCMP 3990. Holotype UCMP 31047. [Noetiidae].

Arcopsis (*Arcopsis*) *eba* (M.A. Hanna, 1927). [*Arca*]. Moore 1983. USGS PP 1228-A:A47–A48, pl. 10, figs. 17, 18. "Rose Canyon Shale," Eocene. On the east side of canyon in bottom of Rose Creek, La Jolla quad., San Diego Co. UCMP 3990. Holotype UCMP 31047. [Noetiidae].

Arcopsis sp. Squires 2012. NHMLAC CS 520:76, fig. 11. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14337. [Noetiidae].

Argopecten abietis abbotti (Hertlein and Grant, 1972). [*Chlamys*]. Moore 1984. USGS PP 1228-B:B42, pl. 12, figs. 1, 5. San Diego Fm., Pliocene. Loma Portal, San Diego, San Diego Co. SDSNH 716. Holotype SDSNH 4334. **Remarks:** SDSNH 716 was proven to be of Pleistocene age (Deméré 1981: p. 3). [Pectinidae].

Argopecten circularis bramkampi (Durham, 1950). [*Aequipecten*]. Moore 1984. USGS PP 1228-B:B35–B36, pl. 9, fig. 5. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Oyster reef, northwest side of Carrizo Mtn., Imperial Co. UCMP A1268. Holotype UCMP 30035. **Remarks:** Determined here as *Argopecten ventricosus bramkampi* (Durham, 1950). [Pectinidae].

Argopecten circularis eldridgei (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B36, pl. 9, fig. 11. Etchegoin Fm., Miocene/Pliocene. McKittrick District, Kern Co., USGS 3878. Holotype USNM 164580. **Remarks:** Determined here as *Argopecten ventricosus eldridgei* (Arnold, 1906). [Pectinidae].

Argopecten circularis imposter (G D. Hanna, 1924). [*Pecten*]. Moore 1984. USGS PP 1228-B:B36, pl. 10, fig. 1. Upper Etchegoin Fm., Pliocene. Near Zapato Creek, Coalinga quad., Fresno Co. UCMP 2991. Holotype UCMP 11089. **Remarks:** Determined here as *Argopecten ventricosus impostor* (G D. Hanna, 1926). [Pectinidae].

Argopecten? *crassiradiatus* (Clark, 1915). [*Pecten*]. Moore 1984. USGS PP 1228-B:B42, pl. 10, fig. 8. Cierbo Fm., Miocene. Oyster Pt., Riggs Canyon, Mt. Diablo quad. Contra Costa Co. UCMP 467 (not UCMP 367 as cited in text). Holotype UCMP 11584. [Pectinidae].

Argopecten deserti (Conrad, 1855b). [*Pecten*]. Moore 1984. USGS PP 1228-B:B33–B34, pl. 9, fig. 2. Imperial Fm.

[=Latrania Fm.], Miocene/Pliocene. Carrizo Creek, Colorado Desert, Imperial Co. Holotype USNM 8398 [figured by Moore 1984, however, based on careful observation, USNM 8398 is not the holotype]. [Pectinidae].

Argopecten deserti (Conrad, 1855b). [*Pecten*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 59, figs. 3.13A-D. Latrania Fm., Miocene/Pliocene. Barrett Canyon, Coyote Mtn., Imperial Co. SDSNH. 45. Hypotype SDSNH 12003. [Pectinidae].

Argopecten deserti (Conrad, 1855b). [*Pecten*]. Rugh 2014a. Desert Symposium vol.:135, fig. 1-8 (three left specimens). Deguynos Fm. (Mud Hills Member), Pliocene. Fish Creek/Vallecitos Creek, San Diego Co. ABDSP 5089. Hypotype ABDSP I 10197. [Pectinidae].

Argopecten ericellus (Hertlein, 1929b). [*Pecten*]. Moore 1984. USGS PP 1228-B:B37, pl. 12, fig. 2. San Diego Fm., Pliocene. Pacific Beach, La Jolla, San Diego Co. CASG 1132. Holotype CASG 2998. [Pectinidae].

Argopecten invalidus G D. Hanna, 1924). [*Pecten*]. Moore 1984. USGS PP 1228-B:B37, pl. 10, fig. 5. San Diego Fm., Pliocene. Pacific Beach, La Jolla, San Diego Co. CASG 61855. Holotype SU/CASG 8 [=CASG 61855.01]. [Pectinidae].

Argopecten invalidus (G D. Hanna, 1924). [*Pecten*]. Squires et al. 2006. NHMLAC CS 511:11–13, figs. 15, 16. Pico Fm., Pliocene. Southwest of Valencia, Oat Mtn. quad. (1952, PR 1969), Los Angeles Co. LACMIP 15719. Hypotypes LACMIP 13344,13345. [Pectinidae].

Argopecten invalidus (G D. Hanna, 1924). [*Pecten*]. Squires 2012. NHMLAC CS 520:76, figs. 16–19. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 9659. Hypotypes LACMIP 14342–14344. [Pectinidae].

Argopecten sp. cf. *A. mendenhalli* (Arnold, 1906). [*Pecten*]. Powell 1985. WSM Ann. Rept. 17:32, pl. 1, fig. 6. Imperial Fm. (Latrania Sand Member) [=Latrania Fm.], Miocene/Pliocene. Whitewater/Supercreek area, Riverside Co. UCR 5035. Hypotype UCR 5035/2 (not UCR 5035/11 as pl. caption). [Pectinidae].

Argopecten mendenhalli (Arnold, 1906). [*Pecten*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 59, fig. 3.13E. Latrania Fm., Miocene/Pliocene. Coyote Mtn., Imperial Co. SDSNH 5452. Hypotype SDSNH 97281. [Pectinidae].

Argopecten subdolis (Hertlein, 1925b). [*Pecten*]. Moore 1984. USGS PP 1228-B:B37-B38, pl. 10, figs. 3, 4. San Diego, Pliocene. Pacific Beach, La Jolla, San Diego Co. SU 115 [=CASG 61881]. Holotype SU/CASG 51 [=CASG 61881.01]. [Pectinidae].

Argopecten subventricosus (Dall, 1898). [*Pecten*]. Smith 1991a. USGS PP 1391:8, pl. 2, fig. 12. Pliocene. Ventura Co. Holotype USNM 61246. **Remarks:** Junior synonym of *Argopecten ventricosus* (G.B. Sowerby II, 1842), *fide* Coan et al. (2000: p. 235). [Pectinidae].

Argopecten sverdrupi (Durham, 1950). [*Pecten*]. Powell 1985. WSM Ann. Rept. 17:32, pl. 1, fig. 7. Imperial Fm. (Latrania Sand Member) [=Latrania Fm.], Miocene/Pliocene. Whitewater/Super Creek area, Riverside Co. UCR 5042. Hypotype UCR 5042/22 (not UCR 5042/23 as in pl. caption). [Pectinidae].

Argopecten sp. Smith 1991a. USGS PP 1391:56, pl. 22, fig. 5. Santa Margarita Fm.?, Miocene. Middle fork of Vineyard Canyon, San Miguel quad., Monterey Co. USGS 16833. Hypotype USNM 334998. **Remarks:** Described as *Lyropecten terrysmithae* n. sp., *fide* Powell et al. (2020: p. 2–7). [Pectinidae].

....., pl. 22, fig. 6. Santa Margarita Fm., Miocene. Cholame Hills, between Indian Valley and Portuguese Canyon, Stockdale Mtn. quad., Monterey Co. CASG 28473. Hypotype (of G D. Hanna and Hertlein 1943, fig. 63-7, CASG 5900 (as *Pecten* (*Lyropecten*) *estrellanus* (Conrad, 1857a). **Remarks:** Described as *Lyropecten terrysmithae* n. sp., *fide* Powell et al. (2020: p. 2–7). [Pectinidae].

Assorted marine invertebrate fossils. Rugh 2001. Quarterly Dose (IDEC Pharmaceuticals Corp.) 21(3):8, unnumbered fig. (upper specimen). Santiago Fm., Eocene. NIMO (New IDEC manufacturing operation) site, Oceanside, San Diego Co. SDHHM 4572. Hypotype SDSNH 158089. **Remarks:** *Barbatia morsei* (Gabb, 1864), *fide* S. Rugh (personal communication, 2019).

Atrina alamedensis (Yates *in* Cooper 1888). [*Pinna*]. Moore 1983. USGS PP 1228-A:A80–A81, pl. 23, fig. 3. San Pablo(?) Group, Miocene. Alameda Co. (Kern Co. on CASG label). Hypotype (of Cooper 1894, pl. 4, fig. 53) CASG 5. [Pinnidae].

....., pl. 27, figs. 1, 3. San Pablo(?) Group, Miocene. In sandstone boulder, Alameda Creek, Alameda Co. Holotype UCSB Y474 [=SBNHM 35621].

Atrina bicuneata (Nomland, 1917b). [*Pinna*]. Moore 1983. USGS PP 1228-A:A81, pl. 23, fig. 1. Santa Margarita Fm., Miocene. Sixteen km northeast of Coalinga, Fresno Co. UCMP 2284. Holotype UCMP 11307. [Pinnidae].

Atrina stephensi G D. Hanna, 1926. Moore, 1983. USGS PP 1228-A:A81, pl. 24, fig. 4. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Coyote Mtn., Imperial Co. SDSNH 53]. Holotype SDSNH

Atrina triangularis Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1286, fig. 1H. Santa Susana Fm., Paleocene. Siltstone at bottom of narrow gully on east side of Runkle Canyon, Simi Hills, Ventura Co. UCR 6832. Holotype UCR 6832/100 (not UCR 6832/1 as in text). [Pinnidae].

Atrina venturensis (Yates *in* Cooper, 1888). [*Pinna*]. Moore, 1983. USGS PP 1228-A:A80, pl. 23, fig. 2. Vaqueros Fm., Oligocene/Miocene. Ventura Co. CSMB 14123. Hypotype (of Cooper 1894, pl. 4, fig. 54) CASG 622. [Pinnidae].

....., pl. 27, fig. 2. Casitas Pass, Ventura Co. Holotype [lectotype (of Moore 1983: A80)], *fide* Coan and Scott 1990:405] UCSB Y3096 [=SBNHM 35622].

Atrina n. sp. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 14. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 6832]. Hypotype UCR 6832/1. **Remarks:** *Atrina triangularis* n. sp., *fide* Zinsmeister (1983b: p. 1286). [Pinnidae].

Axinopsida serricata (Carpenter, 1864a). [*Cyptodon*]. Hertlein and Grant, 1972. SDSNH Mem. 2 (2B):257–258, pl. 44, figs. 17, 18. San Diego Fm., Pliocene. West side of next gully east of LACMIP locality 305 at the same elevation, San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 4653. [Thyasiridae].

Barbatia (*Cucullaearca*) *biloba* (Weaver, 1905). [*Arca*]. Squires et al., 1988. SEPM Guidebook 58:185, pl. 1, fig. 5 (peel). Goler Fm., Eocene. Near head of northeast-flowing ravine, Inyokern SE quad. (1972), El Paso Mtns., Kern Co. USGS M9067. Hypotype USNM 424893. **Remarks:** Junior synonym of *Cucullaea mathewsonii* Gabb, 1864, *fide* Moore (1983: p. A47). [Arcidae].

Barbatia (*Cucullaearca*) *cliffensis* M.A. Hanna, 1927. Reinhart 1943. GSA SP. Pap. 47:32–33, pl. 1, figs. 5–7. Ardath Shale, Eocene. South of the mouth of Soledad Valley in ocean cliff, La Jolla quad., San Diego Co. UCMP 5062. Lectotype (of Reinhart 1943: p. 32) UCMP 31077, paratypes [=paralectotypes] UCMP 31076, 31081 (all three listed as syntypes in UCMP online database). [Arcidae].

Barbatia (*Cucullaearca*) *cliffensis* M.A. Hanna, 1927. Moore 1983. USGS PP 1228-A:A34–A35, pl. 5, figs. 9, 12. Ardath Shale, Eocene. In sea cliff south of mouth of Soledad Valley, La Jolla quad., San Diego Co. UCMP 5062. Lectotype (of Reinhart 1943: p. 32) UCMP 31077, paratype [=paralectotype] UCMP 31081 (all listed as syntypes in UCMP online database). [Arcidae].

Barbatia (*Cucullaearca*) *cliffensis* M.A. Hanna, 1927. Squires 1987. NHMLAC CS 388:55, fig. 89. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 828 [=LACMIP 16141]. Hypotype LACMIP 7507. [Arcidae].

Barbatia (*Cucullaearca*) *cliffensis* M.A. Hanna, 1927. Squires 1988a. SEPM Guidebook 58:110, pl. 2, fig. 1. Juncal Fm. (Matilija Sandstone? in pl. caption), Eocene. Whitaker Peak area, Los Angeles Co. CSUN 828 [=LACMIP 16141]. Hypotype LACMIP 7507. [Arcidae].

Barbatia cf. *B.* (*Cucullaearca*) *cliffensis* M.A. Hanna, 1927. Squires 1988c. NHMLAC CS 398: 17, fig. 45. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 981 [=LACMIP 16142]. Hypotype LACMIP 7725. [Arcidae].

Barbatia (*Cucullaearca*) *cliffensis* M.A. Hanna, 1927. Squires 2008. NHMLAC CS 517:5, fig. 35. Juncal Fm., Eocene. North side of Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13436. [Arcidae].

Barbatia (*Fugleria*) *illota* (G.B. Sowerby I, 1833). [*Byssoarca*]. Hertlein and Grant, 1972. SDSNH Mem. (2B):157–158, pl. 27, figs. 35, 36, 38–40. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San

Diego Co. LACMIP 305. Hypotypes LACMIP [4462–4465]. [Arcidae].

Barbatia (*Fugleria*) *illota* (G.B. Sowerby I, 1833). [*Byssoarca*]. Moore 1983. USGS PP 1228-A:A36, pl. 6, figs. 6, 7. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. [LACMIP 305]. Hypotype (of Hertlein and Grant 1972, pl. 27, figs. 38, 39) LACMIP 4464. [Arcidae].

Barbatia (*Fugleria*) *illota* (G.B. Sowerby I, 1833). *Byssoarca*]. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 17. Niguel Fm., Pliocene. A mile-long cut west of Oso Parkway near Cabot Rd., Orange Co. [SDSNH 4080]. SDSNH hypotype determined here as missing. [Arcidae].

Barbatia (*Obliqarca*) *morsei* Gabb, 1864. Reinhart 1943. GSA Sp. Pap. 47:30–32, pl. 1, fig. 4. Unknown Fm., Eocene. Near San Diego, San Diego Co. Lectotype (of Reinhart 1943:31) UCMP 11984 (listed as holotype in UCMP online database) [paralectotype UCMP 4447]. **Remarks:** In the subgenus *Barbatia*, *fide* Moore (1983: p. A34). [Arcidae].

Barbatia (*Barbatia*) *morsei* Gabb, 1864. Moore 1983. USGS PP 1228-A:A34, pl. 5, fig. 7. La Jolla Group, Eocene. Near San Diego, San Diego Co. Lectotype (of Reinhart 1943: p. 31) UCMP 11984 (listed as holotype in UCMP online database). [Arcidae].

Barbatia (*Barbatia*) cf. *B.* (*B.*) *morsei* Gabb, 1864. Squires 1987. NHMLAC CS 388:55, fig. 88. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 358 [=UCLA 7210, =LACMIP 16114]. Hypotype LACMIP 7506. [Arcidae].

Barbatia (*Barbatia*) *morsei* Gabb, 1864. Squires 1999c. NHMLAC CS 480:18, fig. 26. Matilija Sandstone, Eocene. On south bank of North Fork of Matilija Creek, Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1450 [=LACMIP 16963]. LACMIP hypotype 12456. [Arcidae].

Barbatia (*Fugleria*) *pseudoillota* Reinhart, 1937. Reinhart 1943. GSA Sp.Pap. 47:36, pl. 3, figs. 4–6. Careaga Fm., Pliocene. Fugler Pt. asphalt beds, vicinity of Santa Maria, Santa Barbara Co. [=LACMIP 16112]. Holotype CIT 1383 [=LACMIP 4075]. [Arcidae].

Barbatia pseudoillota Reinhart, 1937. Woodring and Bramlette 1950 [1951]. USGS PP 222:82, p. 15, figs. 12, 13. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., below 4 ft. fossil bed, southeast of brachiopod bed, Santa Barbara Co. USGS 14769. Hypotype USNM 560098. **Remarks:** In the subgenus *Fugleria*, *fide* Moore (1983: p. A35). [Arcidae].

Barbatia (*Fugleria*) *pseudoillota* Reinhart, 1937. Cox et al. 1969a. Treat. Invert. Paleo. N6(1): N252, figs. C3-1a, b (refigured from Reinhart 1937, pl. 28, figs. 9, 10). [Careaga Fm.], Pliocene. [Asphalt beds at Fugler Pt., vicinity of Santa Maria, Santa Barbara Co. [=LACMIP 16112. Holotype CIT 1383 (=LACMIP 4075)]. [Arcidae].

Barbatia (*Fugleria*) *pseudoillota* Reinhart, 1937. Moore 1983. USGS PP 1228-A:A35–A36, pl. 6, figs. 3, 5. Careaga Fm. (Cebada Member), Pliocene. Asphalt beds at Fugler Pt., southeast of Santa Maria, Santa Barbara Co. [LACMIP 16112]. Holotype LACMIP 4075 (*ex*-CIT 1381). [Arcidae].

Barbatia. Fowkes 1982. Coalinga Guidebook, p. 21, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 3, fig. 8; refigured from Arnold and Anderson 1910, pl. 25, fig. 8 (both as *Barbatia morsei*)). Domengine Fm. [as Tejon Fm.], Eocene. West of the San Joaquin Coal mine, west of Coalinga, Fresno Co. Hypotype USNM 165635. [Arcidae].

Barbatia sp. Squires 2001. NHMLAC CS 489:15, fig. 31. Llajas Fm., Eocene. Simi Arroyo, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 25837. Hypotype LACMIP 12748. [Arcidae].

Barbatia sp. indeterminate. Powell 2008. USGS SIR 2008-5155:6, 8, fig. 3g [as *Barbatia* sp.]. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Point, Oasis quad., Imperial Co. (not San Diego Co. as in description). UCMP A1707 [=UCMP A1705]. Hypotype UCMP 39871, missing, *fide* Powell (2008: p. 6) [Arcidae].

Basterotia (*Basterotella*) *hertleini* Durham, 1950. Hertlein and Grant 1972. SDSNH Mem. 2(2B): 241–242, pl. 57, figs. 6, 11. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LAMCIP 16817]. Hypotype LACMIP [4635]. [Sportellidae].

Bornia* (*Temblorniana*) *frankiana Hertlein and Grant, 1972 (n. sp.). SDSNH Mem. 2(2B):238–239, text fig. 11. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Holotype LACMIP

[4624]. [Lasaeidae].

Bornia (*Temblorniana*) *frankiana* Hertlein and Grant, 1972. Moore 1992. USGS PP 1228-E:E8–E9, pl. 3, figs. 13, 14. San Diego Fm., Pliocene. South of Tijuana River at Palm City, "southwest of Goat Canyon, Imperial Beach quad., San Diego Co. LACMIP 305C [=LACMIP 16817]. Holotype LACMIP 4624. [Lasaeidae].

Bornia (*Tembloriana*) *triangulata* (Anderson and Martin, 1914). [*Donax*]. Keen 1943. Tr. SDSNH 10(2):39, pl. 3, figs. 6, 7. Lowermost Round Mtn. Silt, Miocene. In small gully close to terrace contact, Caliente quad., Kern Co. SU 2121. Hypotypes SU 7523, 7523a [=CASG 71994]. [Lasaeidae].

Bornia (*Tembloriana*) *triangulata* (Anderson and Martin, 1914). [*Donax*]. Moore 1992. USGS PP 1228-E:E8, pl. 3, figs. 17, 18. Round Mtn. Silt, Miocene. West bank of small canyon 2 km NE of Barker's Ranch House, Caliente quad., Kern Co. CASG 65. Holotype CASG 130 [=CASG 65.02]. [Lasaeidae].

Botula? sp. Woodring et al. 1940 [1941]. USGS PP 195: opposite p. 38, pl. 13, fig. 14. San Joaquin Fm. (*Pecten* Zone), Pliocene. North Dome, Kettleman Hills, Kings Co. USGS 12335. Hypotype USNM 495739. [Mytilidae].

Brachidontes (*Aeidimytilus*) *adamsianus* (Dunker, 1857). [*Mytilus*]. Moore 1983. USGS PP 1228-A:A70, pl. 17, figs. 10, 11. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. [LACMIP 305C (=LACMIP 16817)]. Hypotype (of Hertlein and Grant 1972, pl. 42, figs. 4, 5) LACMIP 4473. [Mytilidae].

Brachidontes? (*Brachidontes*?) *altiobliquus* (Nelson, 1925). [*Modiolus*]. Moore 1983. USGS PP 1228-A:A67–A68, pl. 17, figs. 3, 4. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Camulos quad., Ventura Co. UCMP 3809. Holotype UCMP 30587. [Mytilidae].

Brachidontes* (*Brachidontes*) *cooperi Moore, 1983 (new name for *Septifer dichotomus* Cooper, 1894, preoccupied). USGS PP 1228-A:A67, pl. 18, fig. 8. Domengine Fm., Eocene. California Coal Mine, near Huron, Fresno Co. CSMB 13735. Holotype CASG 613. [Mytilidae].

Brachidontes cowlitzensis (Weaver and Palmer, 1922). [*Modiolus*]. Weaver and Kleinpell 1963. UCPG 43:197, pl. 29 (not pl. 31), fig. 3. Gaviota Fm., Eocene. Near head of Las Varas Canyon just below the Sespe Fm., Goleta quad., Santa Barbara Co. UCMP B6966. Hypotype SU 9255 [=CASG 70139]. [Mytilidae].

Brachidontes (*Brachidontes*) *cowlitzensis* (Weaver and Palmer, 1922). [*Modiolus*]. Squires 1984. NHMLAC CS 350:42, fig. 10e. Llajas Fm., Eocene. Devil Canyon area, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6567. [Mytilidae].

Brachidontes (*Brachidontes*) *cowlitzensis* (Weaver and Palmer, 1922). [*Modiolus*]. Squires 1987. NHMLAC CS 388:56, fig. 92. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN [=LACMIP 16080]. Hypotype LACMIP 7510. [Mytilidae].

Brachidontes (*Brachidontes*) *cowlitzensis* (Weaver and Palmer, 1922). [*Modiolus*]. Squires 1988c. NHMLAC CS 398:18, fig. 47. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 979 [=LACMIP 16081]. Hypotype LAMCIP 7727. [Mytilidae].

Brachidontes (*Brachidontes*) *cowlitzensis* (Weaver and Palmer, 1922). [*Modiolus*]. Throckmorton 1988a. USGS OFR 88-59:47, pl. 8, fig. 7 (peel) (refigured in Throckmorton 1988b, pl. 1, fig. 7). Tesla Fm., Eocene. From isolated sandstone block (float?) Midway quad., Alameda Co. UCMP D8157. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Mytilidae].

Brachidontes (*Brachidontes*) *cowlitzensis* (Weaver and Palmer, 1922). [*Modiolus*]. Squires 1994b. SEPM Guidebook 74:52, pl. 1, fig. 5 (cast). Upper Matilija Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 24260. Hypotype LACMIP 11630. [Mytilidae].

....., pl. 2, fig. 3. Cozy Dell Shale (Circle B Member), Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23692. Hypotype LACMIP. 11643.

....., pl. 2, fig. 16. Coldwater Sandstone, Eocene. Upper Sespe Crek, Ventura Co. LACMIP 23723. Hypotype LACMIP 11656.

Brachidontes (*B.*) *cowlitzensis* (Weaver and Palmer, 1922). [*Modiolus*]. Squires 2008. HMLAC CS 517:5, fig. 38. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17850. Hypotype LACMIP 13439. [Mytilidae].

Brachidontes? (*Brachidontes*?) *dichotomus* (Gabb, 1864). [*Septifer*]. Moore 1983. USGS PP 1228-A:A68, pl. 17, figs. 6, 7. Tejon Fm., Eocene. Ft. Tejon, Tejon quad., Kern Co. Holotype UCMP 11993. [Mytilidae].

Brachidontes (*Aeidimytilus*) *gabbi* (Clark, 1915). [*Modiolus*]. Moore 1983. USGS PP 1228-A:A69–A70, pl. 17, fig. 8. San Pablo Fm., Miocene. Mt. Diablo quad., Contra Costa Co. UCMP 2040. Holotype UCMP 11550. [Mytilidae].

Brachidontes? (*Brachidontes*?) *kirkerensis* (Clark, 1918). [*Modiolus*]. Moore 1983. USGS PP 1228-A:A68, pl. 17, fig. 9. San Ramon Fm., Miocene(?). Near mouth of Markley Canyon Mt. Diablo quad., Contra Costa Co. UCMP 3081. Holotype UCMP 11121. [Mytilidae].

Brachidontes lawsoni (Nelson, 1925). [*Modiolus*]. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, fig. 6. Lodo Fm., Paleocene. East side Panoche Pass Rd. near the junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype UCMP 14206. **Remarks:** Provisionally in the genus *Brachidontes*?, *fide* Moore (1983: p. A68). [Mytilidae].

Brachidontes? (*Brachidontes*?) *lawsoni* (Nelson, 1925). [*Modiolus*]. Moore 1983. USGS PP 1228-A:A68, pl. 17, fig. 5. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Camulos quad., Ventura Co. UCMP 4004. Holotype UCMP 30651. [Mytilidae].

Brachidontes? (*Scolimytilus*?) *margaritana* (Nomland, 1917b). [*Septifer*]. Moore 1983. USGS PP 1228-A:A69, pl. 17, fig. 13. Santa Margarita Fm., Miocene. Northeast of Coalinga, Coalinga quad. Fresno Co. UCMP 2276. Holotype UCMP 11310. [Mytilidae].

Brachidontes? (*Scolimytilus*?) *multiradiatus* (Gabb, 1866). [*Modiola*]. Moore 1983. USGS PP 1228-A:A69, pl. 17, figs. 12, 17. Martinez Fm., Paleocene. Martinez, Contra Costa Co. Holotype ANSP 4482. [Mytilidae].

Brachidontes? (*Scolimytilus*?) *subconvexus* (Trask, 1922). [*Modiolus*]. Moore 1983. USGS PP 1228-A:A69, pl. 17, fig. 14. Briones Fm.?, Miocene. No locality data available, Contra Costa Co.? UCMP 793. Holotype UCMP 12372. [Mytilidae].

Brachidontes? (*Brachidontes*?) *susanaensis* (Nelson, 1925). [*Septifer*]. Moore 1983. USGS PP 1228-A:A67, pl. 17, fig. 2. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCMP 3776. Holotype UCMP 30501. [Mytilidae].

Bruetia? *traski* (Nelson, 1925). [*Diplodonta*]. Moore 1988b. USGS PP 1228-D:D26, pl. 8, fig. 5. Santa Susana Fm. (Martinez Fm. in pl. caption), Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCMP 3768. Holotype UCMP 30579. [Ungulinidae].

Callista (*Macrocallista*) *andersoni* (Dickerson, 1915). [*Macrocallista*]. Givens 1974. UCPG 109: 55, pl. 3, fig. 5. Matilija Fm., Eocene. Lion Canyon quad. (1943), Ventura Co. UCR 4731. Hypotype UCR 4731/101. [Veneridae].

Callista andersoni (Dickerson, 1915). [*Macrocallista*]. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 5. Cozy Dell Shale (Circle B Sandstone Member), Eocene. Upper Sespe Creek, Ventura Co. CSUN 322 [=LACMIP 16669]. Hypotype LACMIP 11645. [Veneridae].

Callista conradiana (Gabb, 1864). [*Tapes*]. Deméré et al. 1979. SEPM Guidebook 4:98, pl. 1, figs. 5, 6. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20765. [Veneridae].

Callista conradiana (Gabb, 1864). [*Tapes*]. Squires 1994b. SEPM Guidebook 74:54, pl. 3, fig. 7. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 20581. Hypotype LACMIP 11665. [Veneridae].

Callista (*Macrocallista*) *domenginica* Vokes, 1939. Squires 1987. NHMLAC CS 388:70, fig. 122. Matilija?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7537. [Veneridae].

Callista (*Macrocallista*) *domenginica* Vokes, 1939. Squires 2008. NHMLAC CS 517:5, fig. 50. Juncal Fm., Eocene. Elsmere

Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13451. [Veneridae].

Callista (*Costacallista*) *hornii* (Gabb, 1864). [*Meretrix*]. Givens 1974. UCPG 109:55, pl. 3, fig. 6. Matilija Fm., Eocene. Northeast of Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4723. Hypotype UCR 4723/61. [Veneridae].

Callista (*Costacallista*) cf. *C.* (*C.*) *hornii* (Gabb, 1864). [*Meretrix*]. Squires 1984. NHMLAC CS 350:51, fig. 12g. Llajas Fm., Eocene. Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 465 [=LACMIP 16149]. Hypotype LACMIP 6588. [Veneridae].

Callista hornii (Gabb, 1864). [*Meretrix*]. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 4 (cast). Cozy Dell Shale (Circle B Sandstone Member), Eocene. Upper Sespe Creek, Ventura Co. CSUN 322 [=LACMIP 16669]. Hypotype LACMIP 11644. [Veneridae].

Callista* (*Costacallista*) *hornii vokesi Squires, 1987 (n. subsp.). NHMLAC CS 388:69–70, figs. 120, 121. Juncal Fm., Eocene. South portion of crest of Parson's Peak, Coalinga quad., Fresno Co. UCMP 672. Holotype UCMP 11667. [Veneridae].

Callista (*Costacallista*) *hornii vokesi* Squires, 1987. Squires 1988c. NHMLAC CS 398:19, fig. 53. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 978 [=LACMIP 16150]. Hypotype LACMIP 7733. [Veneridae].

Callista (*Costacallista*) *hornii vokesi*? Squires, 1987. Throckmorton 1988a. USGS OFR 88-59:47, pl. 5, fig. 1 (peel) (refigured by Throckmorton 1988b, pl. 1, fig. 9). Tesla Fm., uppermost Cretaceous/lowermost Paleocene. Tesla Road, Midway quad., Alameda Co. UCMP D8152. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Veneridae].

Callista (*Costacallista*) *hornii vokesi* Squires, 1987. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 23. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 675 [=LACMIP 16151]. Hypotype LACMIP 11486. [Veneridae].

Callithaca tenerrima (Carpenter *in* Gould and Carpenter, 1857). [*Tapes*]. Squires 2012. NHMLAC CS 520:76, fig. 33. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14358. [Veneridae].

Callocardia (*Nitidavenus*) *tejonensis* (Waring, 1914). [*Isocardia*]. Squires 1984. NHMLAC CS 350:51, fig. 12h. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6589. [Veneridae].

Callocardia (*Nitidavenus*) *tejonensis* (Waring, 1914). [*Isocardia*]. Squires 1987. NHMLAC CS 388:70, fig. 123. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 231 [=LACMIP 16152]. Hypotype LACMIP 7538. [Veneridae].

Calva* (*Calva*) *baptisia Saul and Popenoe, 1992 (n. sp.). NHMLAC CS 433:24–26, figs. 90–101. Dip Creek Fm. (of Taliaferro 1944:512–517), uppermost Cretaceous/lowermost Paleocene. South side Lake Nacimiento, east side of Narrows of Dip Creek, Lime Mtn. quad., San Luis Obispo Co. UCLA 6526 [=LACMIP 26526]. Holotype LACMIP 7559, paratypes LACMIP 7560, 8234, 8235. [Veneridae].

Calva cf. *C. varians* (Gabb, 1864). [*Venus*]. Saul 1986. SEPM Guidebook 49:29, figs. 41–43. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6526 [=LACMIP 26526]. Hypotypes LACMIP 7559, 7560. **Remarks:** *Calva* (*Calva*) *baptista* n. sp., *fide* Saul and Popenoe (1992: p. 24). [Veneridae].

Calyptogena (*Phreagena*) *lasia* (Woodring, 1938). [*Phreagena*]. Cox et al. 1969b. Treatise Invert. Paleo. N6(2):N664, fig. E138 10a (refigured from Woodring 1938, pl. 5, fig. 4). [Repetto Fm.], Pliocene. Third Street tunnel, Los Angeles, Los Angeles Co. USGS 3426. Paratype USNM 496098. **Remarks:** Junior synonym of *Calyptogena* (*Calyptogena*) *gibbera* Crickmay, 1929, *fide* Squires (1991b: p. 74). [Vesicomyidae].

....., fig. E138 10b (refigured from Woodring 1938, text fig. 2a (left)). Montebello field, Los Angeles Co. USGS 13864. Holotype USNM 496097].

Calyptogena (*Calyptogena*) *lasia* (Woodring, 1938). [*Phreagena*]. Squires 1991b. Veliger 34(1): 74, figs. 5, 7. Upper Towsley Fm., Pliocene. Between Tapo and an unnamed canyon west of Salt Canyon, north side of Santa Susana Mtns., Val Verde quad. (1952), Ventura Co. LACMIP 21363. Hypotypes LACMIP 8401, 8402. **Remarks:** Junior synonym of *Calyptogena* (*Calyptogena*) *gibbera* Crickmay, 1929, *fide* Squires (1991b: p. 74). [Vesicomyidae].

....., figs. 6, 8. Repetto Fm., Pliocene. Montebello Oil field, Los Angeles Co. USGS 13864. Holotype USNM 496097.

Cardiomya israelskyi (M.A. Hanna, 1927). [*Cuspidaria*]. Givens 1974. UCPG 109:60, pl. 4, fig. 3. Juncal Fm., Eocene. Vicinity of Park Canyon, San Guillermo quad. (1943), Ventura Co. UCR 4700. Hypotype UCR 4700/2. [Cuspidariidae].

Cardiomya aff. *C. russelli* (M.A. Hanna, 1927). [*Cuspidaria*]. Squires 1984. NHMLAC CS 350: 54, fig. 12o. Llajas Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 512d [=LACMIP 16161]. Hypotype LACMIP 6594. [Cuspidariidae].

Cardita n. sp. aff. *C. affinis* G.B. Sowerby I, 1833a. Addicott et al. 1978. USGS OFR 78-446:59, 72, pl. 4, fig. 1. Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2859. Hypotype USNM 254370. [Carditidae].

Cardita n. sp. aff. *C. affinis* G.B. Sowerby I, 1833a. Addicott et al. 1980. SEPM Guidebook 6:19, 33, pl. 5, fig. 1 (refigured from Addicott et al. 1978, pl. 4, fig. 1). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2859. Hypotype USNM 254370. [Carditidae].

Cardita californica Dall, 1903b. [*Venericardia* (*Cyclocardia*)]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):176, fig. 64-19. [Careaga Fm.?], Pliocene. South of Guadalupe, Santa Barbara Co. CASG 77. Hypotype CASG 5736. **Remarks:** In the genus *Cyclocardia*, *fide* Coan et al. (2000: p. 303). [Carditidae].

Cardita (*Cyclocardia*) *californica* Dall, 1903b. [*Venericardia* (*Cyclocardia*)] Cummings et al. 1962. CDMG Bull. 181:204, ph. 17, fig. 10 (not *Balanus* cf. *aqulia* Pilsbry as in pl. caption). Purisima Fm. (Pomponio Member), Pliocene. Tunitas Creek, San Mateo Co. Locality 653M. Hypotypes determined here as missing. **Remarks:** In the genus *Cyclocardia*, *fide* Coan et al. (2000: p. 303). [Carditidae].

Cardita (*Cardita*) *superioris* Waring, 1917. Moore 1992. USGS PP 1228-E:E11, pl. 4, figs. 9, 11. Llajas Fm., Eocene. McCray wells (Oil Canyon), Santa Susana quad., Ventura Co. SU 2696 [=CASG 61913]. Holotype SU/CASG 143 [=CASG 61913.06]. [Carditidae].

Cardiidae, indeterminate. Powell et al. 2019a. USGS SIR 2019-5021:3, 31, pl. 3, fig. 6. Wilson Grove Fm., Miocene. Bloomfield Quarry, just north of Bloomfield, Sonoma Co. CASG 54135. Hypotype CASG 78415. [Carditidae].

Cardium (*Schedocardia*) *brewerii* Gabb, 1864. G D. Hanna and Hertlein 1943. CDM Bull. 118 (2):168, fig. 62-3. Tejon Fm., Eocene. Live Oak Creek east of the mouth of Grapevine Canyon, Kern Co. CASG 244. Hypotype CASG 5701. **Remarks:** In the genus/subgenus *Acanthocardia* (*Schedocardia*), *fide* Moore (2003a: p. 3). [Cardiidae].

Cardium (*Trachycardium*) *brewerii brewerii* Gabb, 1864. Weaver and Kleinpell 1963. UCPG 43:201–202, pl. 34, fig. 1. Undifferentiated Sacate/Gaviota fms., Eocene. In small gully just east of Nojoqui Creek, Santa Ynez Mtns., Lompoc quad., Santa Barbara Co. UCMP B6960. Hypotype SU 9288 [=CASG 70141]. **Remarks:** Label in CASG collection reads "not yet received," and hypotype is determined here as presumably missing. In the genus/ subgenus *Acanthocardia* (*Schedocardia*), *fide* Moore (2003a: p. 3). [Cardiidae].

....., pl. 34, fig. 2. "Coldwater" Sandstone, Eocene. On crest of main ridge between Dos Pueblos Canyon and Eagle Canyon, Goleta quad., Santa Barbara Co. UCMP B6934. Hypotype SU 9289 [=CASG 70142]. **Remarks:** Label in CASG collection reads "not yet received," and hypotype is determined here as presumably missing.

Cardium* (*Trachycardium*) *brewerii robusta Weaver and Kleinpell, 1963 (n. subsp.). UCPG 43: 202, pl. 34, fig. 3. Middle Gaviota Fm., Eocene. East of gorge in Gaviota Canyon, Lompoc quad., Santa Barbara Co. UCMP B7010. Holotype SU.9290, missing. **Remarks:** In the genus/subgenus *Acanthocardia* (*Schedocardia*), *fide* Moore (2003a: p. 4). [Cardiidae].

Cardium linteum Conrad, 1855b. Shimer and Shrock 1944. Index Foss. N.A., p. 425, pl. 169, fig. 17 (refigured from Arnold and Anderson 1910, pl. 25, fig. 3 (as *Cardium cooperi* Gabb, 1864)). Tejon Fm., Eocene. [Coalinga District, Fresno Co. USGS 4617. Hypotype USNM 165637]. **Remarks:** In the genus *Nemocardium*, *fide* Moore (2003a: p.

14). [Cardiidae].

Cardium (*Nemocardium*) *linteum* Conrad, 1855b. Weaver and Kleinpell 1963. UCPG 43:202, pl. 34, fig. 4. Matilija Sandstone, Eocene. Nojoqui Creek area, west of Nojoqui creek, Lompoc quad., Santa Barbara Co. UCMP B6919. Hypotype SU 9291 [=CASG 70143]. **Remarks:** In the genus *Nemocardium*, *fide* Moore (2003a: p. 14). [Cardiidae].

Cardium (*Cerastoderma*) *meekianum* Gabb, 1866. Manning and Ogle 1950. CDM Bull. 148:24, pl. 9, fig. A. Falor Fm., Pliocene. On the Mad River Rd., near the mouth of Canon Creek, Humboldt Co. UCMP A4234. [Hypotype UCMP 34177]. **Remarks:** In the genus *Clinocardium*, *fide* Moore (2003a: p. 20). [Cardiidae].

Cardium (*Dallocardia*) *quadragenarium* Conrad, 1837. Hertlein and Grant 1972. SDSNH Mem. 2(2B):259–260, pl. 46, figs. 18, 20. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4654. **Remarks:** In the genus *Dallocardia*, *fide* Coan and Valentich-Scott (2012: p. 413). [Cardiidae].

....., pl. 46, fig. 23. Balboa Park area, San Diego, San Diego Co. CASG 1402. Hypotype CASG 70449.

Cardium Fowkes 1982. Coalinga Guidebook, p. 21, unnumbered fig. [refigured from Arnold 1909 [1910], pl. 3, fig. 3; refigured from Arnold and Anderson 1910, pl. 25, fig. 3 (as *Cardium cooperi* Gabb, 1864)]. Domengine Fm. [=Tejon Fm.], Eocene. On southwest flank of Reef Ridge north of McKure Valley, Fresno Co. No locality number given. [Hypotype USNM 165637]. [Cardiidae].

....., p. 30, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 17, fig. 7; refigured from Arnold and Anderson 1910, pl. 39, fig. 7 [both as *Cardium meekianum* Gabb, 1866)]. Etchegoin Fm., Pliocene/Miocene. Southeast of Coalinga, Fresno Co. Hypotype USNM 165542.

Cardium sp. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. N. Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is. California Channel Ids. Hypotype UCSB 8772 [=SBMNH 60182]. **Remarks:** Determined here as indet. venerid sp. [Veneridae}

Cerastoderma cf. *C. meekianum* (Gabb, 1866). [*Cardium*]. Woodring et al. 1940 [1941]. USGS PP 195:95, pl. 24, figs. 8, 9. San Joaquin Fm. (*Cerastoderma*-bearing sandstone), Pliocene. West branch of Arroyo Doblegado, North Dome, Kettleman Hills, Kings Co. USGS 12706. Hypotype USNM 495345. **Remarks:** *Clinocardium meekianum* (Gabb, 1866), *fide* Kafanov (1998: p. 37). [Cardiidae].

....., pl. 29, fig. 14. Etchegoin Fm. (*Pseudocardium* Zone), Pliocene. North branch of Arroyo Torcido, east of Double Hill, North Dome, Kettleman Hills, Kings Co. USGS 12400. Hypotype USNM 495796.

Cerastoderma cf. *C. meekianum* (Gabb, 1866) small var. Woodring et al. 1940 [1941]. USGS PP 195:95, pl. 29, fig. 3. Etchegoin Fm. (*Littorina* zone), Pliocene. Arroyo Mellado, south of Los Jinetes, North Dome, Kettleman Hills, Kings Co. USGS 12392. Hypotype USNM 495784. **Remarks:** *Clinocardium meekianum* (Gabb, 1866), *fide* Kafanov (1998: p. 37). [Cardiidae].

Burrow of *Chaceia ovoidea* (Gould, 1851). [*Pholas*]. Kennedy 1974 SDSNH Mem. 8:37–39, fig. 103. Temblor Fm. [only in part], Miocene (possibly the Temblor and Santa Margarita fossils were slightly mixed in locs. 28485). One mi. southeast of Oil City, Fresno Co. CASG 28485 (this locality represents at least two different time periods, one of which is probably Pliocene). Hypotype CASG 54825.01. **Remarks:** *Chaceia* sp. aff. *C. ovoidea* (Gould, 1851), *fide* Kennedy (1974) (on errata sheet issued with publication, but not on figure caption); *Chaceia fulcherae* n. sp., *fide* Kennedy (1993: p. 399).

Chaceia fulcherae Kennedy, 1993 (n. sp). Jour. Paleo. 67(3):399–400, figs. 2.4, 2.5. Temblor Fm., Miocene. Base of Temblor Reef, Jasper Canyon, Fresno Co. CASG 1841 [=CASG 54826]. Paratype CASG 54826.01. [Pholadidae].

....., fig. 2.6. Temblor(?) Fm., Miocene. Just southeast of Oil City, north of Coalinga, Fresno Co. CASG 28485 [=CASG 54825]. Holotype CASG 54825.01.

....., Topanga(?) Group, Miocene. In freshly excavated areas for Upper Oso Reservoir excavation on east side of Oso Creek valley, northeast of El Toro, northern Santa Ana Mtns., Orange Co. LACMIP 5824. Unfigured paratypes LACMIP 11444, 11445.

?*Chaceia ovoidea* (Gould, 1851). [*Pholas*]. Squires 2012. NHMLAC CS 520:76 fig. 47. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7757. Hypotype LACMIP 14373. **Remarks:** Undetermined species of *Penitella*, *fide* G.L. Kennedy (personal communication, 2019). [Pholadidae].

Chaceia (?) sp. indet. Adegoke 1966. The Veliger 9(2):234, pl. 21, figs. 1–9. Pismo Fm. [=Santa Margarita Fm.?], Miocene. San Luis Obispo area, San Luis Obispo Co. UCMP A3415. Hypotypes UCMP 12197, 15547, 31409, 31410, 32522, 32523, 34092, all determined here as missing. **Remarks:** *Penitella* sp. indet., *fide* Kennedy (1974: p. 37). [Pholadidae].

Chama (*Chama*) *arcana* Bernard, 1976. Moore 1988b. USGS PP 1228-D:D30, pl. 10, figs. 6, 10. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes (of Hertlein and Grant 1972, pl. 43, figs. 12, 15 as *Chama pellucida* Broderip, 1835) LACMIP. 4534. [Chamidae].

Chama pellucida Broderip, 1835. Woodring et al. 1940 [1941]. USGS PP 195:chart opposite p. 38, pl. 14, figs. 1, 10. San Joaquin Fm. (*Pecten* zone), Pliocene. Arroyo Pequeño and Arroyo Finito areas, North Dome, Kettleman Hills, Kings Co. USGS 12343. Hypotypes USNM 495744 and 495753. **Remarks:** *Chama arcana* Bernard, 1976, *fide* Coan et al. (2000: p. 309). [Chamidae].

....., pl. 14, fig. 2. Arroyo Conchoso, North Dome, Kettleman Hills, Kings Co. USGS 12374. Hypotype USNM 495745.

....., pl. 14, fig. 3. La Lomica, North Dome, Kettleman Hills, Kings Co. USGS 12365 and 12767. Hypotype USNM 495746.

....., pl. 14, fig. 4. Arroyo Finito, North Dome, Kettleman Hills, Kings Co. USGS 12354. Hypotype USNM 495747.

Chama pellucida Broderip, 1835. Hertlein and Grant 1972. SDSNH Mem. 2(2B):227–228, pl. 43, figs. 12, 15. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4534. **Remarks:** *Chama arcana* Bernard, 1976, *fide* Coan et al. (2000: p. 309). [Chamidae].

Chama pellucida Broderip, 1835. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 19. Niguel Fm., Pliocene. Orange Co. SDSNH 4080. Hypotype SDSNH 75918]. **Remarks:** *Chama arcana* Bernard, 1976, *fide* Coan et al. (2000: p. 309). [Chamidae].

Chama piruensis Squires, 1987 (n. sp.). NHMLAC CS 388:62–63, fig. 104. Juncal Fm., Eocene. Whitaker Peak area, Los Angeles Co. CSUN 822 [=LACMIP 16163]. Holotype LACMIP 7520. [Chamidae].

....., fig. 105., Whitaker Peak quad. (1958), Los Angeles Co. CSUN 834 [=LACMIP 16164]. Hypotype LACMIP 7521.

....., fig. 106. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 844 [=LACMIP 16119]. Hypotype LACMIP 7522.

....., Whitaker Peak quad. (1958), Los Angeles Co. CSUN 831 [=LACMIP 17204]. Unfigured hypotype LACMIP 7523.

Chama (*Chama*?) sp. Moore, 1988b. USGS PP 1228-D:D31, pl. 9, figs. 4, 5. Vaqueros Fm., Oligocene/Miocene. [Torrey Canyon, Oak Ridge, Ventura Co. UCMP A334]. Hypotype (of Loel and Corey 1932, pl. 36, figs. 1a, b) UCMP 31875. [Chamidae].

Chama sp. Powell 2008. USGS SIR 2008-5155:15, fig. 4x. Imperial Fm. [=Latrania Fm.], Pliocene. Desert Shores and Travertine Rock area, Imperial Co. (not San Diego Co. as in description). USGS M9779 [=USGS M9778]. Hypotype USNM 486906. [Chamidae].

Chlamys* (*Argopecten*) *abietis abbotti Hertlein and Grant, 1972 (n. subsp.). SDSNH Mem. 2 (2B): 196–197, pl. 34, fig. 5; pl. 36, figs. 1, 6. San Diego Fm., Pliocene. Exposure Loma Portal, San Diego, San Diego Co. [SDSNH 716]. Holotype SDSNH 4334. **Remarks:** Valid subspecies in the genus *Argopecten*, *fide* Moore (1984: p. B42). SDSNH 716 proven to be of Pleistocene age (Deméré 1981: p. 3). [Pectinidae].

....., 32nd Ave. and Woolman St., San Diego, San Diego Co. LACMIP 16168. Unfigured paratype LACMIP 4491.

Chlamys bartschi (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B25, pl. 6, fig. 6. St. George Fm., Pliocene. South side of Light-House [*sic*] Pt., Crescent City, Del Norte Co. USGS. 3352. Holotype USNM 164841. [Pectinidae].

Chlamys (*Leptopecten*) *bellilamellata* (Arnold, 1906). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):203,

pl. 32, fig. 1. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. CASG 1400. Hypotype CASG [=CASG 72227]. **Remarks:** Valid species in the genus *Leptopecten*, *fide* Moore (1984: p. B43); junior synonym of *Leptopecten latiauratus* (Conrad, 1837), *fide* Coan et al. (2000: p. 237). [Pectinidae].

....., pl. 32, fig. 2. San Diego, San Diego Co. SDSNH 331. Hypotype SDSNH 4338.

....., pl. 32, fig. 8. Pacific Beach, San Diego Co. CASG 105. Hypotype CASG 72541.

Chlamys (*Vertipecten*) *bowersi* (Arnold, 1906). [*Pecten*]. Cox et al. 1969a. Treatise Invert. Paleo. N6(1):N364, figs. C85 3a–b (refigured from Arnold, 1906, pl. 12, fig. 1; pl. 13, fig. 1). [Vaqueros Fm.], Miocene. [Santa Inez Canyon, Santa Barbara Co. Holotype UCMP 12075 [=*Vertipecten nevadensis*?]. **Remarks:** In the genus *Vertipecten*, *fide* Moore (1984: p. B62). [Pectinidae].

Chlamys branneri (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B19–B20, pl. 4, fig. 1 (clay impression). Unnamed strata (of Dibblee 1966), Miocene. Tuff Hill, near Stanford University, San Mateo Co. Holotype SU/CASG 358 [=CASG 61953.01]. [Pectinidae].

Chlamys calkinsi (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B19, pl. 3, fig. 12. Coldwater Sandstone., Eocene. Sisar Valley, Santa Paula quad., Ventura Co. Holotype UCMP 12076. [Pectinidae].

Chlamys calkinsi (Arnold, 1906). [*Pecten*]. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 18. Coldwater Sandstone, Eocene. Upper Sespe creek, Ventura Co. CSUN 74 [=LACMIP 16671]. Hypotype LACMIP 11658. [Pectinidae].

Chlamys (*Argopecten*) *callida* (Hertlein, 1925b). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):198–199, pl. 32, fig. 9. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. CASG 1413. Hypotype CASG 55067. **Remarks:** *Argopecten callidus* (Hertlein, 1925b), *fide* Moore (1984: p. B38). [Pectinidae].

....., pl. 32, fig. 11. Pacific Beach, San Diego Co. LACMIP 122. Hypotype LACMIP 4493.

Chlamys (*Lyropecten*) *cerrosensis* (Gabb, 1866). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):209–211, pl. 34, figs. 1, 4. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotype LACMIP 4505. **Remarks:** In the genus *Lyropecten*, *fide* Moore (1984: p. B55). [Pectinidae].

....., pl. 34, figs. 2, 3, San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4504.

....., pl. 36, fig. 7. San Diego, San Diego Co. CASG 12142. Hypotype CASG 55068. *Chlamys* (*Argopecten*) *circularis* (G. B. Sowerby I, 1835b). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):197–198, pl. 32, figs. 4, 16. San Diego Fm., Pliocene. San Diego, San Diego Co. CASG 1137. Hypotype CASG 72544. **Remarks:** Junior synonym of *Argopecten ventricosus* (G.B. Sowerby II, 1842), *fide* Coan et al. (2000: p. 235). [Pectinidae].

....., pl. 32, fig. 15, San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP. 4492.

Chlamys corteziana Durham, 1950 (n. sp.). GSA Mem. 43(2):64–65, pl. 10, figs. 3, 6. Imperial Fm. [=Latrania Fm.], Pliocene. Northwest side of Carrizo Mtn., Imperial Co. UCMP A1267. Paratypes UCMP 34031, 34032. [Pectinidae].

Chlamys cf. *C. corteziana* Durham, 1950. Powell 2008. USGS SIR 2008-5155:11, fig. 3k. Imperial Fm. [=Latrania Fm.], Pliocene. Vicinity of Desert Shores and Travertine Rock, Imperial Co. (not San Diego Co. as in description). USGS M9778. Hypotype USNM 486903. [Pectinidae].

Chlamys (*Lyropecten*) *crassicardo* (Conrad, 1857a). [*Pallium*]. Cox et al. 1969a. Treatise Invert. Paleo. N6(1):N358, fig. C80 3d. (refigured from Arnold 1906, pl. 16, fig. 1). [San Pablo Fm.], Miocene. Kirker's Pass, Contra Costa Co. Hypotype USNM 154154]. **Remarks:** In the genus *Lyropecten*, *fide* Moore (1984: p. B51). [Pectinidae].

Chlamys crassicardo (Conrad, 1857a) [*Pallium*]. Stadum 1973. OCF p. 27, pl. 4, fig. 3. Topanga Fm.?, Miocene. Hypotype possibly at SDSNH (current whereabouts unknown). **Remarks:** *Ex* Grouard collection. In the genus *Lyropecten*, *fide* Moore (1984: p. B51). [Pectinidae].

Chlamys (*Lyropecten*) *crassicardo* (Conrad, 1857a). [*Pallium*]. Stadum 1984b. NHFOC Mem.1:90, pl. 1, fig. 5. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. [SDSNH 4521. Hypotype SDSNH 83236]. **Remarks:** In the genus *Lyropecten*, *fide* Moore (1984: p. B51). [Pectinidae].

Chlamys durhami Adegoke, 1969 (n. sp.). UCPG 80:97–98. pl. 2, fig. 5. Santa Margarita Fm., Miocene. Domengine Ranch quad., Fresno Co. UCMP D1099. Holotype UCMP 36615. **Remarks:** Junior synonym of *Chlamys hodgei* (Hertlein, 1925a), *fide* Moore (1984: p. B21). [Pectinidae].

Chlamys egregius (Nomland, 1917a). [*Pecten*]. Peck 1960. UCPG 36(4):240, pl. 21, fig. 8. Ohlson Ranch Fm., Pliocene. Near Gualala School, Plantation quad., Sonoma Co. UCMP B2062. Hypotype UCMP 32915. [Pectinidae].

Chlamys egregius (Nomland, 1917a). [*Pecten*]. Moore 1984. USGS PP 1228-B:B24-B25, pl. 6, fig. 5. Upper Etchegoin Fm., Pliocene. Near Zapato Creek, Coalinga quad., Fresno Co. UCMP 2991. Holotype UCMP 11090. [Pectinidae].

Chlamys n. sp., aff. *C. egregius* (Nomland, 1917a). [*Pecten*]. Powell et al. 2019a, USGS SIR 2019-5021:3 (as *Chlamys* aff *C. egregious*) 30, pl. 2, figs. 12, 13 (as *Chlamys* aff. *C. egregious*). Wilson Grove Fm., Miocene. Near Bloomfield, Sonoma Co. CASG 54135. Hypotypes CASG 78407, 78408. [Pectinidae].

Chlamys (*Argopecten*) *ericellus* (Hertlein, 1929b). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):199, pl. 32, fig. 7. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. CASG 1132. Holotype CASG 2998. **Remarks:** In the genus *Argopecten*, *fide* Moore (1984: p. B37). [Pectinidae].

Chlamys (*Lyropecten*) *estrellana* (Conrad, 1857a). [*Pallium*]. Cox et al. 1969a. Treatise Invert. Paleo. N6(1):N357, figs. C80 3a, b (refigured from Arnold 1906, pl. 19, figs. 1, 1a). [Santa Margarita Fm.], Miocene. Wildhorse Canyon, Monterey Co. Hypotype (of Arnold 1906, pl. 19, figs. 1-1a) USNM 164851]. **Remarks:** Supplemental descriptions in Conrad, 1857c. and 1857d and first illustrated in 1857c. *Lyropecten estrellanus* (Conrad, 1857a), *fide* Moore (1984: p. B53). [Pectinidae]

..... fig. C80 3c (refigured from Arnold 1906, pl. 20, fig. 1). [Santa Margarita Fm.], Miocene. [Estrella Valley, San Luis Obispo Co. Cotype [=syntype] USNM 13317].

Chlamys etchegoini (Anderson, 1905). [*Pecten*]. Woodring et al. 1940 [1941]. USGS PP 195:91, pl. 13, fig. 5. San Joaquin Fm. (*Pecten* Zone), Pliocene. East fork of Surprise Canyon, North Dome, Kettleman Hills, Kings Co. USGS 12322. Hypotype USNM 495731. **Remarks:** *Swiftopecten parmeleei etchegoini* (Anderson, 1905), *fide* Moore (1984: p. B60). [Pectinidae].

....., pl. 32, fig. 1. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. East end of La Muralla, North Dome, Kettleman Hills, Kings Co. USGS 12434. Hypotype USNM 495816.

Chlamys (*Argopecten*) *hakei* (Hertlein, 1925b). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):199–200, pl. 33, fig. 10. San Diego Fm., Pliocene. San Diego, San Diego Co. SDSNH 4720. Hypotype SDSNH 4339. **Remarks:** In the genus *Argopecten*, *fide* Moore (1984: p. B39). [Pectinidae].

Chlamys (*Chlamys*) *hastata* (G.B. Sowerby II, 1842). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):188–189, pl. 33, figs. 4, 6. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. CASG 1132. Hypotype CASG 72225. [Pectinidae].

....., pl. 33, fig. 5. Pacific Beach, San Diego Co. CASG 2028. Hypotype CASG 72542.

Chlamys (*Chlamys*) *hastata* (G.B. Sowerby II, 1842). [*Pecten*]. Vedder and Moore 1976. AAPG Misc. Pub. 24:123, 134, pl. 4, fig. 2. Unnamed strata, Pliocene. San Clemente Is., California Channel Ids. USGS M6501. Hypotype USNM 235601. [Pectinidae].

Chlamys cf. *C. hastata* (G.B. Sowerby II, 1842). [*Pecten*]. Powell et al. 2019a. USGS SIR 2019-5021:3, 30, pl. 2, fig. 14. Wilson Grove Fm., Miocene. Bloomfield, Sonoma Co. CASG 54136. Hypotype CASG 78409. [Pectinidae].

Chlamys* (*Chlamys*) *hastata ellisi Hertlein and Grant, 1972 (n. subsp.). SDSNH Mem. 2(2B):190– 191, pl. 31, figs. 2, 3; pl. 34, fig. 6. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Holotype LACMIP 4483, paratype LACMIP 4484, unfigured paratypes LACMIP 4485, 4486. **Remarks:** Junior synonym of *Chlamys hastata* (G.B. Sowerby II, 1842), *fide* Coan et al. (2000: p. 233). [Pectinidae].

Chlamys (*Chlamys*) *hastata ellisi* Hertlein and Grant, 1972. Moore 1984. USGS PP 1228-B:B24, pl. 5, fig. 9. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305. Holotype LACMIP 4483. **Remarks:** Junior synonym of *Chlamys hastata* (G.B. Sowerby II, 1842), *fide* Coan et al. (2000: p. 233). [Pectinidae].

Chlamys (*Chlamys*) *hastata hericius* (Gould, 1850b). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):189–190, pl. 33, fig. 2. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. CASG 2028. Hypotype CASG 72540. **Remarks:** Junior synonym of *Chlamys hastata* (G.B. Sowerby II, 1842), *fide* Coan et al. (2000: p. 233). [Pectinidae].

Chlamys (*Chlamys*) *hastata hericius* (Gould, 1850b). [*Pecten*]. Stadum 1984a. NHFOC Mem.1: 80, pl. 1, fig. 26. Niguel Fm., Pliocene. Orange Co. SDSNH4080. Hypotype SDSNH 75916. **Remarks:** Junior synonym of *Chlamys hastata* (G.B. Sowerby II, 1842), *fide* Coan et al. (2000: p. 233). [Pectinidae].

Chlamys hertleini (Loel and Corey, 1932). [*Pecten*]. Addicott 1965b. USGS PP525-C:C104, fig. 3e. "Top of Pyramid Hill sand" (=Jewett Sand of Addicott 1965b: p. C104), Miocene. Pyramid Hill, Kern Co. UCLA MB2000 [=LACMIP 16168]. Hypotype UCLA 39412 [=LACMIP 8428]. [Pectinidae].

Chlamys hertleini (Loel and Corey, 1932). [*Pecten*]. Addicott 1967. USGS Bull. 1254-C:C7, C9, fig. 4B. Top of Pyramid Hill sand (=Jewett Sand of Addicott 1965b), Miocene. Pyramid Hill, Kern Co. UCLA MB2000 [=LACMIP 16168]. Hypotype UCLA 33491 [=LACMIP 11039]. [Pectinidae].

....., fig. 4D. Jewett Sand (of Godde 1928:8–9), Miocene. *Ostrea* biostrome, Woody quad. (1952), Kern Co. UCMP B1654. Hypotype UCMP 32254.

Chlamys cf. *C. hertleini* (Loel and Corey, 1932). [*Pecten*]. Addicott 1967. USGS Bull. 1254-C:C9, figs. 4A, G (casts). Basal Skooner Gulch Fm., Miocene. South of Pt. Arena, Mendocino Co. USGS M2638. Hypotypes USNM 649592, 649595. [Pectinidae].

Chlamys hertleini (Loel and Corey, 1932). [*Pecten*]. Moore 1984. USGS PP 1228-B:B21, pl. 4, figs. 7, 8. Vaqueros Fm., Oligocene/Miocene. Lompoc quad., Santa Barbara Co. UCMP A316. Holotype UCMP 31725. [Pectinidae].

Chlamys hodgei (Hertlein, 1925a). [*Pecten*]. Stanton 1966. Jour. Paleo. 40(1):27, pl. 5, figs. 4, 5. Castaic Fm., Miocene. Humphreys quad. (1932, RP 1946), Los Angeles Co. CIT 1663 [=LACMIP 2555]. [Hypotype LACMIP 4094]. [Pectinidae].

Chlamys hodgei (Hertlein, 1925a). [*Pecten*]. Addicott 1981. GSA Sp. Pap. 184:31, pl. 3, fig. 4. Pancho Rico Fm., Miocene. Wildhorse Canyon, King City quad., Monterey Co. UCMP A906. Hypotype UCMP 14585. [Pectinidae].

....., pl. 3, fig. 5. East side of Reliz Canyon, Reliz Canyon quad., Monterey Co. USGS M902. Hypotype USNM 254388.

Chalmys hodgei (Hertlein, 1925a). [*Pecten*]. Moore 1984. USGS PP 1228-B:B21–B22, pl. 4, figs. 5, 9. Santa Margarita Fm., Miocene. Coalinga region, Fresno Co. SU F-6 [=CASG 61843]. Holotype SU 20 [=CASG 61843.01], paratype SU 21 [=CASG 61843.02]. [Pectinidae].

....., pl. 5, fig. 2. Domingene Ranch quad., Fresno Co. UCMP D1099. Holotype (of *Chlamys durhami* Adegoke, 1969) UCMP 36615.

Chlamys hodgei (Hertlein, 1925a). [*Pecten*]. Powell et al. 2019a. USGS SIR 2019-5021:3 (as *Chlamys* cf. *C. hodgei*), 30, pl. 2, fig. 11. Wilson Grove Fm., Miocene. Bloomfield, Sonoma Co. CASG 54135. Hypotype CASG 78428. [Pectinidae].

Chlamys (*Argopecten*) *invalida* (G D. Hanna, 1924). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):200–201, pl. 33, fig. 1. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. CASG 105. Hypotype CASG 55069. **Remarks:** In the genus *Argopecten*, *fide* Moore (1984: p. B37). [Pectinidae].

....., pl. 33, fig. 3. Pacific Beach, San Diego Co. CASG 1179. Hypotype CASG, determined here as missing.

....., pl. 33, fig. 8. Bluffs 100 to 200 yds. south of Eocene-Pliocene contact at Pacific Beach, San Diego Co. CASG 1399. Hypotype CASG 55071.

Chlamys (*Chlamys*) *jordani* (Arnold, 1903). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):191–192, pl. 30, fig. 10; pl. 32, figs. 5, 6. San Diego Fm., Pliocene. San Diego, San Diego Co. CASG 28893. Hypotype CASG 72555. **Remarks:** Junior synonym of *Chlamys rubida* (Hinds, 1845), *fide* Coan et al. (2000: p. 234). [Pectinidae].

....., pl. 32, figs. 10, 12 (as *Chlamys* (*Argopecten*) *jordani* in pl. caption). Balboa Park, San Diego, San Diego Co. LACMIP 107. Hypotypes LACMIP 4487, 4488].

....., pl. 32, fig. 13 (as *Chlamys* (*Argopecten*) *jordani* in pl. caption) Pacific Beach, San Diego Co. CASG 1132. Hypotype CASG 72556.

Chlamys (*Chlamys*) cf. *C.* (*C.*) *jordani* (Arnold, 1903). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):191–192, pl. 32, fig. 3. San Diego, Pliocene. San Diego, San Diego Co. CASG 28893. Hypotype CASG 72549. **Remarks:** Junior synonym, of *Chlamys rubida* (Hinds, 1845), *fide* Coan et al. (2000: p. 234). [Pectinidae].

Chlamys (*Leptopecten*) *latiaurata* (Conrad, 1837). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):203–204, pl. 35, figs. 1, 3. San Diego Fm., Pliocene. Near the U.S./Mexico boundary, San Diego Co. UCLA 312 [=LACMIP 20312]. Hypotype UCLA 48612 (=LACMIP 9293). **Remarks:** *Leptopecten latiauratus*, *fide* Coan et al. (2000: p. 237). [Pectinidae].

Chlamys (*Macrochlamis*) *magnolia* (Conrad, 1857d). [*Pecten*]. Stadum 1973. OCF, p. 25, pl. 3, fig. 9. Vaqueros Fm., Miocene. [Ojai Valley, Ventura Co. UCLA 1311 [=LACMIP 21311]. Hypotype UCLA 49513 [=LACMIP 10611]. **Remarks:** In the genus *Macrochlamis*, *fide* Moore (1984: p. B56). [Pectinidae].

Chlamys? *mediacostata mediacostata* (G D. Hanna, 1926). [*Pecten*]. Moore 1984. USGS PP 1228-B:B29, pl. 7, fig. 7. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Alverson Canyon, near source, Coyote Mtn., Imperial Co. CASG 681. Holotype CASG 1830. [Pectinidae].

Chlamys cf. *C. mollita* (Reeve, 1853). [*Pecten*]. Addicott 1967. USGS Bull. 1254-C:C6, C9, fig. 4C (cast). Basal Skooner Gulch, Miocene. South of Pt. Arena, Mendocino Co. USGS M2638. Hypotype USNM 649593. [Pectinidae].

Chlamys (*Vertipecten*) *nevadanus* (Conrad, 1855b). [*Pecten*]. Susuki 1992, Topanga Story, p. 7, fig. 11. Topanga Fm., Miocene (Cold Creek Member). Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP 22487 [=UCLA 2487]. Hypotype LACMIP 13083 [=UCLA 57937]. **Remarks:** Junior synonym of *Vertipecten kernensis* (Hertlein, 1925a), *fide* Moore (1984: p. B64). [Pectinidae].

Chlamys (*Chlamys*) *opuntia* (Dall, 1898). [*Pecten*]. Hertlein and Grant, 1972. SDSNH Mem. 2 (2B):192–193, pl. 30, fig 5. San Diego Fm., Pliocene. San Diego, San Diego Co. CASG 1183. Hypotype CASG 59983. [Pectinidae].

....., pl. 30, fig. 6. Clay quarry at end of Arroyo Dr., Balboa Park, San Diego, San Diego Co. LACMIP 107. Hypotype LACMIP 4489.

Chlamys (*Chlamys*) *opuntia* (Dall, 1898). [*Pecten*]. Vedder and Moore 1976. AAPG Misc. Pub. 24:123,128, pl. 1, fig. 5. Unnamed strata, Pliocene. Southeast of Wilson Cove, San Clemente Is., California Channel Ids. USGS M6503. Hypotype USNM 235582. [Pectinidae].

Chlamys (*Chlamys*) *opuntia* (Dall, 1898). [*Pecten*]. Susuki and Stadum 1978. NHMLAC CS 299:7, 20, fig. 26. Unnamed strata, Pliocene. San Clemente Is., San Clemente Is. North quad., California Channel Ids. UCLA 6316 [=LACMIP 26316]. Hypotype UCLA 38797 [=LACMIP 10835]. [Pectinidae].

Chlamys (*Chlamys*) *opuntia* (Dall, 1898). [*Pecten*]. Squires and White 1983. SEPM Guidebook 35:222, pl. 1, fig. 1. Saugus Fm. [=Pico Fm.], Pliocene. Browns Canyon, Los Angeles Co. CSUN 241-H (not CSUN 757 as in fig. caption) [=LACMIP 16173]. Hypotype UCLA 59403 [=LACMIP 8316]. [Pectinidae].

Chlamys opuntia (Dall, 1898). [*Pecten*]. Moore 1984. USGS PP 1228-B:B26, pl. 6, fig. 2. San Diego Fm., Pliocene. Pacific Beach, La Jolla, San Diego Co. Holotype USNM 107752. **Remarks:** Keen and Bentson 1944: p. 91cited USNM 107752 and 7938 as syntypes but 7938 is not labeled as such in USNM collection. [Pectinidae].

Chlamys opuntia (Dall,1898). [*Pecten*]. Cassanova 1992. MAPS Digest 15(4):77, fig. 6 (refigured from Moore 1984, pl. 6, fig. 2). [San Diego Fm., Pliocene. Pacific Beach, La Jolla, San Diego Co. Holotype USNM 107752]. [Pectinidae].

Chlamys parmeleei (Dall, 1898). [*Pecten*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:83, pl. 16, fig. 20. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotype USNM 560101. **Remarks:** In the genus *Swiftopecten*, *fide* Moore (1984: p. B59). [Pectinidae].

Chlamys parmeleei (Dall, 1898). [*Pecten*]. Cummings et al. 1962. CDMG Bull. 181:200, ph. 15, fig. 2. Purisima Fm. (Tahana Member), Pliocene. Sea cliff south of mouth of Pomponio Creek, San Gregorio quad., San Mateo Co. Locality F467-7M. Hypotype determined here as missing. **Remarks:** In the genus *Swiftopecten*, *fide* Moore (1984:

p. B59). [Pectinidae].

Chlamys (*Swiftopecten*) *parmeleei* (Dall, 1898). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):206–208, text fig. 10; pl. 37, fig. 5. San Diego Fm., Pliocene. San Diego, San Diego Co. SDSNH 4735. Hypotype SDSNH 4342. **Remarks:** In the genus *Swiftopecten*, *fide* Moore (1984: p. B59). [Pectinidae].

....., pl. 31, fig. 5; pl. 37, figs. 1–4, 6–10. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4494–4503.

Chlamys (*Swiftopecten*) *parmeleei* (Dall, 1898). [*Pecten*]. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 27. Niguel Fm., Pliocene. Orange Co. [SDSNH 4080]. Hypotype determined here as missing. **Remarks:** In the genus *Swiftopecten*, *fide* Moore (1984: p. B59). [Pectinidae].

Chlamys proavus (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B19, pl. 3, fig. 15. Locatelli(?) Fm., Paleocene. Between headwaters of San Lorenzo River and Pescadero Creek, just west of Santa Cruz Co., Santa Cruz quad., San Mateo Co. SU 2694. Holotype USNM 164930. [Pectinidae].

Chlamys (*Chlamys*) *rubida* (Hinds, 1845). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):193–195, pl. 35, fig. 6. San Diego Fm., Pliocene. San Diego, San Diego Co. SDSNH 4736. Hypotype SDSNH 4340. [Pectinidae].

....., pl. 35, fig. 8. Balboa Park, San Diego, San Diego Co. LACMIP 107 (not CASG as in pl. caption). Hypotype LACMIP 4490.

Chlamys (*Chlamys*) *rubida* (Hinds, 1845). [*Pecten*]. Vedder and Moore 1976. AAPG Misc. Pub. 24:123,130, pl. 3, fig. 1. Unnamed strata, Pliocene. San Clemente Is., California Channel Ids. USGS M6501. Hypotype USNM 235589. [Pectinidae].

Chlamys (*Chlamys*) *rubida jordani* (Arnold, 1903). [*Pecten*]. MacNeil 1967. USGS PP 553:22, pl. 22, fig. 3. "Fernando Fm.", Pliocene. Tustin quad., Orange Co. USGS M2130. Hypotype USNM 644945. **Remarks:** Junior synonym of *Chlamys rubida* (Hinds, 1845), *fide* Coan et al. (2000: p. 234). [Pectinidae].

Chlamys sanctiludovici (Anderson and Martin, 1914). [*Pecten*]. Moore 1984. USGS PP 1228-B:B22, pl. 5, figs. 1, 3. Santa Margarita Fm., Miocene. La Panza quad., San Luis Obispo Co. Holotype CASG 107, paratype CASG 108. [Pectinidae].

Chlamys sespeensis (Arnold, 1906). [*Pecten*] Squires and Fritsche 1978. SEPM Guidebook 13:19, 22, pl. 4, fig. 2. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns, Ventura Co. CSUN 36 [=LACMIP 16173]. Hypotype UCLA 58197 [=LACMIP 10591]. [Pectinidae].

Chlamys sespeensis (Arnold, 1906) of Loel and Corey 1932. Moore 1984. USGS PP 1228-B:B20, pl. 4, figs. 2, 3. Vaqueros Fm., Oligocene/Miocene. South Mtn. near Santa Paula, Piru quad., Ventura Co. UCMP A244]. Hypotypes (of Loel and Corey 1932, pl. 21, figs. 4, 5) UCMP 31721, 31722. [Pectinidae].

Chlamys sespeensis hydei (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B20–B21, pl. 4, figs. 4, 6. Vaqueros Fm., Oligocene/Miocene. Lynch's Mtn., Monterey Co. Holotype SU/CASG 10 [=CASG 61859.01]. [Pectinidae].

Chlamys (*Argopecten*) *subdola* (Hertlein, 1925b). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):201–202, pl. 30, figs. 7, 8. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. CASG 1413. Hypotype CASG 72552. **Remarks:** *Argopecten subdolus* (Hertlein, 1925b), *fide* Moore (1984: p. B37). [Pectinidae].

....., pl. 35, figs. 2, 5. South slope of Mt. Soledad, San Diego Co. CASG 1401. Hypotype CASG. 72554.

....., pl. 35, fig. 9. San Diego, San Diego Co. SDSNH 408. Hypotype SDSNH 4341.

Chlamys swifti (Bernardi, 1858). [*Pecten* (*Pallium)*]. Stadum 1973. OCF p. 31, pl. 6, fig. 2. "Fernando Fm.," Pliocene. Hypotype possibly at SDSNH (current whereabouts unknown). **Remarks:** *Ex* Grouard collection. *Swiftopecten parmeleei parmeleei* (Dall, 1898), *fide* Moore (1984: p. B59). [Pectinidae].

Chione* (*Chione*) *allisoni Hertlein and Grant, 1972 (n. sp.). SDSNH Mem. 2(2B):273, pl. 51, figs. 11–13. San Diego Fm., Pliocene. San Diego Co. SDSU 223 [SDSNH 5063]. Paratypes SDSNH 4321, 4322. **Remarks:** Junior synonym of *Chione* (*Chione*) *californiensis* (Broderip *in* Broderip and G.B. Sowerby I, 1835), *fide* Coan et al. (2000: p. 369).

[Veneridae].

....., pl. 51, figs. 15, 16. San Diego, San Diego Co. SDSU 222 [=SDSNH 5062]. Holotype SDSNH 4320, [paratypes (4) CASG 70422].

....., South side of Mt. Soledad, San Diego Co. LACMIP 4901. Unfigured paratypes LACMIP 4689–4692].

Chione* (*Chionopsis*) *coalingensis Adegoke, 1969 (n. sp.). UCPG 80:138–139, pl. 6, figs. 6, 7, 10, 12. Etchegoin Fm., Pliocene. Domengine Ranch quad., Fresno Co. UCMP D1104. Holotype UCMP 36692, paratype UCMP 36693. [Veneridae].

Chione (*Anomalocardia*) *fernandoensis* English, 1914a. Parker 1949. Jour. Paleo. 23(6):585, pl. 95, figs. 13, 18. "Fernando Fm." [=Pico Fm.], Pliocene. Elsmere Canyon, San Fernando quad., Los Angeles Co.. UCMP 1735. Paratype UCMP 11921. [Veneridae].

....., pl. 95, figs. 14, 16. Elsmere Canyon, Los Angeles Co. SDSNH 209. Hypotype (of Grant and Gale 1931, pl. 17, figs. 4a, b (as *Venus* (*Chione*) *securis* var. *fernandoensis*) SDSNH 159.

Chione (*Anomalocardia*) *fernandoensis* English, 1914a. Squires 2012. NHMLAC CS 520:76, fig. 32. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14357. [Veneridae].

Chione (*Anomalocardia*) *hannai* Bramkamp, [MS]. Parker 1949. Jour. Paleo. 23(6):585–586, pl. 92, fig. 14. Imperial Fm. [=Latrania Fm.], Pliocene. San Jacinto quad., Imperial Co. UCMP A1407. Holotype UCMP 36087. [Veneridae].

Chione* (*Securella*) *kanakoffi Hertlein and Grant, 1972 (n. sp.). SDSNH Mem. 2(2B):274–276, pl. 49, fig. 1. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Paratype LACMIP 4694, unfigured paratypes LACMIP 4697, 4699–4703, 4716–4719, unfigured paratype CASG 70441. [Veneridae].

....., pl. 49, figs. 3–6. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Holotype LACMIP 4693.

....., pl. 51, figs. 4–7, 10. San Ysidro quad. (1953), San Diego Co. LACMIP 305A [=LACMIP 16862]. Paratypes LACMIP 4695, 4696, unfigured paratypes LACMIP 4704–4715, 4720–4732, 5527–5632.

Chione (*Anomalocardia*) *latilaminosa* Anderson and Martin, 1914. Parker 1949. Jour. Paleo. 23 (6):586, pl. 92, figs. 6, 11. Temblor Fm., Miocene. Kern River, Kern Co. UCMP 2713. Hypotype UCMP 33063. [Veneridae].

Chione (*Lirophora*) aff. *C. mariae* (d'Orbigny, 1846). [*Venus*]. Woodring et al. 1946. USGS PP 207:27, pl. 28, fig. 23. Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, west side of George F. Canyon, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotype USNM 497088. [Veneridae].

Chione peabodyi Parker, 1949. Roopnarine 2001. Jour. Paleo. 75(3):648, fig. 2.7. [Saugus Fm.?], Pliocene [=Pleistocene?]. North of Springville [=Camarillo], Ventura Co. Hypotype CASG 28341. **Remarks:** Junior synonym of *Chione* (*Chione*) *californiensis* (Broderip, *in* Broderip and G.B. Sowerby I 1835), *fide* Coan et al. (2000: p. 369). [Veneridae].

Chione richthofeni Hertlein and Jordan, 1927. Avila and Weaver 1969. AAPG/SEPM Guidebook, p. 59, pl. 34, fig. 10. Rincon Fm., Miocene. Upper Cañada Garanon, west central Santa Rosa Is., California Channel Ids. UCSB SR64-4P [=LACMIP 16420]. Hypotype UCSB M1 [=LACMIP 6321]. [Veneridae].

Chione cf. *C. richthofeni* Hertlein and Jordan, 1927. Squires and Fritsche 1978. SEPM Guidebook 13:20, 23, pl. 3, fig. 7. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 150 [=LACMIP 16167]. Hypotype UCLA 58208 [=LACMIP 10598]. [Veneridae].

Chione cf. *richthofeni* Hertlein and Jordan, 1927. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 14. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. [SDSNH 4312. Hypotype SDSNH 83248]. [Veneridae].

Chione cf. *C. richthofeni* Hertlein and Jordan, 1927. Stadum and Finger 2016. NHMLAC CS 524:38, 42, fig. 49. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 83248. [Veneridae].

Chione securis (Shumard, 1858). [*Venus*]. Manning and Ogle 1950. CDM Bull. 148:23, pl. 9, fig. B. Falor Fm., Pliocene.

Near the bridge crossing Boulder Creek, adjacent to the Wiggins Ranch, Humboldt Co. UCMP A4233. Hypotype UCMP 34170. [Veneridae].

Chione semiplicata Nomland, 1917b. Richey 1943. UCPG 27(2):34, pl. 3,figs. 4–5. Orinda Fm., Miocene. Contra Costa Co. UCMP A2569. Hypotype UCMP 30674. **Remarks:** In the subgenus *Chionopsis*, *fide* Hall (1958: p. 55). [Veneridae].

Chione (*Gnidiella*) *semiplicata* Nomland, 1917b. Parker 1949. Jour. Paleo. 23(6):584, pl. 92, figs. 17, 23; pl. 93, fig. 5. Santa Margarita Fm., Miocene. Northeast of Coalinga, Fresno Co. UCMP 2283. Holotype UCMP 11318. **Remarks:** In the subgenus *Chionopsis*, *fide* Hall (1958: p. 55). [Veneridae].

....., pl. 92, fig. 21. North of Coalinga, Fresno Co. UCMP 2276. Paratype UCMP 12071.

Chione (*Chionopsis*) *simplicata** Nomland, 1917b. Hall 1958. UCPG 34(1):55, pl. 8, fig. 6. Oursan Fm., Miocene. Northwest of Pleasanton, Dublin quad. (1953), Alameda Co. SU 3229. Hypotype SU 8462 [=CASG 69959]. **Remarks:** Error for *semiplicata*. [Veneridae].

Chione (*Gnidiella*) *temblorensis* (Anderson, 1905). [*Venus*]. Parker 1949. Jour. Paleo. 23(6):584– 585, pl. 91, fig. 7; pl. 93, fig. 9. Temblor Fm., Miocene. Vicinity of Barker's Ranch, Kern Co. UCMP 3890. Hypotype UCMP 36084. [Veneridae].

Chione (*Chionopsis*) *temblorensis* (Anderson, 1905). [*Venus*]. Addicott 1965b. USGS PP 525-C:C106, fig. 4p. Olcese Sand, Miocene. Caliente quad. (1914), Kern Co. UCMP B1599. Hypotype UCMP 36564. [Veneridae].

Chione temblorensis (Anderson, 1905). [*Venus*]. Bereskin and Edwards 1969. AAPG/SEPM Guidebook, pl. 33, fig. 2 (as *Chione* sp. in text). Vaqueros Fm., Miocene. Sea cliff north of Pozo Anchorage, Santa Cruz Is., California Channel Ids. UCSB RB65-6 [=LAMCIP 16421]. Hypotype UCSB M2 [=LACMIP 6303]. [Veneridae].

Chione temblorensis (Anderson, 1905). [*Venus*]. Stadum 1973. OCF, p. 27, pl. 4, fig. 4. [Topanga Fm.], Miocene. Old Topanga Canyon Rd., Los Angeles Co. UCLA 2632 [=LACMIP 22632]. Hypotype UCLA 49515 [=LACMIP 10614]. [Veneridae].

Chione temblorensis? (Anderson, 1905). [*Venus*]. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. E. Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8716 [=SBMNH 60183]. **Remarks:** Determined here as indet. Carditidae sp. [Carditidae].

Chione vickeryi Wiedey, 1928. Hall 1958. UCPG 34(1):55, pl. 8, fig. 5 (as *Chione* cf. *C. vickeryi*). Briones Fm., Miocene. East of Irvington, La Costa Valley quad. (1953), Alameda Co. SU 3252. Hypotype SU 8463 [=CASG 69946]. [Veneridae].

Chione sp. Alt and Hyndman 1975. Roadside Geol. Calif., p. 70, unnumbered fig. (as fossil clam shells) (refigured in Alt and Hyndman 2000, p. 156, unnumbered fig.). Scotia Bluffs Fm., Pliocene. Unknown locality, Humboldt Co. **Remarks:** Specimens figured in outcrop and were never collected. Figure also includes *Clinocardium* sp., *Macoma* sp., and *Protothaca* sp. [=*Leukoma* sp.]. [Veneridae].

?*Ciliatocardium kirkerense** (Clark, 1918). [*Cardium*]. Kafanov 2002. Bull. Mizunami Foss. Mus. 29:6, pl. 3, figs. 1, 2. Kirker Tuff, Oligocene. West of Kirker's Creek, Diablo Quadangle, Contra Costa Co. [UCMP 2033]. Holotype UCMP 11165. **Remarks:** In the genus *Acanthocardia*?, *fide* Moore (2003a: p. 2). Error for *kirkerensis.* [Cardiidae].

Ciliatocardium reedi (Loel and Corey, 1932). [*Cardium*]. Kafanov 2002. Bull. Mizunami Foss. Mus. 29:9, pl. 3, fig. 11. Vaqueros Fm., Oligocene/Miocene. Anderson Creek, La Panza Mtns., San Luis Obispo Co. [UCMP A504]. Holotype UCMP 31772. **Remarks:** In the genus *Acanthocardia*, *fide* Moore (2003a: p. 1). [Cardiidae].

Claibornites diegoensis (Dickerson, 1916). [*Lucina*]. Givens 1974. UCPG 109:45–46, pl. 1, fig. 15. Juncal Fm., Eocene. San Guillermo quad. (1943), Ventura Co. UCR 4752. Hypotype UCR 4752/41. [Lucinidae].

Claibornites diegoensis (Dickerson, 1916). [*Lucina*]. Squires 1984. NHMLAC CS 350:45, fig. 10m. Llajas Fm., Eocene. Side canyon to Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype UCLA 59281 [=LACMIP 10561]. [Lucinidae].

Claibornites diegoensis (Dickerson, 1916). [*Lucina*]. Squires 1987. NHMLAC CS 388:61, fig. 101. Juncal Fm., Eocene.

Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 358 [=UCLA. 7210 =LACMIP 16114]. Hypotype LACMIP. 7518. [Lucinidae].

....., fig. 102. Llajas Fm., Eocene. Side canyon to Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 10561 (not LACMIP 59281 as in pl. caption) [=UCLA 59281]. [Lucinidae].

Claibornites (*Claibornites*) *diegoensis* (Dickerson, 1916). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D20, pl. 6, figs. 3, 5. "Rose Canyon Shale," Eocene. Rose Canyon, southeast of Soledad Mtn., La Jolla quad., San Diego Co. UCMP 2226. Holotype UCMP 11788. [Lucinidae].

....., pl. 6, fig. 7. Juncal Fm., Eocene. [San Guillermo quad. (1943), Santa Barbara Co. UCR 4752. Hypotype (of Givens, 1974, pl. 1, fig. 15) UCR 4752/41.

Claibornites diegoensis (Dickerson, 1916). [*Lucina*]. Squires 1988a. SEPM Guidebook 58:110, pl. 2, fig. 3. Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype UCLA 59281 [=LACMIP 7729]. [Lucinidae].

Claibornites diegoensis (Dickerson, 1916). [*Lucina*]. Squires 1988c. NHMLAC CS 398:19, fig. 49. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 987 [=LACMIP 16175]. Hypotype LACMIP 7729. [Lucinidae].

Claibornites diegoensis (Dickerson, 1916). [*Lucina*]. Squires 2008. NHMLAC CS 517:5, fig. 44. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13445. [Lucinidae].

Claibornites (*Codalucina*) *muirensis* (Dickerson, 1914a). [*Phacoides*]. Moore 1988b. USGS PP 1228-D:D20, pl. 6, figs. 6, 8. Martinez Fm., Paleocene. Near Muir Station, Concord quad., Contra Costa Co. UCMP 243. Holotype UCMP 11682. [Lucinidae].

Claibornites (*Codalucina*) *turneri* (Stanton, 1896). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D20, pl. 7, figs. 2, 7. Martinez Fm., Paleocene. Lower Lake, Lake Co. Syntypes USNM 108971. [Lucinidae].

Clementia (*Egesta*) *brioniana* (Trask, 1922). [*Venus*]. Adegoke 1969. UCPG 80:148, pl. 7, fig. 2. Monterey Fm. (McClure Shale Member), Miocene. Tar Peak, Reef Ridge quad., Kings Co. UCMP D1207. Hypotype UCMP 36721. [Veneridae].

Clementia (*Egesta*) *conradiana* (Anderson, 1905). [*Venus*]. Adegoke 1969. UCPG 80:147, pl. 7, fig. 7. Temblor Fm., Miocene. Domengine Ranch quad., Fresno Co. UCMP B8584. Hypotype UCMP 36719. [Veneridae].

Clementia conradiana (Anderson, 1905). [*Venus*]. Albi 1991. Bull. SCPS 23(5-6):51, 54, fig. 5. Topanga Fm., Miocene. Old Topanga Canyon Rd. area, Topanga Canyon, Santa Monica Mtns., Los Angeles Co. Line drawing, source specimen unknown. **Remarks:** May have been drawn from figure in Woodring 1926 [1927]: pl. 15, fig. 1. [Veneridae].

Clementia martini (Clark, 1915). [*Venus*]. Albi 1991. Bull. SCPS 23(5-6):51, 54, fig. 6. Topanga Fm., Miocene. Old Topanga Canyon Rd. area, Topanga Canyon, Santa Monica Mtns., Los Angeles Co. Line drawing, source specimen unknown. **Remarks:** May have been drawn from figure in Woodring 1926 [1927]: pl. 15, fig. 3. [Veneridae].

Clementia (*Egesta*) *pertenuis* (Gabb, 1866). [*Venus*]. Shimer and Shrock 1944. Index Foss. N.A., p. 425, pl. 170, fig. 3 (refigured from Arnold and Anderson, 1910, pl. 30, fig. 3 (as *Venus pertenuis* Gabb 1866)). [Vaqueros Fm.], Miocene. [Coalinga District, Fresno Co. USGS 4631. Hypotype USNM 165597]. [Veneridae].

Clementia pertenuis (Gabb, 1866). [*Venus*]. Hall 1958. UCPG 34(1):54, pl. 3, fig. 2. Cierbo Fm. (as Briones Fm. in pl. caption), Miocene. Southeast of Pleasanton, La Costa Valley quad. (1953), Alameda Co. SU 2739. Hypotype SU 8459 [=CASG 69947]. **Remarks:** In the subgenus *Egesta*, *fide* Woodring (1926 [1927]: p. 40); *fide* Adegoke (1969: p. 148); *fide* Addicott (1973b: p. 36). [Veneridae].

Clementia (*Egesta*) *pertenuis* (Gabb, 1866). [*Venus*]. Addicott 1973b. USGS PP 791:7, 36, pl. 7, fig. 9. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek area, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646597. [Veneridae].

....., pl. 7, fig. 12. Basal Vaqueros Sandstone [=Temblor Fm. (Wygal Sandstone Member)], Miocene. Kern Co. USGS 9432. Hypotype USNM 646598.

....., pl. 8, figs. 1, 3. Zemorra Creek area, Carneros Rocks quad., Kern Co. USGS M4466. Hypotypes USNM 646599, 646600.

....., pl. 8, fig. 19. Carneros Rocks quad., Kern Co. USGS M3578. Hypotype USNM 646601.

Clementia (*Egesta*) *pertenuis* (Gabb, 1866). [*Venus*]. Stadum 1973. OCF, p. 27, pl. 4, fig. 2. Topanga Fm., Miocene. Old Topanga Canyon Rd., Los Angeles Co. UCLA 2630 [=LACMIP 22630]. Hypotype UCLA 49514 [=LACMIP 10613]. [Veneridae].

Clementia (*Egesta*) *pertenuis* (Gabb, 1866). [*Venus*]. Albi 1991. Bull. SCPS 23(5-6):50-53, figs. 1, 4. Topanga Fm., Miocene. Old Topanga Canyon Rd. area, Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP 12589. Line drawings, source specimens unknown. **Remarks:** Fig. 1 [middle fig.] may have been drawn from figure in Woodring 1926 [1927]:pl. 14, fig. 4. [Veneridae].

....., figs. 2, 3. Olcese Sand, Miocene. Kern Co. Line drawings, source specimens unknown. **Remarks:** May have been drawn from figures in Woodring 1926 [1927]: pl. 16, figs. 5, 6.

Clementia pertenuis (Gabb, 1866) [*Venus*]. Rugh 2016. Desert Symposium vol., p. 310, fig. 1. Topanga Fm., Miocene. North side San Juan Creek, Orange Co. [Hypotype at CC]. [Veneridae].

Clementia pertenuis (Gabb) *conradiana* (Anderson, 1905). [*Venus*]. Bereskin and Edwards 1969. AAPG/SEPM Guidebook, p. 74, pl. 33, figs. 3a, b. Vaqueros Fm., Miocene. Santa Cruz Is., California Channel Ids. [UCSB FA-JK65-102] [=LACMIP 16422]. Hypotype UCSB M3 [=LACMIP 6304]. [Veneridae].

Clinocardium blandum (Gould, 1851). [*Cardium*]. Faustman 1964. UCPG 41(2):119, pl. 1, fig. 11. Rio Dell Fm., Pliocene. Fortuna quad., Humboldt Co. UCMP B7875. Hypotype UCMP 37771. **Remarks:** In the genus *Keenocardium*, *fide* Herrera et al. (2015: pp. 99–101). [Cardiidae].

Clinocardium? (*Clinocardium*?) *dickersoni* (Clark, 1918). [*Cardium*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Cardiidae):23, pl. 3, figs. 7, 8 (as "*Cardium*" *dickerson* in pl. caption). San Ramon Fm., Miocene(?) Southwest of Walnut Creek, Concord quad., Contra Costa Co. UCMP 1131. Holotype UCMP 11207. [Cardiidae].

Clinocardium lispum Roth and Talmadge, 1975 (n. sp.). OPCAS 117:3–5, figs. 1a-b. Rio Dell Fm., Pliocene. Scotia quad. (1950), Humboldt Co. UCMP B7643. Holotype UCMP 14152, paratype UCMP 37774. [Cardiidae].

Clinocardium meekianum (Gabb, 1866). [*Cardium*]. Peck 1960. UCPG 36(4):236, 240, pl. 21, fig. 4. Ohlson Ranch Fm., Pliocene. Ft. Ross quad., Sonoma Co. UCMP B2155. Hypotype UCMP 12529.

Clinocardium cf. *C. meekianum* (Gabb, 1866). [*Cardium*]. Addicott 1969. Pr.CAS 37(3):62, 68, 71, pl. 3, fig. 11. Merced(?) Fm., Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650979. [Cardiidae].

Clinocardium meekianum (Gabb, 1866). [*Cardium*]. Perry 1977. Foss. Santa Cruz Co., p. 21, bottom fig. Purisima Fm., Pliocene. Santa Cruz Co. SCCM 1. Hypotype SCCM 21012. [Cardiidae].

Clinocardium meekianum (Gabb, 1866). [*Cardium*]. Perry 1988. SCMA, p. 18, fig. 9D. Purisima Fm., Miocene/Pliocene. Santa Cruz Co. CASG66084. Hypotype CASG 66084.04. [Cardiidae].

Clinocardium meekianum (Gabb, 1866). [*Cardium*]. Kafanov 1998. Bull. Mizunami Foss. Mus. 25:37–38, pl. 1, figs. 9–11. Wildcat Group, Pliocene. Eagle Prairie, Humboldt Co. Holotype ANSP 4497. [Cardiidae].

....., pl. 4, figs. 5, 6. Etchegoin Fm., Pliocene. Kettleman Hills area, San Joaquin Valley, Kings Co. USGS 12400. Holotype (of *Clinocardium meekianum myrae* Adegoke, 1969) USNM 495796.

Clinocardium meekianum myrae Adegoke, 1969 (n. subsp.). UCPG 80:117–118, pl. 3, figs. 7, 9. Etchegoin Fm., Pliocene. Garza Creek, Reef Ridge quad., Kings Co. UCMP D1145. Paratype UCMP 36688. **Remarks:** Junior synonym of *Clinocardium meekianum* (Gabb, 1866), *fide* Kafanov (1998: p. 37), valid subspecies, *fide* Moore (2003a: p. 21). [Cardiidae].

....., pl. 7, fig. 6. Coalinga quad., Fresno Co. UCMP 2091. Paratype UCMP 36690.

Clinocardium (*Clinocardium*) *meekianum myrae* Adegoke, 1969. Moore 2003a. USGS PP 1228-F [electronic format] (family Cardiidae):21, pl. 3, fig. 9 (peel, CASG). Etchegoin Fm., Miocene/Pliocene. Garza Creek, Reef Ridge quad., Kings Co. UCMP D1145]. Paratype UCMP 36688 (not 36668 as in pl. caption). **Remarks:** Junior synonym of *Clinocardium meekianum* (Gabb, 1866), *fide* Kafanov (1998: p. 37). [Cardiidae].

Clinocardium nuttalli (Conrad, 1837). [*Cardium*]. Hertlein and Grant, 1972. SDSNH Mem. 2(2B): 261, pl. 46, fig. 21 (as *Cardium* (*Clinocardium*) *nuttalli* in pl. caption). San Diego Fm., Pliocene. Bluff with fossiliferous concretions in clay quarry, Balboa Park, San Diego, San Diego Co. LACMIP 107. Hypotype LACMIP 4655. [Cardiidae].

Clinocardium praeblandum Keen, 1954 (n. sp.). BAP 35(153):321–322, pl. 29, figs. 1, 6. Briones Fm., Miocene. West end of Las Trampas Ridge, near Walnut Creek, Contra Costa Co. UCMP 1262. Holotype UCMP 14836, paratype UCMP 14835. [Cardiidae].

....., text figs. 5, 6. [Pleasanton quad., Alameda Co.] Hypotypes SU 8299, 8300 [=CASG 72194].

Clinocardium (*Clinocardium*) *praeblandum* Keen, 1954. Moore 2003a. USGS PP 1228-F [electronic format] (family Cardiidae):19, pl. 3, fig. 14. Briones Fm., San Pablo Group, Miocene. West end of Las Trampas Ridge, near Walnut Creek, Concord quad., Contra Costa Co. UCMP 1262. Holotype UCMP 14836. [Cardiidae].

Clinocardium pristinum Keen, 1954 (n. sp.). BAP 35(153):322–324, figs. 7, 8, pl. 29, figs. 9, 15. San Pablo Group (probably Neroly Fm.), Miocene. Southwest part of Shell Ridge, near Walnut Creek, Concord quad., Contra Costa Co. [UCMP 1943]. Holotype UCMP 14838, paratype UCMP 14837. [Cardiidae].

Clinocardium aff. *C. pristinum* Keen, 1954. Faustman 1964. UCPG 41(2):120, pl. 1, fig. 7. Rio Dell Fm., Pliocene. Scotia quad., Humboldt Co. UCMP B7643. Hypotype UCMP 37774. **Remarks:** *Clinocardium lispum* n. sp., *fide* Roth and Talmadge (1975: p. 3–5); in the subgenus *Keenocardium*, *fide* Moore (2003a: p. 19). [Cardiidae].

Clinocardium sp. Alt and Hyndman 1975. Roadside Geol. Calif., p. 70, unnumbered fig. (as fossil clam shells) (refigured in Alt and Hyndman 2000, p. 156, unnumbered fig.). Scotia Bluffs Fm., Pliocene. Unknown locality, Humboldt Co. **Remarks:** Specimens figured in outcrop and were never collected. Figure also includes *Chione* sp., *Macoma* sp., and *Protothaca* sp. [=*Leukoma* sp.]. [Cardiidae].

Codakia (*Epilucina*) *californica* (Conrad, 1837). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D11, pl. 1, figs. 16, 17. San Diego Fm., Pliocene. West of the mouth of Rose Canyon, south slope of Mt. Soledad, San Diego Co. SDSNH 80]. Hypotype (of Hertlein and Grant 1972, pl. 46, figs. 11, 16) SDSNH 4348. **Remarks:** In the genus *Epilucina*, *fide* Coan et al. (2000: p. 263), *fide* Squires (2012: p. 76). [Lucinidae].

Codakia distinguenda (Tryon, 1872). [*Lucina*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 601, fig. 3.14A. Latrania Fm., Miocene/Pliocene. Coyote Mtn., Imperial Co. SDSNH 2895. Hypotype SDSNH 12120. [Lucinidae].

Codakia distinguenda (Tryon, 1872). [*Lucina*]. Powell 2008. USGS SIR 2008-5155:12, 14, fig. 4p. Imperial Fm. [=Latrania Fm.], Pliocene. Vicinity of Travertine Point, Oasis quad., Imperial Co. (not San Diego Co. as in locality description). UCMP A1707 [=UCMP A1705]. Hypotype UCMP 39876. [Lucinidae].

Codakia sp. cf. *C. orbicularis* (Linnaeus, 1758). [*Venus*]. Smith 1989. SEPM Guidebook 63:32, pl. 3, fig. 5. Imperial Fm. (Latrania Sand member) [=Latrania Fm.], Miocene. Coyote Mtns., Imperial Co. UCR 7267. [Hypotype UCR 7267/4]. [Lucinidae].

Compsomyax cf. *C. subdiaphana* (Carpenter, 1864b). [*Clementia*]. Woodring et al. 1940 [1941]. USGS PP 195:33, pl. 11, fig. 8. San Joaquin Fm. (*Acila* Zone), Pliocene. North side of Arroyo Hondo, North Dome, Kettleman Hills, Kings Co. USGS 12340. Hypotype USNM 495715. [Veneridae].

Compsomyax subdiaphana (Carpenter, 1864b). [*Clementia*]. Hertlein and Grant, 1972. SDSNH Mem. 2(2B):269–270, pl. 47, figs. 4, 7. San Diego Fm., Pliocene. San Diego, San Diego Co. CASG 1404. Hypotype CASG 72543. [Veneridae].

....., pl. 57, fig. 15. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4688.

Compsomyax subdiaphana (Carpenter, 1864b). [*Clementia*]. Squires 2012. NHMLAC CS 520:76, fig. 34. Pico Fm.,

Pliocene. Newhall area, Los Angeles Co. LACMIP 7757. Hypotype LACMIP 14359. [Veneridae].

Compsomyax subdiaphana (Carpenter, 1864b) subsp. *gibbosus* (Gabb, 1869a). [*Saxidomus*]. Faustman 1964. UCPG 41(2):120, pl. 1, fig. 3. Rio Dell Fm., Pliocene. Scotia quad., Humboldt Co. UCMP B7643. Hypotype UCMP 37776. [Veneridae].

Compsomyax sp. G D. Hanna, 1952. Pr.CAS 27(9):358, pl. 14, fig. 2. Wildcat Fm., Pliocene. Dredged from 96 fm., southwest of Trinidad Head, Humboldt Co. CASG 33223. Hypotype CASG 4284 (with *Patinopecten caurinus*). [Veneridae].

Conchocele bisecta (Conrad, 1849a). [*Venus*]. Squires and Gring 1996. Jour. Paleo. 70(1):68–69, figs. 4.5–4.7. Wagonwheel Fm., Eocene. Wagonwheel Mtn., Emigrant Hill quad. (1953, PR 1973), Kern Co. CSUN 1580 [=LACMIP 16886]. Hypotypes LACMIP 12357–12358. **Remarks:** Renamed *Conchocele bathyaulax* Hickman, 2015, *fide* Hickman (2015: p. 10). [Thyasiridae].

....., fig. 4.8. Wagonwheel Mtn., Emigrant Hill quad. (1953, PR 1973), Kern Co. CSUN 1581 [=LACMIP 16887]. Hypotype LACMIP 12359. **Remarks:** Hryniewicz et al. (2017: p. 719) suggested that this species was is *Maorithyas folgeri* (Wagner and Schilling, 1923), which was confirmed earlier by Kiel and Peckman (2007: p. 348).

Corbicula jestesi Squires, 1999c (n. sp.). NHMLAC CS 480:21–22, figs. 34–39. Matilija Sandstone, Eocene. Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1445 (=LACMIP 24259). Holotype LACMIP 12464, paratypes LACMIP 12465–12468. [Corbiculidae].

Corbicula cf. *C. williamsoni* Anderson and G D. Hanna, 1925. Squires and Deméré 1991. SEPM Guidebook 68:184, figs. 3D, E. Friars Fm., Eocene. San Diego Co. SDSNH 3278. Hypotype SDSNH 40198. [Corbiculidae].

Corbis washingtoniana Clark, 1925. Weaver and Kleinpell 1963. UCPG 43:201, pl. 33, figs. 10, 11. Upper Gaviota Fm., Eocene. Coyote Canyon, Pt. Conception quad., Santa Barbara Co. UCMP B7027. Hypotypes SU 9286, 9287 [=CASG 70147, 70148]. **Remarks:** *Epilucina washingtoniana* (Clark, 1925), *fide* Squires and Gring (1996: p. 66). [Lucinidae].

Corbula (*Varicorbula*) *capayana* Vokes, 1939. Squires 1987. NHMLAC CS 388:71, fig. 126. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 845 [=LACMIP 16137]. Hypotype LACMIP 7541. [Corbulidae].

Corbula complicata G D. Hanna, 1924. Stewart 1946. USGS PP 205-C:93, pl. 11, fig. 7. Avenal Sandstone, Eocene. Reef Ridge, southeast of Big Tar Canyon, Reef Ridge quad., Kings Co. USGS 14495. Hypotype USNM 498708. [Corbiculidae].

....., pl. 11, fig. 8. Reef Ridge, in small tributary just east of main Canoas Canyon, Dark Hole quad., Fresno Co. USGS 14503. Hypotype USNM 498709.

Corbula (*Caryocorbula*) *dickersoni* Weaver and Palmer, 1922. Givens 1974. UCPG 109:57, pl. 4, fig. 7. Juncal Fm., Eocene. Tributary to Alamo Creek above the mouth of Wagon Rd. Canyon, San Guillermo quad. (1943), Ventura Co. UCR 4707. Hypotype UCR 4707/32. [Corbiculidae].

Corbula dickersoni Weaver and Palmer, 1922. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, fig. 11. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20780 (not SDSNH 20781 as in pl. caption). **Remarks:** In the subgenus *Caryocorbula*, *fide* Squires (1987: p. 71). [Corbiculidae].

Corbula (*Caryocorbula*) *dickersoni* Weaver and Palmer, 1922. Squires 1984. NHMLAC CS 350: 53, fig. 12m. Llajas Fm., Eocene. Side canyon to Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6592. [Corbiculidae].

Corbula (*Caryocorbula*) *dickersoni* Weaver and Palmer, 1922. Squires 1987. NHMLAC CS 388:70–71, fig. 124. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 807 [=LACMIP 16191]. Hypotype LACMIP 7539. [Corbiculidae].

Corbula (*Caryocorbula*) *dickersoni* Weaver and Palmer, 1922. Squires 1988a. SEPM Guidebook 58:110, pl. 2, fig. 11. Juncal Fm. ("Capay Stage"), Eocene. Whitaker Peak area, Los Angeles Co. CSUN 807 [=LACMIP 16191]. Hypotype

LACMIP 7539. [Corbiculidae].

Corbula aff. *Corbula* (*Carycorbula*) *dickersoni* Weaver and Palmer, 1922. Squires et al. 1988. SEPM Guidebook 58:185, pl. 1, fig. 9. Goler Fm., Eocene. Near head of northeast-flowing ravine, Inyokern quad. SE (1972), El Paso Mtns., Kern Co. USGS M9067. Hypotype USNM 424897. [Corbiculidae].

Corbula cf. *C.* (*C.*) *dickersoni* Weaver and Palmer, 1922. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 25. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 676 [=LACMIP 16192]. Hypotype LACMIP 11488. [Corbiculidae].

Corbula (*Caryocorbula*) *dickersoni* Weaver and Palmer, 1922. Squires 1999b. NHMLAC CS 479:28, fig. 63. Santa Susana Fm., Eocene. South side of Simi Valley, Calabasas quad. (1952, PR 1967), Ventura Co. CSUN 1344 [=LACMIP 17192]. Hypotype LACMIP 12702. [Corbiculidae].

Corbula (*Caryocorbula*) *dickersoni* Weaver and Palmer, 1922. Squires 2008. NHMLAC CS 517: 5, fig. 54. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13455. [Corbiculidae].

Corbula (*Caryocorbula*) *domenginica* Vokes, 1939. Givens and Kennedy 1976. Jour. Paleo. 50 (5):969, 974, pl. 4, figs. 17–21. Delmar Fm. [=Santiago Fm.?], Eocene. Roadcut along Calif. St. Hwy. 78 near Vista, San Diego Co. UCR 4865. Hypotypes UCR 4865/160-4865/161. [Corbiculidae].

Corbula (*Varicorbula*) *gibbiformis* Grant and Gale, 1931. Hertlein and Grant 1972. SDSNH Mem. 2(2B):323–324, pl. 57, figs. 3, 4 (as *Corbula gibbiformis*). San Diego Fm., Pliocene. Near mouth of Rose Canyon, San Diego, La Jolla quad., San Diego Co. UCLA 2359 [=LACMIP. 22359]. Hypotype UCLA [48636 (=LACMIP 9319)]. [Corbiculidae].

Corbula hornii Gabb, 1864. Weaver and Kleinpell 1963. UCPG 43:208, pl. 38, fig. 5. Cozy Dell Shale, Eocene. Tequipis Canyon, west of San Marcos Pass, Santa Barbara Co. Hypotype SU 9258 (not SU 9323 as in text) [=CASG 70149]. [Corbiculidae].

Corbula (*Caryocorbula*) *hornii* Gabb, 1864. Givens 1974. UCPG 109:57, pl. 4, fig. 6. Matilija Fm., Eocene. Northeast of Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4717. Hypotype UCR 4717/301. [Corbiculidae].

Corbula (*Lentidium*) *luteola* Carpenter, 1864b. Hertlein and Grant 1972. SDSNH Mem. 2(2B): 324, pl. 55, figs. 1,2, 5, 6, 15 (as *Corbula luteola*). San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP [4827, 4828]. **Remarks:** In the genus *Caryocorbula*, *fide* Coan and Valentich-Scott (2012: p. 870). [Corbiculidae].

Corbula parilis Gabb, 1864. Stewart 1946. USGS PP 205-C:93 pl. 11, figs. 9, 10. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14494. Hypotypes USNM 498710, 498711. [Corbiculidae].

Corbula (*Caryocorbula*) *parilis* Gabb, 1864. Givens 1974. UCPG 109:57, pl. 4, fig. 9. Juncal Fm., Eocene. West of Thorn Meadows Campground, Lion Canyon quad. (1943), Ventura Co. UCR 4680. Hypotype UCR 4680/101. [Corbiculidae].

Corbula (*Caryocorbula*) *parilis* Gabb, 1864. Squires 1987. NHMLAC CS 388:71, fig. 125. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7540. [Corbiculidae].

Corbula (*Caryocorbula*) *parilis* Gabb, 1864. Squires 1988c. NHMLAC CS 398:19–20, fig. 54. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 974 [=LACMIP 16193]. Hypotype LACMIP 7734. [Corbiculidae].

Corbula (*Caryocorbula*) *parilis* Gabb, 1864. Squires 1999b. NHNLAC CS 479:28, fig. 64. Santa Susana Fm., Eocene. North side of Simi Valley, bulldozer-generated exposure now under houses, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 958 [=LACMIP 17190]. Hypotype LACMIP. 12703. [Corbiculidae].

Corbula n. sp. aff. *C. pozo* Dailey and Popenoe, 1966. Throckmorton 1988a. USGS OFR 88-59:48, pl. 4, fig. 3 (pl. 1, fig. 2)]. Tesla Fm., uppermost Cretaceous/lowermost Paleocene. From float 50 m above the top of the shale member of the Moreno Fm., Midway quad., Alameda Co. UCMP D8150. UCMP unnumbered hypotype lost, *fide* C.

Throckmorton (personal communication, 2002). [Corbiculidae].

Corbula rosecanyonensis M.A. Hanna, 1927. Moore 1968. SDSNH Ocas. Pap. 15:30, pl. 13, fig. b. "Rose Canyon Shale," Eocene. Rose Canyon, San Diego Co. SDSNH 2363. Hypotype SDSNH 4166]. [Corbiculidae].

Corbula Fowkes 1982. Coalinga Guidebook, p. 22, unnumbered fig. Avenal Sandstone, Eocene. Head of Tar Canyon, near Las Sagaser Ranch, Kings Co. WHC Hypotype lost? [Corbiculidae].

Crassadoma cf. *C. gigantea* (Gray, 1825). [*Lima*]. Stadum and Finger 2016. NHMLAC CS 524:39, 42, fig. 44. Monterey Fm., Saddleback Valley Limestone member, Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 140354. [Pectinidae].

Crassatella branneri (Waring, 1914). [*Crassatellites*]. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 15. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 6825]. Hypotype UCR 6825/1. **Remarks:** Junior synonym of *of Crassatella compacta* Gabb, 1869b, *fide* Moore (2003a: p. 1). [Crassatellidae].

Crassatella claytonensis (Dickerson, 1914a). [*Crassatellites*]. Moore 2003a. USGS 1228-F [electronic format] (family Crassatellidae):2, pl. 2, fig. 15. Martinez Fm., Paleocene. East of Clayton, Mt. Diablo quad., Contra Costa Co. UCMP 1558. Syntype UCMP 11669 (not UCMP 11670 as in text). [Crassatellidae].

Crassatella collina Conrad, 1857d. Weaver and Kleinpell 1963. UCPG 43:199, pl. 32, figs. 1, 2, 4, 7. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6954. Hypotypes SU 9271–9273, 9277. [=CASG 70150, 70156, but unable to match to specific hypotypes here and below]. [Crassatellidae].

....., pl. 32, figs. 3, 5; pl. 33, fig. 1. Middle Gaviota Fm., Eocene. Near San Julian Ranch house, along a fossiliferous "reef," Lompoc quad., Santa Barbara Co. UCMP B7006. Hypotypes SU 9275, 9276.

....., pl. 32, fig. 6. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek area, Lompoc quad., Santa Barbara Co. UCMP B6987. Hypotype SU 9274.

"*Crassatella*" *collina* Conrad, 1857d. Squires 1994b. SEPM Guidebook 74:54, pl. 3, fig. 5. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23727. Hypotype LACMIP 11663. [Crassatellidae].

Crassatella collina Conrad, 1857d. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. Q. Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8718 [=SBMNH 60180]. **Remarks:** Determined here as indet. bivalve internal mold. [Crassatellidae].

Crassatella compacta Gabb, 1869b [not Gabb, 1866 as cited]. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, figs. 1, 2. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=CASG 61666 (=UCMP A9717)]. Hypotype SU 10234 [=CASG 61666.05]. [Crassatellidae].

Crassatella compacta Gabb, 1869b [not Gabb, 1866 as cited]. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 17. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 4569]. Hypotype UCR 4569/38. [Crassatellidae].

Crassatella compacta Gabb, 1869b. Moore 2003a. USGS 1228-F [electronic format] (family Crassatellidae):1, pl. 2, fig. 12. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Calabasas quad., Ventura Co. SU 2695. Holotype (of *Crassatellites branneri* Waring, 1914) CASG 160 [=CASG 61919.03]. [Crassatellidae].

Crassatella granti (Wiedey, 1928). [*Spisula*]. Woodring 1942. Jour. Paleo. 16(1):82, pl. 13, fig. 1. Vaqueros Fm., Miocene. Cajon Pass, Hesperia quad., San Bernardino Co. CIT 568 [=LACMIP 7673]. Hypotype CIT 3899 [=LACMIP 4116]. [Crassatellidae].

....., pl. 13, fig. 2; pl. 14, figs. 1, 2. Near Cajon, Hesperia quad., San Bernardino Co. USGS 12856. Hypotypes USNM 498962, 498963.

Crassatella granti (Wiedey, 1928). [*Spisula*]. Moore 2003a. USGS 1228-F [electronic format] (family Crassatellidae):7–8, pl. 1, figs. 4, 5. Vaqueros Fm., Oligocene/Miocene. Vaqueros Creek, Junipero Serra quad., Monterey Co. SU 200. Holotype SDSNH 40. [Crassatellidae].

Crassatella lillisi (Dickerson, 1916). [*Crassatellites*]. Moore 2003a. USGS 1228-F [electronic format] (family

Crassatellidae):7, pl. 2, figs. 2, 13. Lodo Fm. (Cerros Shale Member), Paleocene [=Eocene]. Vicinity of junction of Urruttia Canyon and Salt Creek, Coalinga quad., Fresno Co. UCMP 1817. Holotype UCMP 11797. [Crassatellidae].

Crassatella lincolnensis (Weaver, 1916) (?). [*Crassatellites*]. Weaver and Kleinpell 1963. UCPG 43:199–200, pl. 33, fig. 3. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek area, Lompoc quad., Santa Barbara Co. UCMP B6957. Hypotype SU 9278 [=CASG 70158]. [Crassatellidae].

Crassatella lomitensis (Oldroyd, 1924). [*Crassatellites*]. Mount 1974. WSM Echo 6:40–43, pl. 1, figs. 5, 6. "Fernando Fm.", Pliocene. East bluff of upper Newport Bay, Orange Co. UCR 4915. Hypotype UCR 4915/273. **Remarks:** Junior synonym of *Eucrassatella fluctuata* (Carpenter, 1864b), *fide* Coan et al. (2000: p. 293). In the genus *Hybolophus fide* DeVries (2015: p. 664, figs. 2E). [Crassatellidae].

Crassatella meganosensis (Clark and Woodford, 1927). [*Crassatellites*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Crassatellidae):3–4, pl. 1, figs. 1, 3, 7. Meganos Fm., Paleocene/Eocene. Mt. Diablo quad., Contra Costa Co. UCMP 3159. Holotype UCMP 31283, paratype UCMP 31284. [Crassatellidae].

Crassatella (*Crassatellites*) *mulates* M.A. Hanna, 1927. Moore 2003a. USGS 1228-F [electronic format] (family Crassatellidae):6–7, pl. 1, figs. 9, 10. Ardath Shale., Eocene. Soledad Valley, La Jolla quad., San Diego Co. UCMP 5062. Holotype UCMP 31006. [Crassatellidae].

Crassatella stewartvillensis (Dickerson, 1914a). [*Crassatellites*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Crassatellidae):2, pl. 1, figs. 6, 8. Martinez Fm., Paleocene. South of Stewartville, Mt. Diablo quad., Contra Costa Co. UCMP 1540. Holotype UCMP 11668. [Crassatellidae].

Crassatella studleyi (Dickerson, 1914a). [*Crassatellites*]. Moore 2003a. USGS 1228-F [electronic format] (family Crassatellidae):3, pl. 2, figs. 11, 14. Martinez Fm., Paleocene (not Palocene as in pl. caption). South of Stewartville, Mt. Diablo quad., Contra Costa Co. UCMP 1540. Holotype UCMP 32756. [Crassatellidae].

Crassatella unioides Stanton, 1896. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 5. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 6834]. Hypotype UCR 6834/2. [Crassatellidae].

Crassatella uvasana Conrad, 1855b. Deméré et al. 1979. SEPM Guidebook 4:98, pl. 1, fig. 7. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH. 20729. [Crassatellidae].

Crassatella uvasana Conrad, 1855b. Squires 1984. NHMLAC CS 350:47–49, figs. 11a–d, f, g. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotypes LACMIP 6576–6579, 6581,6582. [Crassatellidae].

....., fig. 11e. Las Llajas Canyon, Santa Susana quad. (1951, PR 1959), Ventura Co. CSUN. 444 (not CSUN 374 as in pl. caption) [=LACMIP 16203]. Hypotype LACMIP 6580.

Crassatella uvasana Conrad, 1855b. Squires 1987. NHMLAC CS 388:64–65, fig. 111. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7528. [Crassatellidae].

Crassatella uvasana Conrad, 1855b. Squires 1988a. SEPM Guidebook 58:110, pl. 2, fig. 7. Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6577. [Crassatellidae].

"*Crassatella*" *uvasana* Conrad, 1855b. Squires 1997b. Simi Valley Hist. Soc. vol., p. 297, fig. 2i (refigured from Squires, 1984, fig. 11b). Llajas Fm., Eocene. Llajas Canyon, north side Simi Valley, Ventura Co. [CSUN 374 (=LACMIP 7242). Hypotype LACMIP 6577]. [Crassatellidae].

Crassatella uvasana uvasana Conrad, 1855b. Moore 2003a. USGS 1228-F [electronic format] (family Crassatellidae):4–5, pl. 2, figs. 4–6, 9, 10 (figs. 5, 10 refigured from Cooper, 1894, pl. 3, figs. 44, 45, others unfigured). "Rose Canyon Shale," Eocene. Rose Canyon, San Diego Co. [CASG 66541]. Syntypes (of *Astarte semidentata* Cooper, 1894) CASG 618, 618a–c [=CASG 66541.01–66541.04]. [Crassatellidae].

....., pl. 2, figs. 16, 17. Tejon Fm., Eocene. Live Oak Canyon, Tejon quad., Kern Co. Lectotype (of Stewart 1930: p. 142) (of *Crasatella grandis* Gabb, 1864) UCMP 31449.

Crassatella uvasana Conrad, 1855b. Squires 2008. NHMLAC CS 517:5, fig. 46. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13447. [Crassatellidae].

Crassatella weaveri (Clark, 1938). [*Crassatellites*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Crassatellidae):10, pl. 2, figs. 7, 8 (as *Crassatella*). Kreyenhagen Fm. (Markley Sandstone member), Eocene. Sandstone cliff on northeast bank of Pleasants Creek, Napa quad., Solano Co. UCMP A1297. Holotype UCMP 30831. [Crassatellidae].

Crassatella sp. Smith 1975b. SEPM Symposium vol., p. 476, pl. 1, fig. 13. Lodo Fm., Paleocene. East side Panoche Pass Rd. near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP loc. A4657 and A9717]. Hypotype UCMP 14201. [Crassatellidae].

"*Crassatellites brainerdi* Dickerson, 1914b." Moore 2003a. USGS 1228-F [electronic format] (family Crassatellidae):8–9, pl. 1, fig. 2. Martinez Fm. [=Santiago Fm.], Paleocene (Eocene in pl. caption). Santa Ana Mtns., Orange Co. UCMP 2233. Holotype UCMP 11757. [Crassatellidae].

Crassatellites uvasana (Conrad, 1855b). [*Crassatella*]. Shimer and Shrock 1944. Index Foss. N.A., p. 419, pl. 167, fig. 11 (refigured from Stewart, 1930, pl. 12, fig. 9 as *Crassatella uvasana* Conrad). Tejon Fm., Eocene. Ft. Tejon, Kern Co. Neotype (of Stewart 1930: p. 142), ANSP 4461, missing, *fide* K. Estes-Smargianni (personal communication, 2019). **Remarks:** In the genus *Crassatella*, *fide* Moore (2003a: p. 4). [Crassatellidae].

Crassinella branneri (Arnold, 1903). [*Astarte*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):228–229, pl. 43, figs. 24, 25, 28, 29. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4535, 4536. **Remarks:** Junior synonym of *Crassinella pacifica* (C.B. Adams, 1852), *fide* Coan et al. (2000: p. 294). [Crassatellidae].

Crassinella cf. *C. mexicana* Pilsbry and Lowe, 1932. Woodring et al. 1946. USGS PP 207:27, pl. 28, fig. 12. Monterey Fm. (Altamira Shale Member), Miocene. West side of George F. Canyon, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotype USNM 497083. **Remarks:** Junior synonym of *Crassinella pacifica* (C.B. Adams, 1852), *fide* Coan et al. (2000: p. 294). [Crassatellidae].

Crassostrea? *ashleyi* (Hertlein, 1934). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C38-C39, pl. 19, figs. 3, 5; pl. 20, figs. 2, 3. Temblor Fm., Oligocene/Miocene. Domengine Ranch quad., Fresno Co. UCMP D1075. Holotype UCMP 36646, paratype UCMP 36647 (both of *Ostrea arnoldi* Adegoke, 1969). [Ostreidae].

....., pl. 20, figs. 4, 5. Center of sec. 32, T28S, R29E, Kern Co. CASG 933. Holotype CASG 6065.

....., pl. 20, fig. 6; pl. 22, fig. 2. Domengine Ranch quad., Fresno Co. UCMP D1075 (not UCMP D1057 as in text). Holotype (of *Ostrea hertleini* Adegoke, 1969) UCMP 36654).

....., pl. 21, fig. 3; pl. 24, fig. 5. Branch Canyon Fm. [=Temblor Fm.], Miocene. Ridge between main and east Abbott canyons, Caliente Range, McKittrick quad., San Luis Obispo Co. UCLA 512 [=LACMIP 20512]. Holotype (of *Ostrea altatemblorensis* Grant and Eaton *in* Eaton et al., 1941) UCLA 8970 [=LACMIP 8953].

Crassostrea eldridgei ynezana (Loel and Corey, 1932). [*Ostrea*]. Addicot, 1973b. USGS PP 791: 7, 27, pl. 2, figs. 2, 10. Temblor Fm. (Wygal Sandstone Member), Miocene. Aqua Media Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotypes USNM 646533, 646534. **Remarks:** In the genus/subgenus *Pycnodonte* (*Pycnodonte*) (family Gryphaeidae), *fide* Moore (1987: p. C18). [Gryphaeidae].

Crassostrea? *englekyi* (Hertlein, 1928a). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C38, pl. 20, fig. 1; pl. 22, fig. 1. Vaqueros Fm., Oligocene/Miocene. South of San Augustine Canyon, east of dike near top of hill, Santa Rosa Is., California Channel Ids. CASG 1156. Holotype CASG 4116. [Ostreidae].

Crassostrea? *eucorrugata* (Hertlein, 1934). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C39–C40, pl. 25, fig. 3; pl. 26, fig. 1. Cierbo Fm., Miocene. West side of Discovery Gulch, Santa Ynez quad., Santa Barbara Co. UCLA 1751 [= LACMIP 21751]. Holotype (of *Ostrea cierboensis* Grant and Eaton *in* Eaton et al., 1941) UCLA 8980 [=LACMIP 8968]. [Ostreidae].

....., pl. 25, figs. 4, 5; pl. 27, fig. 1. Santa Margarita Fm., Miocene. Fresno Co. UCMP 2284. Holotype UCMP 11309.

Crassostrea tectonica Squires, 2018a (n. sp.). NHMLAC CS 526:10, 13, figs. 80–85, 93, 94. Upper Matilija? Sandstone,

Eocene. Piru Creek, Los Angeles Co. LACMIP 40028. Holotype LACMIP 14687 (both valves), 14688. [Ostreidae].

....., figs. 86–88. Upper Matilija? Sandstone, Eocene. Canton Canyon, Los Angeles Co. LACMIP 40216. Paratype LACMIP 14689.

....., figs. 89, 90, 105, 106. Upper Matilija? Sandstone, Eocene. Canton Canyon, Los Angeles Co. LACMIP 20214 [=LACMIP 40214]. Paratypes LACMIP 14690, 14697.

....., figs. 91, 92. Upper Matilija? Sandstone, Eocene. Canton Canyon, Los Angeles Co. LACMIP 40220 (not 40020 as in pl. caption). Hypotype LACMIP 14691.

....., figs. 95, 96. Coldwater Sandstone, Eocene. 4 km east of Sespe Gorge, Upper Sespe Creek, Ventura Co. LACMIP 23732. Hypotype LACMIP 14693.

....., figs. 97, 98. Upper Matilija? Sandstone, Eocene. Bluepoint Campground area, Piru Creek, Los Angeles Co. LACMIP 40246. Hypotype LACMIP 14694.

....., figs. 99–101. Coldwater Sandstone, Eocene. North side of Sespe Creek, Upper Sespe Creek, Ventura Co. LACMIP 41097. Hypotype LACMIP 14695.

....., figs. 102–104, 109–111. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23723. Hypotypes LACMIP 14696, 14699.

....., figs. 107, 108. Coldwater Sandstone, Eocene. North side of Sespe Creek, Upper Sespe Creek, Ventura Co. LACMIP 40252. Hypotype LACMIP 14698.

Crassostrea titan (Conrad, 1853). [*Ostrea*]. Stenzel, 1971. Treatise Invert. Paleo. N6(3):N973, figs. J14-1a–c. [Santa Margarita Fm.], Miocene. Taylor Canyon quad., Santa Barbara Co. UCLA L1766. Hypotype LSU I-10716].]. **Remarks:** Supplementary descriptions in Conrad,1854 and 1857c and first illustrated in Conrad, 1857c. [Ostreidae].

Crassostrea titan (Conrad, 1853). [*Ostrea*]. Addicott 1972b. SEPM Symposium vol., p. 15, pl. 4, fig. 11. Santa Margarita Fm., Miocene. Fellows quad., Temblor Range, Kern Co. USGS M3787. Hypotype USNM 646820. **Remarks:** Supplementary descriptions in Conrad,1854 and 1857c and first illustrated in Conrad, 1857c. [Ostreidae].

Crassostrea titan (Conrad, 1853). [*Ostrea*]. Addicott and Galehouse 1973. Jour. Res. USGS 1(5): 510, 513, fig. 3q. Paso Robles Fm., Pliocene. Near Atascadero, San Luis Obispo Co. USGS M4621. Hypotype USNM 647010. **Remarks:** : Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). Probably reworked from Miocene Santa Margarita Fm., *fide* Addicott and Galehouse (1973: p. 511). [Ostreidae].

Crassostrea titan (Conrad, 1853). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C35–C37, pl. 23, fig. 1. Topanga Fm., Miocene. South of Calabasas, Los Angeles Co. USGS 4402. Hypotype (of Arnold 1907, pl. 40, fig. 2, pl. 45, fig. 2) USNM 164987. **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). [Ostreidae].

....., pl. 23, figs. 2, 6. San Pablo Fm., Miocene. West of Layfayette, near Lauterwasser Creek, Concord quad., Contra Costa Co. UCMP 1477]. Hypotype (of Clark 1915, pl. 44, fig. 1) UCMP 11565.

....., pl. 23, figs. 3, 7. Santa Margarita(?) Fm., Miocene. Panza and Estrella valleys, San Luis Obispo Co. Holotype (of *Ostrea panzana* Conrad, 1857d) USNM 13338. **Remarks:** Numbered the same as *Ostrea subjecta* Conrad, 1857d in USNM collection.

....., pl. 23, figs. 4, 5. Santa Margarita(?) Fm. [=Topanga Fm.?], Miocene. Between Santa Clara River and Los Angeles Valley, Los Angeles Co. Holotype (of *Ostrea subjecta* Conrad 1857d) USNM 13338. **Remarks:** Numbered the same as *Ostrea panzana* Conrad, 1857d in USNM collection.

....., pl. 24, figs. 1, 3, 4, 6. Santa Margarita Fm., Miocene. A ledge-forming *Ostrea-Pecten* "reef" Domengine Ranch quad., Fresno Co. UCMP D701. Holotype UCMP 36661, paratype UCMP 36662 (both of *Ostrea titan andersoni* Adegoke, 1969).

....., pl. 27, fig. 4; pl. 29, fig. 1. Cierbo Fm. [=Branch Canyon Fm.], Miocene. Branch Canyon, east of head of Discovery

Gulch, Cuyama Valley, Santa Barbara Co. UCLA 1745 [=LACMIP 21745]. Holotype (of *Ostrea titan prior* Grant and Eaton *in* Eaton et al., 1941) UCLA 8991 [=LACMIP 8977].

....., pl. 28, figs. 3, 5; pl. 29, fig. 6. Short Canyon branch of Bitter Creek, south side Cuyama Valley, Santa Ynez quad., Santa Barbara Co. UCLA 1795 [=LACMIP 21795]. Holotype (of *Ostrea ligminuta* Grant and Eaton *in* Eaton et al., 1941) UCLA 8985 [=LACMIP 8971].

Crassostrea titan (Conrad, 1853) [*Ostrea*]. Susuki, 1992. Topanga Story, p. 7, fig. 6. Topanga Fm. (Cold Creek Member), Miocene. Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP22632 [=UCLA 2623]. Hypotype LACMIP 13078 [=UCLA 57967]. **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). [Ostreidae].

Crassostrea titan (Conrad, 1853) [*Ostrea*]. Kirby, 2001. Paleobiology 27(1):84–103, figs. 1, 6, 9. Miocene, Santa Margarita Fm. Godwin Canyon, Pine Mtn., Ventura Co. LACMIP 17749. Hypotypes LACMIP 8272, 8282, 8283, figured half of LACMIP 8282 determined as missing. **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c).[Ostreidae].

....., fig. 8. Miocene, Santa Margarita Fm. Coalinga Anticline, Fresno Co. LACMIP 17750. Hypotype LACMIP 8263.

Crassostrea titan (Conrad, 1853) [*Ostrea*]. Stadum and Finger 2016. NHMLAC CS 524:39, 42, figs. 36, 37. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 83238. Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). [Ostreidae].

Crassostrea vaquerosensis (Loel and Corey, 1932). [*Ostrea*]. Addicott 1972b. SEPM Symposium vol., p. 10, pl. 2, figs. 3, 7. Temblor Fm. (Aqua Sand Member) (of Stinemeyer et al. 1959: pp. 9, 13), Miocene. Las Yeguas Ranch quad., Temblor Range, Kern Co. USGS M4464. Hypotypes USNM 646787, 646791. **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c).Provisionally in the genus *Crassostrea*?, *fide* Moore (1987: p. C38). [Ostreidae].

Crassostrea? *vaquerosensis* (Loel and Corey, 1932). [*Ostrea*]. Moore 1987. USGS PP 1229-C: C38, pl. 21, fig. 2; pl. 25, fig. 2. Vaqueros Fm., Oligocene/Miocene. Jeff Harris Ranch, west of Pleyto, Bryson quad., Monterey Co. Paratypes CASG 6789, 6790. [Ostreidae].

Crenella decussata (Montagu, 1808). [*Mytilus*]. Moore 1983. USGS PP 1228-A:A71–A72, pl. 18, figs. 1, 2. "Fernando Fm.", Pliocene. [Newport Beach, Orange Co. LACMIP 471]. Hypotype LACMIP 5747. [Mytilidae].

Crenella inflata Carpenter, 1864a. Hertlein and Grant 1972. SDSNH Mem. 2(2B):171, pl. 41, fig. 11. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4479. **Remarks:** Junior synonym of *Crenella decussata* (Montagu, 1808), *fide* Coan et al. (2000: p. 166). [Mytilidae].

Crenella inflata Carpenter, 1864a. Moore 1983. USGS PP 1228-A:A72, pl. 18, fig. 3. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305]. Hypotype LACMIP 4479 (of Hertlein and Grant 1972, pl. 41, fig. 11). **Remarks:** Junior synonym of *Crenella decussata* (Montagu, 1808), *fide* Coan et al. (2000: p. 166). [Mytilidae].

Indeterminate *Crenella*? Powell et al. 2019b. *PaleoBios* 36: 9, fig. 12. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP 13003. Hypotype UCMP 218709. [Mytilidae].

Crenomytilus? cf. *C.*? *arnoldi* (Clark, 1918). [*Mytilus*]. Addicott 1973b. USGS PP 791:7, 24, pl. 1, fig. 1. Temblor Fm. (Wygal Sandstone Member), Oligocene. Carneros Rocks quad., Kern Co. USGS M3578. Hypotype USNM 646511. **Remarks:** In the genus/subgenus *Mytilus* (*Mytilus*?), *fide* Moore (1983: p. A6). [Mytilidae].

....., pl. 1, fig. 18. First creek south of Zemorra Creek, Carneros Rocks quad., Kern Co. USGS M3979. Hypotype USNM 646512.

....., pl. 3, fig. 2 [fig. 3 on pl.]. In bed of Temblor Creek, Carneros Rocks quad., Kern Co. USGS M3978. Hypotype USNM 646540.

Crenomytilus cf. *C. arnoldi* (Clark, 1918). [*Mytilus*]. Addicott 1979. SEPM Guidebook 14:47, 48, pl. 1, fig. 14. Vaqueros (?) Fm. (lower sandstone member), Oligocene. The Indians, Junipero Serra quad., Santa Lucia Range, Monterey

Co. SU 1756. Hypotype CASG 60373, determined here as missing. **Remarks:** In the genus/subgenus *Mytilus* (*Mytilus*?), *fide* Moore (1983: p. A62). [Mytilidae].

Crenomytilus cf. *C. coalingensis* (Arnold, 1909 [1910]). [*Mytilus*]. Powell et al. 2019a. USGS SIR 2019-5021:3, 29, pl 2, fig. 16. Wilson Grove Fm., Miocene. North of Bloomfield, Sonoma Co. CASG 54135. Hypotype CASG 78410. [Mytilidae].

Crenomytilus expansus (Arnold, 1907). [*Mytilus*]. Addicott 1973b. USGS PP 791:7, 24, pl. 4, fig. 15. Temblor Fm. (Wygal Sandstone Member), Miocene. Basal beds of Vaqueros Fm. [=Temblor Fm.] near Carneros Spring, Kern Co. USGS 9427. Hypotype USNM 646549. **Remarks:** In the genus/subgenus *Mytilus* (*Crenomytilus*), *fide* Moore (1983: p. A63). [Mytilidae].

Crenomytilus expansus (Arnold, 1907). [*Mytilus*]. Stadum and Finger 2016. NHMLAC CS 524:39, 42, fig. 35. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 83246. **Remarks:** In the genus/subgenus *Mytilus* (*Crenomytilus*), *fide* Moore (1983: p. A63). [Mytilidae].

Crepella columbiana* Dall, 1897. Cummings et al. 1962. CDMG Bull. 181:204, ph. 17, fig. 8. Purisima Fm. (Pomponio Member), Pliocene. Tunitas, Woodside quad., San Mateo Co. Locality 653M. Hypotype determined here as missing. **Remarks:** In the genus *Solamen*, *fide* Coan et al. (2000: p. 171). Error for *Crenella*. [Mytilidae].

Cryptomya cf. *C. californica* (Conrad, 1837). [*Sphaenia*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:91, pl. 7, fig. 2. Sisquoc Fm. (Tinaquaic Sandstone Member), Miocene/Pliocene. Sisquoc River, Santa Barbara Co. USGS 14872. Hypotype USNM 560017. [Myidae].

Cryptomya californica (Conrad, 1837). [*Sphaenia*]. Cummings et al. 1962. CDMG Bull. 181: 208, ph. 19, fig. 1. Purisima Fm. (San Gregorio Member), Pliocene. Near mouth of Tunitas Creek, San Gregorio quad., San Mateo Co. Locality 482-3M. Hypotype determined here as missing. [Myidae].

Cryptomya californica (Conrad, 1837). [*Sphaenia*]. Addicott 1969. Pr.CAS 37(3):63, 66, 70, 74, pl. 2, figs. 2, 4; pl. 4, fig. 7. Merced Fm.(?), Pliocene. Palo Alto quad. Santa Clara Co. USGS M1715. Hypotypes USNM 650963, 650964. [Myidae].

Cryptomya californica (Conrad, 1837). [*Sphenia*]. Bedrossian 1971. Calif. Geol. 24(12):231, unnumbered fig., specimens a and b (molds and casts), lower fig. left specimen. "Merced" Fm., Pliocene [=Wilson Grove Fm., Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotypes CASG, determined here as missing. [Myidae].

Cryptomya californica (Conrad, 1837). [*Sphaenia*]. Hertlein and Grant 1972. SDSNH Mem. (2B):319–320, pl. 55, figs. 3, 4, 7, 10, 16. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4823–4825. [Myidae].

Cryptomya californica (Conrad, 1837). [*Sphenia*]. Bedrossian 1974. Calif. Geol. 27(8):179, unnumbered fig., top specimen (refigured from Bedrossian, 1971); back cover, upper left specimen. "Merced" Fm., Pliocene [=Wilson Grove Fm., Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. CASG hypotypes determined here as missing. [Myidae].

Cryptomya californica (Conrad, 1837). [*Sphenia*]. Perry 1977. Foss. Santa Cruz Co., p. 23, middle right fig. Purisima Fm., Pliocene. Santa Cruz Co. SCCM hypotype determined here as missing. [Myidae].

Cryptomya californica (Conrad, 1837). [*Sphenia*]. Yancey, 1978. Pr.CAS 41(15):364, 369, fig. 5H. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D3688. Hypotype USNM 251804. [Myidae].

Cryptomya californica (Conrad, 1837). [*Sphenia*]. Perry 1988. SCMA, p. 19, fig. 10B. Purisima Fm., Miocene/Pliocene. Capitola, New Brighton section, wave-cut platform (recent), Santa Cruz Co. CASG66084. Hypotype CASG 66084.09. [Myidae].

Cryptomya californica magna Dall, 1921b. Hertlein and Grant 1972. SDSNH Mem. 2(2B):320–321, pl. 54, figs. 10, 13; pl. 55, figs. 8, 12. San Diego Fm., Pliocene. Balboa Park, San Diego, San Diego Co. CASG 1402. Hypotypes CASG 70443, 70448. **Remarks:** Junior synonym of *Cryptomya californica* (Conrad, 1837), *fide* Coan et al. (2000: p. 474). [Myidae].

Cryptomya cf. *C. quadrata* Arnold, 1909 [1910]. Woodring et al. 1940 [1941]. USGS PP 195: 33, pl. 39, fig. 2. San Joaquin Fm. (*Acila* Zone), Pliocene. West fork of Arroyo Conchoso east of El Dombo, North Dome, Kettleman Hills, Kings Co. USGS 12351. Hypotype USNM 495852. **Remarks:** Junior synonym of *Cryptomya californica* (Conrad, 1837), *fide* Coan et al. (2000: p. 474). [Myidae].

Cubitostrea californiana Squires, 2018a (n. sp.). NHMLA CS 526:13, 15, figs. 112–114. Llajas Fm., Eocene. Devil Canyon, Los Angeles Co. LACMIP 40485. Holotype LACMIP 14700, hypotype LACMIP 14701 [Ostreidae].

…..figs. 115, 116, 117–128 Ardath Shale, Eocene. San Clemente Canyon, San Diego Co. LACMIP 42219. Hypotypes LACMIP 14702, 14707, paratypes LACMIP 14703, 14705, 14706.

Cucullaea mathewsonii Gabb, 1864. Smith 1975b. SEPM Symposium vol., p. 476, pl. 1, figs. 20, 23. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype SU/CASG 10232. [Cucullaeidae].

Cucullaea mathewsonii Gabb, 1864. Moore 1983. USGS PP 1228-A:A47, pl. 10, figs. 1, 2. Martinez Fm., Paleocene. Martinez, Contra Costa Co. Lectotype (of Stewart 1930: p. 78) ANSP 4559, paralectotype ANSP 4559 (also numbered ANSP 6125, *fide* Moore (1983: pl. 10 caption). [Cucullaeidae].

Cucullaea mathewsonii Gabb, 1864. Saul 1986. SEPM Guidebook 49:28, figs. 33, 34. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6525 [=LACMIP 26525]. Hypotype LACMIP 7555. [Cucullaeidae].

Cucullaea morani Waring, 1914. Moore 1983. USGS PP 1228-A:A47, pl. 10, figs. 5, 6. Meganos Fm. [=Santa Susana Fm.], Paleocene. Llajas Canyon, east of McCray wells, Camulos quad., Simi Valley Ventura Co. Holotype SU/CASG 166, three syntypes in CASG collection do not match the specimens illustrated in Moore (1983) [CASG 61916.01, 9363, 9820]. [Cucullaeidae].

Cucullaria morani (Waring, 1914). [*Cucullaea*]. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 9. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 6683]. Hypotype UCR. 6838/2 (not UCR 6683/1 as in pl. caption). [Cucullaeidae].

Cuneocorbula torreyensis (M.A. Hanna, 1927). [*Corbula*]. Squires 1999c. NHMLAC CS 480:25, fig. 49. Matilija Sandstone, Eocene. Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1445 (=LACMIP 24259). Hypotype LACMIP 12478. [Corbulidae].

Cuspidaria (*Cardiomya*) *pectinata* (Carpenter, 1864b). [*Neaera*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):342–343, pl. 57, fig. 14. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 4883. **Remarks:** In the genus *Cardiomya*, *fide* Coan et al. (2000: p. 556). [Cuspidariidae].

?*Cyathodonta pedroana* Dall, 1915. Squires 2012. NHMLAC CS 520:76, fig. 49. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7757. Hypotype LACMIP 14374. [Thraciidae].

Cyclinella elevata (Gabb, 1864). [*Dosinia*]. Givens 1974. UCPG 109:56, pl. 3, fig. 9. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4726. Hypotype UCR 4726/21. [Veneridae].

Cyclocardia californica (Dall, 1903b). [*Venericardia (Cyclocardia)*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:85, pl. 8, fig. 16. Sisquoc Fm. (diatomaceous strata), Miocene. Casmalia Hills, near. Shuman, Santa Barbara Co. USGS 14878. Hypotype USNM 560036. [Carditidae].

....., pl. 10, figs. 7, 8; pl. 11, figs. 2, 3. Foxen Mudstone, Pliocene. Waldorf Asphalt Mine, Santa Barbara, Co. USGS 4473. Hypotypes (2) USNM 560054.

....., pl. 15, figs. 1, 2. Careaga Fm. (Cebada Member), Pliocene. Casmalia Hills, northeast of Shuman, Santa Barbara Co. USGS 14608. Hypotype USNM 560103.

....., pl. 21, fig. 5. Careaga Fm. (Graciosa Member), Pliocene. Casmalia Hills, northeast of Shuman, Santa Barbara Co. USGS 14611. Hypotype USNM 560139.

Cyclocardia californica (Dall, 1903b). [*Venericardia (Cyclocardia)*]. Durham and Addicott 1965. USGS PP 524-A:A13,

pl. 5, fig. 16 (cast). Pancho Rico Fm., Miocene/Pliocene., Wunpost quad., Monterey Co. USGS M982. Hypotype USNM 649113. [Carditidae].

....., pl. 5, fig. 17 (cast). North side of Walker Canyon, Wunpost quad., Monterey Co. USGS M1935. Hypotype USNM 649114.

Cyclocardia (*Cyclocardia*) *kirkerensis* (Clark, 1918). [*Cardium*]. Moore 1992. USGS PP 1228-E:E12–E13, pl. 9, fig. 12. Kirker Tuff, Oligocene. Kirker Creek area, Mt. Diablo quad., Contra Costa Co. UCMP 2033. Holotype UCMP 11165. [Carditidae].

Cyclocardia (*Cyclocardia*) *montereyana* (Arnold, 1908). [*Venericardia*]. Moore 1992. USGS PP 1228-E:E13, pl. 7, fig. 21. Monterey Fm., Miocene. Newell Creek area,, Santa Cruz quad., Santa Cruz Co. [SU 121]. Holotype USNM 165464. [Carditidae].

Cyclocardia occidentalis (Conrad, 1855a). [*Cardita*]. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):230–231, pl. 43, figs. 4, 9–11. San Diego Fm., Pliocene. Near mouth Rose Canyon, La Jolla quad., San Diego Co. UCLA 2359 [=LACMIP 22359]. Hypotypes UCLA [=LACMIP 9299–9301]. **Remarks:** Supplemental description in Conrad (1855b). Junior synonym of *Cyclocardia monilicosta* (Gabb, 1861), *fide* Coan et al. (2000: p. 303). [Carditidae].

Cyclocardia occidentalis (Conrad, 1855a). [*Cardita*]. Squires and White 1983. SEPM Guidebook 35:222, pl. 1, fig. 7. Saugus Fm. [=Pico Fm.], Pliocene. Northern Simi Valley, Santa Susana quad. (1951, PR 1969),Ventura Co. CSUN 725 [LACMIP 29227]. Hypotype UCLA 59409 [=LACMIP 8322]. **Remarks:** Supplemental description in Conrad, 1855b. Junior synonym of *Cyclocardia monilicosta* (Gabb, 1861), *fide* Coan et al. (2000: p. 303). [Carditidae].

Cyclocardia (*Cyclocardia*) *occidentalis* (Conrad, 1855a). [*Cardita*]. Moore 1992. USGS PP 1228-E:E13, pl. 9, figs. 3, 5. San Diego Fm., Pliocene. San Diego, San Diego Co. LACMIP 16202. Hypotype (of Hertlein and Grant, 1972 pl. 43, figs. 5, 6) UCLA 48619 [=LACMIP 9302]. **Remarks:** Supplemental description in Conrad, 1855b. Junior synonym of *Cyclocardia monilicosta* (Gabb, 1861), *fide* Coan et al. (2000: p. 303). [Carditidae].

....., pl. 9, figs. 4, 6. Near mouth Rose Canyon, La Jolla quad.], San Diego Co. UCLA 2359 [=LACMIP 22359]. Hypotype (of Hertlein and Grant 1972, pl. 43, figs. 4, 9) UCLA 48616 [=LACMIP 9299].

Cyclocardia occidentalis (Conrad, 1855a). [*Cardita*]. Squires 1997b. Simi Valley Hist. Soc. vol., p. 301, Fig. 6e (refigured from Squires and White 1983, pl. 1, fig. 7). Saugus Fm. [=Pico Fm.], Pliocene. North side Simi Valley, Ventura Co. CSUN 725 (=LACMIP 29227). Hypotype UCLA 59409 (LACMIP 8322)]. **Remarks:** Supplemental description in Conrad, 1855b. Junior synonym of *Cyclocardia monilicosta* (Gabb, 1861), *fide* Coan et al. (2000: p. 303). [Carditidae].

Cyclocardia occidentalis (Conrad, 1855a). [*Cardita*]. Squires 2012. NHMLAC CS 520:76, fig. 30. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14355. **Remarks:** Supplemental description in Conrad, 1855b. Junior synonym of *Cyclocardia monilicosta* (Gabb, 1861), *fide* Coan et al. (2000: p. 303). [Carditidae].

Cyclocardia ventricosa (Gould, 1850a). [*Cardita*]. Hertlein and Grant 1972. SDSNH Mem.2 (2B): 231, pl. 43, figs. 3, 8. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4537. [Carditidae].

Cyclocardia (*Cyclocardia*) *ventricosa* (Gould, 1850a). [*Cardita*]. Moore 1992. USGS PP 1228-E:E14, pl. 9, figs. 9, 10. San Diego Fm., Pliocene. San Ysidro quad. (1943], San Diego Co.[LACMIP 305]. Hypotype (of Hertlein and Grant 1972, pl. 43, figs. 3, 8) LACMIP 4537. [Carditidae].

Carditid cf. *Cyclocardia ventricosa* (Gould, 1850a). Rugh 2018. Desert Symposium vol.: 111, fig. 1B. Reata Glen, northeast of San Juan Capistrano, Orange Co. Monterey Fm., Miocene. [Hypotype at CC]. [Carditidae].

Cyclocardia sp. Powell et al. 2019b. *PaleoBios* 36:10–11, fig. 16. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland Hills, Alameda Co. UCMP IP13001. Hypotype UCMP 410563. [Carditidae].

Cyclopecten lompicoensis (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B7-B8, pl. 1, fig. 2. Monterey Fm., Miocene. Head of Lompico Creek, Santa Cruz quad., Santa Cruz Co. Holotype USNM 164931. [Propeamussiidae].

Cyclopecten? *martinezensis* (Gabb, 1869b). [*Pecten*]. Moore 1984. USGS PP 1228-B:B8–B9, pl. 1, figs. 9, 10. Martinez Fm., Paleocene. Martinez, Contra Costa Co. [MCZ 1043]. Lectotype (of Stewart 1930: p. 117) MCZ 15026a [=MCZ

108502], paralectotype MCZ 15026 [=MCZ 108503]. [Propeamussiidae].

Cyclopecten (*Cyclopecten*) *pernomus* (Hertlein, 1935). [*Pecten*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):213–214, pl. 33, figs. 7, 11. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotypes LACMIP 4507, 4508. [Propeamussiidae].

Cyclopecten sp. cf. *C. pernomus* (Hertlein, 1935). [*Pecten*]. Powell 1985. WSM Ann. Rept. 17: 32, pl. 1, fig. 5. Imperial Fm. (Latrania Sand Member) [=Latrania Fm.], Miocene/ Pliocene. Willis Palm area, Riverside Co. UCMP A1407. Hypotype UCMP 37533. [Propeamussiidae].

Cyrtopleura (*Scobinopholas*) *costata* (Linneaus, 1758). [*Pholas*]. Kennedy 1974. SDNHS Mem. 8: 26–28, fig. 8. Imperial Fm. [=Latrania Fm.], Pliocene. Carrizo Creek (locality B), Imperial Co. SDSNH 51. Hypotype SDSNH 4277. [Propeamussidae].

Delectopecten alternilineatus (Clark, 1918). [*Pecten (Pseudomuseum)*]. Moore 1984. USGS PP 1228-B:B15–B16, pl. 2, figs. 8, 9. San Ramon Fm., Miocene(?). Near Muir Station, Contra Costa Co. UCMP 1131, Holotype UCMP 11203. [Pectinidae].

Delectopecten harfordus (Davis, 1913). [*Pecten*]. Moore 1984. USGS PP 1228-B:B16, pl. 3, figs. 6–9. Monterey(?) Fm., Miocene. Ten km north of Port Harford (=Port San Luis), San Luis Obispo Co. Syntypes SU/CASG 406, 408 [=CASG 61963.01–61963.03], paratype CASG 9819.

Delectopecten lillisi (Hertlein, 1934). [*Pecten*]. Moore 1984. USGS PP 1228-B:B14, pl. 3, figs. 1–3. Kreyenhagen Fm., Eocene/Oligocene. Stanislaus Co. CASG 1874 (not CASG 184 as in text). Holotype CASG 6062, paratype CASG 6063. [Pectinidae].

Delectopecten peckhami (Gabb, 1869a) of Arnold 1906. Moore 1963 [1964]:67–68, pl. 20, fig. 4; pl. 21, fig. 2. Monterey Fm., Miocene. Southeast of Pinole (not Pinnole as in pl. caption), Contra Costa Co. USGS 2593. Hypotype (of Arnold 1906, pl. 3, fig. 8) USNM 164839. [Pectinidae].

Delectopecten peckhami (Gabb, 1869a). [*Pecten*]. Phillips et al. 1974. SEPM Guidebook, p. 123, pl. 3, fig. 1 (peel). Tumey Fm., Eocene/Oligocene. Monocline Ridge, Fresno Co. [UCMP D6534]. Hypotype UCMP 37154. [Pectinidae].

Delectopecten peckhami (Gabb, 1869a). [*Pecten*]. Watkins 1974. Paleo.3 15:252, fig. 6A (cast). Kreyenhagen Fm., Oligocene. Monocline Ridge, Monocline Ridge quad., Fresno Co. [UCMP D6534]. Hypotype UCMP 37154. [Pectinidae].

Delectopecten peckhami (Gabb, 1869a) of Arnold 1906. Moore 1984. USGS PP 1228-B:B15, pl. 3, fig. 5. Monterey Fm., Miocene. Southeast of Pinole, Contra Costa Co. USGS 2539. Hypotype (of Arnold 1906, pl. 3, fig. 8; Moore 1963 [1964], pl. 21, fig. 2) USNM 164839. [Pectinidae].

Delactopecten peckhami (Gabb, 1869a). Rugh 2018. Desert Symposium vol. 112, fig. 12. Reata Glen, northeast of San Juan Capistrano, Orange Co. Monterey Fm., Miocene. [Hypotype at CC]. [Pectinidae].

Delectopecten pedroanus (Trask, 1856). [*Plagiostoma*]. Valpey 1975. Earth Sci. 28(4):188, unnumbered upper fig. Puente Fm., Miocene. Near Elsereno [*sic*], Los Angeles Co. Hypotype current whereabouts unknown. **Remarks:** Possibly equal to *Delectopecten peckhami* (Gabb) of Arnold 1906, *fide* Moore (1984: p. B15). [Pectinidae].

Delectopecten vancouverensis fernandoensis (Hertlein, 1925a). [*Pecten*]. Moore 1984. USGS PP 1228-B:B16–B17, pl. 3, fig. 10. "Fernando Fm.", Pliocene. Drill core, 850 m depth, 1300 m northwest of Signal Hill, 150 m east of Orange Ave., 230 m north of Willow St., Long Beach, Los Angeles Co. (Ventura Co. in text). SU 155 [=CASG 61840]. Holotype SU/CASG 16 [=CASG 61840.01]. **Remarks:** Junior synonym of *Delectopecten vancouverensis* (Whiteaves, 1893), *fide* Coan et al. (2000: p. 227). [Pectinidae].

Delectopecten vancouverensis fernandoensis (Hertlein, 1925a). [*Pecten*]. Anonymous 2001. Calif. Geol. 55(4):26, left fig. (refigured in Anonymous 2002, unnumbered fig., p. 2). [Puente Fm., Miocene. Metro Rail Red Line, Barndsdall Park subway tunnel], Los Angeles, Los Angeles Co. [LACMIP 16847. Hypotype LACMIP 13015.]. **Remarks:** Junior synonym of *Delectopecten vancouverensis* (Whiteaves, 1893), *fide* Coan et al. (2000: p. 227). [Pectinidae].

Delectopecten Fowkes 1982. Coalinga Guidebook, p. 24, unnumbered fig. Tumey Fm., Oligocene. Ciervo Hills, north of Coalinga, Fresno Co. WHC hypotype lost? [Pectinidae].

Delectopecten sp. indet. Squires 1994b. SEPM Guidebook 74:52, pl. 1, fig. 9. Cozy Dell Shale, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23690. Hypotype LACMIP 11634. [Pectinidae].

Dendostrea angelica (Rocheburne, 1895). [*Ostrea*]. Powell 1985. WSM Ann. Rept. 17:32, pl. 1, fig. 10. Imperial Fm. (Latraina Sand Member) [=Latrania Fm.], Miocene/Pliocene. Super Creek area, Riverside Co. UCR 8595. Hypotype LACMIP 7164 [=LACMIP 7869]. **Remarks:** Provisionally in the genus *Dendostrea*?, *fide* Moore (1987: p. C26). [Ostreidae].

Dendostrea? *angermanni* (Hertlein and Jordan, 1927). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C25, pl. 31, figs. 1–4, 6. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Imperial Co. Hypotype UCMP 37535 determined here as missing. [Ostreidae].

Dendostrea? *vespertina* (Conrad, 1854). [*Ostrea*]. Powell 1985. WSM Ann. Rept. 17:32, pl. 1, fig. 9. Imperial Fm. (Latrania Sand Member) [=Latrania Fm.], Miocene/Pliocene. Willis Palm area, Riverside Co. CIT 187 [=LACMIP 16204]. Hypotype LACMIP 7163 [=LACMIP 7868] determined here as missing. **Remarks:** Supplemental descriptions in Conrad (1857b, 1857e) and first illustrated in Conrad (1857b). [Ostreidae].

Dendostrea? *vespertina* (Conrad, 1854). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C25, pl. 11, figs. 2, 5; pl. 12, figs. 2, 5, 6; pl. 13, fig. 5; pl. 15, fig. 6; pl. 16, figs. 6, 7. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Carrizo Creek, Imperial Co. Lectotype (of Woodring 1938: p. 43) ANSP 13366, paralectotypes ANSP 13366a, 13366d, 13366e. **Remarks:** Supplemental descriptions in Conrad (1857b, 1857e) and first illustrated in Conrad (1857b). [Ostreidae].

....., pl. 14, fig. 2; pl. 15, fig. 7. [From two small washes in Alverson Canyon, at base of Coyote Mtn., Imperial Co. UCMP 738]. Hypotype (of G D. Hanna 1926, pl. 26, figs. 1–3) UCMP 32290 (not UCMP 33290 as in pl. 14 caption).

....., pl. 15, figs. 2, 3. San Joaquin Fm., Pliocene. [Kettleman Hills, Kings Co.]. USGS 4728. Syntypes [holotype in text] (of *Ostrea vespertina sequens* Arnold, 1910) USNM 165545. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 10).

Dendostrea? vespertina (Conrad, 1854). [*Ostrea*]. Peska 1992. BSCPS 24(3, 4):32, unnumbered fig. p. 34. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Coyote Mtns., Imperial Co. **Remarks:** Supplemental descriptions in Conrad (1857b, 1857e) and first illustrated in Conrad (1857b). Line drawing, source specimen unknown. [Ostreidae].

Dendostrea vespertina (Conrad, 1854). [*Ostrea*]. Squires 1997b. Simi Valley Hist. Soc. vol., p. 301, fig. 6g (refigured from Squires and White 1983, pl. 1, fig. 4 (as *Ostera vespertina* Conrad, 1854)). Saugus Fm. [=Pico Fm.], Pliocene. Browns Canyon, Los Angeles Co. [CSUN 241D (not CSUN 757, =LACMIP 16171)]. Hypotype UCLA 59406 (=LACMIP 8319)]. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 10). [Ostreidae].

Dermatomya tenuiconcha (Dall, 1913). [*Poromya*]. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):341, pl. 56, figs. 6, 7, 10, 11, 13. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4882. [Poromyidae].

cf. *Dinocardium* sp. Rugh 2014a. Desert Symposium vol.:134, fig. 1-6 (left and lower right specimens). Latrania Fm., Miocene. [ABDSP 5151.1. Hypotype ABDSP I 10691]. [Cardiidae].

Diodus tenuis (Gabb, 1864). [*Cyprinella*]. Throckmorton 1988a. USGS OFR 88-59:48–49, pl. 5, figs. 5, 6 (fig. 5 refigured in Throckmorton 1988b, pl. 1, fig. 5). Tesla Fm., uppermost Cretaceous/lowermost Paleocene. From roadcut on west side of Tesla Rd., Midway quad., Alameda Co. UCMP D8147. UCMP unnumbered hypotypes lost, *fide* C. Throckmorton (personal communication, 2002). [Corbiculidae].

?*Diodus tenuis* (Gabb, 1864). [*Cyprinella*]. Throckmorton 1988a. USGS OFR 88-59:48–49, pl. 4, fig. 1 (refigured in Throckmorton 1988b, pl. 1, fig. 1). Tesla Fm., uppermost Cretaceous/ lowermost Paleocene. From float 50 m above the top of the shale member of the Moreno Fm., Midway quad., Alameda Co. UCMP D8150. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Corbiculidae].

Diplodonta (*Diplodonta*) *buwaldana* Anderson and Martin, 1914. Moore 1988b. USGS PP 1228-D:D27, pl. 8, figs. 9, 10. Round Mt. Silt, Miocene. Near Barker's ranch house, Kern Co. Holotype CASG 111, paratype CASG 112. [Ungulinidae].

Diplodonta (Felaniella) *cornea* (Reeve, 1850). [*Lucina*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):253–254, pl.

43, figs. 7, 13, 20. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4650, 4651. **Remarks:** In the genus *Felaniella*, *fide* Moore (1988b: p. D29); junior synonym of *Diplodonta sericata* (Reeve, 1850), *fide* Coan et al. (2000: p. 271). [Ungulinidae].

Diplodonta (*Diplodonta*) *cretacea* (Gabb, 1864). [?*Lucina*]. Moore 1988b. USGS PP 1228-D:D26, pl. 8, fig. 1 (refigured from Gabb 1864, pl. 30, fig. 255). Meganos Fm.,Paleocene/Eocene. From Clayton to Marsh's, vicinity of Mount Diablo, Contra Costa Co. Holotype missing, *fide* Stewart (1930: p. 7). [Ungulinidae].

....., pl. 8, fig. 6. East of Marsh Creek, Brentwood quad., Contra Costa Co. UCMP 3578. Hypotype (of Clark and Woodford 1927, pl. 15, fig. 7) UCMP 31286.

Diplodonta (*Felaniella*) *harfordi* Anderson, 1905. Susuki 1992. Topanga Story, p. 7, fig. 2. Topanga Fm. (Cold Creek Member), Miocene. Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP 22635 [=UCLA 2635]. Hypotype LACMIP 13074 [=UCLA 57993]. **Remarks:** In the genus *Felaniella*, *fide* Moore (1988b: p. D29). [Ungulinidae].

Diplodonta (*Diplodonta*) *orbella* (Gould, 1851). [*Lucina*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):252–253, pl. 55, fig. 11; pl. 57, figs. 9, 18. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4648, 4649]. [Ungulinidae].

Diplodonta cf. *orbella* (Gould, 1851). [*Lucina*]. Stadum 1973. OCF, p. 25, pl. 3, fig. 8. Vaqueros Fm.?, Miocene. Hypotype possibly at SDSNH (current whereabouts unknown). **Remarks:** *Ex* Grouard collection. [Ungulinidae].

Diplodonta (*Diplodonta*) *orbella* (Gould, 1851). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D27–D28, pl. 8, figs. 12–14. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305]. Hypotypes (of Hertlein and Grant 1972, pl. 55, fig. 11; pl. 57, figs. 9, 18) LACMIP 4648, 4649. [Ungulinidae].

....., pl. 8, fig. 15. San Pablo Fm., Miocene. Near the town of Rodeo, due north on big bend on Santa Fe Railroad [=BNSF Railway], Napa quad., Contra Costa Co.. UCMP 1628. Hypotype (of Clark 1915, pl. 62, fig. 6) UCMP 11521.

Diplodonta* (*Zemysina*) *pacifica Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1287, figs. 1C, D. Santa Susana Fm., Paleocene. Large concretions on west side of Meier Canyon, Calabasas Quad., Simi Hills, Ventura Co. UCR 6682. Holotype UCR 6682/100 (not UCR 6682/2 as in text). [Ungulinidae].

Diplodonta (*Zemysina*) *pacifica* Zinsmeister, 1983b. Moore 1988b. USGS PP 1228-D:D28, pl. 8, figs. 22–24. Simi Conglomerate, Paleocene(?). West side of Meier Canyon, Calabasas quad., Ventura Co. UCR 6682. Holotype UCR 6682/100. [Ungulinidae].

Diplodonta (*Diplodonta*) *polita* (Gabb, 1864). [*?Mysia*] Moore 1988b. USGS PP 1228-D:D26, pl. 8, fig. 8. Martinez Fm., Paleocene. Near Martinez and at Clayton, near the coal mines (from Division B), Contra Costa Co. Holotype UCMP 11990. [Ungulinidae].

Diplodonta (*Diplodonta*) *stephensoni* Clark, 1918. Moore 1988b. USGS PP 1228-D:D27, pl. 8, fig. 7. San Ramon Fm. (San Lorenzo Fm. in locality description), Miocene(?). Southwest of town of Walnut Creek, Contra Costa Co. UCMP 1131. Holotype UCMP 11171. [Ungulinidae].

Diplodonta (*Diplodonta*) *unisulcatus* (Vokes, 1939). [*Taras*]. Moore 1988b. USGS PP 1228-D: D26–D27, pl. 7, figs. 15, 17. Domengine Fm., Eocene. South part of crest of Parson's Peak, Coalinga quad. [=Joaquin Rocks quad.], Fresno Co. UCMP 672. Holotype UCMP 15636. [Ungulinidae].

Diplodonta Fowkes 1982. Coalinga Guidebook, p. 30, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 17, fig. 5, refigured from Arnold and Anderson 1910, pl. 39, fig. 5 (both as *Diplodonta parilis* Conrad, 1848)). Etchegoin Fm., Miocene. Southeast of Coalinga, Fresno Co. [Hypotype USNM 165484]. [Ungulinidae].

Diplodonta (*Zemysina*) n. sp. Zinsmeister, 1983a. SEPM Guidebook 35:67, pl. 1, fig. 16. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 6682]. Hypotype UCR 6682/100 (not UCR 6682/2 as in pl. caption). **Remarks:** *Diplodonta* (*Zemysina*) *pacifica* n. sp., *fide* Zinsmeister (1983b: p. 1287). [Ungulinidae].

Divalinga (*Divalinga*) *eburnea* (Reeve, 1850). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D22–D23, pl. 7, figs. 11, 14. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. From two small washes in Alverson Canyon, at base of Coyote Mtn., Imperial Co. UCMP 738]. Hypotype (of G D. Hanna 1926, pl. 26, figs. 8, 9) UCMP 32289. [Lucinidae].

Divalinga cf. *D. eburnea* (Reeve, 1850). [*Lucina*]. Powell 2008. USGS SIR 2008-5155:14, fig. 4q (as *Duvalinga* sp. cf. *D. eburnea*). Imperial Fm. [=Latrania Fm.], Pliocene. Vicinity of Desert Shores and Travertine Rock, Imperial Co. (not San Diego Co. as in locality description). USGS M9778. Hypotype USNM 486912. [Lucinidae].

Divaricella cumulata (Gabb, 1864). [*Lucina*]. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, fig. 9. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20778. [Lucinidae].

Divaricella cumulata (Gabb, 1864). [*Lucina*]. Squires 2001. NHMLAC CS 489:16, fig. 34. Llajas Fm., Eocene. In small canyon east of Chivo Canyon, north side of Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 7430. Hypotype LACMIP 12751. [Lucinidae].

Divaricella? (*Egracina*?) *cumulata* (Gabb, 1864). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D22, pl. 7, fig. 5. Tejon Fm., Eocene. Live Oak Creek, Tejon quad., Kern Co. [CASG 244]. Hypotype (of Dickerson 1915, pl. 2, fig. 4) CASG 258. [Lucinidae].

....., pl. 7, fig. 6. Near old Ft. Tejon, Kern Co. UCMP IP12784. Holotype UCMP 11988.

Divaricella cf. *D. eburnea* (Reeve, 1850). [*Lucina*]. Woodring et al. 1946. USGS PP 207:27, pl. 28, figs. 17, 20, 21 (clay peels). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, west side of George F. Canyon, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotypes USNM 497084–497086. **Remarks:** In the genus *Divalinga*, *fide* Moore (1988b: p. D22). [Lucinidae].

Donax (*Serrula*) *gouldii* Dall, 1921a. Hertlein and Grant 1972. SDSNH Mem. 2(2B):303, pl. 48, fig. 16. San Diego Fm., Pliocene. Near U.S./Mexico boundary in first terrace above Tiajuana [*sic*] River plain, San Diego Co. UCLA 294 [=LACMIP 20294]. Hypotype UCLA 48631 [=LACMIP 9314]. [Donacidae].

....., pl. 48, fig. 19; pl. 57, fig. 8. Near U.S./Mexico boundary fence, San Diego Co. LACMIP 319. Hypotypes LACMIP 4808, 4809.

Donax latus Gabb, 1869b. Moore 2003b. USGS PP 1228-G [electronic format] (family Donacidae):1, pl. 8, fig. 1. Domengine Fm.(?), Eocene. West of Griswold's, southeast of the Sheep Well, on the road from San Juan to New Idria, San Benito Co. Holotype MCZ 15028 [=MCZ 108506]. [Donacidae].

Donax scrippsensis M.A. Hanna, 1927. Moore 2003b. USGS PP 1228-G [electronic format] (family Donacidae):1–2, pl. 8, fig. 2. "Rose Canyon Shale" Eocene. North of Scripps Institution Pier, La Jolla quad., San Diego Co. UCMP 5089. Holotype UCMP 30992. [Donacidae].

Donax triangulata Anderson and Martin, 1914. Moore 2003b. USGS PP 1228-G [electronic format] (family Donacidae):3, pl. 8, fig. 4. Round Mtn. Silt (Temblor Fm. in pl. caption), Miocene. Northeast of Barker's ranch house, Kern Co. CASG 65. Holotype CASG 130 [=CASG 65.02]. [Donacidae].

Donax n. sp. Keen 1943. Tr. SDSNH 10(2):39, pl. 3, fig. 8. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Hypotype SU 7524 [=CASG 71998]. [Donacidae].

Dosinia longidens Grant and Gale, 1931. Lutz 1951. UCPG 28(13):389, pl. 17, figs. 6–8. Sobrante Fm., Miocene. Crow Canyon, Hayward quad., Alameda Co. UCMP A4565. Hypotypes UCMP 34148–34150. [Veneridae].

Dosinia (*Dosinidia*) *margaritana* Weidey, 1928. Keen 1943. Tr.SDSNH 10(2):40, pl. 3, figs. 3–5. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Hypotypes SU. 7525, 7525b [=CASG 71999]. [Veneridae].

Dosinia margaritana Wiedey, 1928. Shapiro 1997. Santa Cruz Is. Geol. Guide, p. 39, unnumbered fig. p. 42. Either Pozo Fm., Paleocene or Cañada Fm., Eocene. Santa Cruz Is., California Channel Ids. Line drawing, source specimen unknown. **Remarks:** Determined here as *Venericardia* sp. (family Cardiidae). [Veneridae].

Dosinia margaritana Wiedey var. *projecta* Loel and Corey, 1932. Bereskin and Edwards 1969. AAPG/SEPM Guidebook, p. 74, pl. 33, fig. 1. Vaqueros Fm., Miocene. Near Cañada de los Sauces, Santa Cruz Is., California Channel Ids. UCSB FA-JK65-102 [=LACMIP 16405]. Hypotype UCSB M5 [=LACMIP 6302]. [Veneridae].

Dosinia margaritana projecta Loel and Corey, 1932. Addicott 1972b. SEPM Symposium vol., p. 10, pl. 2, fig. 1. Temblor

Fm. (Carneros Sand Member) (of Stinemeyer et al. 1959: pp. 9, 13), Miocene. Packwood Creek quad., Temblor Range, Miocene. USGS M2633. Hypotype USNM 646786. [Veneridae].

Dosinia margaritana projecta Loel and Corey, 1932. Addicott et al. 1978. USGS OFR 78-446: 58, 60, pl. 1, fig. 20. Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5025. Hypotype USNM 254369. [Veneridae].

Dosinia margaritana projecta Loel and Corey, 1932. Addicott et al. 1980. SEPM Guidebook 6: 18, 20, pl. 1, fig. 20 (refigured from Addicott et al. 1978, pl. 1, fig. 20). Monterey Fm. (Saltos Shale member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5025. Hypotype USNM 254369. [Veneridae].

Dosinia mathewsonii Gabb, 1869a. Shimer and Shrock 1944. Index Foss. N.A., p. 427, pl. 173, fig. 1 (refigured from Arnold and Anderson 1910, pl. 27, fig. 2). Vaqueros Fm., Miocene. [Coalinga District, Fresno Co. USGS 4803. Hypotype USNM 165596]. [Veneridae].

Dosinia (*Dosinidia*) *mathewsonii* Gabb, 1869a. Durham 1959. The Veliger 2(2):22, pl. 4, figs. 2, 3. Kirker Sandstone, Oligocene. North side of Mt. Diablo, Contra Costa Co.] UCMP A4660. Hypotype UCMP 11149A. **Remarks:** Junior synonym of *Dosinia whitenyi* (Gabb, 1866), *fide* Addicott (1973b: p. 36). [Veneridae].

Dosinia merriami Clark, 1915. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, fig. 21. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al. 1959: pp. 8, 13), Miocene. Shale Pt. quad., Temblor Range, Kern Co. USGS M3571. Hypotype USNM 646810. [Veneridae].

Dosinia merriami Clark, 1915. Addicott et al. 1978. USGS OFR 78-446:60, pl. 1, fig. 15. Monterey Fm. (Saltos member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5025. Hypotype USNM 254364. [Veneridae].

Dosinia merriami Clark, 1915. Addicott et al. 1980. SEPM Guidebook 6:20, pl. 1, fig. 15 (refigured from Addicott et al. 1978, pl. 1, fig. 15). Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5025. Hypotype USNM 254364. [Veneridae].

Dosinia ponderosa (Gray, 1838), var. [*Artemis*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:89, pl. 16, fig. 6. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotype USNM 560105. [Veneridae].

....., pl. 19, fig. 1; pl. 20, fig. 7. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge, Santa Barbara Co. USGS 14614. Hypotypes USNM 560145, 560146.

Dosinia aff. *D. ponderosa* (Gray, 1838). [*Artemis*]. Woodring et al. 1946. USGS PP 207:27, pl. 28, figs. 18, 22. Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon–Miraleste Canyon area, west side of George F. Canyon, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotypes USNM 497089, 497090. [Veneridae].

Dosinia cf. *D. ponderosa* (Gray, 1838). [*Artemis*]. Durham and Addicott 1965. USGS PP 524-A:A14, pl. 1, fig. 7. Pancho Rico Fm., Miocene/Pliocene. Adelaida quad., Monterey Co. USGS M2047. Hypotype USNM 649086. [Veneridae].

Dosinia ponderosa (Gray, 1838). [*Artemis*]. Moore 1968. SDSNH Occas. Pap. 15:38, pl. 17, figs. a, b. [San Diego Fm.], Pliocene. Near the U.S./Mexico boundary, San Diego Co. [SDSNH 430. Hypotype SDSNH 4151]. [Veneridae].

Dosinia ponderosa (Gray, 1838). [*Artemis*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 62, fig. 3.16E. Latrania Fm., Miocene/Pliocene. [Painted Gorge, Coyote Mtn., Imperial Co. SDSNH 44]. Hypotype SDSNH 53797. [Veneridae].

Dosinia ponderosa (Gray, 1838). [*Artemis*] Squires 2012. NHMLAC CS 520:76, fig. 36. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7725. Hypotype LACMIP 14362. [Veneridae].

Dosinia* (*Dosinia*) *ponderosa diegoana Hertlein and Grant, 1972 (n.subsp.). SDSNH 2(2B):265–266, pl. 47, figs. 2, 8, 10; pl. 49, fig. 8. San Diego Fm., Pliocene. Balboa Park, San Diego, San Diego Co. CASG 1402. Holotype CASG 72226 and paratype CASG 70446. **Remarks:** Possible junior synonym of *Dosinia ponderosa* (Gray, 1838). [Veneridae].

....., pl. 47, figs. 3, 6; pl. 51, fig. 14. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Paratypes LACMIP 4656, 4657, unfigured paratypes LACMIP 4665, 4667, 4669–4679, 4681–4684].

....., San Diego Co. LACMIP 305A [=LACMIP 16862]. Unfigured paratypes LACMIP 4659–4664, 4668, 4680].

....., Balboa Park, San Diego, San Diego Co., LACMIP 107. Unfigured paratype LACMIP 4658].

Dosinia santana Loel and Corey, 1932. Stadum 1973. OCF, p. 25, pl. 3, fig. 6. Vaqueros Fm., Miocene. SDSNH uncataloged. **Remarks:** *Ex* Grouard collection. [Veneridae].

Dosinia cf. *D. semiobliterata* Deshayes, 1853. Powell 2008. USGS SIR 2008-5155:15–16, fig. 4r. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Point, Oasis quad., Imperial Co. (not San Diego Co. as in description). UCMP A1707 [=UCMP A1705]. Hypotype UCMP 39877. [Veneridae].

Dosinia sobrantensis Lutz, 1951 (n. sp.). UCPG 28(13):389, pl. 17, figs. 2–5. Sobrante Fm., Miocene. Crow Canyon, Hayward quad., Alameda Co. UCMP A4565. Holotype UCMP 34151, paratype UCMP 34152. [Veneridae].

Dosinia (*Dosinidia*) *whitneyi* (Gabb, 1866). [*Chione*]. Lutz 1951. UCPG 28(13):389–390, pl. 16, fig. 1. Sobrante Fm., Miocene. Near Martinez, Contra Costa Co. Holotype UCMP 11999 [*ex* CGS. 272]. [Veneridae].

....., pl. 16, fig. 2. Near Muir station along Santa Fe Railway [=BNSF Railway], Contra Costa Co. UCMP A4923. Plastotype UCMP 34153.

Dosinia (*Dosinia*) *whitneyi* (Gabb, 1866). [*Chione*]. Moore 1963 [1964] USGS PP 419:73–74, pl. 24, fig. 1 (as "*Dosinia mathewsoni* Gabb" of Clark, 1918). San Ramon Fm., Oligocene. Near town of Walnut Creek, Contra Costa Co. UCMP 1131. Hypotype UCMP 33734. [Veneridae].

....., pl. 24, fig. 2. "San Ramon Fm., Oligocene." Martinez, Contra Costa Co. California State Survey locality 1272. Holotype UCMP 11999. [Veneridae].

Dosinia whitneyi (Gabb, 1866). [*Chione*]. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 4. Temblor Fm. (*Phacoides* Sand member) (of Stinemeyer et al. 1959: pp. 12, 13), Miocene. Las Yeguas Ranch quad., Temblor Range, Kern Co. USGS M3280. Hypotype USNM 646579. [Veneridae].

Dosinia (*Dosinia*) *whitneyi* (Gabb, 1866). [*Chione*]. Addicott 1973b. USGS PP 791:7, 36–37, pl. 6, fig. 1. Basal Vaqueros Sandstone (=Temblor Fm., Wygal Sandstone Member), Miocene. Kern Co. USGS 9432. Hypotype USNM 646576. [Veneridae].

....., pl. 6, figs. 3, 9, 12, 13 (refigured from Addicott 1972b, pl. 1, fig. 4); pl. 7 fig. 5. South side of Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotypes USNM 646577–646579, 646593.

....., pl. 7, fig. 10. On southeast side of ridge parallelling Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3772. Hypotype USNM 646594.

Dosinia (*Dosinidia*) n. sp. Durham 1959. Veliger 2(2):22, pl. 4, figs. 1, 4, 5. Kirker Sandstone, Oligocene. North side of Mt. Diablo, Contra Costa Co. UCMP A4660. Hypotypes UCMP 30012, 30013. [Veneridae].

Dosinia sp.(?). Weaver and Kleinpell, 1963. UCPG 43:205, pl. 37, figs. 1, 2. Gaviota Fm., Eocene. Stratigraphically just above Sacate-Gaviota contact in narrow gorge of eastern branch of Cañada del Corral, Los Olivos quad., Santa Barbara Co. UCMP B6982. Hypotype SU 9313 [=CASG 70161]. [Veneridae].

Dosinia sp. Stanton, 1966. Jour. Paleo. 40(1):30, pl. 5, figs. 13–14. Castaic Fm., Miocene. Castaic Canyon, Los Angeles Co. CIT 2093 [=LACMIP 11853]. Hypotypes LACMIP 4136, 4137. [Veneridae].

Dosinidia margaritana Wiedey, 1928. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. O. Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8714 [=SBMNH 60184]. **Remarks:** Determined here as indet. pitarid sp. [Veneridae].

Dosiniopsis stewartvillensis Clark and Woodford, 1927. Shimer and Shrock 1944. Index Foss. N.A., p. 427, pl. 170, fig. 16 (refigured from Clark and Woodford 1927, pl. 16, fig. 1). Meganos Fm., Paleocene/Eocene. North of Mt. Diablo, Contra Costa Co. UCMP 3159. Holotype UCMP 31287]. [Veneridae].

Ensis myrae Berry, 1953a. Hertlein and Grant 1972. SDSNH Mem, 2(2B):309–310, pl. 57, figs. 7, 19. San Diego Fm.,

Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 4811 (within *Spisula* (*Mactromeris*) *hemphilli* (Dall, 1894), hypotype 4820). [Pharidae].

Ensis sp. indeterminate. Powell et al. 2019a. USGS SIR 2019-5021:3, 32, pl. 3, fig. 4. Wilson Grove Fm., Miocene. North of Bloomfield, Sonoma Co., CASG 54135, Hypotype CASG 78413. [Pharidae].

Eomiltha turneri (Stanton, 1896). [*Lucina*]. Smith 1975b. SEPM Symposium vol., p. 376, pl. 1, figs. 18, 21. Lodo Fm., Paleocene. Panoche Pass Rd. near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype SU 10230 [=CASG 61666.15]. **Remarks:** In the genus/subgenus *Claibornites* (*Codalucina*), *fide* Moore (1988b: p. D20). [Lucinidae].

Epilucina californica (Conrad, 1837). [*Lucina*]. Squires 2012. NHMLAC CS 520:76, fig. 25. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14350. [Lucinidae].

Epilucina washingtoniana (Clark, 1925). [*Corbis*]. Squires and Gring 1996. Jour. Paleo. 70(1): 66–68, figs. 4.1–4.4. Wagonwheel Fm., Eocene. Wagonwheel Mtn., Emigrant Hill quad. (1953, PR 1973), Kern Co. CSUN 1580 [=LACMIP 16886]. Hypotypes LACMIP 12354–12356. [Lucinidae].

Epilucina sp. Redman et al. 2007. Palaios 22:fig. 3F. Imperial Fm. (=Latrania Fm.), Miocene/ Pliocene. Fossil Canyon, Imperial Co. Hypotype probably at SDSU (current whereabouts unknown). [Lucinidae].

Eucrassatella cf. *E. antillarum* (Reeve, 1842). [*Crassatella*]. Powell 2008. USGS SIR 2008-5155:11, figs. 3k, l. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Point, Oasis quad., Imperial Co. (not San Diego co. as in description). UCMP A1707 [=UCMP A1705]. Hypotype UCMP 39874, missing, *fide* Powell 2008: p. 6. [Crassatellidae].

Eucrassatella subgibbosa (G D. Hanna, 1926). [*Crassatellites*]. Stanton 1966. Jour. Paleo. 40(1):28–29, pl. 5, figs. 9–12. Castaic Fm., Miocene. Humphreys quad. (1932, PR 1946), Los Angeles Co. CIT 1663 [=LACMIP 2555]. Hypotypes LACMIP 4118–4121. **Remarks:** *Eucrassatella subgibbosus*, *fide* Moore (2003a: p. 13). [Crassatellidae].

Eucrassatella subgibbosa (G D. Hanna, 1926). [*Crasaitellites*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 61, fig. 3.14B. Latrania Fm., Miocene/Pliocene. [Coyote Mtn., Imperial Co. SDSNH 2895]. Hypotype SDSNH 23122. **Remarks:** *Eucrassatella subgibbosus*, *fide* Moore (2003a: p. 13). [Crassatellidae].

Eucrassatella subgibbosus (G D. Hanna, 1926). [*Crassatellites*]. Moore 2003a. USPS PP 1228-F [electronic format] (family Crassatellidae):13–14, pl. 2, figs. 1, 3. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Alverson Canyon area, Coyote Mtn., Imperial Co. CASG 682. Holotype CASG 1818 [=CASG 682.02]. [Crassatellidae].

Eucrassatella subgibbosus (G D. Hanna, 1926). [*Crassatellites*]. Powell 2008. USGS SIR 2008-5155: 11, figs. 4m–o. Imperial Fm. [=Latrania Fm.], Pliocene. Alverson Canyon area, Coyote Mtn., Imperial Co.] CASG 682. Holotype CASG 682.2. [Crassatellidae].

Euvola keepi (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B70-B71, pl. 30, figs. 5, 6. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Carrizo Creek district, San Diego Co. Holotype SU/CASG 5 [=CASG 61887.01]. [Pectinidae].

Euvola keepi (Arnold, 1906). [*Pecten*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 59, fig. 3.13F. Latrania Fm., Miocene/Pliocene. Alverson Canyon, Imperial Co. SDSNH 347]. Hypotype SDSNH 12030. [Pectinidae].

Euvola keepi (Arnold, 1906). [*Pecten*]. Smith 1989. SEPM Guidebook 63:34, pl. 4, fig. 1. Imperial Fm. (Latrania Sand Member) [=Latrania Fm.], Miocene. Coyote Mtns., Imperial Co. Hypotype (holotype as per CASG online database) SU/CASG 5 [=CASG 61887.01]. [Pectinidae].

Euvola stearnsii (Dall, 1878a). [not 1874 as in pl. caption]. [*Pecten*]. Vendrasco et al. 2012. NHMLAC CS 520: fig. 2.4. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexican boundary, San Diego Co. LACMIP 305. Hypotype LACMIP 14851. [Pectinidae].

Felaniella (*Felaniella*) *cornea* (Reeve, 1850). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D29–D30, pl. 9, figs. 1, 2. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305]. Hypotype (of Hertlein and Grant 1972, pl. 43, figs. 7, 13, 20) LACMIP 4650. **Remarks:** Junior synonym of *Diplodonta sericata* (Reeve, 1850), *fide* Coan et al. (2000: p. 271). [Ungulinidae].

Felaniella (*Felaniella*) *harfordi* (Anderson, 1905). [*Diplodonta*]. Addicott 1973b. USGS PP 791:7, 29, pl. 4, figs. 2, 7. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotypes USNM 646550, 646551. [Ungulinidae].

Felaniella harfordi (Anderson, 1905). [*Diplodonta*]. Moore 1988b. USGS PP 1228-D:D29, pl. 8, fig. 21. Vaqueros Fm., Oligocene/Miocene. [Grimes Canyon, Oak Ridge, Ventura Co. UCMP A355]. Hypotype (of Loel and Corey 1932, pl. 36, figs. 11a, b) UCMP 31872. [Ungulinidae].

....., pl. 8, figs. 25–29. Temblor Fm., Oligocene/Miocene. Three mi. (4.8 km) west of Coalinga, Fresno Co. CASG66748]. Syntypes CASG 62, 63 [=CASG 66748.01, 66748.02].

Felicia phrear (Woodring, 1938). [*Limopsis*]. Moore 1983. USGS PP 1228-A:A59, pl. 13, fig. 5. "Fernando Fm.", Pliocene. Shell Oil Company Reyes 101, Dominguez field, depth 5245 ft., Los Angeles Co. USGS 13900. Holotype USNM 496077. [Limopsidae].

...., pl. 13, figs. 6, 7. [Pacific Western Oil Corporation Cone 26, Inglewood field, depth 2926 to 2945 ft.], Los Angeles Co. [USGS 13892]. Paratype USNM 496079.

Fimbria susanensis Squires, 1990c (n. sp.). Jour. Paleo. 64(4):554, fig. 2. Santa Susana Fm., Paleocene. East side of Meier Canyon, south side Simi Valley, Santa Susana quad. (1903., reprinted 1924), Ventura Co. UCMP 7009. Holotype UCMP 38568. [Fimbriidae].

Fimbria susanensis Squires, 1990c. Squires 1999b. NHMLAC CS 479:25, fig. 57. Santa Susana Fm., Paleocene/Eocene. In a small gulley, in sandy shale about 100 m north of UCMP 3759 [=2134 m south of BM 961 at Santa Susana well, flank of 717 m (1500 ft.) hill], Santa Susana quad., Ventura Co. UCMP 7009. Holotype UCMP 38568. [Fimbriidae].

Fimbria new species? Squires 1987. NHMLAC CS 388:61–62, fig. 103. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 830 [=LACMIP 16166]. Hypotype LACMIP 7519. [Fimbriidae].

Flabellipecten carrizoensis (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B71–B72, pl. 31, figs. 4, 6. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Head of Garnet Canyon, San Diego Co. Holotype SU/CASG 11 [=CASG. 61861.01]. [Pectinidae].

Flabellipecten? *hawleyi* (Hertlein, 1925a). [*Pecten*]. Moore 1984. USGS PP 1228-B:B74, pl. 31, fig. 1. Vaqueros Fm., Oligocene/Miocene. Santa Inez [*sic*] Mtns., Santa Barbara Co. SU 860 [=CASG 61841]. Holotype SU/CASG 19 [=CASG 61841.01]. [Pectinidae].

Flabellipecten? *merriami* (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B74–B75, pl. 32, fig. 5; pl. 33, fig. 1. Pico Fm., Pliocene. San Felician Creek, near Piru, Ventura Co. Holotype UCMP 12086. **Remarks:** Junior synonym of *Patinopecten caurinus* (Arnold, 1906), *fide* Coan et al. (2000: p. 240). [Pectinidae].

Flabellipecten stearnsii (Dall, 1878a). [*Pecten*]. Moore 1984. USGS PP 1228-B:B72-B73, pl. 31, figs. 7, 8. San Diego Fm., Pliocene. Well at San Diego, San Diego Co. Holotype USNM 7942. **Remarks:** In the genus *Leopecten*, *fide* Waller (2007: pp. 937–938); in the genus *Euvola*, *fide* Coan and Valentich-Scott (2012: p. 270). [Pectinidae].

Florimetis biangulata (Carpenter, 1856a). [?*Scrobicularia*]. Durham and Addicott 1965. USGS PP 524-A:A14 pl. 4, fig. 2. Pancho Rico Fm., Miocene/Pliocene. Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M1929. Hypotype USNM 649097. **Remarks:** Junior synonym of *Psammotreta* (*Leporimetis*) *obesa* (Deshayes, 1855), *fide* Coan and Valentich-Scott (2012: p. 617). [Tellinidae].

Florimetis biangulata (Carpenter, 1856a). [?*Scrobicularia*]. Addicott 1965b. USGS PP 525-C:C104, fig. 3c. Santa Margarita Fm., Miocene. Comanche Pt., Tejon Hills, Kern Co. USGS M1619. Hypotype USNM 649165. **Remarks:** Junior synonym of *Psammotreta* (*Leporimetis*) *obesa* (Deshayes, 1855), *fide* Coan and Valentich-Scott (2012: p. 617). [Tellinidae].

Florimetis biangulata (Carpenter, 1856a). [?*Scrobicularia*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):298, pl. 53, figs. 14, 17, 19. San Diego Fm., Pliocene. Near the U.S./Mexico boundary, San Diego Co. UCLA 312 [=LAMCIP 20312]. Hypotypes UCLA [48629, 48630 (=LACMIP 9312, 9313)]. **Remarks:** Junior synonym of *Psammotreta* (*Leporimetis*) *obesa* (Deshayes, 1855), *fide* Coan and Valentich-Scott (2012: p. 617). [Tellinidae].

Fossil clams. Saul and Saul 1961. Gems and Minerals 288:18, unnumbered fig. [Pliocene?]. Del Dio [= Rio Dell?], Humboldt Co. Hypotype current whereabouts unknown.

Fossil clam shells … Anonymous 1984. Calif. Geol. 37(9):202, unnumbered fig. (refigured from Bedrossian, 1974, unnumbered fig. on p. 178). ["Merced" Fm.], Pliocene. Sonoma Co. Hypotype CASG, determined here as missing. **Remarks:** *Macoma nasuta* (Conrad 1837), *fide* Bedrossian (1974: p. 178).

Gari (*Gobraeus*) *cylindrica* (Dickerson, 1914a). [*Psammobia*(?)]. Moore 2003b. USGS PP 1228-G [electronicformat] (family Psammobiidae):1, pl. 9, fig. 1. Martinez Fm., Paleocene. Near Lower Lake village, Lake Co. UCMP 780. Syntype UCMP 11677. [Psammobiidae].

Gari (*Gobraeus*) *diegoensis* (M.A. Hanna, 1927). [*Psammobia*]. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):3–4, pl. 9, fig. 5. "Rose Canyon Shale," Eocene. La Jolla, San Diego Co. UCMP 5069. Holotype UCMP 31019. [Psammobiidae].

Gari edentula (Gabb, 1869a). [?*Siliquaria*]. Adegoke 1969. UCPG 80:124, pl. 8, fig. 8. Santa Margarita Fm., Miocene. Domengine Ranch quad., Fresno Co. UCMP D1095. Hypotype UCMP 36737. **Remarks:** Junior synonym of *Gari* (*Gobraeus*) *fucata* (Hinds 1845), *fide* Coan et al. (2000: p. 426). [Psammobiidae].

Gari cf. *G. eoundulata* Vokes, 1939. Squires 1984. NHMLAC CS 350:50, fig. 12f. Llajas Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 471d [=LACMIP 16240]. Hypotype LACMIP 6587. **Remarks:** *Gari texta* Gabb, 1864, *fide* Squires (2001: p. 17). [Psammobiidae].

Gari new species? aff. *G. eoundulata* Vokes, 1939. Squires 1987. NHMLAC CS 388:68, fig.118. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 845 [=LACMIP 16137]. Hypotype LACMIP 7535. [Psammobiidae].

Gari (*Gobraeus*) *eoundulata* Vokes, 1939. Moore 2003b. USGS PP 1228-G [electronic format] (family Psammobiidae):4–5, pl. 9, fig. 7. Avenal Sandstone, Eocene. Cliff north of point where Domengine Creek crosses the Eocene outcrop, Fresno Co. UCMP A820. Holotype UCMP 15707. [Psammobiidae].

Gari hornii (Gabb, 1864). [*Tellina*]. Weaver and Kleinpell 1963. UCPG 43:207, pl. 38, fig. 3. Matilija Sandstone, Eocene. Nojoqui Creek area, on west side of Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6920. Hypotype SU 9242 (not SU 9322 as in text) [=CASG 70175]. **Remarks:** In the subgenus *Gobraeus*, *fide* Moore (2003b: p. 1). [Psammobiidae].

Gari hornii (Gabb, 1864). [*Tellina*]. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, fig. 13. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20782. **Remarks:** In the subgenus *Gobraeus*, *fide* Moore (2003b: p. 1). [Psammobiidae].

Gari (*Gobraeus*) *hornii hornii* (Gabb, 1864). [*Tellina*]. Moore 2003b. USGS PP 1228-G [electronic format] (family Psammobiidae):1–2, pl. 9, fig. 2. Tejon Fm., Eocene. Near Ft. Tejon, Kern Co. Lectotype (of Stewart 1930: p. 283) ANSP 4453. [Psammobiidae].

Gari texta Gabb, 1864. Squires 1987. NHMLAC CS 388:68, fig. 117. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 232 [=LACMIP 16075]. Hypotype LACMIP 7534. **Remarks:** In the subgenus *Gobraeus*, *fide* Moore (2003b: p. 4). [Psammobiidae].

Gari texta Gabb, 1864. Squires 2001. NHMLAC CS 489:17–18, fig. 38. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 (=LACMIP 22312). Hypotype LACMIP 12755. **Remarks:** In the subgenus *Gobraeus*, *fide* Moore (2003b: p. 4). [Psammobiidae].

Gari (*Gobraeus*) *texta* Gabb, 1864. Moore 2003b. USGS PP 1228-G [electronic format] (family Psammobiidae):4, pl. 9, fig. 6. Domengine Fm., Eocene. Near Martinez, Contra Costa Co. Holotype ANSP 4471. [Psammobiidae].

Gari sp. Squires 2012. NHMLAC CS 520:76, fig. 43. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7757. Hypotype LACMIP 14367. [Psammobiidae].

Gastrochaena? *dubitata* M.A. Hanna, 1927. Squires 2001. NHMLAC CS 489:18–20, figs. 41, 42. Llajas Fm., Eocene. Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 548 (=LACMIP 15450). Hypotype LACMIP 12758. [**Remarks**:

In the genus *Rocellaria*, *fide* Carter et al. (2008:p. 110). [Gastrochaenidae].

Gibbolucina (*Eomiltha*) *gyrata* (Gabb, 1864). [*Dosinia*]. Moore 1988b. USGS PP 1228-D:D20–D21, pl. 7, fig. 1. Domengine Fm. (Tejon Fm. in pl. caption), Eocene. Southeast of Mt. Diablo, Contra Costa Co. Holotype UCMP 11986. [Lucinidae].

Gibbolucina (*Eomiltha*?) *packi* (Dickerson, 1916). [*Lucina*]. Moore 1988b. USGS PP 1228-D:21, pl. 6, fig. 9. Domengine Fm. (Tejon Fm. in pl. caption), Parson's Peak area, Coalinga quad. [=Joaquin Rocks quad.], Fresno Co. UCMP 672. Holotype UCMP 11787. [Lucinidae].

Glans subquadrata (Carpenter, 1864b). [*Lazaria*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B): 232, pl. 43, figs. 16, 18, 19, 22, 30. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4538–4540]. **Remarks:** Renamed *Cardita carpenteri* by Lamy (1922) and accepted as valid under ICZN Art. 59; *Glans carpenteri* (Lamy, 1922); both *fide* Coan et al. (2000: p. 305). [Carditidae].

Glans (*Glans*) *subquadrata* (Carpenter, 1864b). [*Lazaria*]. Moore 1992. USGS PP 1228-E:E15, pl. 5, figs. 10, 11. San Diego Fm., Pliocene. San Ysidro quad. (1943)], San Diego Co. [LACMIP 305]. Hypotype LACMIP 4539 (of Hertlein and Grant 1972, pl. 43, fig. 18). **Remarks:** Renamed *Cardita carpenteri* by Lamy (1922) and accepted as valid under ICZN Art. 59; *Glans carpenteri* (Lamy, 1922); both *fide* Coan et al. (2000: p. 305). [Carditidae].

Glans (*Centrocardita*) *veneriformis* (Gabb, 1864). [*Cardita*]. Moore 1992. USGS PP 1228-E:E16, pl. 7, figs. 7–9. Martinez(?) Fm., Paleocene(?). West of Martinez, Contra Costa Co. Holotype ANSP. 4381, paratype ANSP 4381a [invalid number]. [Carditidae].

Glossus* (*Meiocardia*) *susukii Squires and Advocate, 1986 (n. sp.). Jour. Paleo. 60(4):860–862, figs. 3.3–3.5. Maniobra Fm., Eocene. Northeastern Orocopia Mtns., Canyon Spring NW quad. (1963), Riverside Co. CSUN. 662 [=UCLA 3779] [=LACMIP 23779]. Holotype UCLA 48427 [=LACMIP 10568], unfigured paratype UCLA 48427b [=LACMIP 10569]. [Glossidae].

Glossus (*Meiocardia*) *susukii* Squires and Advocate, 1986. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 22. Maniobra Fm., Eocene. Canyon Spring NW quad. (1963), Riverside Co. CSUN 662 (=LACMIP 23779). Holotype UCLA 48427 [=LACMIP 10568]. [Glossidae].

Glycymeris branneri Arnold, 1908. Nicol 1947. Jour. Paleo. 21(4):346–347, pl. 50, figs. 12–14. [Temblor Fm.?], Lower Miocene. On south and west slopes of Pyramid Hill, 4 or 5 mi. due north of the Power Plant in Kern River and about 15 mi. northeast of Bakersfield, Kern Co. CASG69. Hypotypes CASG 8566, 8567]. [Glycymerididae].

....., pl. 50, fig. 15. [Monterey Fm., Miocene]. Caliente Mtn. quad., Caliente Mtn. Range, San Luis Obispo Co. CASG 32221. Hypotype CASG 8565.

Glycymeris (*Glycymeris*) *branneri* Arnold, 1908. Moore 1983. USGS PP 1228-A:A51, pl. 10, figs. 11, 16. Vaqueros Fm., Oligocene/Miocene. Mindego Creek, Santa Cruz quad., San Mateo Co. [SU 12]. Holotype USNM 165455. [Glycymerididae].

Glycymeris (*Glycymeris*) *buwaldi* Clark, 1918. Moore 1983. USGS PP 1228-A:A51–A52, pl. 12, figs. 13, 14. San Ramon Fm., Miocene(?). Contra Costa Co. UCMP 1131. Holotype UCMP 11150. [Glycymerididae].

Glycymeris coalingensis Arnold, 1909 [1910]. Hall 1958. UCPG 34(1):50, pl. 1, figs. 1, 2. Oursan Fm., Miocene. Northwest of Pleasanton, Dublin quad. (1953), Alameda Co. SU 3229. Hypotypes SU 8431, 8432 [=CASG 69949, 69950, 69952 but unable to match the on-line specimens with the figured specimens]. **Remarks:** Junior synonym of *Glycymeris* (*Axinola*) *grewingki* Dall (1909), *fide* Hertlein and Grant (1972: p. 159); *fide* Moore (1983: p. A58); junior synonym of *Glycymeris* (*Axinola*) *septentrionalis* (Middendorff, 1849), *fide* Coan et al. (2000: p. 143). [Glycymerididae].

....., pl. 1, fig. 3. Northeast of Irvington, La Costa Valley quad. (1953), Alameda Co. SU 3248. Hypotype SU 8433.

....., pl. 1, fig. 4. Southeast of Irvington, La Costa Valley quad. (1953), Alameda Co. SU 3249. Hypotype SU 8434.

Glycymeris coalingensis Arnold, 1909 [1910]. Fowkes 1982. Coalinga Guidebook, p. 30, unnumbered fig. Etchegoin/Jacalitos Fm. ("*Glycymeris* Zone"), Miocene/Pliocene. Southwest of Coalinga Fresno Co. WHC hypotype lost?

Remarks: Junior synonym of *Glycymeris* (*Axinola*) *grewingki* Dall, 1909, *fide* Hertlein and Grant (1972:p. 159); *fide* Moore (1983:p. A58); junior synonym of *Glycymeris* (*Axinola*) *septentrionalis* (Middendorff, 1849), *fide* Coan et al. (2000: p. 143). [Glycymerididae].

....., p. 84, unnumbered fig. Alcalde Hills, west of Coalinga, Fresno Co. WHC hypotype lost?

....., p. 96, unnumbered fig. (*Glycymeris* in caption). East of Coalinga Sulphur Baths, west of Coalinga, Fresno Co. WHC hypotype lost?

....., p. 99, unnumbered fig. (refigured in Fowkes 1983:55). South side of Hwy. 198, southwest of Coalinga, Fresno Co. WHC hypotype lost?

....., p. 207, unnumbered fig. W-K Hill, north of Coalinga, Fresno Co. WHC hypotype lost?

Glycymeris aff. *G. eocenica* (Weaver, 1912). [*Pectunculus*]. Weaver and Kleinpell 1963. UCPG 43:196, pl. 28, figs. 8, 9, 11. Middle Gaviota Fm., Eocene. Hills near junction of Yridisis Creek with El Jaro Creek, Lompoc quad., Santa Barbara Co. UCMP B7007. Hypotypes SU 9251, 9252 [=CASG 70176, 70177]. [Glycymerididae].

Glycymeris (*Tucetona*) *evermanni* Anderson and G. D. Hanna, 1925. Moore 1983. USGS PP 1228-A:A56, pl. 12, figs. 6, 7. Tejon Fm., Eocene. East side of Grapevine Creek near point where it enters valley floor, Tejon quad., Kern Co. CASG 711. Holotype CASG 964. [Glycymerididae].

Glycymeris (*Glycymeris*) aff. *G.* (*G.*) *fresnoensis* Dickerson, 1916. Givens 1974. UCPG 109:42, pl. 1, fig. 14. Juncal Fm., Eocene. East side of Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4661. Hypotype UCR 4661/91. **Remarks:** In the subgenus *Tucetona*, *fide* Moore (1983:p. A55). [Glycymerididae].

Glycymeris (*Tucetona*) *fresnoensis* Dickerson, 1916. Moore 1983. USGS PP 1228-A:A55, pl. 12, figs. 2, 3. Lodo Fm. (Cerros Shale member), Paleocene [Eocene]. Vicinity of where Urruttia Canyon enters Salt Creek, Coalinga quad., Fresno Co. UCMP 1817. Holotype UCMP 11795. [Glycymerididae].

Glycymeris cf. *G. gigantea* (Reeve, 1843). [*Pectunculus*]. Stanton 1966. Jour. Paleo. 40(1):26, pl. 5, figs. 2, 3. Castaic Fm., Miocene. Elderberry Canyon, Los Angeles Co. CIT 2075 [=LACMIP 16244. Hypotypes LACMIP 4077, 4259. [Glycymerididae].

Glycymeris (*Glycymeris*) *gigantea* (Reeve, 1843). [*Pectunculus*]. Powell 2008. USGS SIR 2008-5155:8, figs. 3a, c. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Rock, Imperial Co. (not San Diego Co. as in description). USGS M9778. Hypotype USNM 486898. [Glycymerididae].

Glycymeris gigantea (Reeve, 1843) [*Pectunculus*]. Rugh 2014a. Desert Symposium vol.:135, fig. 1-9 (left specimen). Latrania Fm., Miocene. Garnet Canyon, Imperial Co. ABDSP 5132.5. Hypotype ABDSP I 10684. [Glycymerididae].

Glycymeris grewingki Dall, 1909. Woodring et al. 1940 [1941]. USGS PP 195:90, pl. 29, figs. 10, 11. Etchegoin Fm. (*Pseudocardium* Zone), Pliocene. North branch of Arroyo Doblegado, southeast of El Rascador, North Dome, Kettleman Hills, Kings Co. USGS 12406. Hypotypes USNM 495792, 495793. **Remarks:** In the subgenus *Axinola*, *fide* Moore (1983: p. A58). [Glycymerididae].

....., pl. 33, figs. 7, 8. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. Arroyo Pino, north of Bullwheel Ridge, North Dome, Kettleman Hills, Kings Co. USGS 12815. Hypotypes USNM 495827, 495828.

Glycymeris grewingki Dall, 1909. Weaver and Meyer 1969. AAPG/SEPM Guidebook, p. 101, pl. 33, figs. 7a, b. Potato Harbor Fm., Pliocene. North side of Potato Harbor, Santa Cruz Is., California Channel Ids. UCSB GM65-21 [=LACMIP 16425]. Hypotype UCSB M7 [=LACMIP 6308]. **Remarks:** In the subgenus *Axinola*, *fide* Moore (1983: p. A58). [Glycymerididae].

Glycymeris (*Axinola*) *grewingki* Dall, 1909. Hertlein and Grant 1972. SDSNH Mem. 2(2B):159–160, pl. 27, figs. 14, 19, 22, 24. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4466, 4467. [Glycymerididae].

Glycymeris (*Glycymerita*) *major* (Stanton, 1896). [*Pectunculus*]. Moore 1983. USGS PP 1228-A:A54, pl. 11, figs. 9, 10. Martinez Fm., Paleocene. Southeast of Lower Lake, Lake Co. USGS 4192. Syntype USNM 157830 (erroneously

cited by Keen and Bentson (1944:96) as USNM 157827). **Remarks:** In the genus *Glycymerita*, *fide* Squires (2010: p. 909). [Glycymerididae].

Glycymeris major (Stanton, 1896). [*Pectunculus*]. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 4. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR6901. Hypotype UCR 6901/3 (not UCR 6891/5 as in pl. caption). **Remarks:** In the genus *Glycymerita*, *fide* Squires (2010: p. 909). [Glycymerididae].

Glycymeris (*Glycymerita*) *major meganosensis* Clark and Woodford, 1927. Moore 1983. USGS PP 1228-A:A53–A54, pl. 11, figs. 11, 12. Meganos Fm., Paleocene/Eocene. Deer Valley, Mt. Diablo quad., Contra Costa Co. UCMP 3152. Holotype UCMP 31289. [Glycymerididae].

Glycymeris (*Tucetona*?) *maccrayi* Waring, 1917. Moore 1983. USGS PP 1228-A:A57, pl. 12, fig. 12. Llajas Fm., Eocene. Oil Canyon, Ventura Co. SU. 8 [=CASG 61913]. Holotype SU/CASG 167 [=CASG 61913.04]. **Remarks:** In the genus *Glycymerita*, *fide* Squires (2010: p. 909). [Glycymerididae].

Glycymeris meganosensis Clark and Woodford, 1927. Smith 1945. Jour. Paleo. 19(1):43–44, fig. 6. Meganos Fm., Paleocene/Eocene. Mt. Diablo quad., Contra Costa Co. [LACMIP 7173. Hypotype LACMIP 4078]. **Remarks:** *Glycymeris* (*Glycymerita*) *major meganosensis*, *fide* Moore (1983: p. A53). [Glycymerididae].

Glycymeris (*Tucetona*) *multicostata* (G.B. Sowerby I, 1833a). [*Pectunculus*]. Powell 2008. USGS SIR 2008-5155:8–9, fig. 3b. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Rock, Imperial Co. (not San Diego Co. as in locality description). USGS M9779 [=USGS M9778]. Hypotype USNM 486905. [Glycymerididae].

Glycymeris perrini Dickerson, 1916. Stewart 1946. USGS PP 205-C:91, pl. 12, fig. 4. Avenal Sandstone, Eocene. Reef Ridge, Kettleman Plain quad., Kings Co. USGS 14482. Hypotype USNM 498734. **Remarks:** In the subgenus *Tucetona*, *fide* Moore (1983: p. A55). [Glycymerididae].

Glycymeris (*Glycymeris*) n. sp.? aff. *G.* (*G.*) *perrini* Dickerson, 1916. Givens 1974. UCPG 109:42, pl. 1, fig. 5. Juncal Fm., Eocene. Thorn Pt. area, Lion Canyon quad. (1943), Ventura Co. UCR 4697. Hypotype UCR 4697/301. **Remarks:** In the subgenus *Tucetona*, *fide* Moore (1983: p. A55). [Glycymerididae].

Glycymeris perrini Dickerson, 1916. Deméré et al, 1979. SEPM Guidebook 4:98, pl. 1, figs. 3, 4. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20764. **Remarks:** In the subgenus *Tucetona*, *fide* Moore (1983: p. A55). [Glycymerididae].

Glycymeris (*Tucetona*) *perrini* Dickerson, 1916. Moore, 1983. USGS PP 1228-A:A55–A56, pl. 12, figs. 4, 5. Domengine Fm., Eocene. Parson's Peak area, Coalinga quad., Fresno Co. UCMP 672. Holotype UCMP 11792. [Glycymerididae].

Glycymeris (*Axinola*) *profunda* (Dall, 1878a). [*Axinea*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):160–161, pl. 27, figs. 15, 23, 28, 29. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. Paratypes CASG 696, 696b. **Remarks:** Valid species, *fide* Moore (1983: p. A58); junior synonym of *Glycymeris* (*Axinola*) *septentrionalis* (Middendorff, 1849), *fide* Coan et al. (2000:p. 143). [Glycymerididae].

....., pl. 27, figs. 20, 21, 25, 34. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4468, 4469.

....., pl. 27, figs. 30, 37. Pacific Beach, San Diego Co. SDSNH 150. Hypotype SDSNH 4335.

Glycymeris (*Glycymerita*?) *reefensis* Vokes, 1939. Moore 1983. USGS PP 1228-A:A55, pl. 12, fig. 1. Avenal Fm., Eocene. Big Tar Canyon, Cholame quad., Kings Co. UCMP A1165. Holotype UCMP 15571. [Glycymerididae].

Glycymeris (*Glycymeris*) *rosecanyonensis* M.A. Hanna, 1927. Moore 1983. USGS PP 1228-A:A49–A50, pl. 10, figs. 12, 13. "Rose Canyon Shale," Eocene. On east side of canyon in bottom of Rose Creek, La Jolla quad., San Diego Co. UCMP 3990. Holotype UCMP 30989. [Glycymerididae].

Glycymeris (*Glycymeris*) *rosecanyonensis* M.A. Hanna, 1927. Squires 1984. NHMLAC CS 350:41–42, fig. 10c. Llajas Fm., Eocene. Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 489 [=LACMIP 16103]. Hypotype LACMIP 6565. [Glycymerididae].

Glycymeris (*Glycymeris*) *rosecanyonensis* M.A. Hanna, 1927. Squires 1987. NHMLAC CS 388:55–56, fig. 90. Matilija

Fm.?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7508. [Glycymerididae].

Glycymeris (*G.*) *rosecanyonensis* M.A. Hanna, 1927. Squires 2008. NHMLAC CS 517:5, fig. 36. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13437. [Glycymerididae].

Glycymeris (*Tucetona*) *ruckmani* Dickerson, 1915. [*Glycimeris*]. Moore, 1983. USGS PP 1228-A:A56, pl.12, figs. 8, 9. Tejon Fm., Eocene. West side of Grapevine Creek, Tejon quad., Kern Co. UCMP 458. Holotype UCMP 11051. [Glycymerididae].

Glycymeris sagittata (Gabb, 1864). [*Axinaea (Limopsis?)*]. Stewart 1946. USGS PP 205-C:93, pl. 12, fig. 1. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Fresno Co. 14497a. Hypotype USNM 498733. **Remarks:** In the subgenus *Glycymerita*, *fide* Moore (1983: p. A54). [Glycymerididae].

Glycymeris sagittata (Gabb, 1864). [*Axinaea (Limopsis?)*]. Weaver and Kleinpell 1963. UCPG 43:196–197, pl. 28, fig. 10. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6955. Hypotype SU 9254 [=CASG 70178]. **Remarks:** In the subgenus *Glycymerita*, *fide* Moore (1983: p. A54). [Glycymerididae].

....., pl. 29 (not. pl. 31), figs. 1, 2. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6954. Hypotype SU 9253 [=CASG 70179].

Glycymeris sagittata (Gabb, 1864). [*Axinaea (Limopsis?)*]. Deméré et al. 1979. SEPM Guidebook 4:98, pl. 1, figs. 1, 2. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Resevoir, San Diego Co. SDSNH 2962. Hypotype SDSNH 20763. **Remarks:** In the subgenus *Glycymerita*, *fide* Moore (1983: p. A54.) [Glycymerididae].

Glycymeris (*Glycymerita*) *sagittata* (Gabb, 1864). [*Axinaea (Limopsis?)*]. Moore 1983. USGS PP 1228-A: A54–A55, pl. 12, fig. 17. Tejon Fm., Eocene. Near Ft. Tejon, Kern Co. [Holotype] (not lectotype as in text and pl. caption) [cited as holotype in Stewart (1930: p. 72); Keen and Bentson (1944: p. 31); and Richards (1968: p. 82)] ANSP 4422. [Glycymerididae].

Glycymeris (*Glycymerita*) *sagittata* (Gabb, 1864). [*Axinaea (Limopsis?)*]. Squires 1984. NHMLAC CS 350:42, fig. 10d. Llajas Fm., Eocene. Devil Canyon area, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6566. [Glycymerididae].

Glycymeris (*Glycymerita*) *sagittata* (Gabb,1864). [*Axinaea (Limopsis?)*]. Squires 1987. NHMLAC CS 388:56, fig. 91. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 807 [=LACMIP 16191]. Hypotype LACMIP 7509. [Glycymerididae].

Glycymeris (*Glycymerita*) *sagittata* (Gabb, 1864). [*Axinea (Limopsis?)*]. Squires 1988c. NHMLAC CS 398:17–18, fig. 46. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN. 981 [=LACMIP 16142]. Hypotype LACMIP 7726. [Glycymerididae].

Glycymeris (*Glycymerita*) *sagittata*? (Gabb, 1864). [*Axinaea (Limopsis?)*]. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 16. Maniobra Fm., Eocene. Maniobra Valley, Canyon Spring NW quad. (1963), Riverside Co. CSUN 662 (=LACMIP 23779). Hypotype LACMIP 11480. [Glycymerididae].

Glycymeris (*Glycymerita*) *sagittata* (Gabb, 1864). [*Axinaea (Limopsis?)*]. Squires 2008. NHMLAC CS 517: 5, fig. 37. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13438. [Glycymerididae].

Glycymeris (*Tucetona*?) *septentrionalis* (Middendorff, 1948). [*Pectunculus*]. Moore, 1983. USGS PP 1228-A:A57, pl. 13, figs. 1, 2. San Pablo Fm., Miocene. Contra Costa Co.? UCMP 1948]. Hypotype (not holoytpe as in pl. caption]) (of Clark 1915, pl. 48, fig. 4) UCMP 11520. [Glycymerididae].

Glycymeris (*Glycymerita*?) *tecolotensis* M.A. Hanna, 1927. Moore 1983. USGS PP 1228-A:A55, pl. 11, figs. 13, 14. "Rose Canyon Shale," Eocene. Tecolote Creek, La Jolla quad., San Diego Co. UCMP 5091. Holotype UCMP 30987. [Glycymerididae].

Glycymeris (*Tucetona*) *tenuimbricata* Clark, 1918. [*Glycimeris*]. Moore 1983. USGS PP 1228-A:A56, A57, pl. 12, figs. 24, 25 (as *Glycymeris* (*Tucetona*) *teniumbricata* in pl. caption). San Ramon Fm., Miocene(?). Southwest of Walnut Creek], Contra Costa Co. UCMP 1131. Holotype UCMP 11183. [Glycymerididae].

Glycymeris veatchii major (Stanton, 1896). [*Petunculus*]. Smith 1945. Jour. Paleo. 19(1):42–43, fig. 5. Martinez Fm. [=Santa Susana Fm.], Paleocene. South side Simi Valley, on crest of Simi Hills, Ventura Co. LACMIP 7089. Hypotype LACMIP 4083]. **Remarks:** In the genus *Glycymerita*, *fide* Squires (2010: p. 909); refigured in Squires (2010:fig. 11.3). [Glycymerididae].

Glycymeris (*Tucetona*) *verticordia* Anderson and G D. Hanna, 1925. Moore 1983. USGS PP 1228-A: A56, pl. 12, figs. 10, 11. Tejon Fm., Eocene. Grapevine Canyon, 56 km south of Bakersfield, Tejon quad., Fresno Co. CASG. 245. Holotype CASG 776. [Glycymerididae].

Glycymeris (*Glycymeris*) *viticola* Anderson and G D. Hanna, 1925. Givens 1974. UCPG 109:42, pl. 1, fig. 6. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4723. Hypotype UCR 4723/141. [Glycymerididae].

Glycymeris (*Glycymeris*) *viticola* Anderson and G D., Hanna 1925. Moore 1983. USGS PP 1228-A: A50, pl. 10, figs. 14, 15. Tejon Fm., Eocene. Grapevine Canyon, 56 km south of Bakersfield, Tejon quad., Kern Co. CASG 245. Holotype CASG 777. [Glycymerididae].

Glycymeris whaleyi Nicol, 1947 (n. sp.). Jour. Paleo. 21(4):347–349, pl. 50, figs. 7, 10. [Temblor Fm.?], Miocene. Near Arroyo Ciervo, Fresno Co. Paratype SU 7877, [unfigured paratypes SU 7878, 7879] [=CASG 32221.02, 72120, 72121]. **Remarks:** Provisionally in the subgenus *Glycymeris*?, *fide* Moore (1983: p. A53). [Glycymerididae].

....., pl. 50, figs. 8, 9, 11. [Monterey Fm., Miocene]. Caliente Range, San Luis Obispo Co. CASG 32221]. Holotype CASG 8584 [=CASG 32221.01], paratype CASG 8585 [=CASG 32221.02].

Glycymeris (*Glycymeris*?) *whayleyi* Nicol, 1947. Moore 1983. USGS PP 1228-A:A53, pl. 11, figs. 5, 6. Monterey Fm. (Saltos Shale Member), Miocene. Caliente Mtn. quad., San Luis Obispo Co. Holotype CASG 8584 [=CASG. 32221.01]. [Glycymerididae].

Glycymeris Fowkes 1982. Coalinga Guidebook, p. 22, unnumbered fig. Avenal Sandstone, Eocene. Southeast of Les Sagaser Ranch, Kings Co. WHC hypotype lost? [Glycymerididae].

....., p. 135, unnumbered fig. Etchegoin/Jacalitos Fm., Miocene/Pliocene. Near Murietta Camp, Fresno Co. WHC hypotype lost? **Remarks:** The author figured the same specimen (p. 135 and p. 230) as being from the same locality, therefore the exact locality is unknown.

....., p. 230, unnumbered fig. (refigured in Fowkes 1983, p. 32). Avenal Sandstone, Eocene. North of Les Sagaser Ranch, Kings Co. WHC hypotype lost?

Glycymeris (*Glycymeris*) n. sp. Saul 1986. SEPM Guidebook 49:29, figs. 37, 38. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6528 [=LACMIP 26528]. Hypotype LACMIP 7557. [Glycymerididae].

Glycymeris sp. Throckmorton 1988a. USGS OFR 88-59:49, pl. 8, fig. 8 (refigured in Throckmorton 1988b, pl. 1, fig. 4). Tesla Fm., Eocene. From isolated sandstone block (float?) Midway quad., Alameda Co. UCMP D8157. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Glycymerididae].

Glycymeris sp. coquina. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. P. Cañada Fm., Eocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8734 [=SBMNH 60168]. [Glycymerididae].

Glycymerita major (Stanton, 1896). [*Petunculus*]. Squires 2010. Jour. Paleo. 84(5):909–912, figs. 11.1, 11.2 [Lodo Fm., Paleocene. Near junction of Silver Creek with Panoche Creek, NE end of Tumey Hills, Fresno Co. LACMIP 7044. Hypotype LACMIP 13628, 13629. [Glycymerididae].

….., fig. 11.3. Santa Susana Fm., Paleocene. South side Simi Valley, on crest of Simi Hills, Ventura Co.]. LACMIP 7089. Hypotype (of *Glycymeris veatchii major* Stanton 1896) (of Smith (1945: pp. 42, 43, fig. 5) LACMIP 4083.

....., figs. 11.4–11.7. San Francisquito Fm., Paleocene. Pinyon Ridge, NE side of Rock Creek, Valyermo quad., Los Angeles Co. LACMIP 22334. Hypotypes LACMIP 13630, 13631

....., figs. 11.8, 11.9. Santa Susana Fm., Paleocene. western Simi Hills, Thousand Oaks quad. Ventura Co. CSUN 1602 [=LACMIP 41602]. Hypotype LACMIP 13632.

....., figs. 11.10, 11.11. Lodo Fm., Paleocene. Fresno Co.]. UCMP A4657. Hypotype UCMP 555882.

....., figs. 11.12–11.13. Lodo Fm., Paleocene. Panoche Hills, near junction of Panoche and Silver creeks, Panoche quad., Fresno Co. LACMIP 4845. Hypotype LACMIP 13633.

....., fig. 11.14. Paleocene. One mi. SE of Lower Lake, Lake Co. Syntype USNM 157830.

Glycymerita sp. Albi 1990. Bull. SCPS 22(11-12):131, figs. 1–3. Topanga Fm. (Cold Creek Member), Miocene. Old Topanga Rd. area, Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP 12589. Line drawings, source specimen unknown. [Glycymerididae].

Glyptoactis domenginica (Vokes, 1939). [*Venericardia*]. Squires 1984. NHMLAC CS 350:46–47, figs. 10q, r. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6575. [Carditidae].

Glyptoactis (*Glyptoactis*) *domenginica* (Vokes, 1939). [*Venericardia*]. Squires 1987. NHMLAC CS 388:63–64, fig. 109. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 828 [=LACMIP 16141]. Hypotype LACMIP 7526. [Carditidae].

Glyptoactis (*Claibornicardia*) *domenginica* (Vokes, 1939). [*Venericardia*]. Squires 1988a. SEPM Guidebook 58:110, pl. 2, fig. 5. Llajas Fm. ("Domengine Stage"), Eocene. Simi Valley, Ventura Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6575. [Carditidae].

Glyptoactis (*Claibornicardia*) *domenginica* (Vokes, 1939). [*Venericardia*]. Squires 1988c. NHMLAC CS 398:19, fig. 50. Juncal Fm.?, Eocene. Lockwood Valley, Ventura Co. CSUN 978 [=LACMIP 16150]. Hypotype LACMIP 7730. [Carditidae].

Glyptoactis (*Claibornicardia*) *domenginica* (Vokes, 1939). [*Venericardia*]. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 19. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 674 [=LACMIP 16082]. Hypotype LACMIP 11483. [Carditidae].

Glyptoactis (*Claibornicardia*) *domenginica* (Vokes, 1939). [*Venericardia*]. Moore 1992. USGS PP 1228-E:E27–E28, pl. 7, fig. 13. Domengine Fm., Eocene. Coalinga quad., Fresno Co. UCMP A1219. Holotype UCMP 15611. [Carditidae].

....., pl. 7, figs. 10, 12, 16, 18, 20. [Pine Canyon, Mt. Diablo quad., Contra Costa Co. UCMP A1003.] Paratypes UCMP 15612, 15613.

Glyptoactis (*Claibornicardia*) *keenae* (Verástegui, 1953). [*Venericardia*]. Moore 1992. USGS PP 1228-E:E27, pl. 8, figs. 6, 10, 12, 15. Basal Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Panoche quad., Fresno Co. CASG 2073. Holotype (of *Venericardia* (*Pacificor*) *argentea* Verástegui, 1953) SU/CASG 7992 [=CASG 66535.01], holotype SU/CASG 7995 [=CASG 66535.02]. [Carditidae].

....., pl. 8, figs. 8, 13. Panoche Creek, Panoche quad., Fresno Co. UCMP A1284]. Paratype UCMP 33001.

Glyptoactis (*Claibornicardia*) *marksi* Verástegui, 1953. Moore 1992. USGS PP 1228-E:E27, pl. 7, figs. 17, 19. Tejon Fm. (Live Oak member of Verástegui, 1953), Eocene. East side of Live Oak Canyon, Kern Co. CASG 183. Holotype SU/CASG 8021 [=CASG 6536.01]. [Carditidae].

Glyptoactis (*Claibornicardia*) *sandiegoensis* (M.A. Hanna, 1927). [*Cardita*]. Squires 1987. NHMLAC CS 388:64, fig. 110. Juncal Fm., Eocene Whitaker Peak quad. (1958), Los Angeles Co. CSUN 844 [=LACMIP 16119]. Hypotype LACMIP 7527. [Carditidae].

Glyptoactis (*Claibornicardia*) *sandiegoensis* (M.A. Hanna, 1927). [*Cardita*]. Squires 1988a. SEPM Guidebook 58:110, pl. 2, fig. 6. Juncal Fm., Eocene. Whitaker Peak area, Los Angeles Co. CSUN 844 [=LACMIP 16119]. Hypotype

LACMIP 7527. [Carditidae].

Glyptoactis (*Claibornicardia*) *sandiegoensis* (M.A. Hanna, 1927). [*Cardita*]. Moore 1992. USGS PP 1228-E:E26–E27, pl. 1, figs. 15, 19, 21 (cast). "Rose Canyon Shale" (of M.A. Hanna 1927:256), Eocene. Soledad Valley, La Jolla quad., San Diego Co. UCMP 5062. Syntypes UCMP 30980, 30982. [Carditidae].

....., pl. 7, figs. 15, 22. La Jolla Group, Eocene. San Clemente Canyon, San Diego Co. Holotype (of *Glyptoactis* (*Claibornicardia*) *mcmastersi* Verástegui, 1953) CASG 8011 [=CASG 66534.01].

Glyptoactis (*Claibornicardia*) *sandiegoensis* (M.A. Hanna, 1927). [*Cardita*]. Squires 1994b. SEPM Guidebook 74:54, pl. 3, fig. 4. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23739. Hypotype LACMIP 11662. [Carditidae].

Glyptoactis (*Claibornicardia*) *sandiegoensis* (M.A. Hanna, 1927). [*Cardita*]. Squires, 2008. NHMLAC CS 517:5, fig. 45. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13446. [Carditidae].

Glyptoactis n. sp.? Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 20. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. CSUN 662 [=LACMIP 23779]. Hypotype LACMIP 11484. [Carditidae].

Gobraeus edentulus (Gabb, 1869a). [*Siliquaria*]. Hertlein and Grant 1972. SDSNH. Mem. 2(2B):305, pl. 48, figs. 13, 15. San Diego Fm., Pliocene. Near mouth of Rose Canyon, La Jolla quad., San Diego Co. UCLA 2359 [=LACMIP 22359]. Hypotypes UCLA [=LACMIP 9315, 9316]. **Remarks:** Junior synonym of *Gari* (*Gobraeus*) *fucata* (Hinds, 1845), *fide* Coan et al. (2000: p. 426). [Psammobiidae].

Gregariella chenui (Récluz, 1842). [*Mytilus (Modiola)*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):168–169, pl. 41, figs. 1, 5. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4477. [Mytilidae].

....., pl. 42, figs. 1, 8. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotype LACMIP 4478.

Gryphaeostrea aviculiformis (Anderson, 1905). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C18, pl. 19, figs. 1, 2, 6. Domengine Fm., Eocene. West and north of Coalinga, Fresno Co. CASG 66747. Holotype CASG 21 [=CASG 66747.01]. [Gryphaeidae].

Gryphaeostrea aviculiformis (Anderson, 1905). [*Ostrea*]. Squires 2018a. NHMLAC CS 526:15, figs. 129–131. Sketches refigured from Anderson 1905, pl. 13, figs. 3–5 (as *Ostrea aviculiformis* Anderson 1905). Domengine Fm., Eocene. Alcalde Hills, west of Coalinga, Fresno Co. CASG 66747. Holotype CASG 66747.01 [*ex* CASG 21]. [Gryphaeidae].

....., figs. 132–136, current condition of holotype CASG. 66747.01.

Halonanus hornii hornii (Gabb, 1864). [*Arca*]. Reinhart 1943. GSA Sp. Pap. 47:79–81, pl. 2, figs. 7, 9. Domengine Fm., Eocene. Parson's Peak, north of Coalinga, Fresno Co. UCMP 672. Hypotype UCMP 32544. **Remarks:** In the genus/subgenus *Pachecoa* (*Pachecoa*), *fide* Moore (1983: p. A48). [Arcidae].

....., pl. 2, fig. 8. Tejon Fm., Eocene. Live Oak Canyon, Kern Co. CASG 244. Hypotype CASG 7782.

Hawaiarca mediaimpressa s.s. (Clark, 1918). [*Arca (Scapharca)*]. Noda 1986. Paleo. Soc. Japan Sp. Pap. 29:64, pl. 4, fig. 17. San Ramon Fm., Miocene. Southwest of Walnut Creek, Contra Costa Co. UCMP 1131. Hypotype UCMP 1174. **Remarks:** In the genus/subgenus *Anadara* (*Anadara*), *fide* Moore (1983: p. A38). [Arcidae].

Here (*Here*) *effingeri* (Weaver and Kleinpell, 1963). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D13, pl. 2, fig. 16; pl. 3, figs. 1, 2. Undifferentiated Sacate/Gaviota fms., Eocene/Oligocene. Nojoqui Creek area, Lompoc quad., Santa Barbara Co. UCMP B6955. Holotype SU/CASG 9285 [CASG 70181]. [Lucinidae].

Here excavata (Carpenter, 1857b). [*Lucina*]. Addicott 1973. USGS PP 791:7, 27, 28, pl. 3, figs. 6, 8, 9. Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Rocks quad., Kern Co. USGS M3578. Hypotypes USNM 646545–646547. [Lucinidae].

Here excavata (Carpenter, 1857b). [*Lucina*]. Squires 2012. NHMLAC CS 520:76, fig. 25. Pico Fm., Pliocene. Newhall

area, Los Angeles Co. LACMIP 17920. Hypotype LACMIP 14351. [Lucinidae].

Here (*Here*) *excavata* (Carpenter, 1857b). [*Lucina*]. Cox et al. 1969b. Treatise Invert. Paleo. 6(2): N496, figs. E3 1a, 1b. Miocene [=Pliocene?]. Line drawings of hinges, source specimen unknown. [Lucinidae].

....., fig. E3 1c (refigured from Gabb 1866, pl. 8, fig. 49a (as *Lucina* (*Here*) *richtofeni* Gabb, 1869)). Miocene [=Pliocene, Pico Fm.?]. San Fernando Valley, north of Los Angeles, Los Angeles Co. Lectotype (of Stewart 1930: p. 182) ANSP 4492], missing, *fide* K. Estes-Smargiassi (personal communication, 2019). [Lucinidae].

Here (*Here*) *excavata* (Carpenter, 1857b). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D13, pl. 3, figs. 5, 7, 8. "Fernando Fm." [=Pico Fm.?], Pliocene. Holser Canyon, Los Angeles Co. SDSNH 217B. Hypotypes (of Grant and Gale 1931, pl. 14, figs. 2, 10) SDSNH 131, 133. [Lucinidae].

....., pl. 3, figs. 6, 9, 10. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes (of Hertlein and Grant, 1972, pl. 46, figs. 2, 3) LACMIP 4636, 4638.

....., pl. 3, figs. 11–13. Pico Fm., Pliocene. San Fernando Valley, Los Angeles Co. Lectotype (of Stewart, 1930:182) (of *Lucina richthofeni* Gabb, 1866) ANSP 4492.

....., pl. 3, fig. 14. Vaqueros Fm., Oligocene/Miocene. South side San Juan River, La Panza Mtns., San Luis Obispo Co. UCMP A510. Hypotype (of *Phacoides richthofeni* (Gabb, 1866) of Loel and Corey 1932, pl. 36, fig. 4) UCMP 31823.

Here (*Here*) *hannai* (Clark, 1938). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D12, D13, pl. 2, figs. 12–15. Markley Fm., Eocene. Northeast bank of Pleasants Creek, Napa quad., Solano Co. UCMP A1297. Holotype UCMP 30841, paratype UCMP 30842. [Lucinidae].

Heteromacoma rostellata (Clark, 1918). [*Metis*]. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, figs. 1, 6. Temblor Fm. (*Phacoides* Sand member) (of Stinemeyer et al. 1959:12, 13), Miocene. Las Yeguas Ranch quad., Temblor Range, Kern Co. USGS M3280. Hypotypes USNM 646564, 646568. **Remarks:** In the genus *Leporimetis*, *fide* Moore (2003b: p. 52). [Tellinidae].

Heteromacoma rostellata (Clark, 1918). [*Metis*]. Addicott 1973b. USGS PP 791:7, 34–35, pl. 5, figs. 1, 3 [refigured from Addicott (1972b, pl. 1, fig. 6, 10, 11) and Addicott (1972b pl. 1, fig. 1)]. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotypes USNM 646563, 646564, 646567, 646568. **Remarks:** In the genus *Leporimetis*, *fide* Moore (2003b: p. 52). [Tellinidae].

....., pl. 5, fig. 6. Las Yeguas Ranch quad., Kern Co. USGS M3281. Hypotype USNM 646565.

....., pl. 5, fig. 9. On southeast side of ridge paralleling Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3772. Hypotype USNM 646566.

....., pl. 6, figs. 2, 4, 14. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotypes USNM 646580–646582.

Hiatella arctica (Linneaus, 1767). [*Mya*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):326–327, pl. 56, figs. 15, 17, 18. San Diego Fm., Pliocene, San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotypes LACMIP 4829, 4830. [Hiatellidae].

Hilgardia? *parkei* (Anderson and G D. Hanna, 1925). [*Leda*]. Moore 1983. USGS PP 1228-A:A22–A23, pl. 3, figs. 6, 7. Tejon Fm., Eocene. Live Oak Creek, Tejon quad., Kern Co. CASG 244. Holotype CASG 782 (determined here as missing), paratype CASG 783. [Nuculanidae].

Hilgardia? *parkei* (Anderson and G D. Hanna, 1925). [*Leda*]. Squires 1987. NHMLAC CS 388:54–55, fig. 87. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7505. [Nuculanidae].

?*Hilgardia parkei* (Anderson and G D. Hanna, 1925). [*Leda*]. Squires 2001. NHMLAC CS 489:15, fig. 30. Llajas Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 26624. Hypotype LACMIP 12747. [Nuculanidae].

Hinnites benedicti Adegoke, 1969 (n. sp.). UCPG 80:103–104, pl. 3, figs. 3, 5. Santa Margarita Fm., Miocene. Prominent ledge-forming *Ostrea-Pecten* "reef," Domingene Ranch quad., Fresno Co. UCMP D702. Holotype UCMP 36638, paratype UCMP 36635. **Remarks:** Determined here as in the genus *Crassadoma,*. [Pectinidae].

Hinnites benedicti Adegoke, 1969. Moore 1984. USGS PP 1228-B:B65, pl. 26, fig. 2. Santa Margarita Fm., Miocene. From approximately 2 m-thick oyster bed, Domengine Ranch quad., Fresno Co. (Kern Co. in locality description). UCMP D702. Holotype UCMP 36638. **Remarks:** Determined here as in the genus *Crassadoma*. [Pectinidae].

Hinnites cf. *H. crassa* Conrad, 1857d. Woodring et al. 1940 [1941]. USGS PP 195:table opposite p. 66, pl. 31, figs. 3, 8. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. El Campo, North Dome, Kettleman Hills, Kings Co. USGS 12440. Hypotypes USNM 495810, 495812. **Remarks:** Junior synonym of *Crassadoma gigantea* (Gray, 1825), *fide* Coan et al. (2000: p. 238). [Pectinidae].

....., pl. 31, fig. 4. Ridge east of La Maseta, North Dome, Kettleman Hills, Kings Co. USGS 12431. Hypotype USNM 495811.

Hinnites giganteus (Gray, 1825). [*Lima*]. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):211–212, pl. 41, fig. 16. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. [LACMIP 16440]. Hypotype LACMIP 4506. **Remarks:** *Crassadoma gigantea* (Gray, 1825), *fide* Coan et al. (2000: p. 238). [Pectinidae].

Hinnites giganteus (Gray, 1825). [*Lima*]. Addicott and Galehouse 1973. Jour. Res. USGS 1(5):510, 513, figs. 3i, o. Paso Robles Fm., Pliocene. Near Atascadero, San Luis Obsipo Co. USGS M4621. Hypotypes USNM 647003 (with *Balanus* sp.), 647008. **Remarks:** In the genus *Crassadoma*, *fide* Coan et al. (2000: p. 238). [Pectinidae].

Hinnites giganteus (Gray, 1825). [*Lima*]. Vedder and Moore 1976. AAPG Misc. Pub. 24:123, 134, pl. 4, figs. 6–8. Unnamed strata, Pliocene. Near Lemon Tank Reservoir, San Clemente Is., California Channel Ids. USGS M6501. Hypotypes USNM 235599, 235600. **Remarks:** *Crassadoma gigantea* (Gray, 1825), *fide* Coan et al. (2000:p. 238). [Pectinidae].

Hinnites giganteus (Gray, 1825). [*Lima*]. Addicott et al. 1978. USGS OFR 78-446:59, 72, pl. 4, fig. 19. Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2857. Hypotype USNM 254386. **Remarks:** *Crassadoma gigantea* (Gray, 1825), *fide* Coan et al. (2000: p. 238). [Pectinidae].

Hinnites giganteus (Gray, 1825). [*Lima*]. Addicott et al. 1980. SEPM Guidebook 6:19, 33, pl. 5, fig. 19 (refigured from Addicott et al. 1978, pl. 4, fig. 19). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2857. Hypotype USNM 254386. **Remarks:** *Crassadoma gigantea* (Gray, 1825), *fide* Coan et al. (2000: p. 238). [Pectinidae].

Hinnites giganteus (Gray, 1825). [*Lima*]. Moore 1984. USGS PP 1228-B:B65–B66, pl. 26, figs. 1, 5; pl. 27, fig. 4. Santa Margarita Fm., Miocene. Salinas Valley, San Luis Obispo Co. Holotype (lectotype, *fide* Keen and Bentson (1944: p. 54) USNM 13336, paratype USNM 13336a (both of *Hinnites crassa* Conrad 1857d). **Remarks:** *Crassadoma gigantea* (Gray, 1825), *fide* Coan et al. (2000: p. 238). [Pectinidae].

Hinnites multirugosus var. *crassiplicatus* (Gale, 1928). [*Pecten*]. Stanton 1966. Jour. Paleo. 40 (1):27–28, pl. 5, fig. 6. Castaic Fm., Miocene. Humphreys quad. (1932, PR 1946), Los Angeles Co. CIT 2069 [=LACMIP 2558]. Hypotype LACMIP 4095. **Remarks:** Junior synonym of *Crassadoma gigantea* (Gray, 1825), *fide* Coan et al. (2000: p. 238). [Pectinidae].

Hinnites multirugosus subsp. *crassiplicatus* (Gale, 1928). [*Pecten*]. Adegoke 1969. UCPG 80:103, pl. 3, figs. 1,2. Santa Margarita Fm., Miocene. Prominent ledge-forming *Ostrea-Pecten* "reef," Domengine Ranch quad., Fresno Co. UCMP D702. Hypotypes UCMP 36633, 36634. **Remarks:** Junior synonym of *Crassadoma gigantea* (Gray, 1825), *fide* Coan et al. (2000: p. 238). [Pectinidae].

Humilaria perlaminosa (Conrad, 1855a) of Arnold (1907) [*Mercenaria*]. Addicott 1969. Pr.CAS 37(3):63, 68, 73, pl. 3, fig. 12. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650980. [Veneridae].

Idasola? *bakeri* (Dickerson, 1914a). [*Modiolus*]. Moore 1983. USGS PP 1228-A:A78, pl. 21, figs. 6, 7. Martinez Fm., Paleocene. South of Stewartville, Mt. Diablo quad., Contra Costa Co. UCMP 1556. Holotype UCMP 11686. [Mytilidae].

Indet. ostrein. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. I. Cañada Fm., Eocene. Cañada

Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8743 [=SBMNH 60173]. **Remarks:** Determined here as *Pycnodonte* sp. [Gryphaeidae].

Indet. pectinid. Brabb et al. 1977. USGS OFR 77-714: cover, p. 39. Vaqueros Fm.(?), Oligocene. Kings Creek area, Santa Cruz Mtns., Santa Cruz Co. Hypotype current whereabouts unknown. **Remarks:** Determined here as *Oppenheimopecten sanctaecruzensis* (Arnold, 1906). [Pectinidae].

Indet solenid (not *Ficus* sp.). Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. F. Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8713 [=SBMNH 60186]. **Remarks:** Determined here as indet. solenid. [Solenidae].

Indet gryphaeid. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), figs. J-L. Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. [Hypotypes SBMNH 60170–60172]. **Remarks:** All determined here as l *Pycnodonte* sp. [Gryphaeidae].

Indet. teredinid (not "sabellariid" tubes). Shapiro 1998. AAPG Guidebook MP 45:129, pl. 3, fig. A. Unknown Fm., Paleocene/Eocene. Cañada Posa area, Santa Cruz Is., California Channel Is. [Hypotype SBMNH 60187]. **Remarks:** Determined here as indet. teredinid. [Teredinidae].

Indeterminate pelecypod. Phillips et al. 1976. SEPM Symposium vol. p. 147, pl. 4, fig. 8. Gallaway Fm., Oligocene. North of Iverson Pt., Saunders Reef quad., Mendocino Co. UCMP D7149. Hypotype UCMP 14440. **Remarks:** Determined here as possibly a corbulid.

Irusella lamellifera (Conrad, 1837). [*Venus*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):279, pl. 50, fig. 11. San Diego Fm., Pliocene. Lowest *Pecten healeyi* bed, from just south of a ravine which is immediately south of the contact between the Eocene and Pliocene strata, Pacific Beach, San Diego Co. UCLA 298 [=LACMIP 20298]. Hypotype UCLA [=LACMIP 9306]. [Veneridae].

Isognomon (*Isognomon*) *clarki* (Effinger, 1938). [*Pedalion*]. Squires 1989b. Tr. SDSNH 21(17):279–280, figs. 2.1–2.4. Torrey Sandstone, Eocene. Hillside exposure (now mostly covered), Del Mar quad. (1967), San Diego Co. SDSNH 3282. Hypotypes SDSNH 35235, 35236. [Isognomonidae].

Isognomon (*Isognomon*) *clarki* (Effinger, 1938). [*Pedalion*]. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 17. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. CSUN 252 [=LACMIP 16670]. Hypotype LACMIP 11657. [Isognomonidae].

Isognomon (*Isognomon*) *panzana* (Loel and Corey, 1932). [*Pedalion*]. Moore 1983. USGS PP 1228-A:A84, pl. 25, figs. 3, 6. Vaqueros Fm., Oligocene/Miocene. San Luis Obispo Co. UCMP A498. Holotype UCMP 31780. [Isognomonidae].

Isognomon (*Isognomon*) *panzana* (Loel and Corey, 1932). [*Pedalion*]. Squires 1994a. Veliger 37(2):215–217, figs. 1–6. Vaqueros Fm., Miocene. West side of Plano Trabuco, Santa Ana Mtns., Orange Co. LACMIP 16667 (not LACMIP 27006 as in pl. caption). Hypotypes LACMIP 12371–12374 (not LACMIP 12251–12254 as in pl. caption). [Isognomonidae].

Isognomon sp. Clark and Woodford 1927. Moore 1983. USGS PP 1228-A:A84–A85, pl. 26, fig. 3. Meganos Fm., Paleocene/Eocene. Bryon quad., Contra Costa Co. UCMP 3609. Hypotype UCMP 31301. **Remarks:** Equivalent to *Pedalion* sp. of Clark and Woodford 1927, pl. 14, fig. 8. [Isognomonidae].

Isognomon n. sp.? Givens 1974. UCPG 109:43–44, pl. 2, fig. 6. Juncal Fm., Eocene, San Guillermo quad. (1943), Ventura Co. UCR 4752. Hypotype UCR 4752/61. **Remarks:** *Isognomon* (*Isognomon*) *clarki* Effinger, 1938, *fide* Squires (1989b: p. 279). [Isognomonidae].

Isognomon n. sp. Givens 1974. Moore 1983. USGS PP 1228-A:A85, pl. 26, fig. 1. Juncal Fm., Eocene. Piru Creek, Ventura Co. UCR 4752. Hypotype (of Givens 1974 pl. 2, fig. 6) UCR 4752/61. **Remarks:** *Isognomon* (*Isognomon*) *clarki* Effinger, 1938, *fide* Squires (1989b: p. 279). [Isognomonidae].

"*Jouannetia*" sp. Clark and Woodford 1927. Kennedy 1974. SDSNH Mem. 8:72, figs. 91, 92. Meganos Fm., Paleocene/Eocene. On top of ridge at middle of north edge of Contra Costa Co. UCMP 3158. Hypotype UCMP 31340. [Pholadidae].

Jupiteria taphria (Dall, 1896b). [*Leda*]. Squires 2012. NHMLAC CS 520:76, fig. 10. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14336. **Remarks:** In the genus *Saccella*, *fide* Coan and Valentich-Scott (2012: p. 94). [Nuculanidae].

Katherinella (*Katherinella*) *angustifrons* (Conrad, 1849a). [*Venus*]. Powell 2015. WSM Ann. Rept. 45:59, 61, figs. 15–20. Monterey Fm., Miocene. Along Arroyo Seco, west of Greenfield, Monterey Co. [CASG 101093. Hypotypes CASG 101112, 101113, 101115–101118].

Kellia catacta Anderson and G D. Hanna, 1925. Moore 1992. USGS PP 1228-E:E6, pl. 1, fig. 7. Tejon Fm., Eocene. Live Oak Creek, Tejon quad., Kern Co. CASG 244. Holotype CASG 275. [Lasaeidae].

Kellia lajollaensis M.A. Hanna, 1927. Moore 1992. USGS PP 1228-E:E6–E7, pl. 3, fig. 8. "Rose Canyon Shale" (of M.A. Hanna 1927: p. 256), Eocene. San Clemente Canyon, where the canyon enters Rose Canyon, San Diego Co. UCMP 3991. Holotype UCMP 31036. [Lasaeidae].

Kellia laperousii (Deshayes, 1839). [*Chironia*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):237, pl. 44, figs. 11, 19. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 4623. **Remarks:** Valid species, *fide* Moore (1992: p. E7); junior synonym of *Kellia suborbicularis* (Montagu, 1803), *fide* Coan et al. (2000: p. 323). [Lasaeidae].

Kellia laperousii (Deshayes, 1839). [*Chironia*]. Moore 1992. USGS PP 1228-E:E7, pl. 3, figs. 10, 15. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype (of Hertlein and Grant 1972, pl. 44, figs. 11, 19) LACMIP 4623. **Remarks:** Valid species, *fide* Moore (1992: p. E7); junior synonym of *Kellia suborbicularis* (Montagu, 1803), *fide* Coan et al. (2000: p. 323). [Lasaeidae].

Kellia uvasana (Dickerson, 1915). [*Corbula*]. Moore 1992. USGS PP 1228-E:E6, pl. 3, figs. 9, 12. Tejon Fm., Eocene. Live Oak Canyon, Tejon quad., Kern Co. CASG 244. Holotype CASG 276 [=CASG 244.04]. Hypotype (of Anderson and G D. Hanna, 1925: pl. 9, fig. 11) CASG 894. [Lasaeidae].

Laevicardium (*Cerastoderma*) *meekianum* (Gabb, 1866). [*Cardium*]. Glen 1959. UCPG 36(2):171, pl. 17, fig. 9 (not fig. i). Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene. San Vicente Creek, San Mateo Co. UCMP B4790. Hypotype UCMP 37626. **Remarks:** In the genus *Clinocardium*, *fide* Moore (2003a: p. 20). [Cardiidae].

Larkinia camuloensis (Osmont, 1905). [*Arca*]. Stadum 1973. OCF, p. 31, pl. 6, fig. 6. "Fernando Fm." [=Pico Fm.], Pliocene. Between Salt and Tapo canyons, Ventura Co. UCLA 1363 [=LACMIP 21363]. Hypotype UCLA 49525 [=LACMIP 10624]]. **Remarks:** Junior synonym of *Anadara* (*Larkinia*) *multicostata* (G.B. Sowerby I, 1833b), *fide* Coan and Valentich-Scott (2012: p. 179). [Arcidae].

Larkinia camuloensis (Osmont, 1905). [*Arca*]. Moore 1983. USGS PP 1228-A:A43, pl. 8, figs. 8, 9. Pico Fm. (Fernanado Fm. in text), Pliocene. 1.5 km north of Camulos, Ventura Co. Holotype UCMP 12006. **Remarks:** Junior synonym of *Anadara* (*Larkinia*) *multicostata* (G.B. Sowerby I, 1833b), *fide* Coan and Valentich-Scott (2012: p. 179). [Arcidae].

Larkinia santana santana (Loel and Corey, 1932). [*Arca*]. Moore 1983. USGS PP 1228-A:A42–A43, pl. 8, figs. 3, 7. Vaqueros Fm., Miocene. West side of Plano Trabuco, Santa Ana Mtns., Orange Co. UCMP 6128. Holotype UCMP 31768. [Arcidae].

Larkinia santana weddlei (Loel and Corey, 1932). [*Arca*]. Moore 1983. USGS PP 1228-A:A43, pl. 9, figs. 1, 2. Vaqueros Fm., Miocene. Junipero Serra quad., Monterey Co. UCMP 3675. Holotype UCMP 31771. [Arcidae].

Ledina duttonae (Vokes, 1939). [*Jupiteria*]. Moore 1983. USGS PP 1228-A:A22, pl. 3, fig. 3. Lodo Fm. (Cerros Shale Member), Paleocene/Eocene [Eocene]. Vicinity where Urruttia Canyon enters Salt Creek, Coalinga quad., Fresno Co. UCMP 1817. Holotype UCMP 15564. [Nuculanidae].

Ledina duttonae (Vokes, 1939). [*Jupiteria*]. Squires et al. 1988. SEPM Guidebook 58:185, pl. 1, fig. 4. Goler Fm., Eocene. Inyokern SE quad. (1972), El Paso Mtns., Kern Co. USGS M9177. Hypotype USNM 424892. [Nuculanidae].

Ledina fresnoensis (Dickerson, 1916). [*Leda*]. Givens 1974. UCPG 109:39–40, pl. 1, fig. 2. Juncal Fm., Eocene. Hot Springs Creek, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4662. Hypotype UCR 4662/101. [Nuculanidae].

Ledina fresnoensis (Dickerson, 1916). [*Leda*]. Moore 1983. USGS PP 1228-A:A22, pl. 3, figs. 4, 5. Lodo Fm. (Cerros

Shale Member), Paleocene [Eocene]. Vicinity where Urruttia Canyon enters Salt Creek, Coalinga quad., Fresno Co. UCMP 1817. Holotype UCMP 11790. [Nuculanidae].

Leochlamys? *erici* (Wiedey, 1928). [*Pecten*]. Moore 1984. USGS PP 1228-B:B30–B31, pl. 8, figs. 1, 2. Vaqueros Fm., Oligocene/Miocene. Southwest of Santa Paula, Ventura Co. SU 406. Holotype SDSNH 27. [Pectinidae].

Leopecten stearnsii (Dall, 1878a). [*Pecten*]. Squires 2012. NHMLAC CS 520:76, fig. 22. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14347. [Pectinidae].

Leporimetis dombei (Hanley, 1844). Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):53, pl. 7, fig. 9 (as *Leporimentis dombi* (Hanley, 1844). Latrania Fm., Miocene/ Pliocene. West side of Coyote Mtn., Imperial Co. UCMP 738. Hypotype of G D. Hanna (1926: pl. 23, fig. 6) UCMP 32278. **Remarks:** In the genus/subgenus *Psammotreta* (*Leporimetis*), *fide* Coan and Valentich-Scott (2012: p. 617). [Tellinidae].

Leporimetis obesa (Deshayes, 1855). [*Tellina*]. Squires 2012. NHMLAC CS 520:76, fig. 41. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17921. Hypotype LACMIP 14366. **Remarks:** In the genus/subgenus *Psammotreta* (*Leporimetis*), *fide* Coan and Valentich-Scott (2012: p. 617). [Tellinidae].

Leporimetis rostellata (Clark, 1918). Moore 2003b. [*Metis*]. USGS PP 1228-G [electronic format] (family Tellinidae):52–53, pl. 7, fig. 7. San Ramon Fm., Oligocene/Miocene. Southwest of town of Walnut Creek, Concord quad., Contra Costa Co. UCMP 1131. Holotype UCMP 11120. [Tellinidae].

Leptopecten andersoni (Arnold, 1906). [*Pecten*]. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, fig. 11. Monterey Fm. (Gould Shale Member), Miocene. Las Yeguas Ranch quad., Temblor Range, Kern Co. USGS M3282. Hypotype USNM 646802. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45). [Pectinidae].

....., pl. 3, fig. 20. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al. 1959: pp. 8, 13), Miocene. Shale Pt. quad., Temblor Range, Kern Co. USGS M3987. Hypotype USNM 646809.

Leptopecten andersoni (Arnold, 1906). [*Pecten*]. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, figs. 9, 19. Monterey Fm. (Saltos Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5026. Hypotypes USNM 254358, 254368. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45). [Pectinidae].

Leptopecten andersoni (Arnold, 1906). [*Pecten*]. Addicott et al. 1980. SEPM Guidebook 6:18, 20, pl. 1, figs. 9, 19 (refigured from Addicott et al. 1978, pl. 1, figs. 9, 19). Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5026. Hypotypes USNM 254358, 254368. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45). [Pectinidae].

Leptopecten bellilamellatus (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B43, pl. 13, figs. 3, 6. San Diego Fm., Pliocene. Pacific Beach, La Jolla, San Diego Co. Holotype SU/CASG 35 [=CASG 6183.01]. **Remarks:** Junior synonym of *Leptopecten latiauratus* (Conrad, 1837), *fide* Coan et al. (2000: p. 237). [Pectinidae].

Leptopecten discus (Conrad, 1857d). [*Pecten*]. Vedder and Moore 1976. AAPG Misc. Pub. 24: 121,128, pl. 1, figs. 4, 6,7, 9–12. Unnamed strata, Miocene. Near Lemon Tank Reservoir, San Clemente Is., California Channel Ids. USGS M3743b. Hypotypes USNM 235577–235581. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B46). [Pectinidae].

....., pl. 1, fig. 8. [Monterey Fm.?], Miocene. Between La Purisima and Santa Ynez, Santa Barbara Co. Holotype USNM 13335. [Pectinidae].

Leptopecten discus (Conrad, 1857d). [*Pecten*]. Addicott et al. 1978. USGS OFR 78-446:59,72, pl. 4, fig. 18 (peel). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M3568. Hypotype USNM 254385. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B46). [Pectinidae].

Leptopecten discus (Conrad, 1857d). [*Pecten*]. Addicott et al. 1980. SEPM Guidebook 6:19, 33, pl. 5, fig. 18 (peel) (refigured from Addicott et al., 1978, pl. 4, fig. 18). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M3568. Hypotype USNM 254385. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B46). [Pectinidae].

Leptopecten pabloensis (Conrad, 1857c). [*Pecten*]. Vedder and Moore 1976. AAPG Misc. Pub. 24:123,128, pl. 1, figs. 1,

2. Santa Margarita Fm., Miocene. Atascadero quad., San Luis Obispo Co. USGS M3934. Hypotypes USNM 235574, 235575. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B47). [Pectinidae].

Leptopecten (*Leptopecten*) *palmeri* (Dall, 1897). [*Pecten*]. Powell 1985. WSM Ann. Rept. 17:32, pl. 1, fig. 8. Imperial Fm. (Latrania Sand Member) [=Latrania Fm.], Miocene/Pliocene. Willis Palm area, Riverside Co. UCR 4777. Hypotype UCR 4777/80 (not UCR 4777/11 as in pl. caption). [Pectinidae].

Leptopecten? sp. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 11. Temblor Fm. (lower Santos Shale Member), Miocene. Carneros Rocks quad., Temblor Range, Kern Co. USGS M3983. Hypotype USNM 646784. [Pectinidae].

Leptopecten? sp. Addicott 1973b. USGS PP 791:26, pl. 1, fig. 14. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646527. [Pectinidae].

Lima* (*Limaria*) *orcutti Hertlein and Grant, 1972 (n. sp.). SDSNH Mem. 2(2B):215, pl. 35, fig. 11; pl. 57, fig. 10. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Paratype LACMIP 4510, unfigured paratypes LACMIP 4517-4521. **Remarks:** In the genus *Limaria*, *fide* Moore (1987: p. C16). [Limidae].

....., pl. 36, figs. 2–5. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Holotype LACMIP 4509, paratype LACMIP 4511, unfigured paratypes LACMIP 4512–4514].

....., San Ysidro quad., San Diego Co. LACMIP 305A [=LACMIP 16862]. Unfigured paratypes LACMIP 4515, 4516].

....., Near U.S./Mexico boundary, San Ysidro quad. (1943), San Diego Co. LACMIP 319. Unfigured paratypes LACMIP 4522, 4523].

Lima vedderi Moore, 1977 (n.sp). Veliger 19(3):277–278, figs. 7, 9, 10. Monterey Fm., Miocene. Aliso Creek, San Juan Capistrano quad. (1949), Orange Co. USGS M3220. Holotype USNM 240060. **Remarks:** In the subgenus *Lima*, *fide* Moore (1987: p. C13). [Limidae].

....., figs 2, 6. Unnamed Fm., Miocene. San Clemente Is., California Channel Ids. USGS M6500. Hypotype USNM 240059.

Lima (*Lima*) *vedderi* Moore, 1977. Moore 1987. USGS PP 1228-C:C13–C14, pl. 10, figs. 1, 3. Monterey Fm., Miocene. East bank of Aliso Creek, San Juan Capistrano quad. (1949.), Orange Co. USGS M3220 (not USGS 3220 as in locality description). Holotype USNM 240060. [Limidae].

Lima (*Lima*) n. sp. aff. *L.* (*L.*) *tetrica* Gould, 1851. Vedder and Moore 1976. AAPG Misc. Pub. 24:124, 130, pl. 3, fig. 7. Unnamed Fm., Miocene. Near Old Airfield Reservoir, San Clemente Is., California Channel Ids. USGS M6500. Hypotype USGS 235596. [Limidae].

Lima n. sp. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 13. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH 4312. Hypotype SDSNH 83247. [Limidae].

Lima sp. Stadum and Finger 2016. NHMLAC CS 524:39, 42, fig. 45. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 140182. [Limidae].

Indeterminate *Lima*? Powell et al. 2019b. *PaleoBios* 36:8–9, fig. 11. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP 13001. Hypotype UCMP 412479. [Limidae].

Limatula aff. *L. subauriculata* (Montagu, 1808). [*Pecten*]. Moore 1987. USGS PP 1228-C:C17, pl. 9, fig. 2. "Fernando Fm.", Pliocene. Montebello Oil field, Los Angeles Co. USGS 13871]. Hypotype (of Woodring 1938, pl. 8, fig. 6) USNM 496096. **Remarks:** Junior synonym of *Limatula saturna* Bernard, 1978, *fide* Coan et al. (2000: p. 207). [Limidae].

Limaria (*Limaria*) *clarki* (Nelson, 1925). [*Lima*]. Moore 1987. USGS PP 1228-C:C16, pl. 10, fig. 6. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Valley, Santa Susana quad., Ventura Co. UCMP 3752. Holotype UCMP 30494. [Limidae].

Limaria (*Limaria*) *orcutti* (Hertlein and Grant, 1972). [*Lima*]. Moore 1987. USGS PP 1228-C:C16–C17, pl. 9, figs. 4–6, 8. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305C [=LACMIP 16817]. Holotype LACMIP 4509, paratype LACMIP 4511. [Limidae].

Limaria sp., cf. *L. orcutti* (Hertlein and Grant, 1972). [*Lima*]. Squires 2012. NHMLAC CS 520:76, fig. 13. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14339. [Limidae].

Limaria sp. Stadum and Finger 2016. NHMLAC CS 524:39, 42, fig. 44. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 121368. [Limidae].

Limea? (*Isolimea*?) *claytonensis* (Dickerson, 1914a). [*Lima*(?)]. Moore 1987. USGS PP 1228-C:C17, pl. 10, figs. 2, 9. Martinez Fm., Paleocene. Mt. Diablo quad., Contra Costa Co. UCMP 1592. Syntypes UCMP 11720, 11721. [Limidae].

Limopsis (*Limopsis*) *marysvillensis* (Dickerson, 1913). [*Glycymeris*]. Givens 1974. UCPG 109: 41, pl. 1, fig. 7. Juncal Fm., Eocene. East side of Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4656. Hypotype UCR 4656/101. [Limopsidae].

Limopsis (*Limopsis*) *marysvillensis* (Dickerson, 1913). [*Glycymeris*]. Moore 1983. USGS PP 1228-A:A49, pl. 10, fig. 9, 10. Meganos Fm. (Marysville Claystone Member) (not Capay Fm. as in locality description), Paleocene/Eocene. Marysville (Sutter) Buttes, Marysville (Sutter) Buttes quad., Sutter Co. UCMP 1853. Holotype UCMP 11766. [Limopsidae].

Lithophaga (*Lithophaga*) *clarki* M.A. Hanna, 1927. Moore 1983. USGS PP 1228-A:A73, pl. 19, figs. 5, 6. Delmar Fm., Eocene. Soledad Valley, La Jolla quad., San Diego Co. UCMP 3981. Holotype UCMP 31031. [Mytilidae].

Lithophaga sp. Watkins 1990b. *Palaios* 5:169, fig. 4A. Imperial Fm. [=Latrania Fm.], Pliocene. Coyote Mtns., Imperial Co. [MPM 90088]. Hypotype MPM 28229 (extracted from *Gastrochaenolites* within "*Ostrea*" *heermanni*). [Mytilidae].

....., fig. 4B. Coyote Mtns., Carrizo Mtn. quad., Imperial Co. [MPM 90087]. Hypotype MPM 28230 (from within *Solenastrea fairbanksi*). [Mytilidae].

Lituyapecten dilleri (Dall, 1901a). [*Pecten*]. Addicott 1981. GSA Sp. Pap. 184:34, pl. 5. Wildcat Group, Pliocene. Thompkins Hill, Humboldt Co. USGS M7258. Hypotype USNM 252514. [Pectinidae].

Lituyapecten dilleri (Dall, 1901a). [*Pecten*]. Moore 1984. USGS PP 1228-B:B88, pl. 42, fig. 4. Rio Dell Fm., Pliocene. Eel River, Humboldt Co. Lectotype (of Moore 1984: p. B88) USNM 164846. [Pectinidae].

Lituyapecten falorensis (MacNeil, 1961). [*Pecten*]. Moore 1984. USGS PP 1228-B:B86–B87, pl. 41, figs. 1, 5. Falor Fm., Pliocene. About 16 km southeast of Blue Lake, Humboldt Co. UCMP A4233. Holotype UCMP 34172. [Pectinidae].

Lituyapecten purisimaensis (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B87, pl. 41, figs. 3, 4. Purisima Fm., Pliocene. North of mouth of Pescadero Creek, Santa Cruz quad., San Mateo Co. Holotype SU/CASG 3 [=CASG 61852.01]. [Pectinidae].

Lituyapecten turneri (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B87–B88, pl. 37, figs. 1, 2. Merced Fm., Pliocene. Arroyo San Antonio, Tomales Bay, Marin Co. Holotype SU/CASG 430 [=CASG 61949.02], paratype SU/CASG 430A [=CASG 61949.03]. [Pectinidae].

Lopha vespertina (Conrad, 1854). [*Ostrea*]. Watkins 1990a. Paleo. 3 79:250, figs. 2A–F. Imperial Fm. [=Latrania Fm.], Pliocene. Fish Creek area, Fish Creek Mtns., Imperial Co. [MPM 90015]. Hypotypes MPM 28212–28217. **Remarks:** Supplemental descriptions in Conrad (1857b, 1857e) and first illustrated in Conrad (1857b). Provisionally in the genus *Dendostrea*?, *fide* Moore (1987: p. C25). [Ostreidae].

....., fig. 5A. Fish Creek area, Fish Creek Mtns., Imperial Co. MPM 90024. Hypotype MPM 28218 [polished slab from *L. vespertina* beds].

....., fig. 5B. Fish Creek area, Fish Creek Mtns., Imperial Co. MPM 90020. Hypotype MPM 28219 [polished slab from *L. vespertina* beds].

....., fig. 5C. Fish Creek area, Fish Creek Mtns., Imperial Co. MPM 90033. Hypotype MPM 28220 [polished slab from *L. vespertina* beds].

....., fig. 5D. Fish Creek area, Fish Creek Mtns., Imperial Co. MPM 90004. Hypotype MPM 28221 [polished slab from *L. vespertina* beds].

....., fig. 10A. Fish Creek area, Fish Creek Mtns., Imperial Co. MPM 90023. Hypotype MPM 28222 (*L. vespertina* with encrusting cheilostome bryozoa).

....., fig. 10B. Fish Creek area, Fish Creek Mtns., Imperial Co. MPM 90035. Hypotype MPM 28223 (*L. vespertina* with balanid barnacle).

....., figs. 10C, F. Fish Creek area, Fish Creek Mtns., Imperial Co. MPM 90015. Hypotypes MPM. 28224–28227 (*L. vespertina* with attached *L. vespertina* (MPM 28224), with *Gastrochaenolites* (MPM 28225), with *Entobia* borings (MPM 28226), and with *Caulostrepsis* borings MPM. 28227, 10F.

Lucina (*Lucinoma*) *acutilineata* Conrad, 1849a. G.D. Hanna and Hertlein 1943. CDM Bull. 118 (2):174, fig. 64-16. Temblor Fm., Miocene. South of Oil City, Fresno Co. CASG 27276. Hypotype CASG 5730. [Lucinidae].

Lucina (*Lucinoma*) *acutilineata* Conrad, 1849a. Shimer and Shrock 1944. Index Foss. N.A., p. 423, pl. 168, fig. 25 (refigured from Arnold and Anderson 1910, pl. 30, fig. 4 (as *Phacoides acutilineatus* (Conrad)). [Vaqueros Fm.], Miocene. Coalinga District, Fresno Co. USGS 4803. Hypotype USNM 165564]. [Lucinidae].

Lucina (*Myrtea*) *acutilineata* Conrad, 1849a. Glen 1959. UCPG 36(2):170, pl. 17, fig. 7 (not fig. g). Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene. Near Princeton, San Mateo Co. UCMP B4791. Hypotype UCMP 37624. **Remarks:** *Lucinoma annulatum* (Reeve, 1850), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucina cf. *acutilineata* Conrad, 1849a. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 17. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH 4312. Hypotype SDSNH 83250]. [Lucinidae].

Lucina (*Lucinoma*) *annulata* Reeve, 1850. Hertlein and Grant 1972. SDSNH Mem. 2(2B):247, pl. 46, figs. 12, 19. San Diego Fm., Pliocene. Southwestern San Diego Co, San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4643, 4644. **Remarks:** *Lucinoma annulatum* (Reeve, 1850), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucina (*Lucinoma*) *annulata* Reeve, 1850. Squires and White 1983. SEPM Guidebook 35:222, pl. 1, fig. 6. Saugus Fm. [=Pico Fm.], Pliocene. Browns Canyon, Los Angeles Co.. CSUN 241 (not CSUN 757 as in fig. caption) [LACMIP 12953]. Hypotype UCLA 59408 [=LACMIP 8321]. **Remarks:** *Lucinoma annulatum* (Reeve, 1850), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucina (*Lucina*) *annulata* Reeve, 1850. Stadium 1984a. NHFOC Mem. 1:80, pl. 1, fig. 16. Niguel Fm., Pliocene. Orange Co. SDSNH 4080]. SDSNH hypotype determined here as missing. **Remarks:** *Lucinoma annulatum* (Reeve, 1850), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucina (*Lucinoma*) *annulata* Reeve, 1850. Squires 1997b. Simi Valley Hist. Soc., vol., p. 301, fig. 6f (refigured from Squires and White 1983, pl. 1, fig. 6). Saugus Fm. [=Pico Fm.]. Browns Canyon, Los Angeles Co. CSUN 241 (not CSUN 757) (=LACMIP 12953). Hypotype UCLA 59408 (=LACMIP 8321)]. **Remarks:** *Lucinoma annulatum* (Reeve, 1850), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucina annulatum (Reeve, 1850). Vendrasco et al. 2012. NHMLAC CS 520:17, fig. 2.2. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. [Hypotype LACMIP 14852]. **Remarks:** *Lucinoma annulatum* (Reeve, 1850), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucina? (*Lucina*?) *bramkampi* Vokes, 1939. Moore 1988b. USGS PP 1228-D:D8, pl. 4, fig. 10. Lodo Fm. (Cerros Shale Member), Paleocene [Eocene]. Near where Urruttia Canyon enters Salt Creek, Coalinga quad. (=Joaquin Rocks quad.), Fresno Co. UCMP 1817. Holotype UCMP 15629. [Lucinidae].

Lucina (*Epilucina*) *californica* Conrad, 1837. Hertlein and Grant 1972. SDSNH Mem. 2(2B):247– 248, pl. 46, figs. 11, 16. San Diego Fm., Pliocene. West of the mouth of Rose Canyon, San Diego Co. SDSNH 80. Hypotype SDSNH [4348]. **Remarks:** In the genus *Epilucina*, *fide* Coan et al. (2000: p. 263). [Lucinidae].

Lucina? (*Lucina*?) *diabloi* (Dickerson, 1914a). [*Phacoides*]. Moore 1988b. USGS PP 1228-D:D8, pl. 4, figs. 9, 15, 18. Martinez Fm., Paleocene. Mt. Diablo quad., Contra Costa Co. UCMP 340. Holotype UCMP 11681. [Lucinidae].

Lucina (*Myrtea*) aff. *L. diegoensis* Dickerson, 1916. Weaver and Kleinpell 1963. UCPG 43:200–201, pl. 33, fig. 6. Upper Gaviota Fm., Eocene. Coyote Canyon, Pt. Conception quad., Santa Barbara Co. UCMP B7027. Hypotype SU. 9284 [=CASG 70180]. **Remarks:** *Epilucina washingtoniana* (Clark, 1925), *fide* Squires and Gring (1996: p. 66). [Lucinidae].

....., pl. 33, fig. 8. Undifferentiated Sacate/Gaviota fms., Eocene. North of Gaviota Pass, Los Olivos quad., Santa Barbara Co. UCMP B6962. Hypotype SU 9283 [=CASG 70182].

Lucina* (*Here*) *effingeri Weaver and Kleinpell, 1963 (n. sp.). UCPG 43:201, pl. 33, fig. 9. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6955. Holotype SU 9285. **Remarks:** In the genus *Here*, *fide* Moore (1988: p. D13). [Lucinidae].

Lucina (*Here*) *excavata* Carpenter, 1857b. Hertlein and Grant 1972. SDSNH Mem. 2(2B):244, pl. 46, figs. 1–3. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4636–4638. **Remarks:** In the genus *Here*, *fide* Coan et al. (2000: p. 263). [Lucinidae].

Lucina* (*Here*) *excavata temblorensis Adegoke, 1969 (n. subsp.). UCPG 80:115, pl. 4, figs. 8, 11, 12. Temblor Fm., Miocene. Uppermost fossiliferous sandstone ledge of the Temblor Fm., Domengine Ranch quad., Fresno Co. UCMP D1074. Holotype UCMP 36676. **Remarks:** Tentatively "*Lucina* (*Here*) *excavata temblorensis* Adegoke," *fide* Moore (1988: p. D23). Species seems to be a venerid, *fide* Moore (1988: p. D23). [Lucinidae].

"*Lucina* (*Here*) *excavata temblorensis*" Adegoke, 1969. Moore, 1988b. USGS PP 1228-D:D23, pl. 3, figs. 3, 4. Temblor Fm., Oligocene/Miocene. Uppermost fossiliferous sandstone ledge of the Temblor Fm., Domengine Ranch quad., Fresno Co. (Kern Co. in text) UCMP D1074. Holotype UCMP 36676. **Remarks:** Species seems to be a venerid, *fide* Moore (1988: p. D23). [Lucinidae].

"*Lucina*" *gaylordi* (Wagner and Schilling, 1923). [*Phacoides*]. Moore 1988b. USGS PP 1228-D: D23, pl. 7, figs. 16, 18, 20. San Emigdio Fm., Eocene. Devil's Kitchen, San Emigdio Creek, Kern Co. Southern Pacific Geology Dept. locality 321. Holotype CASG 6176. [Lucinidae].

Lucina (*Lucinisca*) *menuda* (Keen, 1943). [*Lucinisca*]. Moore 1988b. USGS PP 128-D:D9, pl. 1, figs. 1, 2. Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Holotype SU/CASG 7526 [=CASG 72004]. [Lucinidae].

"*Lucina*" *nasuta* Gabb, 1864. Moore 1988b. USGS PP 1228-D:D23, pl. 5, fig. 10. Domengine Fm. (Tejon Fm. in pl. caption), Eocene. Martinez, Contra Costa Co. Holotype ANSP 4465 [ANSP. 4475, *fide* Richards (1968: p. 68)], missing, *fide* K. Estes-Smargiassi (personal communication, 2019).[Lucinidae].

Lucina (*Lucinisca*) *nuttalli* Conrad, 1837. Hertlein and Grant 1972. SDSNH Mem. 2(2B):245–246, pl. 45, figs. 1–4. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4639, 4640. **Remarks:** In the genus *Lucinisca*, *fide* Coan et al. (2000: p. 263). [Lucinidae].

Lucina (*Lucinisca*) *nuttalli* Conrad, 1837. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 15. Niguel Fm., Pliocene. Orange Co. SDSNH 4080. Hypotype SDSNH 75917. **Remarks:** In the genus *Lucinisca*, *fide* Coan et al. 2000:263. [Lucinidae].

Lucina (*Lucinisca*) *nuttallii nuttallii* Conrad, 1837. Moore 1988b. USGS PP 1228-D:D9, pl. 1, figs. 3, 4, 6, 12. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes (of Hertlein and Grant, 1972, pl. 45, figs. 1–4) LACMIP 4639. 4640. **Remarks:** In the genus *Lucinisca*, *fide* Coan et al. (2000: p. 263). [Lucinidae].

Lucina (*Lucinisca*) *nuttalli antecedens* (Arnold, 1907). [*Phacoides*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):246, pl. 46, figs. 8, 9, 13, 14. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4641. 4642. **Remarks:** Junior synonym of *Lucinisca nuttalli* (Conrad, 1837), *fide* Coan et al. (2000: p. 263). [Lucinidae].

Lucina (*Lucinisca*) *nuttallii antecedens* (Arnold, 1907). [*Phacoides*]. Moore 1988b. USGS PP 1228-D:D9, pl. 1, figs. 7.8, 10.11. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes (of Hertlein and Grant 1972 pl. 46, figs. 8, 9, 13, 14) LACMIP 4641, 4642. **Remarks:** Junior synonym of *Lucinisca nuttalli* (Conrad, 1837), *fide* Coan et al. (2000: p. 263). [Lucinidae].

Lucina? (*Lucina*?) *quadrata* (Dickerson, 1914a). [*Phacoides*]. Moore 1988b. USGS PP 1228-D:D8, pl. 4, fig. 11. Martinez Fm., Paleocene. Near Lower Lake, Lake Co. UCMP 784. Holotype UCMP 11683. [Lucinidae].

Lucina richthofeni Gabb, 1866. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, fig. 63-13. Temblor Fm., Miocene. Hills just north of Kern River Kern Co. CASG 65. Hypotype CASG 5737. **Remarks:** Junior synonym of *Here excavata* (Carpenter, 1857), *fide* Coan et al. (2000: p. 263). [Lucinidae].

Lucina (*Parvilucina*) *tenuisculpta intensa* (Dall, 1903b). [*Phacoides (Parvilucina)*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):248, 249, pl. 46, figs. 6, 7 (as *Lucina* (*Parvilucina*) *intensa* in pl. captions). San Diego Fm., Pliocene. San Diego well, Balboa Park, San Diego, San Diego Co. Syntype CASG 698D, determined here as missing. **Remarks:** Junior synonym of *Parvilucina approximata* (Dall, 1901b), *fide* Coan et al. (2000: p. 265). [Lucinidae].

....., pl. 46, fig. 17 (as *Lucina* (*Parvilucina*) *intensa* in pl. caption). West side of next gully east of LACMIP 305 at the same elevation. LACMIP 305A [=LACMIP 16862]. Hypotype LAMCIP 4645.

....., pl. 46, fig. 22 (as *Lucina* (*Parvilucina*) *intensa* in pl. caption). Knox Ranch hill, near U.S./Mexico boundary, San Diego Co. LACMIP 318. Hypotype LACMIP 4646.

Lucina? n. sp.? Squires et al. 1988. SEPM Guidebook 58:185, pl. 2, fig. 7. Goler Fm., Eocene. Inyokern SE quad. (1972), El Paso Mtns., Kern Co. USGS M9178. Hypotype USNM 424895. [Lucinidae].

Lucinid bivalve. Schwartz et al. 2003. Geo-Mar. Lett. 23:344, fig. 5f. Moreno Fm., Paleocene. Right Angle Canyon, Panoche Hills, Fresno Co. Hypotype current whereabouts unknown. **Remarks:** Now *Nymphalucina panochensis*, *fide* Kiel (2013: pp. 259, 260).

Lucinisca? brabbi Powell, 2001. (n. sp.). *PaleoBios* 21(2):19–24, figs. 2–4. Santa Margarita Fm., Miocene. Pancho Rico Creek, Spreckles quad., Monterey Co. SU 1957 [=CASG 68587]. Holotype CASG 68586, paratypes CASG 68587.01, 68587.02. [Lucinidae].

Lucinisca menuda Keen, 1943. (n. sp.). Tr.SDSNH 10(2):40–41, pl. 3, figs. 15, 16. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Holotype SU 7526 [=CASG 72004]. **Remarks:** In the genus/subgenus *Lucina* (*Lucinisca*), *fide* Moore (1988b: p. D9). [Lucinidae].

Lucinisca nuttalli (Conrad, 1837). [*Lucina*]. Addicott 1965b. USGS PP 525-C:C104, fig. 3d. Santa Margarita Fm., Miocene. Comanche Pt., Tejon Hills, Kern Co. USGS M1619. Hypotype USNM 649166. [Lucinidae].

Lucinisca nuttalli (Conrad, 1837). [*Lucina*]. Moore 1968. SDSNH Occas. Pap. 15:40, pl. 18, fig. d. [San Diego Fm.], Pliocene. Balboa Park, San Diego, San Diego Co. [SDSNH 29. Hypotype SDSNH 4138]. [Lucinidae].

Lucinisca nuttalli (Conrad, 1837). [*Lucina*]. Squires 2012. NHMLAC CS 520:76, fig. 27. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14352. [Lucinidae].

Lucinisca nuttallii antecedens (Arnold, 1907). [*Phacoides*] Woodring and Bramlette 1950 [1951]. USGS PP 222:86, pl. 20, fig. 3. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge, southeast of Orcutt, Santa Barbara Co. USGS 14622. Hypotype USNM 560140. **Remarks:** Junior synonym of *Lucinisca nuttalli* (Conrad, 1837), *fide* Coan et al. (2000: p. 263]. [Lucinidae].

....., pl. 21, fig. 6. Graciosa Ridge, southeast of Orcutt, road cut, USGS 14614. Hypotype USNM 560141.

Lucinisca nuttallii nuttallii (Conrad, 1837). [*Lucina*]. Powell 2008:12, fig. 4u (as *Lucina nuttallii nuttallii*). Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Rock, Imperial Co. (not San Diego Co. as in locality description). USGS M9779 [=USGS M9778]. Hypotype USNM 486910. [Lucinidae].

Lucinisca n. sp.? Durham and Addicott, 1965 (not Addicott and Durham as in pl. caption. However they list a *Lucinisca* n. sp.? aff. *L. nuttalli* (Conrad)). Addicott 1972b. SEPM Symposium vol., p. 15, pl. 4, fig. 4. Panorama Hills Fm. (of Dibblee 1968), Pliocene. Panorama Hills quad., Temblor Range, Kern Co. USGS M1059. Hypotype USNM 646814. [Lucinidae].

Lucinoma acutilineata (Conrad, 1849a). [*Lucina*]. Stewart 1946. USGS PP 205-C:99, pl. 17, fig. 9. Temblor Fm., Miocene. Reef Ridge, west side of Zapato Canyon, Kreyenhagen Hills quad., Fresno Co. USGS 14392. Hypotype USNM 498747. **Remarks:** *Lucinoma acutilineatum* (Conrad, 1849a), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucinoma acutilineata (Conrad, 1849a). [*Lucina*]. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, figs. 3, 15.

Temblor Fm. (*Phacoides* Sand member) (of Stinemeyer et al. 1959:12, 13), Miocene. Las Yeguas Ranch quad., Temblor Range, Kern Co. USGS M3280. Hypotypes USNM 646537, 646541. **Remarks:** *Lucinoma acutilineatum* (Conrad, 1849a), *fide* Coan et al. (2000: p. 267). [Lucinidae].

Lucinoma acutilineata (Conrad, 1849a). [*Lucina*]. Addicott 1973b. USGS PP 791:7, 28, pl. 2, fig. 6 (refigured from Addicott, 1972b pl. 1, fig. 3); pl. 3, figs. 3 (refigured from Addicott 1972b, pl. 1, fig. 15), 7. Temblor Fm. (Wygal Sandstone Member), Miocene. South side of Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotypes USNM 646537, 646541, 646542. **Remarks:** *Lucinoma acutilineatum* (Conrad, 1849a), *fide* Coan et al. (2000: p. 267). [Lucinidae].

Lucinoma cf. *L. acutilineata* (Conrad, 1849a). [*Lucina*]. Woodring et al. 1940 [1941]. USGS PP 195:63, pl. 29, fig. 7. Etchegoin Fm. (*Pseudocardium* Zone), Pliocene. North branch of Arroyo Torcido, east of Double Hill, North Dome, Kettleman Hills, Kings Co. USGS 12400. Hypotype USNM 495789. **Remarks:** *Lucinoma acutilineatum* (Conrad, 1848), *fide* Coan et al. (2000: p. 267). [Lucinidae].

Lucinoma cf. *L. annulata* (Reeve, 1850). [*Lucina*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:86, pl. 19, fig. 8. Careaga Fm. (Graciosa Member), Pliocene. Casmalia Hills, northeast of Shuman, Santa Barbara Co. USGS 14612. Hypotype USNM 560142. **Remarks:** *Lucinoma annulatum* (Reeve, 1850), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucinoma annulata (Reeve, 1850). [*Lucina*]. Cummings et al. 1962. CDMG Bull. 181:204, ph. 17, fig. 3. Purisima Fm. (Pomponio Member), Pliocene. San Mateo Co. Locality 711M. Hypotype determined here as missing. **Remarks:** *Lucinoma annulatum* (Reeve, 1850), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucinoma annulata (Reeve, 1850). [*Lucina*]. Moore 1968. SDSNH Occas. Pap. 15:40, pl. 18, fig. b. [San Diego Fm.], Pliocene. Near the south base of Mt. Soledad, San Diego Co. [SDSNH 365. Hypotype SDSNH 4156]. **Remarks:** *Lucinoma annulatum* (Reeve, 1850), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucinoma annulata (Reeve, 1850). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D17, pl. 4, figs. 4, 5, 16. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes (of Hertlein and Grant, 1972, pl. 46, figs. 12, 19) LACMIP 4643, 4644. **Remarks:** *Lucinoma annulatum* (Reeve, 1850), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucinoma annulata (Reeve, 1850). [*Lucina*]. Perry 1988. SCMA, p. 18, fig. 9B. Purisima Fm., Miocene/Pliocene. Santa Cruz Co. CASG 66062. Hypotype CASG 66062.02. **Remarks:** *Lucinoma annulatum* (Reeve, 1850), *fide* Coan et al. (2000: p. 266). [Lucinidae].

Lucinoma annulatum (Reeve, 1850). [*Lucina*]. Squires 2012. NHMLAC CS 520:76, fig. 28. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14353. [Lucinidae].

aff. *Lucinoma*? Powell et al. 2019b. *PaleoBios* 36: 9–10, fig. 14. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP 13005. Hypotype UCMP 218741. [Lucinidae].

Lutraria? *traskei* Conrad, 1855b. Moore 2003a. USGS 1228-F [electronic format] (family Mactridae):34, pl. 10, fig. 4. Monterey Fm.(?), Miocene. Carmelo, Monterey Co. Holotype USNM 1848. [Mactridae].

Lyropecten catalinae (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B53, pl. 18, figs. 4, 6. San Onofre(?) Breccia, Miocene. Santa Catalina Is., California Channel Ids. Holotype SU/CASG 30 [=CASG 61825.01], paratype SU/CASG 561 [=CASG 6966]. [Pectinidae].

Lyropecten catalinae (Arnold, 1906). [*Pecten*]. Smith 1991a. USGS PP 1391:48–49, pl. 27, fig. 2. [San Onofre Breccia?], Miocene. Santa Catalina Is. California Channel Ids. Holotype SU 30 [=CASG 61825.01] (as *Pecten* (*Lyropecten*) *estrellanus* Conrad var. *catalinae* Arnold, 1906). [Pectinidae].

....., pl. 27, figs. 3, 7; pl. 28, fig. 6. Unnamed strata, Miocene. In saddle northeast of Mt. Banning and Mt. Orizaba, Santa Catalina Is., California Channel Ids. UCMP D-8793. Hypotypes UCMP 37384–37386.

....., pl. 28, fig. 1. Modelo Fm. [=Castaic Fm., *fide* Squires et al. (2006:13, 15], Miocene. Santa Clara Valley north of Newhall and the Santa Susana Mtns., Mint Canyon quad., Los Angeles Co. UCMP D-8261. Hypotype UCMP 16098.

Lyropecten catalinae (Arnold, 1906). [*Pecten*]. Squires et al. 2006. NHMLAC CS 511:13–15, figs. 17–19. Pico Fm., Pliocene. Southwest of Valencia, Oat Mtn. quad. (1952 [PR 1969]), Los Angeles, Co. LACMIP 17778. Hypotypes LACM 13346–13348. [Pectinidae].

Lyropecten catalinae (Arnold, 1906). [*Pecten*]. Squires 2012. NHMLAC CS 520:76, fig. 20. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACM 14345. [Pectinidae].

Lyropecten cerrosensis (Gabb, 1866). [*Pecten*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:85, pl. 21, fig. 1. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., below brachiopod bed, Santa Barbara Co. USGS 14771. Hypotype USNM 560138. [Pectinidae].

Lyropecten cerrosensis (Gabb, 1866). [*Pecten*]. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 3, fig. 8. Pancho Rico Fm., Miocene/Pliocene. Priest Valley quad., Monterey Co. UCMP A911. Hypotype UCMP 36469. [Pectinidae].

Lyropecten cerrosensis (Gabb, 1866). [*Pecten*]. Peska 1977. BSCPS 9(10-12):92, unnumbered fig. Niguel Fm., Pliocene. Mission Viejo area, Orange Co. Line drawing, source specimen unknown. [Pectinidae].

Lyropecten cerrosensis (Gabb, 1866). [*Pecten*]. Smith 1991a. USGS PP 1391:49–50, pl. 27, fig. 5. Pancho Rico Fm., Miocene/Pliocene. Salinas Valley, San Ardo quad., Monterey Co. UCMP A911. Hypotype (of Durham and Addicott 1965, pl. 3, fig. 8) UCMP 36469. [Pectinidae].

....., pl. 28, fig. 4. San Diego Fm., Pliocene. Hills south of Tijuana River at Palm City, "K" Ranch, exactly 290 ft. from the U.S./Mexico boundary, southwest of Goat Canyon, Imperial Beach quad., San Diego Co. LACMIP 305-C [=LACMIP. 16817]. Hypotype (of Hertlein and Grant 1972, pl. 34, fig. 4) LACMIP 4505.

Lyropecten crassicardo (Conrad, 1857a). [*Pallium*]. Addicott 1965b. USGS PP 525-C:C104, fig. 3b. Santa Margarita Fm., Miocene. Comanche Pt., Tejon Hills, Kern Co. USGS M1619. Hypotype USNM 649164. [Pectinidae].

Lyropecten crassicardo (Conrad, 1857a). [*Pallium*]. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, fig. 4. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al. 1959: p. 8, 13), Miocene. Shale Pt. quad., Temblor Range, Kern Co. USGS M3988. Hypotype USNM 646796. [Pectinidae].

....., pl. 4, fig. 2. Santa Margarita Fm., Miocene. Fellows quad., Temblor Range, Kern Co. USGS. M3786. Hypotype USNM 646812.

Lyropecten crassicardo (Conrad, 1857a). [*Pallium*]. Vedder and Moore 1976. AAPG Misc. Pub. 24:121, 122, 130, pl. 2, fig 1. Unnamed strata, Miocene. East side of central San Clemente Is., California Channel Ids. UCR 7957. Hypotype UCR 7957/1. [Pectinidae].

....., pl. 2, fig. 7. Near Lemon Tank Reservoir, San Clemente Is., California Channel Is. UCLA 5899 [=LACMIP 25899]. Hypotype UCLA 59266 [=LAMCIP 10844].

....., pl. 2, fig. 10. San Clemente Is., California Channel Ids. LACMIP 1194. Hypotype LACMIP 6272.

Lyropecten crassicardo (Conrad, 1857a). [*Pallium*]. Addicott et al. 1978. USGS OFR 78-446:59, unnumbered fig. inside back cover. Santa Margarita Fm., Miocene. Camatti Ranch, San Luis Obispo Co. USGS. M2023. Hypotype USNM 254389. [Pectinidae].

Lyropecten crassicardo (Conrad, 1857a). [*Pallium*]. Addicott et al. 1980. SEPM Guidebook 6:19, 38, unnumbered fig. (refigured from Addicott et al. 1978, unnumbered fig. inside back cover). Santa Margarita Fm., Miocene. Camatti Ranch, San Luis Obispo Co. USGS M2023. Hypotype USNM 254389. [Pectinidae].

Lyropecten crassicardo (Conrad, 1857a). [*Pallium*]. Moore 1984. USGS PP 1228-B:B51–B53, pl. 17, fig. 6. Santa Margarita Fm., Miocene. Tejon Hills, Caliente quad., Kern Co. UCMP 3029. Holotype (of *Pecten nomlandi* Hertlein, 1931) UCMP 11308. [Pectinidae].

....., pl. 17, fig. 7. Briones Fm., Miocene. Vicinity of McGuire Peaks, Pleasanton quad., Alameda Co. Holotype (of *Pecten vickeryi* Trask 1922) SU/CASG 26 [=CASG 61833.01].

...., pl. 18, fig. 1. Pleasanton quad., Alameda Co. UCMP 3535. Holotype (of *Pecten ricei* Trask, 1922) UCMP 12364.

....., pl. 18, figs. 2, 5. Santa Margarita Fm., Miocene. La Panza quad., Monterey Co. Lectotype (of Moore 1984:B52) ANSP 30745a.

....., pl. 18, fig. 3. Briones Fm., Miocene. Alum Rock Canyon, San Jose quad., Santa Clara Co. Holotype (of *Pecten hamiltoni* Arnold, 1906) USNM 164845.

....., pl. 21, fig. 3. Santa Margarita Fm., Miocene. Coalinga quad., Fresno Co. UCMP D1088. Holotype (of *Swiftopecten adekunbiana* Adegoke, 1969) UCMP 36639.

....., pl. 28, fig. 1. Cierbo Fm., Miocene. Near the town of Rodeo, Napa quad., Contra Costa Co. UCMP 1632. Holotype (of *Pecten holwayi* Clark, 1915) UCMP 11580.

Lyropecten crassicardo (Conrad, 1857a). [*Pallium*]. Smith 1991a. USGS PP 1391:52–55, pl. 23, figs. 1, 2. Briones Fm., Miocene. Alum Rock Canyon, Santa Clara Co. Holotype and paratype (of *Pecten* (*Lyropecten*) *crassicardo* var. *hamiltoni* Arnold, 1906) USNM 164845. [Pectinidae].

....., pl. 23, fig. 3. Santa Margarita Fm., Miocene. In *Pecten*-oyster biostrome, north of Coalinga along Domengine Creek, Domengine Ranch quad., Fresno Co. UCMP D8791. Hypotype UCMP 37381.

....., pl. 23, fig. 4. [Santa Margarita Fm.?], Miocene. Northern La Panza Range, Monterey Co. Lectotype (of Moore 1984:B52) ANSP 30745a.

....., pl. 23, fig. 6. Santa Margarita Fm., Miocene. Eastern Temblor Range, Fellows quad., San Luis Obispo Co. USGS M3786. Hypotype (of Addicott 1972b, pl. 4, fig. 2) USNM 646812.

....., pl. 24, fig. 1. East of Shell Creek, La Panza Range, Pozo quad., Monterey Co. USGS M3569. Hypotype USNM 334999, determined here as missing.

....., pl. 24, fig. 3. West side of Anticline Ridge, Oyster-*Pecten* bed, Coalinga quad., Fresno Co. UCMP D1088. Holotype (of *Swiftopecten adekunbiana* Adegoke, 1969) UCMP 36639.

....., pl. 24, fig. 4. Briones Fm., Miocene. Reef beds in vicinity of Verona, near Pleasanton, Livermore quad., Alameda Co. UCMP 3535. Holotype UCMP 12364 (of *Pecten* (*Lyropecten*) *ricei* Trask 1922).

....., pl. 24, figs. 5, 6. Santa Margarita Fm., Miocene. Cammatta Ranch, northern La Panza Range, Monterey Co. Hypotype (of *Pecten* (*Lyropecten*) *magnificus* G.B. Sowerby I, 1835 of Grant and Gale 1931, pl. 9, figs. 4, 5) SU/CASG 442.

....., pl. 24, fig. 7. Unnamed strata, Miocene. Near Lemon Tank Reservoir, San Clemente central quad., San Clemente Is., California Channel Ids. UCLA 5899 [=LACMIP 25899]. Hypotype UCLA 59266 [=LACMIP 10844].

....., pl. 24, fig. 8. Unnamed strata, Miocene. Near Lemon Tank Reservoir San Clemente central quad., San Clemente Is., California Channel Ids. LACMIP 1194. Hypotype LACMIP 5877.

....., pl. 24, fig. 9. Santa Margarita Fm., Miocene. Western Tejon Hills, southeast of Bakersfield, Arvin quad., Kern Co. UCMP 3029. Holotype (of *Pecten crassicardo biformatis* Nomland, 1917) UCMP 11308 (not 11318 as in pl. caption).

....., pl. 25, figs. 1, 3. Monterey Fm., Miocene. Near Rossmore, Leisure World, Laguna Hills, road cut on Moulton Parkway, San Juan Capistrano quad., Orange Co. LACMIP 1189. Hypotype LACMIP 5876.

....., pl. 25, fig. 2. Briones Fm., Miocene. Near McGuire Peaks, Mt. Hamilton Range, Santa Clara Co. Holotype (of *Pecten* (*Lyropecten*) *vickeryi* Trask, 1922) SU 26 [=CASG 61833.01].

....., pl. 25, fig. 4. San Pablo Fm., Miocene. On shore of San Pablo Bay near the town of Rodeo, Mare Is. quad., Contra Costa Co. UCMP 1632. Holotype (of *Pecten* (*Pallium*) *holwayi* Clark, 1915)). UCMP 11580.

....., pl. 25, fig. 5. Monterey Fm., Miocene. Eastern tributary to Wood Canyon, in Aliso Creek drainage, San Juan Capistrano quad., Orange Co. UCLA 635 [=LACMIP 20635]. Hypotype UCLA 45105 [=LACMIP 11429].

....., pl. 25, fig. 6. [Vaqueros Fm.?], Miocene. Southwest of El Toro, El Toro quad. (Corona quad. in pl. caption), Orange Co. UCMP 1910. Hypotype UCMP 16099.

....., pl. 25, fig. 7. Unnamed strata, Miocene. Near Lemon Tank Reservoir, San Clemente Central quad., San Clemente Is., California Channel Ids. LACMIP 1193. Hypotype LACMIP 5875.

Lyropecten crassicarso (Conrad, 1857d) [*Pallium*]. Stadum and Finger 2016. NHMLAC CS 524:39, 42, figs. 4, 41, 42. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4521. Hypotypes SDSNH 98671, 98672. [Pectinidae].

Lyropecten crassicardo nomlandi (Hertlein, 1931). [*Pecten*]. Adegoke 1969. UCPG 80:100–101, pl. 2, fig. 8. Monterey Fm. (McClure Member), Miocene. Tar Peak area, Kings Co. UCMP D1207. Hypotype UCMP 36626. **Remarks:** Junior synonym of *Lyropecten crassicardo* (Conrad, 1857a), *fide* Moore (1984: p. B51). [Pectinidae].

Lyropecten crassicardo vaughani (Arnold, 1906). [*Pecten*]. Addicott 1972b. SEPM Symposium vol., p. 10, pl. 2, fig. 6. Temblor Fm. (Carneros Sand Member) (of Stinemeyer et al. 1959: pp. 9, 13), Miocene. Temblor Range, Kern Co. USGS 4941. Hypotype USNM 646790. **Remarks:** *Lyropecten vaughani* (Arnold, 1906), *fide* Moore (1984: p. B50). [Pectinidae].

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Durham and Addicott 1965. USGS PP 524-A: A13, pl. 1, fig. 5. Pancho Rico Fm., Miocene/Pliocene. Adelaida quad., Monterey Co. USGS M2050. Hypotype USNM 649085. **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c). [Pectinidae].

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Adegoke 1969. UCPG 80:101, pl. 2, fig. 13. Santa Margarita Fm., Miocene. Domengine Creek, Polvadero Gap quad., Kings Co. UCMP B4350. Hypotype UCMP. 36627. **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c). [Pectinidae].

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Addicott 1972b. SEPM Symposium vol., p. 15, pl. 4, fig. 1. Santa Margarita Fm., Miocene. Unspecified quad., Temblor Range, Kern Co. USGS 12984. Hypotype USNM 646811. **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c). [Pectinidae].

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Smith 1975a. SEPM Symposium vol., p. 463, pl. 2, fig. 6. Santa Margarita Fm., Miocene. San Juan River area, San Luis Obispo Co. USGS 4944. Hypotype USNM 647533 (not holotype USNM 13317 as in text). **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c). [Pectinidae].

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Addicott 1978. USGS OFR 78-446:89, pl. 1, fig. 4. Pancho Rico Fm., Miocene/Pliocene. Northeast of San Lucas, Monterey Co. USGS M903. Hypotype USNM 254349. **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c). [Pectinidae].

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Addicott et al. 1978. USGS OFR 78-446:59, 72, pl. 4, fig. 11. Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2872. Hypotype USNM 254378. **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c). [Pectinidae].

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Addicott et al. 1980. SEPM Guidebook 6:19, 33, pl. 5, fig. 11 (refigured from Addicott et al. 1978, pl. 4, fig. 11). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2872. Hypotype USNM 254378. **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c). [Pectinidae].

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Fowkes 1982. Coalinga Guidebook, p. 27, unnumbered fig. Santa Margarita Fm. (*Tamiosoma* Zone), Miocene. Fresno Co. WHC hypotype lost? **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c). [Pectinidae].

....., p. 30, unnumbered fig. (*Lyropecten* in text) (refigured from Arnold 1909 [1910], pl. 10, fig. 3; refigured from Arnold and Anderson 1910, pl. 32, fig. 3 (both as *Pecten estrellanus* Conrad 1857a)). Santa Margarita Fm., Miocene. *Tamiosoma* Zone above Big Blue Fm., Fresno Co. [Hypotype USNM 165616]. [Pectinidae].

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Moore 1984. USGS PP 1228-B:B53-B54, pl. 19, fig. 2. Santa Margarita Fm., Miocene. Estrella Valley, San Luis Obispo Co. Lectotype of Woodring 1938:33; neoholotype (invalid term) of Tucker-Rowland 1938: p. 4) USNM 13317. **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c). [Pectinidae].

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Smith 1991a. USGS PP 1391:55–57, pl. 1, fig. 4 (refigured from Smith 1975a, pl. 2, fig. 6). Santa Margarita Fm., Miocene. Northern La Panza Range, Pozo quad., San Luis Obispo Co. USGS 4944. Hypotype USNM 647533. **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c). [Pectinidae].

....., pl. 1, fig. 5; pl. 22, figs. 1, 7. Domengine Creek, Domengine Ranch quad., Fresno Co. CASG 29395. Hypotype CASG 60983.

....., pl. 22, fig. 4.9 mi. north of Coalinga, Coalinga quad., Fresno Co. USGS 4766. Hypotype (of Arnold, 1909 [1910] pl. 10, fig. 3) USNM 165616.

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Powell 2007. *PaleoBios* 27(3):92, cover, fig. 4. Santa Margarita Fm., Miocene. Cosio Knob quad., Monterey Co. UCMP A8968. Hypotype UCMP 54535. **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c). [Pectinidae].

Lyropecten estrellanus (Conrad, 1857a). [*Pallium*]. Powell et al., 2020. *PaleoBios* 37(1):6, figs. 5E, F. Santa Margarita Fm., Miocene. Pancho Rico Canyon, Monterey Co. CASG 78559. Hypotype CASG 78560. **Remarks:** Supplemental descriptions in Conrad (1857c, 1857d) and first illustrated in Conrad (1857c).

Lyropecten magnolia (Conrad, 1857d). [*Pecten*]. Addicott 1965b. USGS PP 525-C:C104, fig. 3i. Basal Jewett Sand, Miocene. Coffee Canyon, Kern Co. UCR 1185. Hypotype UCR 1185/6 (not UCR 1185-b as in pl. caption). **Remarks:** In the genus *Macroclamis*, *fide* Moore (1984: p. B56). [Pectinidae].

Lyropecten magnolia (Conrad, 1857d). [*Pecten*]. Smith 1975a. Pacific Section SEPM Symposium vol., p. 463, pl. 2, fig. 3. Vaqueros Fm., Oligocene. Northwest of mouth of Lion Canyon, southwest of Ojai, Ojai Valley, Matilija quad., Ventura Co. UCMP A326. Hypotype UCMP 31734. **Remarks:** In the genus *Macroclamis*, *fide* Moore (1984: p. B56). [Pectinidae].

....., pl. 2, fgs. 4, 5. Cuyama area, Caliente Range, sec. 11, T10N, R25W, Cuyama quad., San Luis Obipo Co. USGS M3520. Hypotypes USNM 335003 (fig. 4), 647534 (fig. 5) (not same specimen as indicated in pl. 2 caption, *fide* J.T. Smith (personal communication, 1999).

....., pl. 2, fig. 7. **Remarks:** Not *Lyropecten magnolia* (Conrad, 1857d), specimen of unknown affinity, *fide* J.T. Smith (personal communication, 1999).

Lyropecten magnolia (Conrad, 1857d). [*Pecten*]. Norris 2003. SBMNH Mon. 3:88, fig. 50. Vaqueros Fm., Miocene. Santa Barbara Co. Hypotype determined here as missing. **Remarks:** In the genus *Macroclamis*, *fide* Moore (1984: p. B56). [Pectinidae].

Lyropecten miguelensis (Arnold, 1906). [*Pecten*]. Addicott 1972b. SEPM Symposium vol., p. 10, pl. 2, fig. 5. Temblor Fm. (Carneros Sand Member) (of Stinemeyer et al.1959: pp. 9, 13), Miocene. Carneros Rocks quad., Temblor Range, Kern Co. USGS M3981. Hypotype USNM 646789. [Pectinidae].

Lyropecten miguelensis (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B49–B50, pl. 16, figs. 1, 2, 4. Vaqueros Fm., Oligocene/Miocene. San Miguel Is., California Channel Ids. Holotype UCMP 12079. [Pectinidae].

Lyropecten miguelensis (Arnold, 1906). [*Pecten*]. Smith 1991a. USGS PP 1391:61, pl. 34, fig. 1. Branch Canyon Fm. (of Hill et al. 1958: pp. 2991–2993), Miocene. West of Santa Barbara Canyon, Fox Mtn. quad., Santa Barbara Co. USGS M2424. Hypotype USNM 335952. [Pectinidae].

....., pl. 34, fig. 2. Rincon Fm. (of Avila and Weaver 1969:49–51), Miocene. Southeast coast, west of East Pt., Santa Rosa Is. East quad., Santa Rosa Isd., California Channel Ids. UCSB SR67-28. Hypotype UCSB 4675 [=SBMNH 60212].

....., pl. 34, fig. 3. Vaqueros Fm., Miocene. Southwest coast, south of Posa Anchorage, Santa Cruz Is., California Channel Ids. Hypotype UCSB 1844 [=SBNHM 80167].

....., pl. 34, fig. 4. From north of Kinton Pt., Santa Cruz Is., California Channel Ids. UCSB E-8 [=LACMIP 16406]. Hypotype (of *Pecten miguelensis* (supervariant) Arnold, 1906 of Avila and Weaver 1969, pl. 32, fig. 8a) UCSB M16 [=LACMIP 6300].

....., pl. 34, fig. 5. Southeast coast of Santa Rosa Is., west of East Pt., east of Ford Pt., Santa Rosa Is., California Channel Ids. CASG 1156. Hypotype (of *Pecten* (*Lyropecten*) *miguelensis* Arnold, 1906 of Hertlein 1928a, pl. 24, fig. 1) CASG 4143.

....., pl. 34, fig. 6; pl. 35, figs. 1, 6. Miocene. San Miguel Is., California Channel Ids. Holotype UCMP 12079.

....., pl. 35, fig. 5. Southwest part of island, west of Posa Canyon, Santa Cruz Is., California Channel Ids. UCSB E-5. Hypotype UCSB 1912 [=SBMNH 60213].

Lyropecten miguelensis (Arnold, 1906). [*Pecten*]. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), figs. A, B. San Onofre Breccia, Miocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotypes UCSB. 6527 [=SBMNH 60178, 60179]. [Pectinidae].

Lyropecten pretiosus (Hertlein, 1925b). [*Pecten*]. Smith 1991a. USGS PP 1391:64–65, pl. 26, figs. 8, 9. Vaqueros Fm. (Diorite breccia member), Oligocene/Miocene. Cañada Posa, southwestern Santa Cruz Is., California Channel Ids. USGS M8022. Hypotypes USNM 335000, 335001. [Pectinidae].

....., pl. 26, figs. 12, 13; pl. 37, fig. 3. In canyon east of pass between two high peaks on crest of island, Santa Rosa Is., California Channel Ids. UCMP A311. Holotype UCMP 31737 (of *Pecten* (*Lyropecten*) *miguelensis submiguelensis* Loel and Corey, 1932).

....., pl. 26, fig. 14. Rincon Fm. (of Avila and Weaver 1969), Miocene. North coast of Santa Rosa Is., California Channel Ids. UCSB SR67-53 [=LACMIP 16404]. Hypotype (of *Pecten miguelensis* Arnold 1906 of Avila and Weaver 1969, pl. 34, fig. 9) UCSB M15 [=LACMIP 6320].

Lyropecten submiguelensis (Loel and Corey, 1932). [*Pecten*]. Smith 1975a. Pacific Section SEPM Symposium vol., p. 463, pl. 2, figs. 1, 2. Vaqueros Fm., Oligocene. Santa Rosa Is., California Channel Ids. UCMP A311. Holotype UCMP 31737. [Pectinidae].

Lyropecten submiguelensis (Loel and Corey, 1932). [*Pecten*]. Moore 1984. USGS PP 1228-B:B50, pl. 16, figs. 3, 5; pl. 17, fig. 1. Vaqueros Fm., Oligocene/Miocene. In a canyon east of pass between two high peaks on crest of island, Santa Rosa Is., California Channel Is. UCMP A311. Holotype UCMP 31737. [Pectinidae].

Lyropecten terminus (Arnold, 1906). [*Pecten*]. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 1, figs. 1, 10. Pancho Rico Fm., Miocene/Pliocene. Walker Canyon, Wunpost quad., Monterey Co. USGS M1935. Hypotypes USNM 649083, 649084. [Pectinidae].

....., pl. 2, fig. 1. West of Salinas River, Hames Valley quad., Monterey Co. USGS M1676. Hypotype USNM 649088.

....., pl. 2, fig. 10. Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M1939. Hypotype USNM 649089.

Lyropecten terminus (Arnold, 1906). [*Pecten*]. Addicott 1974a. Jour. Paleo. 48(1):184, pl. 1, fig. 5 (refigured from Durham and Addicott 1965, pl. 2, fig. 1). Pancho Rico Fm., Pliocene. Near San Ardo, Monterey Co. USGS M1676. Hypotype USNM 649088. [Pectinidae].

Lyropecten terminus (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228:B:54, pl. 19, figs. 1, 5. Pancho Rico Fm., Pliocene. Terraces on east side of Salinas Valley between King City and San Lucas, Monterey Co., *fide* Durham and Addicott (1965: p. A15). Holotype UCMP 11662. [Pectinidae].

Lyropecten terminus (Arnold, 1906). [*Pecten*]. Smith 1991a. USGS PP 1391:66–67, pl. 2, fig. 1; pl. 22, fig. 3. Pancho Rico Fm., Miocene/Pliocene. Cholame Hills, east side Salinas Valley, Monterey Co. Holotype UCMP 11622. [Pectinidae].

....., pl. 22, fig. 2, Near Wildhorse Canyon, east of San Lucas, San Lucas quad., Monterey Co. UCMP D8797. Hypotype UCMP 37391.

Lyropecten terrysmithae Powell et al., 2020 (n.sp). *PaleoBios* 37:2–7, cover + figs. 1, 2, 5A–D. Monterey Fm., Miocene. Cholame Hills, between Indian Valley and Portuguese Canyon, Stockdale Mtn. quad., Monterey Co. CASG 28473. Holotype CASG 5900, paratypes CASG 78557, 78558.

....., figs. 3, 4. [Pancho Rico Fm., Miocene]. Salinas Valley, east of King City, Monterey Co. CASG 78553. Paratypes

CASG 78554–78556, 78563.

Lyropecten tiburonensis Smith, 1991a (n. sp.). USGS PP 1391:67, fig. 17Aiv. Imperial Fm. (Latrania Sand Member) [=Latrania Fm.], Miocene. Carrizo Mtn. quad., Imperial Co. UCR 7267. Hypotype UCR 7267/3. [Pectinidae].

....., fig. 17Av; pl. 16, fig. 2. Southeast San Bernardino Mtns., west branch of Super Creek, Whitewater quad., Riverside Co. UCR 5042. Hypotype UCR 5042/4.

....., pl. 18, fig. 5. Base of Coyote Mtn. [=Carrizo Mtn.) west of road from Coyote Wells to Carrizo Spring, Carrizo Mtn. quad., Imperial Co. [UCMP 738]. Hypotype (of *Pecten subnodosus* G.B. Sowerby I, 1835 of G.D. Hanna 1926, pl. 25, fig. 6) UCMP 32291.

Lyropecten vaughani (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B50-B51, pl. 17, figs. 2–4. Vaqueros Fm., Oligocene/Miocene. Ojai Valley, Ventura Co. Holotype SU/CASG 9 [=CASG 61858.01]. [Pectinidae].

Lyropecten vaughani (Arnold, 1906). [*Pecten*]. Smith 1991a. USGS PP 1391:68–69, pl. 26, figs. 10, 11. Vaqueros Fm., Oligocene/Miocene. Ojai Valley (exact locality unknown), Ventura Co. Holotype SU 9 [=CASG 61858.01]. [Pectinidae].

Lyropecten sp. Deméré and Rugh, 2006. Foss. Treas. Anza-Borrego Desert, p. 29, unnumbered fig. Latrania Fm., Miocene/Pliocene. Barrett Canyon, Coyote Mtns., Imperial Co. ABDSP 4121. Hypotype ABDSP I 14396. **Remarks:** Specimen on exhibit at the Anza-Borrego Desert State Park visitor center, *fide* L. Gilbert (personal communication, 2019). [Pectinidae].

Macoma (*Macoma*) *acolasta* Dall, 1921c. Hertlein and Grant 1972. SDSNH Mem. 2(2B):290–291, pl. 53, figs. 12, 13. San Diego Fm., Pliocene. Balboa Park, San Diego, San Diego Co. UCLA 1386 [=LACMIP 21386]. Hypotypes UCLA [48626, 48627 [=LACMIP 9309, 9310]. **Remarks:** In the subgenus *Psammacoma*, *fide* Coan et al. (2000: p. 414). [Tellinidae].

Macoma addicotti Nikas, 1977 (n. sp.). Veliger 19(4):434–437, figs. 3, 4. Merced(?) Fm., Pliocene. Palo Alto, Palo Alto quad., Santa Clara Co. CASG 44020. Holotype CASG 55956 [=CASG 44020.01]. **Remarks:** Possibly *Macoma nasuta* (Conrad, 1837), *fide* Coan et al. (2000). [Tellinidae].

.....figs. 5, 6. Purisima Fm., Pliocene. Soquel quad., Santa Cruz Co. USGS M3618. Paratype USNM 241064 (not USNM 241063 as in text).

Macoma addicotti Nikas, 1977. Perry 1988. SCMA, p. 19, fig. 10A. Purisima Fm., Miocene/ Pliocene. Santa Cruz Co. CASG 66095. Hypotype CASG 66095.01]. **Remarks:** Possibly *Macoma nasuta* (Conrad, 1837), *fide* Coan et al. (2000: p. 420). [Tellinidae].

Macoma (*Rexithaerus*?) *addicotti* Nikas, 1977. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):46–47, pl. 5, fig. 11. Palo Alto, Palo Alto quad. (1961), Santa Clara Co. CASG 44020. Holotype CASG 55959 [=CASG 44020.01]. **Remarks:** Possibly *Macoma nasuta* (Conrad, 1837), *fide* Coan et al. (2000: p. 420). [Tellinidae].

Macoma affinis Nomland, 1917a. Woodring et al., 1940 [1941]. USGS PP 195:92–93, pl. 9, figs. 1–3. San Joaquin Fm. (Upper *Mya* Zone), Pliocene. Las Alturas, Middle Dome, Kettleman Hills, Kings Co. USGS 12697. Hypotypes USNM 495301–495303. [Tellinidae].

....., pl. 34, figs. 1–4. Etchegoin Fm. (*Macoma* Zone), Pliocene. South slope of east end of El Serrijon, North Dome, Kettleman Hills, Kings Co. USGS 12424. Hypotypes USNM 495830–495833.

Macoma affinis Nomland, 1917a. Durham and Addicott 1965. USGS PP 524-A:A14 pl. 2, fig. 7 (cast). Pancho Rico Fm., Miocene/Pliocene. Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M979. Hypotype USNM 649092. **Remarks:** *Macoma* (*Macoma*?) *inquinata affinis* Nomland, 1917, *fide* Moore (2003b: p. 37). [Tellinidae].

Macoma affinis Nomland 1917a, small var. cf. *M. a. plena* Stewart *in* Woodring et al. 1940 [1941]. USGS PP 195:93, pl. 15, fig. 13. San Joaquin Fm. (*Mya* layer below *Pecten* Zone, between *Pecten* and *Neverita* Zones), Pliocene. West of Arroyo Raso, North Dome, Kettleman Hills, Kings Co. USGS 12380. Hypotype USNM 495766. [Tellinidae].

Macoma affinis plena Stewart *in* Woodring, et al., 1940 [1941]). Adegoke 1969. UCPG 80:130, pl. 6, fig. 4. San Joaquin

Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP D1193. Hypotype UCMP 36761, determined here as missing. [Tellinidae].

Macoma cf. *M. affinis plena* Stewart *in* Woodring et al., 1940 [1941]. Addicott 1972b. SEPM Symposium vol., p. 15, pl. 4, figs. 5, 8. Panorama Hills Fm. (of Dibblee, 1968), Pliocene. Panorama Hills quad., Temblor Range, Kern Co. USGS M1059. Hypotype USNM 646815. [Tellinidae].

Macoma (*Macoma*?) *affinis plena* Stewart *in* Woodring et al., 1940 [1941]. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):37–38, pl. 5, fig. 10. Etchegoin Fm. (*Littorina* Zone), Miocene/ Pliocene. North Dome of] Kettleman Hills, [Kings Co.] [USGS 14096a]. Holotype USNM. 495853. [Tellinidae].

Tellinid *Macoma albaria* (Conrad, 1849a). Rugh, 2018. Desert Symposium vol.:111, fig. 1C. Reata Glen, northeast of San Juan Capistrano, Orange Co. Monterey Fm., Miocene. [Hypotype at CC]. [Tellinidae].

Macoma (*Rexithaerus*?) *andersoni* Clark, 1915. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):48–49, pl. 7, fig. 1. San Pablo Fm., Miocene. Mt. Diablo quad., Contra Costa Co. UCMP 1449. Holotype UCMP 11557. [Tellinidae].

Macoma arctata (Conrad, 1849a). [*Tellina*]. Hall 1958. UCPG 34(1):55, pl. 8, fig. 4. Oursan Sandstone, Miocene. Northeast of Irvington, La Costa Valley quad. (1943), Alameda Co. SU 3248. Hypotype SU 8465 [CASG 69939]. **Remarks:** Provisionally in the subgenus *Psammacoma*?, *fide* Moore (2003b: p. 39). [Tellinidae].

Macoma arctata (Conrad, 1849a). [*Tellina*]. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 14. Temblor Fm. (*Phacoides* Sand member) (of Stinemeyer et al. 1959: pp. 12, 13), Miocene. Carneros Rocks quad., Temblor Range, Kern Co. USGS M3578. Hypotype USNM 646785. **Remarks:** Provisionally in the subgenus *Psammacoma*?, *fide* Moore (2003b: p. 39). [Tellinidae].

Macoma arctata (Conrad, 1849a). [*Tellina*]. Addicott 1973b. USGS PP 791:7, 33, pl. 5, figs. 4, 7. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotypes USNM 646571, 646572. **Remarks:** Provisionally in the subgenus *Psammacoma*?, *fide* Moore (2003b: p. 39). [Tellinidae].

Macoma arctata (Conrad, 1849a). [*Tellina*]. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 1. Monterey Fm. (Hames Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M2044. Hypotype USNM 254350. **Remarks:** Provisionally in the subgenus *Psammacoma*?, *fide* Moore (2003b: p. 39). [Tellinidae].

....., pl. 1, fig. 16. Monterey Fm. (Saltos member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M3814. Hypotype USNM 254365.

Macoma arctata (Conrad, 1849a). [*Tellina*]. Addicott et al. 1980. SEPM Guidebook 6:18, 20, pl. 1, fig. 1 (refigured from Addicott et al. 1978, pl. 1, fig. 1). Monterey Fm. (Hames Member), Miocene Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M2044. Hypotype USNM 254350. **Remarks:** Provisionally in the subgenus *Psammacoma*?, *fide* Moore (2003b: p. 39). [Tellinidae].

....., pl. 1, fig. 16 (refigured from Addicott et al. 1978, pl. 1, fig. 16). Monterey Fm. (Saltos Shale Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M3814. Hypotype USNM. 254365.

Macoma arctata (Conrad, 1849a). [*Tellina*]. Squires and Fritsche 1978. SEPM Guidebook 13:20, 23, pl. 3, fig. 8. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 338 [=LACMIP 16277]. Hypotype UCLA 58214 [=LACMIP 10595]. **Remarks:** Provisionally in the subgenus *Psammacoma*?, *fide* Moore (2003b: p. 39). [Tellinidae].

Macoma astori Dall, 1909. Faustman 1964. UCPG 41(2):122, pl. 1, fig. 1. Rio Dell Fm., Pliocene. Scotia quad., Humboldt Co. UCMP B7925. Hypotype UCMP 37781. [Tellinidae].

Macoma brota Dall var. *liparia* Dall, 1916b. Cummings et al. 1962. CDMG Bull. 181:200, ph. 15, fig. 3. Purisima Fm. (Tahana Member), Pliocene. Pomponio Creek, San Gregorio quad., San Mateo Co. locality 470-1M. Hypotype determined here as missing. **Remarks:** *Macoma* (*Macoma*) *liparia* Dall, 1916b, *fide* Coan et al. (2000: p. 410). [Tellinidae].

Macoma brota lipara Dall, 1916b. Addicott 1966a. USGS PP 523-C:C4–C5, pl. 3, figs. 16, 19. Purisima Fm., Pliocene

(reworked from Purisima and deposited in late Pleistocene sediments). Near Santa Cruz Pt., Santa Cruz quad. (1954), Santa Cruz Co. USGS M1691. Hypotype USNM 649312. **Remarks:** *Macoma* (*Macoma*) *liparia* Dall, 1916b, *fide* Coan et al. (2000: p. 410). [Tellinidae].

Macoma calcarea (Gmelin, 1791). [*Tellina*]. Cummings et al. 1962. CDMG Bull. 181:208, ph. 19, fig. 2. Purisima Fm. (San Gregorio Member), Pliocene. San Gregorio quad., San Mateo Co. Locality 672M. Hypotype determined here as missing. **Remarks:** Junior synonym of *Macoma* (*Macoma*) *elimata* Dunnill and Coan, 1968, *fide* Hertlein and Grant (1972: p. 291). [Tellinidae].

Macoma calcarea (Gmelin 1791). [*Tellina*]. Faustman 1964. UCPG 41(2):122, pl. 1, fig. 4. Rio Dell Fm., Pliocene. Fortuna quad., Humboldt Co. UCMP B7875. Hypotype UCMP 37782. **Remarks:** Junior synonym of *Macoma* (*Macoma*) *elimata* Dunnill and Coan, 1968, *fide* Hertlein and Grant 1972: p. 291. [Tellinidae].

Macoma copelandi Wiedey, 1928. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, fig. 7. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al.1959:8, 13), Miocene. Shale Pt. quad., Temblor Range, Kern Co. USGS M3987. Hypotype USNM 646799. **Remarks:** In the subgenus *Rexithaerus*, *fide* Moore (2003b: p. 40). [Tellinidae].

Macoma (*Rexithaerus*) *copelandi* Wiedey, 1928. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):40–41, pl. 6, fig. 5. Temblor Fm., Oligocene/Miocene. West of Simmler, San Luis Obispo Co. SDSNH 432. Holotype SDSNH 37. [Tellinidae].

Macoma (*Rexithaerus*?) *diabloensis* Clark, 1915. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):45–46, pl. 6, fig. 13. San Pablo Fm., Miocene. South side of Mt. Diablo anticline, Contra Costa Co. UCMP 763. Holotype UCMP 11560. [Tellinidae].

Macoma (*Macoma*) *elimata* Dunnill and Coan, 1968. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):291–292, pl. 53, fig. 5. San Diego Fm., Pliocene. Near Rose Canyon La Jolla quad., San Diego Co. UCLA 2359 [=LACMIP 22359]. Hypotype UCLA [48628 [=LACMIP 9311]. [Tellinidae].

Macoma cf. *M. indentata* Carpenter, 1864b. Woodring et al. 1940 [1941]. USGS PP 195:92, pl. 35, fig. 1. Etchegoin Fm. (*Patinopecten* Zone), Pliocene. Near Arroyo Doblegado, southeast of Los Paredes, North Dome, Kettleman Hills, Kings Co. USGS 12426. Hypotype USNM 495838. **Remarks:** In the subgenus *Rexithaerus*, *fide* Coan et al. (2000: p. 415). [Tellinidae].

Macoma (*Rexithaerus*) *indentata* Carpenter, 1864b. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):296, pl. 52, fig 3. San Diego Fm., Pliocene. Near the U.S./Mexico boundary, San Diego Co. LACMIP 319. Hypotype LACMIP 4785. [Tellinidae].

....., pl. 52, figs. 4, 7. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4786.

Macoma aff. *M. indentata indentata* Carpenter, 1864b. Powell et al. 2019a. USGS SIR 2019-5021:3 (as *Macoma* aff. *M. indentata*), 31, pl. 3, fig. 1 (as *Macoma* aff. *M. indentata s.s.*). Wilson Grove Fm., Miocene. North of Bloomfield, Sonoma Co., CASG 54135, Hypotype CASG 78411. [Tellinidae].

Macoma aff. *M. indentata* Carpenter subsp. *tenuirostris* Dall, 1900b. Faustman 1964. UCPG 41 (2):122, pl. 1, fig. 12. Rio Dell Fm., Pliocene. Scotia, Humboldt Co. UCMP A4539. Hypotype UCMP 37784. **Remarks:** Junior synonym of *Macoma* (*Rexithaerus*) *indentata* Carpenter, 1864b, *fide* Coan et al. (2000: p. 415). [Tellinidae].

Macoma (*Rexithaerus*) *indentata tenuirostris* Dall, 1900b. Hertlein and Grant 1972. SDSNH Mem. 2(2B):297, pl. 41, fig. 15. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4787. **Remarks:** Junior synonym of *Macoma* (*Rexithaerus*) *indentata* Carpenter, 1864b, *fide* Coan et al. (2000: p. 415). [Tellinidae].

....., pl. 50, fig. 7. 200 ft. north of the U.S./Mexico boundary, Tiajuana [*sic*] River plain, San Diego Co. SDSNH 331. Hypotype SDSNH 4357.

....., pl. 52, fig. 2. San Diego, Pliocene. San Diego Co., LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 4788.

Macoma inquinata (Deshayes, 1855) subsp. *arnheimi* Dall, 1916. Faustman 1964. UCPG 41(2):121–122, pl. 1, fig.

2. Rio Dell Fm., Pliocene. Fortuna quad., Humboldt Co. UCMP B7875. Hypotype UCMP 37780. **Remarks:** Junior synonym of *Macoma inquinata* (Deshayes, 1855), *fide* Coan et al. (2000: p. 419). [Tellinidae].

Macoma (*Macoma*) *inquinata* (Deshayes, 1855) [*Tellina*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):292–293, pl. 52, fig. 1, 10. San Diego Fm., Pliocene. San Diego, San Diego Co. LACMIP 124. Hypotypes LACMIP 4780, 4781. [Tellinidae].

Macoma inquinata (Deshayes, 1855). [*Tellina*]. Yancey 1978. Pr.CAS 41(15):354, 369, fig. 5A. Merced Fm., Pliocene/ Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D5924. Hypotype USNM 251798. [Tellinidae].

Macoma (*Macoma*?) *inquinata affinis* Nomland, 1917a. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):37, pl. 5, fig. 9. Etchegoin Fm. (*Mya japonica* Zone), Miocene/Pliocene. Garza Creek area, Kings Co. UCMP 2965. Holotype UCMP 11092. [Tellinidae].

Macoma (Subgenus?) *lorenzoensis* (Arnold, 1908). Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):50–51, pl. 7, fig. 4. San Lorenzo Fm., Eocene/Oligocene. Southeast branch of Waddell Creek, Big Basin, Santa Cruz Co. Holotype USNM 165439. [Tellinidae].

Macoma (*Macoploma*) *medioamericana* Olsson, 1942. Hertlein and Grant 1972. SDSNH Mem. 2(2B):295, pl. 52, figs. 6, 8. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 478]. [Tellinidae].

Macoma (*Macoploma*) *medioamericana* Olsson, 1942. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):50, pl. 7, fig. 3. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype (of Hertlein and Grant, 1972, pl. 52, fig. 8) LACMIP 4784. [Tellinidae].

Macoma (*Macoma*?) *menkeni* G.D. Hanna and Hertlein, 1938. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):34–35, pl. 5, fig. 7. Temblor Fm., Oligocene/Miocene. Chancellor Canfield Midway Oil Co., well 7, at depth of 1223 to 1240 ft, Kern Co. CASG. 28682. Holotype CASG 6900. [Tellinidae].

Macoma cf. *M. nasuta* (Conrad, 1837). [*Tellina*]. Woodring et al. 1940 [1941]. USGS PP 195: 93, pl. 14, fig. 5. San Joaquin Fm. (*Pecten* Zone), Pliocene. Vicinity of Arroyo Vadosa and Arroyo Largo, North Dome Kettleman Hills, Kings Co. USGS 12331. Hypotype USNM 495748. [Tellinidae].

....., pl. 20, fig. 12. San Joaquin Fm. (*Neverita* Zone), Pliocene. South of Arroyo Doblegado, North Dome, Kettleman Hills, Kings Co. USGS 12635. Hypotype USNM 495327.

Macoma nasuta (Conrad, 1837). [*Tellina*]. Shimer and Shrock 1944. Index Foss. N.A., p. 429, pl. 171, fig. 15 (refigured from Arnold and Anderson 1910, pl. 47, fig. 5). [Etchegoin Fm.], Pliocene. Coalinga District, Fresno Co. USGS 4758. Hypotype USNM 165515. [Tellinidae].

Macoma nasuta (Conrad, 1837). [*Tellina*]. Moore et al. 1952, p. 446, fig. 10-7.10. Pliocene/ Pleistocene. Line drawing, source specimen unknown. [Tellinidae].

Macoma nasuta (Conrad, 1837). [*Tellina*]. Hall 1958. UCPG 34(1):55, pl. 8, fig. 3. Briones Fm., Miocene. South of Pleasanton, Niles quad. (1943), Alameda Co. SU 3232. Hypotype SU 8466 [=CASG 69938]. [Tellinidae].

Macoma nasuta (Conrad, 1837). [*Tellina*]. Cummings et al. 1962. CDMG Bull. 181:204, ph. 17, fig. 2. Purisima Fm. (Pomponio Member), Pliocene. Purisima Creek, Half Moon Bay quad., San Mateo Co. Locality 631M. Hypotype determined here as missing. [Tellinidae].

Macoma (*Macoma*) *nasuta* (Conrad, 1837). [*Tellina*]. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):293–294, pl. 53, fig. 10; pl. 54, fig. 6. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. CASG 1178. Hypotype CASG [=CASG 72539]. [Tellinidae].

Macoma nasuta (Conrad, 1837). [*Tellina*]. Bedrossian 1974. Calif. Geol. 27(8):178, unnumbered fig. "Merced" Fm., Pliocene [Wilson Grove Fm., Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotype CASG determined here as missing. [Tellinidae].

Macoma nasuta (Conrad, 1837). [*Tellina*]. Yancey 1978. Pr.CAS 41(15):364, 369, fig. 5B. Merced Fm., Pliocene/ Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D3688, Hypotype USNM 251799. [Tellinidae].

Macoma nasuta (Conrad, 1837). [*Tellina*]. Perry 1988. SCMA, p. 19, fig. 10F. Purisima Fm., Miocene/Pliocene. Vicinity of Capitola, Santa Cruz Co. CASG 66137. Hypotype CASG 66137.01]. [Tellinidae].

Macoma nasuta (Conrad, 1837). [*Tellina*]. Squires 2012. NHMLAC CS 520:76, fig. 40. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17916. Hypotype LACMIP 14365. [Tellinidae].

Macoma (*Rexithaerus*?) *nasuta jacalitosana* Arnold, 1909 [1910]. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):46, pl. 6, fig. 12 (as *Macoma* (*Rexithaerus*?) *jacalitosana*). Etchegoin Fm., Miocene/Pliocene. Jasper Creek just above Jacalitos Creek, Coalinga quad., Fresno Co. USGS 4765. Holotype USNM 156613. **Remarks:** Junior synonym of *Macoma nasuta* (Conrad, 1837), *fide* Coan et al. (2000: p. 420). [Tellinidae].

Macoma nasuta kelseyi Dall, 1900c. Woodring and Bramlette 1950 [1951]. USGS PP 222:87, pl. 20, figs. 2, 8. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge, Santa Barbara Co. USGS 14614. Hypotype USNM 560143. **Remarks:** Valid subspecies provisionally in the subgenus *Rexithaerus*?, *fide* Moore (2003b: p. 47); junior synonym of *Macoma nasuta* (Conrad, 1837), *fide* Coan et al. (2000: p. 420). [Tellinidae].

Macoma nasuta forma *kelseyi* Dall, 1900c. Addicott 1969. Pr.CAS 37(3):62, 70, 73, pl. 4, fig. 6. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650984. **Remarks:** Valid subspecies provisionally in the subgenus *Rexithaerus*?, *fide* Moore (2003b: p. 47); junior synonym of *Macoma nasuta* (Conrad, 1837), *fide* Coan et al. (2000: p. 420). [Tellinidae].

Macoma (*Macoma*) *nasuta kelseyi* Dall, 1900c. Hertlein and Grant 1972. SDSNH Mem. 2(2B):294–295, text fig. 13. San Diego, Pliocene. Balboa Park, San Diego, San Diego Co. SDSNH 29. Hypotype SDSNH 4354. **Remarks:** Valid subspecies provisionally in the subgenus *Rexithaerus*?, *fide* Moore (2003b: p. 47); junior synonym of *Macoma nasuta* (Conrad, 1837), *fide* Coan et al. (2000: p. 420). [Tellinidae].

....., pl. 52, figs. 5, 9. Cholla Valley, San Diego, San Diego Co. SDSNH 5679. Hypotype SDSNH 5679 [=SDSNH 4353].

....., pl. 52, figs. 11, 12. Shell and echini stratum, San Diego Co. LACMIP 124. Hypotypes LACMIP 4782, 4783.

Macoma nasuta kelseyi Dall, 1900c. Perry 1977. Foss. Santa Cruz Co., p. 23, upper right fig. Purisima Fm., Pliocene. Vinicty of Capitola City Beach Soquel quad., Santa Cruz Co. SCCM. 39. Hypotype SCCM 21013]. **Remarks:** Valid subspecies provisionally in the subgenus *Rexithaerus*?, *fide* Moore (2003b: p. 47); junior synonym of *Macoma nasuta* (Conrad, 1837), *fide* Coan et al. (2000: p. 420). [Tellinidae].

Macoma (*Macoma*) *nasuta kelseyi* Dall, 1900c. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 18. Niguel Fm., Pliocene. Orange Co. SDHNM 4080. SDSNH hypotype determined here as missing. **Remarks:** Valid subspecies provisionally in the subgenus *Rexithaerus*?, *fide* Moore (2003b: p. 47); junior synonym of *Macoma nasuta* (Conrad, 1837), *fide* Coan et al. (2000: p. 420). [Tellinidae].

Macoma (*Rexithaerus*?) *nasuta kelseyi* Dall, 1900c. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):47–48, pl. 6, fig. 11. Careaga Fm., Pliocene. Graciosa Ridge, southeast of Orcutt, Santa Barbara Co. USGS 14614. Hypotype (of Woodring and Bramlette 1950 [1951], pl. 20, figs. 2, 8) USNM. 560143. **Remarks:** Junior synonym of *Macoma nasuta* (Conrad, 1837), *fide* Coan et al. (2000: p. 420). [Tellinidae].

Macoma oldroydi (Wiedey, 1928). [*Tellina*]. Susuki 1992, Topanga Story, p. 7, fig. 10. Topanga Fm., Miocene (Cold Creek Member). Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP22645 (=UCLA 2645). Hypotype LACMIP 13082 [=UCLA 58009]. **Remarks:** In the genus *Tellina* and provisionally in the subgenus *Eurytellina*?, *fide* Moore (2003b: p. 14). [Tellinidae].

Macoma (Subgenus?) *pabloensis* Clark, 1915. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):52, pl. 7, fig. 8. San Pablo Fm., Miocene. Near town of Rodeo, Napa quad., Contra Costa Co. UCMP 1631. Holotype UCMP 11563. [Tellinidae].

Macoma (Rexithaerus) panzana Wiedey, 1928. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):41–42, pl. 6, fig. 6. Temblor Fm., Oligocene/Miocene. Near Syncline Hill, vicinity of Simmler, San Luis Obispo Co. SDSNH 432. Holotype SDSNH 38. [Tellinidae].

Macoma pittsburgensis (Clark, 1925). [*Tellina*]. Phillips et al. 1974. SEPM Guidebook, p. 123, pl. 3, fig. 13 (peel) Tumey Fm., Eocene/Oligocene. Monocline Ridge, Fresno Co. UCMP D6542. Hypotype UCMP 37167. [Tellinidae].

Macoma pittsburgensis (Clark, 1925). [*Tellina*]. Watkins 1974. Paleo.3 15:255, fig. 8E [peel]. Kreyenhagen Fm., Oligocene. T16S, R13E, Monocline Ridge quad., Fresno Co. UCMPD6542. Hypotype UCMP 37167. [Tellinidae].

Macoma rosa M.A. Hanna, 1927. Squires 1984. NHMLAC CS 350:50, fig. 12e. Llajas Fm., Eocene. Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 489 [=LACMIP 16103]. Hypotype LACMIP 6586. **Remarks:** Provisionally in the subgenus *Rexithaerus*?, *fide* Moore (2003b: p. 44). [Tellinidae].

Macoma rosa M.A. Hanna, 1927. Squires 1999b. NHMLAC CS 479:27, fig. 61. Santa Susana Fm., Paleocene/Eocene. South side of Simi Valley, Calabasas quad. (1952, PR 1967), Ventura Co. CSUN 1342 [=LACMIP 17187]. Hypotype LACMIP 12700. **Remarks:** Provisionally in the subgenus *Rexithaerus*?, *fide* Moore (2003b: p. 44). [Tellinidae].

Macoma rosa M.A. Hanna, 1927. Ekdale and Ekdale. 2018. Paleo^3 493:fig. 5E. Scripps Fm., Eocene. Sorrento Pointe, near Interstate 5/805 merge, San Diego, San Diego Co. SDSHN 5581. Hypotype SDSNH 112104. (Tellinidae].

Macoma (*Rexithaerus*?) *rosa* M.A. Hanna, 1927. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):44, pl. 6, fig. 9. "Rose Canyon Shale" [=possibly Ardath Shale], Eocene. East of La Jolla, La Jolla quad., San Diego Co. UCMP 3993. Holotype UCMP 31094. [Tellinidae].

Macoma cf. *M. secta* (Conrad, 1837). [*Tellina*]. Woodring et al. 1940 [1941]. USGS PP 195:93, pl. 16, fig. 1. San Joaquin Fm. (*Pecten* Zone), Pliocene. South end of El Caballete, Middle Dome, Kettleman Hills, Kings Co. USGS 12787. Hypotype USNM 495776. **Remarks:** In the subgenus *Rexithaerus*, *fide* Coan et al. (2000: p. 417). [Tellinidae].

Macoma secta (Conrad, 1837). [*Tellina*]. Addicott 1969. Pr.CAS 37(3):63, 68, 73, pl. 3, fig. 4. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650975. **Remarks:** In the subgenus *Rexithaerus*, *fide* Coan et al. (2000: p. 417). [Tellinidae].

Macoma (*Rexithaerus*) *secta* (Conrad, 1837). [*Tellina*]. Squires 2012. NHMLAC CS 520:76, fig. 39. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14364. [Tellinidae].

Macoma sespeensis Loel and Corey, 1932. Lutz 1951. UCPG 28(13):387–388, pl. 16, fig. 5. Sobrante Fm., Miocene. Concord quad., Contra Costa Co. UCMP 516. Hypotype UCMP 34138. **Remarks:** *Heteromacoma rostellata* (Clark, 1918), *fide* Addicott (1973b: p. 34). [Tellinidae].

....., pl. 16, fig. 6. NE along Santa Fe Railway [=BNSF Railway] near Muir Station, Contra Costa Co. UCMP A4924. Plastotype UCMP 34139. **Remarks:** *Heteromacoma rostellata* (Clark, 1918), *fide* Addicott 1973b: p. 34. [Tellinidae].

Macoma (*Rexithaerus*?) *sespeensis* Loel and Corey, 1932. Moore 2003b. USGS PP 1228-G[electronic format] (family Tellinidae):44–45, pl. 6, fig. 10. Vaqueros Fm., Oligocene/ Miocene. Vicinity of junction of Little Sespe Creek with Sespe Creek, Santa Clara Valley, Ventura Co. UCMP A322. Holotype UCMP 31840. [Tellinidae].

Macoma (*Macoma*?) *sheridani* Vokes, 1939. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):34, pl. 5, fig. 5. Domengine Fm., Eocene. Griswold Canyon, Panoche quad.,] San Benito Co. UCMP A1154. Holotype UCMP 15703. [Tellinidae].

Macoma (*Rexithaerus*?) *vanvlecki* Arnold, 1909 [1910]. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):49, pl. 7, fig. 2. Etchegoin Fm., Miocene/Pliocene. Near Coalinga, Fresno Co. USGS 4763. Holotype USNM 165576. [Tellinidae].

Macoma viticola Anderson and G D. Hanna, 1925. Givens 1974. UCPG 109:51, pl. 2, fig. 4. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4726. Hypotype UCR 4726/12. [Tellinidae].

Macoma (Subgenus?) *viticola* Anderson and G D. Hanna, 1925. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):51, pl. 7, fig. 5. Tejon Fm., Eocene. Live Oak Creek, Kern Co. CASG 244. Holotype CASG 1701. [Tellinidae].

Macoma (Subgenus?) *wilcoxi* Hall and Ambrose, 1916. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):51–52, pl. 7, fig. 6. Briones Fm., Miocene. North limb, Haywards Pass syncline, Pleasanton quad., Alameda Co. Holotype SU 506 [=CASG 69805]. [Tellinidae].

Macoma new species? aff. *M. nasuta* (Conrad, 1837). [*Tellina*]. Addicott 1969. Pr.CAS 37(3):63, 66, 70, 72, 73, pl.

2, fig. 11; pl. 4, fig. 12. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650970. **Remarks:** *Macoma addicotti* n. sp., *fide* Nikas (1977: pp. 434–437); in the subgenus *Rexithaerus*?, *fide* Moore (2003b: p. 46). [Tellinidae].

Macoma Fowkes 1982. Coalinga Guidebook, p. 30, unnumbered fig. Etchegoin/Jacalitos Fm. ("Big *Trophon* Zone"), Miocene/Pliocene. Upper Jacalitos Creek area, Fresno Co. WHC hypotype missing? [Tellinidae].

....., p. 207, unnumbered fig. W-K Hill, north of Coalinga, Fresno Co. WHC hypotype missing?.

Macoma n. sp.? Woodring and Bramlette 1950 [1951]. USGS PP 222:87, pl. 8, figs. 10, 11. Sisquoc Fm. (diatomaceous strata), Miocene. Sisquoc Ranch, Santa Barbara Co. USGS 14963. Hypotype USNM 560038. [Tellinidae].

Macoma? sp. Stanton 1966. Jour. Paleo. 40(1):31, pl. 6, figs. 6, 7. Castaic Fm., Miocene. Vicinity of junction of Castaic and Elizabeth Lake canyons, Los Angeles Co. CIT 277 [=LACMIP 7776]. Hypotypes LACMIP 4127, 4128. [Tellinidae].

Macoma sp. Bedrossian 1974. Calif. Geol. 27(8):175, unnumbered fig., right center specimen. "Merced" Fm. Pliocene [=Wilson Grove Fm.], Miocene/Pliocene. Santa Rosa Valley, Sonoma Co. Hypotype CASG, determined here as missing. [Tellinidae].

Macoma sp. Alt and Hyndman 1975. Roadside Geol. Calif., p. 70, unnumbered fig. (as fossil clam shells) (refigured in Alt and Hyndman 2000, p. 156, unnumbered fig.). Scotia Bluffs Fm., Pliocene. Unknown locality, Humboldt Co. **Remarks:** Specimens figured in outcrop and were never collected. Figure also includes *Chione* sp., *Clinocardium* sp. and *Protothaca* sp. [=*Leukoma* sp.]. [Tellinidae].

Macoma sp. Ekdale and Ekdale 2018. Paleo3 493:fig. 5A. Scripps Fm., Eocene. Sorrento Pointe, San Diego, San Diego Co., SDSNH 6871. Hypotype SDSNH 139003. [Tellinidae].

Macoma sp. indeterminate. Powell et al. 2019a. USGS SIR 2019-5021:3, 31, pl. 3, figs. 2, 3. Wilson Grove Fm., Miocene. North of Bloomfield, Sonoma Co., CASG 54135, Hypotype CASG 78412 [Tellinidae].

Macrocallista andersoni Dickerson, 1915. Weaver and Kleinpell 1963. UCPG 43:203, pl. 35, fig. 3 (as "previously unfigured type"). Tejon Fm., Eocene. [Live Oak Creek, Kern Co.] UCMP 7181, 7182. Hypotype [paratype?] UCMP 32977 [not in UCMP online catalog], UCMP paratype missing, *fide* D. Haasl (personal communication, 2006). [Veneridae].

....., pl. 35, fig. 4. "Coldwater" Sandstone, Eocene. Ridge near Dos Pueblos Canyon Goleta quad., Ventura Co. UCMP B6934. Hypotype SU 9296 [=CASG 70183].

Macrocallista conradiana (Gabb, 1864). [*Tapes*]. G D. Hanna and Hertlein 1943. CDM Bull. 118 (2):170, fig. 62-14. Tejon Fm., Eocene. Live Oak Creek, Kern Co. CASG 244. Hypotype CASG 5623. [Veneridae].

Macrocallista furlongi Nelson, 1925. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 6. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR6683. Hypotype UCR 6683/20. [Veneridae].

Macrocallista hornii (Gabb, 1864). [*Meretrix*]. Weaver and Kleinpell 1963. UCPG 43:203, pl. 35, fig. 5. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek area, Los Olivos quad., Santa Barbara Co. UCMP B6933. Hypotype SU 9297 [=CASG 70184]. [Veneridae].

....., pl. 35, fig. 6. Nojoqui Creek, Santa Barbara Co. UCMP 3170. Hypotype SU 9298[=CASG 70185].

Macrocallista horni (Gabb, 1864). [*Meretrix*]. Moore 1968. SDSNH Occas. Pap. 15:30, pl. 13, fig. c. "Rose Canyon Fm." [= possibly Ardath Shale], Eocene. Rose Canyon, San Diego Co. SDSNH 2356. Hypotype SDSNH 4150]. [Veneridae].

Macrocallista cf. *M. maculata* (Linneaus, 1758). [*Venus*]. Woodring et al. 1946. USGS PP 207:27, pl. 28, fig. 19. Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotype USNM 497091. [Veneridae].

Macrocallista pittsburgensis (Dall, 1900c). [*Callista*]. G D. Hanna and Hertlein 1943. CDM Bull. 118 (2):170, fig. 62-13. Kreyenhagen Fm., [Eocene?] Oligocene. Arroyo Ciervo area, Fresno Co. CASG 2267. Plastohypotype CASG 5667. [Veneridae].

Macrocallista pittsburgensis (Dall, 1900c). [*Callista*]. Phillips et al. 1974. SEPM Guidebook, p. 123, pl. 3, fig. 9 (peel). Tumey Fm., Eocene/Oligocene. Monocline Ridge, Fresno Co. UCMP D6546. Hypotype UCMP 14512]. [Veneridae].

Macrocallista pittsburgensis (Dall, 1900c). [*Callista*]. Watkins 1974. Paleo3. 15:255, fig. 8A (cast). Kreyenhagen Fm., Oligocene. Monocline Ridge, Monocline Ridge quad., Fresno Co. Hypotype UCMP 37163. [Veneridae].

....., fig. 8B (cast). T16S, R13E, Monocline Ridge quad., Fresno Co. UCMP D6533. Hypotype UCMP 37164.

Macrocallista stantoni Waring, 1917 (n. sp.). Pr.CAS 7(4):77. "Martinez Fm." Eocene [=Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. LACMIP 6106. Unfigured paratypes LACM 4141, 10848, 10849. [Veneridae].

Macrocallista stantoni Waring, 1917. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 3. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 6684]. Hypotype UCR 6684/22 (not CASG 4928 as in pl. caption). [Veneridae].

Macrocallista Fowkes 1982. Coalinga Guidebook, p. 24, unnumbered fig. Tumey Fm., Oligocene. Ciervo Hills, Fresno Co. WHC hypotype missing?. [Veneridae].

Macrochlamis magnolia (Conrad, 1857d). [*Pecten*]. Addicott 1972b SEPM Symposium vol., p. 10, pl. 2, fig. 8. Temblor Fm. (Agua Sand Member) (of Stinemeyer et al. 1959: pp. 9, 13), Miocene. Packwood Creek quad., Temblor Range, Kern Co. USGS M2631. Hypotype USNM 646792. [Pectinidae].

Macrochlamis magnolia (Conrad, 1857d). [*Pecten*]. Addicott 1974a. Jour. Paleo. 48(1):186, pl. 2, fig. 3. Jewett Sand (Pyramid Hill Sand Member), Miocene. Kern River area, Kern Co. UCR 1185. Hypotype UCR 1185/6 (not 1185-b as in pl. caption). **Remarks:** "*Macroclamis*" *magnolia ojaiensis* n. subsp., *fide* Smith (1991a: p. 74). [Pectinidae].

Macrochlamis magnolia (Conrad, 1857d). [*Pecten*]. Squires and Filewicz (eds.) 1983. SEPM Guidebook 35:182, unnumbered fig. Vaqueros Fm., Miocene. West of Big Mtn. Oil Field, Santa Susana Mtns., Ventura Co. LACMIP17098. Hypotype LACMIP. 12721. [Pectinidae].

Macrochlamis magnolia (Conrad, 1857d). [*Pecten*]. Moore 1984. USGS PP 1228-B:B56–B57, pl. 21, fig. 4. Vaqueros Fm., Oligocene/Miocene. Santa Inez [*sic*] Mtns., Santa Barbara Co. Lectotype (of Keen and Bentson 1944: p. 89) USNM 13325. [Pectinidae].

....., pl. 21, fig. 5. East of Rock Springs, near Bee Spring Ridge, Mt. Pinos quad., Kern Co. UCMP 3224 (not UCMP 3234 as cited in text). Holotype (of *Pecten* (*Lyropecten*) *vaughani emigdioensis* Wagner and Schilling 1923) UCMP 11417. [Pectinidae].

Macrochlamis magnolia (Conrad, 1857d). [*Pecten*]. Squires 1997b. Simi Valley Hist. Soc. vol. p. 299, fig. 4b (refigured from Squires and Filewicz (eds.) 1983, unnumbered fig., p. 182). Vaqueros Fm., Miocene. Big Mtn. Oil Field area, north side Simi Valley, Ventura Co. LACMIP17098. Hypotype LACMIP 12721. [Pectinidae].

"*Macrochlamis*" *magnolia magnolia* (Conrad, 1857d). [*Pecten*]. Smith 1991a. USGS PP 1391:72–74, pl. 29, figs. 3 (also lower right fig. on cover), 4 (refigured from Smith 1975a, pl. 29, figs. 3, 4 (as *Lyropecten magnolia*)). Vaqueros Fm., Oligocene/Miocene. Caliente Range, Salisbury Canyon quad., San Luis Obispo Co. USGS M3520. Hypotypes USNM 335003, 647534. [Pectinidae].

....., pl. 31, figs. 1, 5. Santa Ynez Mtns., south of Santa Ynez River, west of its junction with Nojoqui Creek, Los Olivos quad., Santa Barbara Co. UCMP D8794. Hypotype UCMP 37387.

....., pl. 37, fig. 2. Morro Bay North quad., San Luis Obispo Co. UCLA 6203 [=LACMIP 26203]. Hypotype UCLA 59264. **Remarks:** Hypotype lost and never assigned a LACMIP type number.

....., pl. 37, fig. 4. East side of Santiago Canyon, Irvine Lake area, western Santa Ana Mtns., Orange Co. SU 1949:131-3A. Hypotype CASG 61039.

"*Macrochlamis*" *magnolia ojaiensis* Smith, 1991a (n.subsp.). USGS PP 1391:74–75, pl. 29, fig.1. Jewett Sand (Pyramid Hill Sand Member), Miocene. North of Poso Creek-Coffee Creek, Pine Mtn. quad., Kern Co. UCR 1185. Hypotype (of *Macrochlamis magnolia* (Conrad, 1857d) (of Addicott 1974a, pl. 2, fig. 3) UCR 1185/6. [Pectinidae].

....., pl. 29, fig. 2. Vaqueros Fm., Oligocene/Miocene. Southwest of Ojai, upper end of San Antonio Creek and northwest

of mouth of Lion Canyon, Matilija quad., Ventura Co. UCMP A326. Hypotype (of *Pecten* (*Lyropecten*) *magnolia* (Conrad, 1857d) (of Loel and Corey 1932, pl. 26, fig. a) UCMP 31734.

....., pl. 30, fig. 3. East end of Ojai Valley, Ojai quad., Ventura Co. UCMP D8792. Paratype UCMP 37383 [*ex* SU 22363].

....., pl. 31, fig. 2. East end of Ojai Valley, south of Reeves Creek, Ojai quad., Ventura Co. UCLA 1311 [=LACMIP 21311]. Hypotype UCLA 59265 [=LACMIP 11428].

....., pl. 31, fig. 6. East end of Ojai Valley Ojai quad., Ventura Co. USGS M8012. Holotype USNM 335004 [*ex* SU 22366].

?"*Macrochlamis*" *magnolia ojaiensis* Smith, 1991a (n.subsp.) USGS PP 1391:74–75, pl. 31, fig. 1. Unknown Fm., Oligocene. San Emigdio Mtns., Kern Co. UCMP 3234. Holotype (of *Pecten* (*Lyropecten*) *vaughani emigdioensis* Wagner and Schilling, 1923, pl. 45, fig. 2) UCMP 11417. [Pectinidae].

Mactra? *coalingensis* Arnold, 1909 [1910]. Woodring et al. 1940 [1941]. USGS PP 195:93, pl. 33, fig. 1. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. South side of El Tolete, North Dome, Kettleman Hills, Kings Co. USGS 14104. Hypotype USNM 495821. **Remarks:** Provisionally in the genus *Mactromeris*?, *fide* Moore (2003a: p. 30). [Mactridae].

"*Mactra* (*Harvella*) *elegans* G.B. Sowerby I, 1825" of Yates (1903). Moore 2003a. USGS 1228-F [electronic format] (family Mactridae):31, pl. 6, fig. 12. Vaqueros(?) Fm., Oligocene/Miocene. Santa Rosa Is., California Channel Ids. CASG. 66543. Hypotype CASG 2828 [=CASG 66543.01) **Remarks:** CASG 2828, figured by Yates 1903: pl. 8, fig. 15, is ?*Chione temblorensis* var., *fide* Keen and Bentson (1944: p. 64). [Mactridae].

Mactra sectoris Anderson and Martin, 1914. Adegoke 1969. UCPG 80:122, pl. 4, fig. 10. Temblor Fm., Miocene. Reef Ridge quad., Kings Co. UCMP D1060. Hypotype UCMP 36733. **Remarks:** Provisionally in the genus *Mactromeris*?, *fide* Moore (2003a: p. 27). [Mactridae].

Mactromeris abbotti (Wiedey, 1928). [*Spisula*]. Moore 2003a. USGS PP 128-F [electronic format] (family Mactridae):13, pl. 7, figs. 1, 3. Temblor Fm., Oligocene/Miocene. Near mouth of Kern Canyon, Caliente quad., Kern Co. SU 440 [=SDSNH 440]. Holotype SDSNH. [Mactridae].

Mactromeris acutirostrata (Packard, 1916). [*Spisula*]. Moore 2003a. USGS 1228-F [electronic format] (family Mactridae):8–9, pl. 6, figs. 5, 7. Tejon Fm., Eocene. On a branch canyon of Salt Creek, Mt. Pinos quad., Kern Co. UCMP 463. Holotype UCMP 33377. [Mactridae].

Mactromeris? *aequilateralis* (Waring, 1917). [*Spisula*]. Moore 2003a. USGS 1228-F [electronic format] (family Mactridae):24–25, pl. 8, fig. 8 (not fig. 6 as in text). Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Camulos quad., Ventura Co. CASG. 61927. Holotype SU/CASG 154 [=CASG 61927.01]. [Mactridae].

Mactromeris albaria albaria (Packard, 1916). [*Mactra*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):16–17, pl. 9, figs. 5, 7. San Pablo Fm., Miocene. Locality unknown, Contra Costa Co.? Hypotype (of Packard 1916, pl. 24, fig. 1, pl. 25, fig. 8) UCMP 11479. [Mactridae].

Mactromeris albaria selbyensis (Packard, 1916). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):18, pl. 9, figs. 4, 8. Monterey Fm., Miocene. near Vallejo Junction, Napa quad., Napa Co. UCMP 1352. Holotype UCMP 11483. [Mactridae].

....., pl. 9, fig. 11 [image is reversed on pl.]. Sobrante Fm., Miocene. Near junction of Norris Creek with Crow Creek, Hayward quarangle, Alameda Co. UCMP A4565]. Hypotype (of Lutz 1951, pl. 15, fig. 3) UCMP 34144. [Mactridae].

Mactromeris? (*Mactromeris*?) *beali* (Hall and Ambrose, 1916). [*Mactra*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):29, pl. 5, fig. 10 [as *Mactromeris beali* in pl. caption]. Monterey Fm. (as Jewett Sand in pl. caption), Miocene. Pleasanton quad., Alameda Co. [CASG 66544]. Holotype SU/CASG 507 [=CASG 66544.01]. [Mactridae].

Mactromeris bisculpturata (Anderson and G D. Hanna, 1925). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):9, pl. 6, fig. 4. Tejon Fm., Eocene. Live Oak Creek, Kern Co. CASG 244. Holotype CASG 794 [=CASG 244.04]. [Mactridae].

Mactromeris brevirostrata (Packard, 1916). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family

Mactridae):21–22, pl. 10, figs. 1, 7. Wildcat Group, Pliocene/ Pleistocene. Bank of Eel River north of Scotia, Humboldt Co. UCMP 1875. Holotype UCMP 11489. [Mactridae].

Mactromeris catilliformis lenticularis (Gabb, 1866). [*Hemimactra*]. Moore 2003a. USGS PP 228-F [electronic format] (family Mactridae):15–16, pl. 8, fig. 4. San Ramon Fm. Miocene(?). Near Martinez, Contra Costa Co. Lectotype (of Stewart 1930:208, 209) ANSP 4549. [Mactridae].

Mactromeris capayana (Vokes, 1939). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):7–8, pl. 6, figs. 1, 2. Lodo Fm. (as Loco [*sic*] Fm. in pl. caption, Cerros (as Caerros [*sic*] in pl. caption) Shale Member), Paleocene [Eocene]. Vicinity of where Urruttia Canyon enters Salt Creek, Coalinga quad., Fresno Co. UCMP 1817. Syntypes UCMP 15714, 15715 (syntype UCMP 15715 (not UCMP 11715 as in pl. caption)). **Remarks:** Species seems to be a tellinid, *fide* Moore (2003a: p. 8). [Mactridae].

Mactromeris? *coalingensis* (Arnold, 1910). [*Mactra*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):30–31, pl. 9, fig. 10. Etchegoin Fm., Miocene/Pliocene (not Pliocene/Pleistocene as in pl. caption). Waltham Creek Valley, south of Coalinga, Fresno Co. Holotype USNM 165513. [Mactridae].

Mactromeris? *gaviotaensis* (Conrad, 1857d). [*Mactra?*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):26–27, pl. 8, fig. 7. Gaviota Fm., Eocene/Oligocene. Gaviota Pass, Santa Barbara Co. Holotype USNM 13310. **Remarks:** Error for gabiotensis, but is likely a misprint in original description as the type locality is listed as Gaviote Pass. [Mactridae].

Mactromeris markleyensis (Clark, 1938). [*Mactra*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):26, pl. 8, fig. 6 (not fig. 8 as in text). Markley Fm., Eocene. Vicinity of Pleasants Creek, south of Putah Creek, Napa quad., Solano Co. UCMP A1297. Holotype UCMP 30852. [Mactridae].

Mactromeris mercedensis (Packard, 1916). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):22–23, pl. 11, fig. 3. Merced Fm., Pliocene/ Pleistocene. ... marine cliffs ... near Mussel Rock, San Mateo Co. Holotype UCMP 11467. **Remarks:** Junior synonym of *Mactromeris catilliformis* (Conrad, 1867), *fide* Coan et al. (2000: p. 454). [Mactridae].

Mactromeris? *merriami* (Packard, 1916). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):25–26, pl. 11, figs. 1, 2, 5, 7. Domengine Fm., Eocene. Parson's Peak area, Coalinga quad., Fresno Co. UCMP 672. Holotype UCMP 11484 (not UCMP 11467 as in pl. caption), paratype UCMP 11485. [Mactridae].

?*Mactromeris merriami* (Packard, 1916). [*Spisula*]. Squires 2001:17, figs. 36, 37. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 26617. Hypotypes LACMIP 12753, 12754. [Mactridae].

Mactromeris? (*Mactromeris*?) *montereyana* (Arnold, 1908). [*Mactra*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):28, pl. 5, fig. 9 (as *Mactromeris montereyana* in pl. caption). Monterey Fm., Miocene. Love Creek near confluence with San Lorenzo River, Santa Cruz quad., Monterey Co. Holotype USNM 165463. [Mactridae].

Mactromeris mossbeachensis (Glen, 1959). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):19–20, pl. 10, figs. 3, 5. Purisima Fm., Miocene/Pliocene. Vicinity of San Vicente Creek, San Mateo Co. UCMP B4790. Holotype UCMP 37643. [Mactridae].

Mactromeris muliniaformis (Wagner and Schilling, 1923). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):12–13, pl. 7, figs. 5, 6 [as *Mactromeris mulineaformis* in pl. caption]. Pleito Fm., Oligocene. Devil's Kitchen, Mt. Pinos quad., Kern Co. UCMP 3203. Holotype UCMP 11423. [Mactridae].

Mactromeris occidentalis (Gabb, 1869a). [?*Hemimactra*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):13–14, pl. 7, figs. 2, 4. San Ramon Fm., Miocene(?). South of Martinez, Contra Costa Co. Holotype ANSP 4545. [Mactridae].

Mactromeris ramonensis attenuata (Clark, 1918). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):11, pl. 6, figs. 8, 10, 11. San Ramon Fm., Miocene(?). Sobrante Ridge area, Contra Costa Co. UCMP 1167. Holotype UCMP 11119. [Mactridae].

Mactromeris ramonensis ramonensis (Packard, 1916). [*Spisula*]. Moore 2003a. USGS 1228-F [electronic format]

(family Mactridae):10–11, pl. 6, figs. 13–15 (not listed on pl. caption). San Ramon Fm., Miocene(?).Tice Valley area, Concord quad., Contra Costa Co. UCMP 1687. Holotype UCMP 11118. [Mactridae].

Mactromeris rushi (Wagner and Schilling, 1923). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):11–12, pl. 6, figs 6, 9. San Emigdio Fm., Eocene/ Oligocene. San Emigdio Canyon, Mt. Pinos quad., Kern Co. UCMP 3179. Holotype UCMP 11422. **Remarks:** Figures 6 and 9 on pl. 6 do not match those of Wagner and Schilling (1923) (pl. 47, fig. 2). [Mactridae].

Mactromeris? (*Mactromeris*?) *sectoris* (Anderson and Martin, 1914). [*Mactra*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):27–28, pl. 5, figs. 12, 14, 15 [*Mactra? sectoris* in pl. caption]. Jewett (as Jewitt [*sic*] in text and pl. caption) Sand, Miocene. South and west slopes of Pyramid Hill, Kern Co. CASG 69. Holotype CASG 131 [=CASG 69.01], paratype CASG 132 [=CASG 69.02]. [Mactridae].

Mactromeris? *subquadrata* (Clark, 1925). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):29–30, pl. 12, fig. 4. San Ramon Fm., Miocene. Southwest of town of Walnut Creek, Concord quad., Contra Costa Co. UCMP 1131. Holotype UCMP 30344. [Mactridae].

Mactromeris tejonensis (Packard, 1916). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):9–10, pl. 6, fig. 3. Tejon Fm., Eocene. Vicinity of Lower Lake, Lake Co. UCMP 785. Holotype UCMP 11488. [Mactridae].

Mactromeris? (*Mactromeris*?) *trampasensis* (Packard, 1916). [*Mactra*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):28–29, pl. 5, fig. 11 [pl. caption missing]. San Pablo Fm., Miocene. North of Los Trampas Creek, Concord quad., Contra Costa Co. UCMP 1227 (not UCMP 1237 as in text). Holotype UCMP 11499. [Mactridae].

"*Mactromeris weaveri* Packard *in* Dickerson, 1914a." Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):24, pl. 8, fig. 5 (as "*Spisula weaveri*" in pl. caption, image reversed in pl.). Martinez Fm., Paleocene. Near Stewartville, Mt. Diablo quad., Contra Costa Co. UCMP 1556. Holotype UCMP 11714 (syntype in text). **Remarks:** Not a mactrid, but actually an "*Arctica*," *fide* Smith (1975b: p. 470). [Mactridae].

Maorithyas folgeri (Wagner and Schilling, 1923) [*Thyasira*]. Hryniewicz et al. 2017. Acta Pala. Polon. 62(4):717, fig. 13. San Emigdio Fm., Oligocene. Devil's Kitchen, Kern Co. UCMP 3195. Holotype UCMP 11434.

Marcia angustifrons (Conrad, 1849a). [*Venus*]. Lutz 1951. UCPG 28(13):390, pl. 15, fig. 5. Sobrante Fm., Miocene. Near Lawson Hill and Oursan Ridge, Contra Costa Co. UCMP A4931. Hypotype UCMP 34154. [Veneridae].

Marcia (*Mercimonia*) *bunkeri* (M.A. Hanna, 1927). [*Dosinia*]. Squires 1984. NHMLAC CS 350: 53, fig. 12l. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7142; =LACMIP 22312]. Hypotype UCLA 59282 [=LACMIP 10562]. [Veneridae].

Martesia meganosensis Clark and Woodford, 1927. Kennedy 1974. SDSNH Mem. 8:58–59, fig. 65. Meganos Fm., Paleocene/Eocene. Northeast of Mt. Diablo, Byron quad., Contra Costa Co. UCMP 3577. Holotype UCMP 31297. [Pholadidae].

....., fig. 66. Contra Costa Co. UCMP 3159. Paratype UCMP 31298.

Martesia* (*Paramartesia*) *tolkieni Kennedy, 1974 (n. sp.). SDSNH Mem. 8:59–60, frontis., figs. 67, 69, 70. Lodo Fm., Eocene [Paleocene]. Vicinity of Ortigalito and Little Panoche creeks, west side of San Joaquin Valley, Merced Co. USGS 5712 (listed as USGS 5718 in locality register). Unfigured holotype USNM 163803, paratypes USNM 163804a, 163804c, d. [Pholadidae].

....., fig. 68. Vicinity of Ortigalito and Little Panoche creeks, west side of San Joaquin Valley, Merced Co. USGS 5712. Hypotype SDSNH 4292 [peel of USNM 163804b].

Martesia sp. Squires and Kennedy 1998. Veliger 41(2):166–167, fig. 13. Santa Susana Fm., Paleocene. Locality now covered by 2 to 3 m of fill underlying a homesite, Trailer Canyon, Santa Monica Mtns., Topanga quad. (1952, PR 1981), Los Angeles Co. LACMIP 16869 [=CSUN 1590). Hypotype LACMIP 7944. [Pholadidae].

"*Martesia*(?)" sp. Dickerson 1914a. Kennedy 1974. SDSNH Mem. 8:72, fig. 99. Martinez Fm., Paleocene. Near Lower Lake Lake Co. UCMP 784. Hypotype UCMP 10607. **Remarks:** *Teredina* sp., *fide* G.L. Kennedy (personal

communication, 2019). [Pholadidae].

Martesia s.l. Kennedy 1974. SDSNH Mem. 8: frontispiece. Lodo Fm., Eocene [Paleocene]. Vicinity of Ortigalito and Little Panoche creeks, west side of San Joaquin Valley, Merced Co. USGS. 5712. Hypotype USNM 163804. [Pholadidae].

Megapitaria squalida (G.B. Sowerby I, 1835a). [*Cytherea*]. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):268–269, pl. 50, figs. 1–3. San Diego Fm., Pliocene. San Diego, San Diego Co. LACMIP 302. Hypotypes LACMIP [4686, 4687]. [Veneridae].

Megapitaria sp. Deméré and Rugh, 2006. Foss. Treas. Anza-Borrego Desert, p. 62, fig. 3.16F. Latrania Fm., Miocene/Pliocene. Painted Gorge, Coyote Mtn., Imperial Co. SDSNH 44]. Hypotype SDSNH 23150. [Veneridae].

Meretrix dibbleei Weaver and Kleinpell, 1963 (n. sp.). UCPG 43:203, pl. 34, figs. 8, 9. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6954. Holotype SU 9294 [=CASG 70187]. [Veneridae].

....., pl. 35, figs. 1,2. Nojoqui Creek, Santa Barbara Co. UCMP B6955. Paratype SU 9295 [=CASG 70186.

"*Meretrix*" *stantoni* Dickerson, 1914a. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, figs. 4, 7. Lodo Fm., Paleocene. East side Panoche Pass Rd., near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717, =UCMP. 4657]. Hypotypes UCMP 14204, 14205. [Veneridae].

Meretrix Fowkes 1982. Coalinga Guidebook, p. 21, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 3, fig. 5; refigured from Arnold and Anderson 1910, pl. 25, fig. 5 (both as *Meretrix ovalis* (Gabb 1864)). Domengine Fm., Eocene. Northwest of Coalinga, Fresno Co. [Hypotype USNM 165629]. [Veneridae].

Metis Fowkes 1982. Coalinga Guidebook, p. 25, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 6, fig. 1; refigured from Arnold and Anderson 1910, pl. 28, fig. 1 (both as *Metis* aff. *alta* (Conrad 1837)). Vaqueros Fm., Miocene. "Reef beds" near Tar Canyon area, Kings Co. [Hypotype USNM 165567]. [Tellinidae].

Microcallista (*Costacallista*) *conradiana* (Gabb, 1864). [*Tapes*]. Weaver and Kleinpell 1963. UCPG 43:203, pl. 35, fig. 7. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek, Santa Ynez Mtns., Lompoc quad., Santa Barbara Co. UCMP B6960. Hypotype SU 9299 [=CASG 70198]. [Veneridae].

Milneria minima (Dall, 1871). [*Ceropsis*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):234, pl. 43, figs. 1, 2, 14. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4546. [Carditidae].

Milneria minima (Dall, 1871). [*Ceropsis*]. Moore 1992. USGS PP 1228-E:E28, pl. 9, figs.16, 18. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305]. Hypotype (of Hertlein and Grant 1972, pl. 43, figs. 1, 2, 14) LACMIP 4546. [Carditidae].

Miltha (*Miltha*?) *jacalitosana* (Arnold, 1909 [1910]). [*Paphia*]. Moore 1988b. USGS PP 1228D:D19, pl. 9, fig. 6. Etchegoin Fm., Miocene/Pliocene. Jasper Creek area, Coalinga quad., Fresno Co. USGS 4765. Holotype USNM 165587. [Lucinidae].

Miltha (*Miltha*?) *meganosensis* (Clark and Woodford, 1927). [*Phacoides*]. Moore 1988b. USGS PP 1228-D:D19, pl. 5, figs. 6, 9. Meganos Fm., Paleocene/Eocene. Mt. Diablo quad., Contra Costa Co. UCMP 3159. Holotype UCMP 31303, paratype UCMP 31304. [Lucinidae].

....., pl. 5, fig. 8. Deer Valley, Mt. Diablo quad., Contra Costa Co. UCMP 3152. Paratype UCMP 31305.

Miltha packi (Dickerson, 1916). [*Lucina*]. Deméré et al. 1979. SEPM Guidebook 4:98, pl. 1, figs. 10, 11. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotypes SDSNH. 20767, 20768. [Lucinidae].

Miltha packi (Dickerson, 1916) [*Lucina*]. Squires 1987. NHMLAC CS 388:59—61, fig. 100. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN. 362 [=LACMIP 16273]. Hypotype LACMIP 7517. **Remarks:** In the genus/subgenus *Gibbolucina* (*Eomiltha*?), *fide* Moore (1988: p. D21). [Lucinidae].

Miltha packi (Dickerson, 1916). [*Lucina*]. Squires 1988a. SEPM Guidebook 58:110, pl. 2, fig. 2. Juncal Fm., Eocene. Whitaker Peak area, Los Angeles Co. CSUN 362 [=LACMIP 16273]. Hypotype LACMIP 7571. **Remarks:** In the genus/subgenus *Gibbolucina* (*Eomiltha*?), *fide* Moore (1988: p. D21).

Miltha packi (Dickerson, 1916). [*Lucina*]. Squires 2008. NHMLAC CS 517:5, fig. 43. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13444. [Lucinidae]. **Remarks:** In the genus/subgenus *Gibbolucina* (*Eomiltha*?), *fide* Moore (1988: p. D21).

Miltha (*Miltha*) *parsoni* Waring, 1917. Moore 1988b. USGS PP 1228-D:D18, pl. 6, fig. 4. Martinez Fm. [=Santa Susana Fm.], Paleocene. Las Virgenes Canyon, Simi Hills, Camulos quad., Ventura Co. SU 2697 [=CASG 61667]. Holotype SU/CASG 150 [=CASG 61667.19]. [Lucinidae].

Miltha sanctaecrucis (Arnold, 1909 [1910]). [*Phacoides*]. G.D. Hanna and Hertlein 1943. CDM Bull. 118(2):174, fig. 63-18. Vaqueros Fm., Miocene. Ventura Co. CASG 27409. Hypotype CASG 5740. [Lucinidae].

Miltha sanctaecrucis (Arnold, 1909 [1910]). [*Phacoides*]. Stewart 1946. USGS PP 205-C:98, pl. 17, fig. 5. Temblor Fm., Miocene. Kern River, Kern Co. USGS 6622. Hypotype USNM 498743. [Lucinidae].

....., pl. 17, fig. 8. McLure Shale, Miocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14395b. Hypotype USNM 498746.

Miltha sanctaecrucis (Arnold, 1909 [1910]). [*Phacoides*]. Woodring et al. 1946. USGS PP 207:27, pl. 28, fig. 16 (clay peel). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotype USNM 497087. [Lucinidae].

Miltha (*Miltha*) *sanctaecrucis* (Arnold, 1909 [1910]). [*Phacoides*]. Addicott 1973b. USGS PP 791:7, 28–29, pl. 3, fig. 5. Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Rocks quad., Kern Co. USGS M3579. Hypotype USNM 646543. [Lucinidae].

....., pl. 3, fig. 10. Basal Vaqueros Sandstone [=Temblor Fm., Wygal Sandstone Member), Miocene. Kern Co. USGS 9432. Hypotype USNM 646544.

Miltha santaecrucis (Arnold, 1909 [1910]). [*Phacoides*]. Stadum 1973. OCF, p. 27, pl. 4, fig. 10. Topanga Fm., Miocene. Topanga Canyon, Los Angeles Co. UCLA 2488 [=LACMIP 22488]. Hypotype UCLA 49518 [=LACMIP 10617]. [Lucinidae].

Miltha cf. *M. sanctaecrucis* (Arnold, 1909 [1910]). [*Phacoides*]. Addicott 1979. SEPM Guidebook 14:47–48, pl. 1, fig. 11. Vaqueros (?) Fm. (lower sandstone member), Oligocene. The Indians, Junipero Serra quad., Santa Lucia Range, Monterey Co. SU 1756. Hypotype CASG 60371, determined here as missing. [Lucinidae].

Miltha (*Miltha*) *sanctaecrucis* (Arnold, 1909 [1910]). [*Phacoides*]. Moore 1988b. USGS PP 1228-D:D18, pl. 5, figs. 5, 7. Vaqueros Fm., Oligocene/Miocene. Carrizo Creek, La Panza Mtns., San Luis Obispo Co. UCMP A501. Hypotype (of Loel and Corey 1932, pl. 36, fig. 5) UCMP 31824. [Lucinidae].

....., pl. 5, fig. 11; pl. 6, fig. 10. Devils Den District, in "reef beds." Cholame quad., Kern Co. USGS 4861. Holotype USNM 165569.

Miltha xantusi (Dall, 1905). [*Phacoides*]. Moore 1968. SDSNH Occas. Pap. 15:40, pl. 18, figs. e, f. [San Diego Fm.], Pliocene. Balboa Park, San Diego, San Diego Co. SDSNH 1965. Hypotype SDSNH 4176. [Lucinidae].

Miltha xantusi (Dall, 1905). [*Phacoides*]. Squires 2012. NHMLAC CS 520:76, fig. 29. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17934. Hypotype LACMIP 14354. [Lucinidae].

Miltha (*Miltha*) *xantusi* (Dall, 1905). [*Phacoides*]. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):250–251, pl. 45, figs. 14, 15. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 4647. [Lucinidae].

....., pl. 45, figs. 16–17. Cabrillo Canyon, Balboa Park, San Diego, San Diego Co. CASG 1402. Hypotype CASG [=CASG 72538].

Miltha (*Miltha*) *xantusi* (Dall, 1905). [*Phacoides*]. Moore 1988b. USGS PP 1228-D:D18, pl. 5, figs. 1, 4; pl. 6, figs. 1, 2. Pico Fm., Pliocene. Holser Canyon, Los Angeles Co. SDSNH 217a. Hypotypes (of Grant and Gale 1931, pl. 14, figs. 20a, b) SDSNH 140a, b (not 1406 as in pl. caption). [Lucinidae].

....., pl. 5, fig. 12; pl. 6, fig. 11. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Alverson Canyon, Coyote Mtn., Imperial Co. UCMP738]. Hypotype (of G D. Hanna 1926, pl. 28, fig. 7) UCMP 32285.

Miltha xantusi (Dall, 1905). [*Phacoides*]. Powell 2008. USGS SIR 2008-5155:14, fig. 4v. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Rock, Imperial Co. (not San Diego Co. as in locality description). USGS M9778. Hypotype USNM 486911. [Lucinidae].

Miltha Fowkes 1982. Coalinga Guidebook, p. 28, unnumbered fig. McLure Shale, Miocene. Tar Canyon, Fresno Co. WHC hypotype lost? [Lucinidae].

Miodonticus prolongatus (Carpenter, 1864b). [*Miodon*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):233–234, pl. 56, figs. 1–5. San Diego Fm., Pliocene. San Diego, San Diego Co. LACMIP 323. Hypotypes LACMIP 4541, 4545. [Carditidae].

Miodonticus prolongatus (Carpenter, 1864b). [*Miodon*]. Moore 1992. USGS PP 1228-E:E16, pl. 5, figs. 12–14, 16. San Diego Fm., Pliocene. San Diego, San Diego Co. LACMIP 323. Hypotypes (of Hertlein and Grant 1972, pl. 56, figs. 1, 4) LACMIP 4541, 4544. [Carditidae].

Modiolus altiobliquus Nelson, 1925. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 8. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6673. Hypotype UCR 6673/7. **Remarks:** Provisionally in the genus/subgenus *Brachidontes*? (*Brachidontes*?), *fide* Moore (1983: p. A67). [Mytilidae].

Modiolus bakeri Dickerson, 1914a. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 11. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 7321]. Hypotype UCR 7321/1. **Remarks:** In the genus *Idasola*?*, fide* Moore (1983:A78). [Mytilidae].

Modiolus*? (*Modiolus*?) *clarki Moore, 1983 (new name for *Mytilus merriami* Clark, 1915, preoccupied). USGS PP 1228-A:A78, pl. 21, figs. 8, 9. Neroly Fm., Miocene. Contra Costa Co. UCMP 118. Holotype UCMP 11544. [Mytilidae].

Modiolus (*Modiola*) *contracta* Conrad, 1855b. Moore 1983. USGS PP 1228-A:A76, pl. 20, fig. 5. Monterey(?) Fm. (Etchegoin Fm. in text), Miocene(?). Near Tres Pinos, Monterey Co. Holotype USNM 1853. [Mytilidae].

Modiolus directus Dall, 1909. Cummings et al. 1962. CDMG Bull. 181:200, ph. 15, fig. 6. Purisima Fm. (Tahana member), Pliocene. Pomponio Creek, San Gregorio quad., San Mateo Co. locality 469-3M. Hypotype determined here as missing. **Remarks:** Junior synonym of *Modiolus* (*Modiolusia*) *rectus* (Conrad, 1837), *fide* Coan et al. (2000: p. 186). [Mytilidae].

Modiolus flabellatus (Gould, 1850) [*Mytilus* (*Modiola*)]. Perry 1977. SCMA, p. 23, upper row left fig. Purisima Fm., Pliocene. Near Capitola beach, Santa Cruz Co. SCCM 1. Hypotype SCCM 9681.02. **Remarks:** Junior synonym of *Modiolus* (*Modiolusia*) *rectus* Conrad, 1837, *fide* Coan et al. (2000: p. 186). [Mytilidae].

Modiolus gabbi Clark, 1915. Hall 1958. UCPG 34(1):52, pl. 5, fig. 5. Cierbo Fm., Miocene. Southeast of Pleasanton, La Costa Valley quad. (1953), Alameda Co. SU 2739. Hypotype SU 8446 [=CASG 69940]. **Remarks:** In the genus/subgenus *Brachidontes* (*Aeidimytilus*), *fide* Moore (1983: p. A69). [Mytilidae].

Modiolus (*Modiolus*) *lagunanus* Loel and Corey, 1932. Moore 1983. USGS PP 1228A: A75, pl. 19, figs. 13, 14. Vaqueros Fm., Oligocene/Miocene. San Joaquin Hills, Corona quad., Orange Co. UCMP A543. Holotype UCMP 31788. [Mytilidae].

Modiolus? (*Modiolus*?) *meganosensis* Clark and Woodford, 1927. Moore 1983. USGS PP 1228A:A78, pl. 21, fig. 5. Meganos Fm., Paleocene/Eocene. Mt. Diablo quad., Contra Costa Co. UCMP. 3155. Holotype UCMP 31363. [Mytilidae].

Modiolus (*Modiolus*?) *merriami* Weaver, 1905. Moore 1983. USGS PP 1228-A:A77, pl. 21, fig. 2. Martinez Fm., Paleocene. Concord quad., Contra Costa Co. UCMP 333. Holotype UCMP 11892. [Mytilidae].

Modiolus (*Modiolus*?) *pittsburgensis* Clark, 1918. Moore 1983. USGS PP 1228-A:A77, pl. 21, figs. 3, 4 (cast, CASG).

Kirker Tuff, Oligocene. Vicinity of Pittsburg, north of Mt. Diablo, Mt. Diablo quad., Contra Costa Co. UCMP 1895. Holotype UCMP 11122. [Mytilidae].

Modiolus rectus Conrad, 1837. Hertlein and Grant 1972. SDSNH Mem. 2(2B):166–167, pl. 42, fig. 7. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. [Hypotype LACMIP 4474. **Remarks:** In the subgenus *Modiolusia*, *fide* Coan et al. 2000: p. 186. [Mytilidae].

Modiolus rectus Conrad, 1837. Perry 1988. SCMA, p. 19, fig. 10D. Purisima Fm., Miocene/Pliocene. Santa Cruz Co. CASG 66068. Hypotype CASG 66068.01]. **Remarks:** In the subgenus *Modiolusia*, *fide* Coan et al. 2000: p. 186. [Mytilidae].

Modiolus sacculifer (Berry, 1953b). [*Volsella*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):167–168, pl. 41, figs. 2–4. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4475, 4476. [Mytilidae].

Modiolus (*Modiolus*) *veronensis veronensis* Trask, 1922. Moore 1983. USGS PP 1228-A:A75, pl. 20, fig. 3. Briones Fm., Miocene. Pleasanton quad., Alameda Co. UCMP 3529. Holotype UCMP 12373. [Mytilidae].

Modiolus veronensis temblorensis Adegoke, 1969 (n. subsp.). UCPG 80:94, pl. 1, figs. 6, 8. Temblor Fm., Miocene. Reef Ridge quad., Fresno Co. UCMP D1065. Holotype UCMP 36606, paratype UCMP 36607. [Mytilidae].

Modiolus (*Modiolus*) *veronensis temblorensis* Adegoke, 1969. Moore 1983. USGS PP 1228-A:A75, pl. 20, fig. 2. Upper Temblor Fm., Miocene. Reef Ridge quad., Kings Co. UCMP D1065. Holotype UCMP 36606. [Mytilidae].

Modiolus (*Modiolus*) *ynezianus* Arnold, 1907. Moore 1983. USGS PP 1228-A:A74–A75, pl. 19, fig. 11. Vaqueros Fm., Oligocene/Miocene. Southeast of Lompoc, Santa Barbara Co. USGS 4504. Holotype USNM 165324. [Mytilidae].

Modiolus ynezianus garzaensis Adegoke, 1969 (n. subsp.). UCPG 80:93, pl. 1, figs. 5, 6. Temblor Fm., Miocene. Reef Ridge quad., Fresno Co. UCMP D1065. Holotype UCMP 36601, paratype UCMP 36602. [Mytilidae].

Modiolus (*Modiolus*) *ynezianus garzaensis* Adegoke, 1969. Moore 1983. USGS PP 1228-A:A75, pl. 20, fig. 1. Upper Temblor Fm., Miocene. Reef Ridge quad., Kings Co. UCMP D1065. Holotype UCMP 36601. [Mytilidae].

Modiolus sp. Weaver and Kleinpell 1963. UCPG 43:197, pl. 29 (not pl. 31), fig. 4. Middle Gaviota Fm., Eocene. Vicinity of Gaviota Pass, western Santa Ynez Mtns., Los Olivos quad., Santa Barbara Co. UCMP B6998. Hypotype SU 9256 [=CASG 70191]. [Mytilidae].

*Mulina** (*Pseudocardium*) Fowkes 1982. Coalinga Guidebook, p. 207, unnumbered fig. Etchegoin/Jacalitos Fm., Miocene/Pliocene. W-K Hill, north of Coalinga, Fresno Co. WHC hypotype lost? **Remarks:** Determined here as *Pseudocardium densatum* (Conrad, 1857a). Error for *Mulinia*. [Mactridae].

Mulinia densata Conrad, 1857a. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):176, figs. 65-6, 65-7. Etchegoin Fm., Pliocene. [*Mulinia* Zone], Kettleman Hills, Kings Co. CASG 26820. Hypotypes CASG 5743, 5743A. **Remarks:** *Pseudocardium densatum* (Conrad, 1857a), *fide* Moore (2003a: p. 4). [Mactridae].

Musculus (*Musculus*) *stalderi* (Martin, 1914). [*Modiolus*]. Moore 1983. USGS PP 1228-A:A73, pl. 19, figs. 3, 4. Rio Dell Fm., Pliocene. Vicinity of Ferndale, Humboldt Co. UCMP 1859. Holotype UCMP 12354. **Remarks:** Junior synonym of *Musculus niger* (Gray, 1824), *fide* Coan et al. (2000: p. 169). [Mytilidae].

Mya arenaria Linneaus, 1758. MacNeil 1965. USGS PP 483-G:G33–G35, pl. 5, fig. 5. Cierbo Fm., Miocene. Alameda Co. UCMP 1224. Hypotype UCMP 15007. [Myidae].

....., pl. 5, fig. 6. San Joaquin Fm. [upper *Mya* Zone], Pliocene. North Dome, Kettleman Hills, Kings Co. USGS 12480. Hypotype (of Woodring et al. 1940 [1941], pl. 9, fig. 7, as *Mya* cf. *M. dickersoni*) USNM 495304.

....., pl. 5, figs. 7, 8, 11. Etchegoin Fm., Pliocene. Kettleman Hills, Kings Co. UCMP A1686. Hypotype UCMP 34840.

....., pl. 5, figs. 9, 10, 12. San Joaquin Fm., Pliocene. "*Mya japonica*" Zone, Kettleman Hills, Kings Co. UCMP A3167. Hypotypes UCMP 30801, 30802.

Mya arenaria Linné, 1758. Durham and Addicott 1965. USGS PP 524-A:A14, pl. 3, fig. 2. Pancho Rico Fm., Miocene/Pliocene. North of Sarah Canyon, Wunpost quad., Monterey Co. USGS M1934. Hypotype USNM 649093. [Myidae].

Mya (*Arenomya*) *arenaria* Linneaus, 1758. Adegoke 1969. UCPG 80:151, pl. 9, figs. 3, 7. Etchegoin Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP B6527. Hypotype UCMP 36786. [Myidae].

Mya* (*Arenomya*) *arrosis MacNeil, 1965 (n. sp). USGS PP 483-G:G31, pl. 2, fig. 9, pl. 3, fig. 3. Briones Fm., Miocene. Vicinity of Tice Valley, Contra Costa Co. UCMP 1687. Hypotype UCMP 15003. [Myidae].

....., pl. 3, fig. 2. Neroly Fm., Miocene. Near town of Rodeo, Contra Costa Co. UCMP 1617. Hypotype UCMP 15004.

....., pl. 3, figs. 5, 6, 9. Cierbo Fm., Miocene. Contra Costa Co. UCMP 1227. Hypotype UCMP 15005, holotype UCMP 15006.

Mya cf. *M. dickersoni* Clark, 1915. Woodring et al. 1940 [1941]. USGS PP 195:95, pl. 9, fig. 4. San Joaquin Fm. (Upper *Mya* Zone), Pliocene. Las Alturas, Middle Dome, Kettleman Hills, Kings Co. USGS 12684. Hypotype USNM 495305. **Remarks:** *Mya* (*Arenomya*) *arenaria* Linneaus, 1758, *fide* MacNeil (1965: p. G33). [Myidae].

....., pl. 9, fig. 5. La Ceja, North Dome,Kettleman Hills, Kings Co. USGS 12701. Hypotype USNM 495306. **Remarks:** *Mya* (*Arenomya*) *arenaria* Linneaus, 1758, *fide* MacNeil (1965: p. G33).

....., pl. 9, figs. 6–9. La Ceja, North Dome, Kettleman Hills, Kings Co. USGS 12480. Hypotypes USNM 495304, 495307. **Remarks:** *Mya* (*Arenomya*) *arenaria* Linneaus, 1758, *fide* MacNeil (1965: p. G33).

....., pl. 24, fig. 2. San Joaquin Fm. (upper oolite between *Neverita* Zone and Cascajo Conglomerate Member), Pliocene. North of El Campo, North Dome, Kettleman Hills, Kings Co. USGS 12841. Hypotype USNM 495339.

....., pl. 24, fig. 21. Etchegoin Fm. (*Pseudocardium-Anadara* Zone), Pliocene. North of La Escudilla, Middle Dome, Kettleman Hills, Kings Co. USGS 12640. Hypotype USNM 495357.

Mya (?*Arenomya*) *dickersoni* Clark, 1915. MacNeil 1965. USGS PP 483-G:G28–G29, pl. 2, figs. 1, 2, 5, 10, 11. Neroly Fm., Miocene. Near town of Rodeo, Contra Costa Co. UCMP 1617. Holotype UCMP 11554, hypotypes UCMP 15001, 15002.

Mya (*Arenomya*) *dickersoni* Clark, 1915. Adegoke 1969. UCPG 80:150, pl. 8, fig. 9. Santa Margarita Fm., Miocene. Domengine Ranch quad., Fresno Co. UCMP D703. Hypotype UCMP 36781. [Myidae].

Mya* (*Arenomya*) *fujiei MacNeil, 1965 (n. sp). USGS PP 483-G:G30, pl. 5, fig. 1 (as *Mya* cf. *M. fujiei* MacNeil (n. sp)). Briones Fm., Miocene. Near town of Pacheco, Contra Costa Co. UCMP 197. Hypotype ("paratype" of *Mya dickersoni* Clark, 1915) UCMP 11553 (not UCMP 11533 as in pl. caption). [Myidae].

Mya (*Arenomya*) *fujiei* MacNeil, 1965. Adegoke 1967c. Nautilus 80(3):91, 97, figs. 1, 2. Temblor Fm., Miocene. Near Oil Canyon, Joaquin Rocks quad., Fresno Co. UCMP B7085. Hypotype UCMP 36779. [Myidae].

....., fig. 3. Reef Ridge quad., Kings Co. UCMP D1059. Hypotype UCMP 36780 (not UCMP 37680 as in text).

Mya (*Arenomya*) *fujiei* MacNeil, 1965. Adegoke 1969. UCPG 80:149, pl. 8, fig. 7 (refigured from Adegoke 1967c, fig. 3). Temblor Fm., Miocene. Garza Creek area, Reef Ridge quad., Kings Co. UCMP D1059. Hypotype UCMP 36780. [Myidae].

....., pl. 8, figs. 10–11 (refigured from Adegoke, 1967c, figs. 1, 2). Near Oil Canyon, Joaquin Rocks quad., Fresno Co. UCMP B7085. Hypotype UCMP 36779.

Mya japonica Jay, 1857. G.D. Hanna and Hertlein 1943. CDM Bull. 118(2):176, figs. 65-12, 65-13. Etchegoin Fm. [*Mya* Zone], Pliocene. North Dome, Kettleman Hills, Fresno Co. Hypotypes CASG 5925, 5925A. **Remarks:** Junior synonym of *Mya arenaria* Linneaus, 1758, *fide* Coan et al. (2000: p. 470).[Myidae].

Mya (*Arenomya*) *japonica* Jay, 1857. Adegoke 1969. UCPG 80:151, pl. 9, figs. 6, 9. San Joaquin Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP D1200. Hypotype UCMP 36787. **Remarks:** Junior synonym of *Mya arenaria* Linneaus, 1758, *fide* Coan et al. (2000: p. 470). [Myidae].

Mya* (*Arenomya*) *macneili Adegoke, 1969 (n.sp). UCPG 80:150, pl. 9, figs. 1, 4, 10. Etchegoin Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP D1120. Paratypes UCMP 36783–36785. [Myidae].

....., pl. 9, fig. 5. Reef Ridge quad., Kings Co. UCMP D1122. Holotype UCMP 36782.

Mya Fowkes 1982. Coalinga Guidebook, p. 33, unnumbered fig. San Joaquin Fm.("Upper *Mya* Zone"), Pliocene. North Dome, Kettleman Hills, Kings Co. WHC hypotype lost? [Myidae].

Myadesma? *eocenica* (Clark, 1938). [*Mesodesma*]. Moore, 2003a. USGS PP 1228-F [electronic format] (family Mesodesmatidae):1, pl. 12, fig. 8. Markley Fm., Eocene. Napa quad., Solano Co. UCMP A1297. Paratype UCMP 30837. [Mesodesmatidae].

Myadesma pacifica (Hall and Ambrose, 1916) [*Mesodesma*]. Saul 1989. Veliger 32(4):200, 204, fig. 78. Miocene. Alameda Creek, Alameda Co. CASG61804]. Holotype CASG 61804.01. [Myadesmatidae, not Mesodesmatidae, *fide* Saul (1989: p. 200)].

Myrakeena cf. *M. angelica* (Rochebrune, 1895). [*Ostrea*]. Powell 2008. USGS SIR 2008-5155: 9. 10, fig. 3i. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Rock, Imperial Co. (not San Diego Co. as in locality description). USGS M9778. Hypotype USNM 486902. [Ostreidae].

Myrakeena veatchii (Gabb, 1866). [*Ostrea*]. Squires et al. 2006. NHMLAC CS 511:7–11, figs. 9, 10, 12, 13. Pico Fm., Pliocene. Near Valencia, Oat Mtn. quad. (1952, PR 1969), Los Angeles Co. LACMIP 17777. Hypotypes LACMIP 13339, 13341–13343. [Ostreidae].

....., fig. 11. Near Valencia, Oat Mtn. quad. (1952, PR 1969), Los Angeles Co. LACMIP 17778, Hypotype LACMIP 13340.

Myrakeena veatchii (Gabb, 1866). [*Ostrea*]. Squires 2012. NHMLAC CS 520:76, fig. 14. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 9659. Hypotype LACMIP 14340. [Ostreidae].

....., fig. 15. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 9659. Hypotype LACMIP 14341.

Myrtea (*Myrtea*) *taffana* (Dickerson, 1916). [*Phacoides*]. Moore 1988b. USGS PP 1228-D:D16, pl. 4, figs. 13, 14. Lodo Fm. (Cerros Shale Member), Eocene. Parson's peak area, Coalinga quad. [=Joaquin Rocks quad.], Fresno Co. UCMP 672. Holotype UCMP 11789. [Lucinidae].

Mysella tumida Carpenter, 1864b. [*Tellimya*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):239–240, pl. 44, figs. 2–5. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotypes LACMIP 4625, 4626. **Remarks:** In the genus *Kurtiella*, *fide* Coan and Valentich-Scott (2012: p. 517). [Lasaeidae].

....., pl 44, figs. 7, 8, 12. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4627, 4628.

Mysella (*Rochefortia*) *tumida* Carpenter, 1864b. [*Tellimya*]. Moore 1992. USGS PP 1228-E:E9, pl. 7, figs. 5, 6. San Diego Fm., Pliocene. Near U.S./Mexico boundary, southwest of Goat Canyon, Imperial Beach quad., San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotype (of Hertlein and Grant 1972, pl. 44, figs. 2, 4) LACMIP 4625. **Remarks:** In the genus *Kurtiella*, *fide* Coan and Valentich-Scott (2012: p. 517). [Lasaeidae].

Mytella inezensis (Conrad, 1857d). [*Mytilus*]. Moore 1983. USGS PP 1228-A:A70, pl. 17, figs. 15, 16. Gaviota Fm. (of Keen and Bentson 1944: p. 72), Eocene/Oligocene. Santa Ynez Mtns. and Santa Ynez River, Santa Barbara Co. Syntypes USNM 13319. [Mytilidae].

Mytilus (*Mytilus*?) *arnoldi* Clark, 1918. Moore 1983. USGS PP 1228-A:A62, pl. 14, fig. 2. Kirker Tuff, Oligocene. Near Pittsburg, Contra Costa Co. UCMP 78. Holotype UCMP 11153. [Mytilidae].

Mytilus (*Mytilus*?) *ascia* Gabb, 1864. Moore, 1983. USGS PP 1228-A:A62, pl. 14, fig. 1. Tejon Fm., Eocene. Ft. Tejon, Kern Co. IP12930. Holotype UCMP 11989. [Mytilidae].

Mytilus coalingensis Arnold, 1909 [1910]. Woodring et al. 1940 [1941]. USGS PP 195:90, pl. 32, figs. 3, 4. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. Arroyo Estrecho, southwest of Broken Hill, North Dome, Kettleman Hills, Kings Co. USGS 12812. Hypotypes USNM 495818, 495819. **Remarks:** In the subgenus *Crenomytilus*, *fide* Moore (1983:

p. A64). [Mytilidae].

Mytilus (*Crenomytilus*) *coalingensis* Arnold, 1909 [1910]. Moore 1983. USGS PP 1228-A:A64, pl. 15, figs. 1–3. Etchegoin Fm., Miocene/Pliocene. At northwest end of Anticline Ridge, northeast of Coalinga, Coalinga quad.], Fresno Co. USGS 4656. Holotype USNM 165551, paratype USNM 165557. [Mytilidae].

Mytilus coalingensis Arnold, 1909 [1910]. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 23. Niguel Fm., Pliocene. Orange Co. [SDSNH 4080]. SDSNH hypotype determined here as missing. **Remarks:** In the subgenus *Crenomytilus*, *fide* Moore (1983: p. A64). [Mytilidae].

Mytilus coalingensis Arnold, 1909 [1910]. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 12. Monterey Fm., Miocene. Saddleback Valley, Orange Co. SDSNH 4312. Hypotype SDSNH 83246. **Remarks:** In the subgenus *Crenomytilus*, *fide* Moore (1983: p. A64). [Mytilidae].

Mytilus* (*Crenomytilus*) *coalingensis sternbergi Hertlein and Grant, 1972 (n.subsp.). SDSNH Mem. 2(2B):163–164, pl. 41, fig. 10. San Diego Fm., Pliocene. San Diego, San Diego Co. LACMIP 302. Paratype LACMIP [4471. **Remarks:** *Mytilus* (*Crenomytilus*) *sternbergi* Hertlein and Grant, 1972, *fide* Moore (1983: p. A64). [Mytilidae].

....., pl. 41, fig. 14. Clay quarry at end of Arroyo Dr., Balboa Park, San Diego, San Diego Co. LACMIP 107. Holotype LACMIP 4470, unfigured paratype LACMIP 4472].

....., San Diego Fm., Pliocene. San Diego Co. SDSNH 4548. Unfigured paratype SDSNH 4386].

Mytilus condoni Dall, 1890b. Addicott 1974b. Veliger 16(4):355–357, fig. 9. Merced Fm., Pliocene. San Francisco South quad., San Mateo Co. UCMP D3364. Hypotype UCMP 10928. [Mytilidae].

Mytilus condoni Dall, 1890b. Yancey 1978. Pr.CAS 41(15):364, 369, fig. 5C. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D3364. Hypotype USNM 251800. [Mytilidae].

....., fig. 5D. Twelvemile Creek area, San Mateo Co. UCMP D3364 (not D5927 as in pl. caption). Hypotype UCMP 10928. [Mytilidae].

Mytilus cf. *M. edulis* Linneaus, 1758. Woodring et al. 1940 [1941]. USGS PP 195:90, pl. 8, fig. 8. San Joaquin Fm. (Upper *Mya* Zone), Pliocene. Las Alturas, Middle Dome, Kettleman Hills, Kings Co. USGS 12685. Hypotype USNM 495293. **Remarks:** Probably *Mytilus trossulus* Gould, 1850b, *fide* Coan et al. 2000: p. 159. [Mytilidae].

Mytilus edulis Linneaus, 1758 var. Manning and Ogle 1950. CDM Bull. 148:23, pl. 8, fig. B. Falor Fm., Pliocene. Humboldt Co. UCMP A4233. Hypotype UCMP 34176]. **Remarks:** Probably *Mytilus trossulus* Gould, 1850, *fide* Coan et al. (2000: p. 159). [Mytilidae].

Mytilus (*Crenomytilus*) *expansus* Arnold, 1907. Moore 1983. USGS PP 1228-A:A63, pl. 15, fig. 5. Vaqueros Fm., Oligocene/Miocene. Southwest of Piru, Piru quad., Ventura Co. USGS 3897]. Holotype USNM 164968. [Mytilidae].

Mytilus expansus Arnold, 1907. Bereskin and Edwards 1969. AAPG/SEPM Guidebook, p. 74, pl. 32, figs. 3a, b. Vaqueros Fm., Miocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. UCSB RB65-6 [=LACMIP 16421]. Hypotype UCSB M8 [=LACMIP 6294]. **Remarks:** In the subgenus *Crenomytilus*, *fide* Moore (1983: p. A63). [Mytilidae].

Mytilus expansus Arnold, 1907. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. M. Vaqueros Fm., Miocene. Cañada Posa area, Santa Cruz Is., California Channel Is. Hypotype UCSB 1851 [=SBMNH 60169]. **Remarks:** In the subgenus *Crenomytilus*, *fide* Moore 1983: p. A63. [Mytilidae].

Mytilus highoohiae Mandra, 1949 (n.sp). Jour. Paleo. 23(1):104–105, figs. 1A, B. Rio Dell(?) Fm., Pliocene. Blue Lake quad. (1943), Humboldt Co. UCMP A4234. Holotype UCMP 35518 [= UCMP 12506]. **Remarks:** Junior synonym of *Mytilus condoni* Dall, 1890b, *fide* Addicott (1974b: p. 355); *fide* Moore (1983: p. A61). [Mytilidae].

Mytilus highoohiae Mandra, 1949. Addicott 1974b. Veliger 16(4):355, fig. 7. Falor Fm. (of Manning and Ogle, 1950:22–25), Pliocene. Blue Lake quad. (1943), Humboldt Co. UCMP A4234. Holotype UCMP 35518 [=UCMP 12506]. **Remarks:** Junior synonym of *Mytilus condoni* Dall, 1890b, *fide* Addicott (1974b: p. 355); *fide* Moore (1983: p. A61). [Mytilidae].

Mytilus (*Crenomytilus*) *kewi* Nomland, 1916b. Moore 1983. USGS PP 1228-A:A63–A64, pl. 15, fig. 4. Etchegoin Fm., Miocene/Pliocene. Fresno Co. UCMP 2680. Holotype UCMP 12061. [Mytilidae].

Mytilus (*Mytilus*?) *loeli* Grant, 1930. Moore 1983. USGS PP 1228-A:A62, pl. 14, fig. 3. Vaqueros Fm., Oligocene/Miocene. Vaqueros Creek, Junipero Serra quad., Monterey Co. SU 200. Holotype SU/CASG 515. [Mytilidae].

Mytilus (*Crenomytilus*) *mathewsonii* Gabb, 1866. Moore 1983. USGS PP 1228-A:A63, pl. 14, fig. 6. San Ramon Fm., Miocene(?). South of Martinez, Concord quad., Contra Costa Co. Lectotype (of Stewart 1930: p. 96) ANSP 4500. [Mytilidae].

Mytilus aff. *M. middendorfi** Grewingk, new species. Manning and Ogle 1950. CDMG Bull. 148:24 [as *M. highoohiae*], pl. 8, fig. A. Falor Fm., Pliocene. Canon Creek area, Humboldt Co. UCMP A4234. Paratype (of *M. highoohiae* Mandra 1949) UCMP 35523. **Remarks:** *Mytlius condoni* Dall, 1890b, *fide* Addicott (1974b: p. 355); in the subgenus *Plicatomytilus*, *fide* Moore (1983: p. A65). Error for *middendorffi*. [Mytilidae].

Mytilus middendorffi Grewingk, 1850. Hall 1958. UCPG 34(1):52, pl. 5, fig. 6. Oursan Fm., Miocene. Northeast of Irvington, La Costa Valley quad. (1953), Alameda Co. SU 3248. Hypotype SU/CASG 8445 [=CASG 69943]. **Remarks:** *Mytilus* (*Plicatomytilus*) *gratacapi* n. sp., *fide* Allison and Addicott (1976: p. 10). [Mytilidae].

Mytilus middendorffi Grewingk, 1850. Addicott 1974b. Veliger 16(4):355, figs. 1, 2. Temblor Fm., Miocene. Silver Creek area, New Idria quad., San Benito Co. USGS M3614. Hypotypes USNM 647269 [as USNM 647064 in Alison and Addicott 1976] and 647270. **Remarks:** In the subgenus *Plicatomytilus*, *fide* Moore (1983: p. A65). [Mytilidae].

Mytilus (*Plicatomytilus*) *middendorffi* Grewingk, 1850. Allison and Addicott 1976. USGS PP 962:3–9, pl. 1, figs. 2, 3, 9. Temblor Fm., Miocene. Silver Creek area, Griswold Hills, New Idria quad., San Benito Co. USGS M3614. Hypotypes USNM 647058, 647059, 647269 [as USNM 647064 in Allison and Addicott 1976: pl. 1, fig. 9; see also Addicott 1974b, fig. 1]. [Mytilidae].

Mytilus (*Crenomytilus*?) *perrini* Clark, 1915. Moore 1983. USGS PP 1228-A:A65, pl. 14, figs. 4, 5. San Pablo Group (Neroly Sandstone), Miocene. Near town of Rodeo, Napa quad., Contra Costa Co. UCMP 1617. Holotype UCMP 11548. [Mytilidae].

Mytilus (*Crenomytilus*?) *schencki* G.D. Hanna and Hertlein, 1938. Moore 1983. USGS PP 1228-A: A64-, A65, pl. 16, fig. 2. Santa Margarita(?) Fm., Miocene. San Miguel quad., Monterey Co. CASG 67166. Holotype CASG 4686. [Mytilidae].

Mytilus (*Crenomytilus*) *sternbergi* Hertlein and Grant, 1972. Moore, 1983. USGS PP 1228-A:A64, pl. 16, fig. 1. San Diego Fm., Pliocene. San Diego, San Diego Co. LACMIP 107. Holotype LACMIP 4470. [Mytilidae].

Mytilus trampasensis Clark, 1915. Richey 1943. UCPG 27(2):34, pl. 3, fig. 6. Orinda Fm., Miocene. Concord quad. (1915), Contra Costa Co. UCMP A2568. Hypotype UCMP 30675. **Remarks:** In the subgenus *Crenomytilus*, *fide* Moore (1983: p. A63). [Mytilidae].

Mytilus (*Crenomytilus*) *trampasensis* Clark, 1915. Moore 1983. USGS PP 1228-A:A63, pl. 14, fig. 7. San Pablo Group (Neroly Fm.) (Cierbo Sandstone in locality register), Miocene. South of Pittsburg, Contra Costa Co. UCMP 402. Syntype UCMP 11545. [Mytilidae].

....., pl. 14, fig. 8. San Pablo Group, Miocene. Concord quad., Contra Costa Co. UCMP 39. Syntype UCMP 11546.

Mytilus Fowkes 1982. Coalinga Guidebook, p. 25, unnumbered fig. Temblor Fm., Miocene. Tar Canyon, southwest of Avenal, Kings Co. WHC hypotype lost? **Remarks:** Because the author figured the same specimen (p. 25 and p. 206) as being from two localities, the exact locality of *Mytilus* of Fowkes 1982 is unknown. [Mytilidae].

....., p. 206, unnumbered fig. Etchegoin/Jacalitos Fm., Miocene/Pliocene. W-K Hill, north of Coalinga, Fresno Co. WHC hypotype lost?

Mytilus sp. Squires and Fritsche 1978. SEPM Guidebook 13:16, 17, pl. 1, fig. 7. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 412 [=LACMIP 16284]. Hypotype UCLA 58224 [=LACMIP 10580]. [Mytilidae].

Mytilus (subgenus?) n. sp. Allison and Addicott 1976. USGS PP 962:7, pl. 3, fig. 9. Jewett Sand (Pyramid Hill Member), Miocene. Kern River area, Kern Co. USGS M1591. Hypotype USNM 647077. [Mytilidae].

Nanaochlamys (Arnold, 1906). [*Pecten*]. Moore, 1984. USGS PP 1228-B:B31, pl. 8, figs. 4, 5. Purisima Fm., Pliocene. San Gregorio Creek area, Santa Cruz quad., San Mateo Co. CASG 68153. Holotype SU/CASG 6 [=CASG 61853.01]. [Pectinidae].

Nayadina (*Exputens*) *alexi* (Clark, 1934). [*Exputens*]. Moore 1983. USGS PP 1228-A:A86, pl. 26, figs. 8, 9. Domengine Fm., Eocene. Los Gatos Creek area, Coalinga quad., Fresno Co. UCMP A1007. Holotype UCMP 32386. **Remarks:** Junior synonym of *Nayadina* (*Exputens*) *llajasensis* (Clark, 1934), *fide* Squires (1990b: p. 309). [Malleidae].

Nayadina (*Exputens*) *llajasensis* (Clark, 1934). [*Exputens*]. Givens 1974. UCPG 109:44, pl. 1, fig. 9. Juncal Fm., Eocene. Hot Springs Creek area, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4659. Hypotype UCR 4659/81. [Malleidae].

Nayadina (*Exputens*) *llajasensis* (Clark, 1934). [*Exputens*]. Moore 1983. USGS PP 1228-A:A86, A87, pl. 26, figs. 10, 13. Llajas Fm., Eocene. Las Llajas Canyon Simi Valley quad. [=Santa Susana quad.], Ventura Co. UCMP 7004. Holotype UCMP 32391. [Malleidae].

Nayadina (*Exputens*) *llajasensis* (Clark, 1934). [*Exputens*]. Squires 1984. NHMLAC CS 350:43, figs. 10h, i. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotypes LACMIP 6569, 6570. [Malleidae].

Nayadina (*Exputens*) *llajasensis* (Clark, 1934). [*Exputens*]. Squires 1990b. Veliger 33(3):309, 311– 312, figs. 26–28, 30, 32, 33, 46. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1969), northern Simi Valley, Ventura Co. UCMP 7004. Holotype UCMP 32391, paratypes UCMP 32389, 32390, 32392, 32393. [Malleidae].

....., figs. 29, 31, 34–37, 41, 43. Las Llajas Canyon, Ventura Co. LACMIP22312. Hypotypes LACMIP 8306–8312.

....., figs. 38–40, 42, 44, 45. Domengine Fm., Eocene. Los Gatos Creek area, Alcalde Hills quad. (1969), Fresno Co. UCMP A1007. Holotype UCMP 32386, paratypes (of *Exputens alexi* Clark 1934) UCMP 32384, 32385.

Neaeromya (*Orbitella*) *compressa* (Dall, 1899b). [*Erycina*]. Moore 1992. USGS PP 1228-E: E10, pl. 4, figs. 5, 7. Lower Rio Dell Fm., Pliocene. Humboldt Co. UCMP B7380. Hypotype (of Roth 1979:pl. 3, figs. 6, 7 (as "*Orbitella*" *compressa*)), determined here as missing. [Lasaeidae].

Nemocardium (*Keenaea*) *centifilosum* (Carpenter, 1864b). [*Cardium*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):263–264, pl. 46, figs. 4, 5. San Diego Fm., Pliocene. San Diego, San Diego Co. [SDSNH 75]. Hypotype SDSNH 4347. [Cardiidae].

....., pl. 46, figs. 10, 15. San Diego well, Balboa Park, San Diego, San Diego Co. CASG 12078. Hypotype CASG [=CASG 7154].

Nemocardium linteum (Conrad, 1855b). [*Cardium*]. Stewart 1946. USGS PP 205-C:91, pl. 11, fig. 19. Avenal Sandstone, Eocene. Reef Ridge, Kettleman Plain quad., Kings Co. USGS 14483. Hypotype USNM 498720. [Cardiidae].

Nemocardium linteum (Conrad, 1855b). [*Cardium*]. Moore 1968. SDSNH Occas. Pap. 15:30, pl. 13, fig. d. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Rose Canyon, San Diego Co. SDSNH 2363. Hypotype SDSNH 4161]. [Cardiidae].

Nemocardium linteum (Conrad, 1855b). [*Cardium*]. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 7. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6806]. Hypotype UCR. 6806/5. [Cardiidae].

Nemocardium linteum (Conrad, 1855b). [*Cardium*]. Squires 1984. NHMLAC CS 350:49–50, fig. 12c. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6584. [Cardiidae].

Nemocardium linteum (Conrad, 1855b). [*Cardium*]. Squires 1987. NHMLAC CS 388:65–67, fig. 113. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 232 [=LACMIP 16075]. Hypotype LACMIP 7530. [Cardiidae].

Nemocardium linteum (Conrad, 1855b). [*Cardium*]. Squires 1988c. NHMLAC CS 398:19, fig. 51. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 981 [=LACMIP 16142]. Hypotype LACMIP 7731. [Cardiidae].

Nemocardium linteum (Conrad, 1855b). [*Cardium*]. Squires et al. 1988. SEPM Guidebook 58:185, pl. 1, fig. 8. Goler Fm., Eocene. Inyokern SE quad. (1972), El Paso Mtns., Kern Co. USGS M9067. Hypotype USNM 424896. [Cardiidae].

Nemocardium (*Nemocardium*) *linteum* (Conrad, 1855b) [*Cardium*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Cardiidae):14, pl. 3, fig. 5. Marysville Fm., Eocene. Marysville Buttes, Sutter Co. UCMP 1853. Holotype (of *Cardium dalli* Dickerson 1913) UCMP 11756. [Cardiidae].

Nemocardium linteum (Conrad, 1855b). [*Cardium*]. Squires 1999b. NHMLAC CS 479:25, 27, fig. 59. Santa Susana Fm., Eocene. North side Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 26111 (= CSUN 965). Hypotype LACMIP 12698. [Cardiidae].

Nemocardium linteum (Conrad, 1855b). [*Cardium*]. Squires 2008. NHMLAC CS 517:5, fig. 48. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13449. [Cardiidae].

Nemocardium Fowkes 1982. Coalinga Guidebook, p. 22, unnumbered fig. Avenal Sandstone, Eocene. Southeast of Les Sagaser Ranch, Kings Co. WHC hypotype lost? **Remarks:** Determined here as *Nemocardium linteum* (Conrad, 1855b). [Cardiidae].

....., p. 230, unnumbered fig. (refigured in Fowkes 1983, p. 32). North of Les Sagaser Ranch, Kings Co. WHC hypotype lost? **Remarks:** Determined here as *Nemocardium linteum* (Conrad, 1855b).

"*Nemodon*" *morani* (Waring, 1917). [*Cucullaea*]. Saul 1986. SEPM Guidebook 49:28, figs. 35, 36. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA. 6525 [=LACMIP 26525]. Hypotype LACMIP 7556. **Remarks:** In the genus *Cucullaea*, *fide* Moore (1983: p. A47). [Cucullaeidae].

Neotrapezium californicum Squires, 1999c (n. sp.) NHMLAC CS 480:19, 21, figs. 29–31, 33. Matilija Sandstone, Eocene. North Fork of Matilija Creek, Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1450 [=LACMIP 16963]. Holotype LACMIP 12459, paratypes LACMIP 12460, 12461, 12463. [Trapezidae].

....., fig. 32. Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1445 [=LACMIP 24259]. Paratype LACMIP 12462.

Netastoma squiresi Kennedy, 1993 (n. sp.). Jour. Paleo. 67(3):400–401, figs. 2.9, 2.10. Santa Susana Fm., Eocene. North side of Simi Valley, Ventura Co. LACMIP 12648. Holotype LACMIP 8405. [Pholadidae].

Netastoma squiresi Kennedy, 1993. Squires 1999b. NHMLAC CS 479:28, fig. 65. Santa Susana Fm., Eocene. North side Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 967 [=LACMIP 12648]. Holotype LACMIP 8405. [Pholadidae].

Netastomella rostrata (Valenciennes, 1846). [*Pholas*]. Addicott and Galehouse 1973. Jour. Res. USGS 1(5):510, 513, figs. e, j. Paso Robles Fm., Pliocene. Near Atascadero, San Luis Obispo Co. USGS M4621. Hypotypes USNM 646999, 647004. **Remarks:** *Netastoma rostratum* (Valenciennes, 1846), *fide* Coan et al. (2000: p. 502). [Pholadidae].

Nototeredo(?) sp. Squires and Kennedy 1998. Veliger 41(2):167–168, figs. 14–16. Santa Susana Fm., Paleocene. Locality now covered by 2 to 3 m of fill underlying a homesite, Trailer Canyon, east-central Santa Monica Mtns., Topanga quad. (1952, PR 1981), Los Angeles Co. LACMIP 16869 [=CSUN 1590). Hypotype LACMIP 7945. [Teredinidae].

Nucula? *bifida* Clark, 1918. Moore 1983. USGS PP 1228-A:A7, pl. 1, figs. 6, 7. San Ramon Fm., Miocene (?). On first ridge north of Sobrante Ridge, southeast of west fork of Bear Creek, Concord quad., Contra Costa Co. UCMP 331. Holotype UCMP 11184. [Nuculidae].

Nucula* (*Ennucula*) *balboana Hertlein and Grant, 1972 (n. sp.). SDSNH Mem. 2(2B):145–146, pl. 27, figs. 1–4. San Diego Fm., Pliocene. San Diego well, Balboa Park, San Diego, San Diego, Co. CASG 12099. Holotype CASG [=CASG 59684], paratype CASG [=CASG 59685, 2 unfigured paratypes CASG 59686, 59687]. **Remarks:** Valid species *fide* Moore (1983: p. A8); junior synonym of *Ennucula tenuis* (Montagu, 1808), *fide* Coan et al. (2000: p. 76). [Nuculidae].

Nucula (*Leionucula*) *balboana* Hertlein and Grant, 1972. Moore, 1983. USGS PP 1228-A:A8, pl. 1, fig. 10. San Diego Fm., Pliocene. Well in Balboa Park, San Diego, San Diego Co. CASG 12099. Holotype CASG 59684. **Remarks:** Valid species, *fide* Moore (1983: p. A8). Junior synonym of *Ennucula tenuis* (Montagu, 1808), *fide* Coan et al. (2000: p. 76). [Nuculidae].

Nucula* (*Ennucula*) *birchi Keen, 1943 (n. sp.). Tr.SDSNH 10(2):41, pl. 3, figs. 9–12. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121 [=CASG 71992]. Holotype SU 7527 [=CASG 72008], paratypes SU 7527a–b [=CASG 72008] [unfigured paratype SU 8014 [=CASG 8014]. **Remarks:** In the subgenus *Leionucula*, *fide* Moore (1983: p. A7). [Nuculidae].

....., [SDSNH 5422 (*ex* SU 2121). Unfigured paratypes SDSNH 611, 933].
Nucula (*Leionucula*) *birchi* Keen, 1943. Moore 1983. USGS PP 1228-A:A7–A8, pl. 1, figs. 8, 9. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Holotype SU/CASG 7527 [=CASG 72008]. [Nuculidae].

Nucula (*Nucula*) *capayensis* Schenck, 1939. Moore 1983. USGS PP 1228-A:A6, pl. 1, figs. 1, 2. Capay Fm., Eocene. Capay Valley quad., Yolo Co. UCMP A1319. Holotype UCMP 30196. [Nuculidae].

Nucula (*Nucula*) *cooperi* Dickerson, 1913. Moore 1983. USGS PP 1228-A:A6–A7, pl. 1, figs. 3, 4. Capay Fm., Eocene. Marysville [Sutter] Buttes, Marysville [Sutter] Buttes quad., Sutter, Co. UCMP 1853. Lectotype (as holotype in pl. caption) (of Moore 1983: p. A6) UCMP 11754a. [Nuculidae].

Nucula (*Lamellinucula*) *exigua* G.B. Sowerby I, 1833. Hertlein and Grant 1972. SDSNH Mem. 2(2B):146–147, pl. 27, figs. 5, 6. San Diego Fm., Pliocene. Near the U.S./Mexico boundary, San Diego Co. UCLA 312 [=LACMIP 20312]. Hypotype UCLA 48610 [=LACMIP 9287]. [Nuculidae].

Nucula (*Lamellinucula*) *exigua* G.B. Sowerby I, 1833. Moore, 1983. USGS PP 1228-A:A8, pl. 1, fig. 13. San Diego Fm., Pliocene. Near the U.S./Mexico boundary, San Diego Co. UCLA312 [=LACMIP 20312]. Hypotype (of Hertlein and Grant 1972, pl. 27, figs. 5, 6) UCLA 48610 [=LACMIP 9287]. [Nuculidae].

Nucula* (*Lamellinucula*) *kennedyi Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1284, 1286, figs. 1A, B. Santa Susana Fm., Paleocene. First concretionary horizon above the Las Virgenes Sandstone, Thousand Oaks quad., Simi Hills, Ventura Co. UCR 6683. Holotype UCR 6683/300, paratype UCR 6683/301. [Nuculidae].

Nucula (*Leionucula*) *postangulata* Clark, 1918. Moore 1983. USGS PP 1228-A:A8, pl. 1, fig. 12. San Ramon Fm., Miocene (?). On Sobrante Ridge, Concord quad., Contra Costa Co. UCMP 2754. Holotype UCMP 11260. [Nuculidae].

Nucula (*Nucula*) *vitis* Anderson and G.D. Hanna, 1925. Moore 1983. USGS PP 1228-A:A7, pl. 1, fig. 5. Tejon Fm., Eocene. Near mouth of Grapevine Canyon, Tejon quad., Kern Co., CASG 245. Holotype CASG 788. [Nuculidae].

Nucula (*Lamellinucula*) n. sp. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 1. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 6683]. Hypotype UCR 6683/301 (not UCR 6683/12 as in pl. caption). **Remarks:** *Nucula* (*Lamellinucula*) *kennedyi* n. sp., *fide* Zinsmeister (1983b: p. 1284). [Nuculidae].

Nuculana (*Saccella*) *alaeformis* (Gabb, 1869b). [*Corbula*]. Moore 1983. USGS PP 1228-A:A15, A16, pl. 2, fig. 9. Martinez Fm., Paleocene. Near Lower Lake, Lake Co.. USGS 4192. Hypotype (of Stanton 1896, pl. 64, fig. 7 (as *Leda alaeformis*)) USNM 157829. [Nuculanidae].

....., pl. 2, fig. 10. Lower Lake quad., Lake Co. UCMP12093. Paratype UCMP 32515.

Nuculana (*Saccella*) *alaeformis* (Gabb, 1869b). [*Corbula*]. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 2. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR6683. Hypotype UCR 6683/28 (not UCR 6682/28 as in pl. caption). [Nuculanidae].

Nuculana (*Saccella*) *cahillensis* (Arnold, 1908). [*Leda*]. Moore 1983. USGS PP 1228-A:A17, pl. 2, fig. 34. Vaqueros Fm. (not Butano (?) Ss., Eocene as in text), Oligocene/Miocene (in pl. caption and in CASG online database). Locality 57, west of Woodside, Santa Cruz quad., San Mateo Co. Holotype SU/CASG 5368 (not SU/CASG 5386 as in text) [=CASG 71658]. [Nuculanidae].

Nuculana (*Saccella*) *chaneyi* Vokes, 1939. Moore 1983. USGS PP 1228-A:A16–A17, pl. 2, figs. 12, 13. Avenal Sandstone, Eocene. East side of Big Tar Canyon, Cholame quad., Kings Co. UCMP A1165 and A976. Syntypes UCMP 15745, 15746. [Nuculanidae].

Nuculana chehalisensis (Weaver, 1912). [*Leda*]. Lutz 1951. UCPG 28(13):384, pl. 15, fig. 4. Sobrante Fm., Miocene. Contra Costa Co. UCMP A4928. Hypotype UCMP 34120. **Remarks:** In the subgenus *Saccella*, *fide* Moore (1983:p. A18. [Nuculanidae].

Nuculana (*Saccella*?) *denominata* (G D. Hanna, 1924). [*Leda*]. Moore 1983. USGS PP 1228-A:A21, pl. 2, fig. 40. Martinez Fm., Paleocene. South of Stewartville, Mt. Diablo quad., Contra Costa Co. UCMP 1556. Holotype (of *Leda milleri* Dickerson, 1914a [=*Leda denominata* G D. Hanna 1924: p. 169) UCMP 11663, new name for *Leda milleri* Dickerson, 1914a, preoccupied]. [Nuculanidae].

Nuculana (*Nuculana*?) *elongorostrata* (Clark, 1918). [*Leda*]. Moore 1983. USGS PP 1228-A:A15, pl. 3, fig. 1. Kirker Tuff, Oligocene. Sobrante Ridge, on west fork of Bear Creek, Contra Costa Co. UCMP 2755. Holotype UCMP 11206. [Nuculanidae].

Nuculana (*Saccella*?) *fabata* (Nelson, 1925). [*Leda*]. Moore 1983. USGS PP 1228-A:A21, pl. 2, fig. 39. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Valley, Santa Susana quad., Ventura Co. UCMP 3752. Holotype UCMP 30717. [Nuculanidae].

Nuculana (*Saccella*) *furlongi* (Trask, 1922). [*Leda*]. Moore 1983. USGS PP 1228-A:A19, pl. 2, figs. 35, 36. Briones Fm., Miocene. Concord quad., Contra Costa Co. UCMP 15. Holotype UCMP 12362. [Nuculanidae].

Nuculana furlongi (Trask, 1922). [*Leda*]. Powell 2015. WSM Ann. Rept. 45:59–60, figs. 3–5 (as *Nuculana forlongi*). Monterey Fm., Miocene. Arroyo Seco, west of Grenfield, Monterey Co. [CASG 101093. Hypotypes CASG 101107–101109]. [Nuculanidae].

Nuculana (*Saccella*) *gabbi* (Gabb, 1869b). [*Leda*]. Shimer and Shrock 1944. Index. Foss. N.A., p. 377, pl. 146, fig. 32 (refigured from Stewart 1930, pl. 7, fig. 3 as *Saccella gabbii* (Gabb 1864)). Martinez Fm., Eocene. Martinez, Contra Costa Co. Lectotype (of Stewart 1930: p. 56) ANSP 4476]. **Remarks:** Should be cited as *Nuculana* (*Saccella*) *gabbi* Conrad (ms.) of Gabb 1869b (not 1864). See Groves and Squires 2018: p. 49 regarding *Leda protexta*? Gabb, for an explanation of the complicated naming history of this species. Type material missing, *fide* K. Estes-Smargiassi (personal communication, 2019). [Nuculanidae].

Nuculana (*Saccella*) *gabbii* (Gabb, 1869b). [*Leda*]. Weaver and Kleinpell 1963. UCPG 43:195, pl. 28, fig. 1. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek area, Lompoc quad., Santa Barbara Co. UCMP B6957. Hypotype SU 9246 [=CASG 70197]. **Remarks:** Should be cited as *Nuculana* (*Saccella*) *gabbi* Conrad (ms.) of Gabb 1869 (not 1864). See Groves and Squires 2018: p. 49 regarding *Leda protexta*? Gabb, for an explanation of the complicated naming history of this species. [Nuculanidae].

Nuculana (*Saccella*) *gabbii* (Gabb, 1869b). [*Leda*]. Givens 1974. UCPG 109:39, pl. 1, fig. 3. Matilija Fm., Eocene. San Guillermo quad. (1943), Ventura Co. UCR 4743. Hypotype UCR 4743/301. **Remarks:** Should be cited as *Nuculana* (*Saccella*) *gabbi* Conrad (ms.) of Gabb 1869b, (not 1864). See Groves and Squires 2018: p. 49 regarding *Leda protexta*? Gabb, for an explanation of the complicated naming history of this species. [Nuculanidae].

Nuculana gabbii (Gabb, 1869b). [*Leda*]. Deméré et al. 1979. SEPM Guidebook 4:98, pl. 1, fig. 13. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20770. **Remarks:** In the subgenus *Saccella*, *fide* Moore (1983: p. A16). **Remarks:** Should be cited as *Nuculana* (*Saccella*) *gabbi* Conrad (ms.) of Gabb 1869b (not 1864). See Groves and Squires (2018: p. 49) regarding *Leda protexta*? Gabb, for an explanation of the complicated naming history of this species. [Nuculanidae].

Nuculana (*Saccella*) *gabbii* (Gabb, 1869b). [*Leda*]. Moore,1983. USGS PP 1228-A:A16, pl. 2, figs. 7, 8. So-called Tejon Fm., Eocene [=probably Vine Hill Fm., Paleocene]. Martinez, Contra Costa Co. Lectotype (of Stewart, 1930: p. 56) ANSP 4476, hypotype ANSP. 4476a. **Remarks:** See Weaver (1953: p. 28) for probable occurrence of this species in the area of the type locality. Should be cited as *Nuculana* (*Saccella*) *gabbi* Conrad (ms.), of Gabb 1869b, (not 1864). See Groves and Squires (2018: p. 49) regarding *Leda protexta*? Gabb, for an explanation of the complicated naming history of this species. [Nuculanidae].

Nuculana (*Calorhadia*) *gabbii* (Gabb, 1869b). [*Leda*]. Zinsmeister, 1983a. SEPM Guidebook 35:67, pl. 1, fig. 3. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 6684]. Hypotype UCR 6684/19 (not UCR 6684/1 as in pl. caption). **Remarks:** In the subgenus *Saccella*, *fide* Moore (1983: p. A16). Should be cited as *Nuculana* (*Saccella*) *gabbi* Conrad (ms.) of Gabb 1869b (not 1864). See Groves and Squires (2018: p. 49) regarding *Leda protexta*? Gabb, for an explanation of the complicated naming history of this species. [Nuculanidae].

Nuculana (*Saccella*) *gabbii* (Gabb, 1869b). [*Leda*]. Squires, 1984. NHMLAC CS 350:41, fig. 10b. Llajas Fm., Eocene. Santa Susana quad., Los Angeles Co. CSUN 467 [=LACMIP 16079]. Hypotype UCLA 59279 [=LACMIP 10559]. **Remarks:** Should be cited as *Nuculana* (*Saccella*) *gabbi* Conrad (ms.), of Gabb 1869b (not 1864). See Groves

and Squires (2018: p. 49) regarding *Leda protexta*? Gabb, for an explanation of the complicated naming history of this species. [Nuculanidae].

Nuculana (*Saccella*) *gabbi* (Gabb, 1869b). [*Leda*]. Throckmorton 1988a. USGS OFR 88-59:50, pl. 6, figs. 6, 8 (peels) (fig. 6 refigured in Throckmorton 1988b, pl. 1, fig. 18). Tesla, Eocene. Midway quad., Alameda Co. UCMP D8151. **Remarks:** UCMP unnumbered hypotype lost *fide*, C. Throckmorton (personal communication, 2002). Should be cited as *Nuculana* (*Saccella*) *gabbi* Conrad (ms.) of Gabb 1869b (not 1864). See Groves and Squires (2018: p. 49) regarding *Leda protexta*? Gabb, for an explanation of the complicated naming history of this species. [Nuculanidae].

Nuculana (*Saccella*) *gabbii* (Gabb, 1869b). [*Leda*]. Squires 1999b. NHMLAC CS 479:23, fig. 50 (peel). Santa Susana Fm., Eocene. Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 967 (=LACMIP 12648). Hypotype LACMIP 12694. **Remarks:** Should be cited as *Nuculana* (*Saccella*) *gabbi* Conrad (ms.) of Gabb 1869b (not 1864). See Groves and Squires (2018: p. 49) regarding *Leda protexta*? Gabb, for an explanation of the complicated naming history of this species. [Nuculanidae].

Nuculana (*Saccella*) *hindsii* (Hanley, 1860). [*Leda*]. Moore 1983. USGS PP 1228-A:A20–A21, pl. 2, figs. 30, 31. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge southeast of Orcutt, Santa Barbara Co. USGS 14648]. Hypotype (of Woodring and Bramlette 1950 [1951], pl. 16, fig. 18, as *Saccella redondoensis* (Burch, 1944)) USNM 560096. [Nuculanidae].

Nuculana (*Saccella*) *hondana* Vokes, 1939. Givens 1974. UCPG 109:39, pl. 1, fig. 4. Juncal Fm., Eocene. Hot Springs Creek, Topatopa Mtns. Quad. (1943), Ventura Co. UCR 4662. Hypotype UCR 4662/12. [Nuculanidae].

Nuculana (*Saccella*) *hondana* Vokes, 1939. Moore 1983. USGS PP 1228-A:A16, pl. 2, fig. 42. Lodo Fm. (Cerros Shale Member), Paleocene [Eocene]. Vicinity of where Urruttia Canyon enters Salt Creek, Coalinga quad., Fresno Co. UCMP 1817. Holotype UCMP 15561. [Nuculanidae].

Nuculana (*Nuculana*) aff. *N.* (*N.*) *leonina* (Dall, 1896a). [*Leda*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):149, pl. 57, figs. 17, 20 (as *Nuculana* aff. *N. leonina*). San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP [4451]. [Nuculanidae].

Nuculana (*Saccella*) *markleyensis* (Clark, 1918). [*Leda*]. Moore 1983. USGS PP 1228-A:A18–A19, pl. 3, fig. 2. San Ramon Fm., Miocene(?). Near mouth of Markley Canyon, Mt. Diablo quad., Contra Costa Co. UCMP 3081. Holotype UCMP 11272. [Nuculanidae].

Nuculana ochsneri (Anderson and Martin, 1914). [*Leda*]. Adegoke 1969. UCPG 80:89, pl. 1, fig. 15 [as *ochosneri* in pl. caption]. Temblor Fm., Miocene. Reef Ridge quad., Fresno Co. UCMP D1056. Hypotype UCMP 33505. **Remarks:** In the subgenus *Saccella*, *fide* Moore (1983: p. A19). [Nuculanidae].

Nuculana (*Saccella*) *ochsneri* (Anderson and Martin, 1914). [*Leda*]. Moore 1983. USGS PP 1228-A:A19, pl. 2, figs. 24, 25. Round Mtn. Silt, Miocene. North bank of Kern River, Caliente quad., Kern Co. CASG 68. Holotype CASG 103 [=CASG 68.01]. [Nuculanidae].

Nuculana (*Saccella*) *orcutti* (Arnold, 1907). [*Leda*]. Moore 1983. USGS PP 1228-A:A20, pl. 2, figs. 28, 29. Careaga Fm., Pliocene. South of Guadelupe [*sic*], Santa Barbara Co. USGS 4473. Holotype USNM 165271. [Nuculanidae].

Nuculana (*Saccella*?) *packardi* (Dickerson, 1914a). [*Leda*]. Moore 1983. USGS PP 1228-A:A21, pl. 2, fig. 32. Martinez Fm., Paleocene. Near Lower Lake, Lake Co. UCMP 784. Holotype UCMP 11725. [Nuculanidae].

Nuculana (*Saccella*) cf. *N.* (*S.*) *parkei coosensis* Turner, 1938. Givens and Kennedy 1976. Jour. Paleo. 50(5):969, 973–974, pl. 4, figs. 10, 11. Delmar Fm. [=Santiago Fm.?], Eocene. Near Vista and San Marcos, San Diego Co. UCR 4865. Hypotype UCR 4865/140. **Remarks:** Provisionally in the genus *Hilgardia*?, *fide* Moore (1983: p. A23). [Nuculanidae].

Nuculana (*Nuculana*) *pernula* Müller, 1779. Moore 1983. USGS PP 1228-A:A15, pl. 2, fig. 6. "Fernando Fm.", Pliocene. Upper Newport Bay, Orange Co. UCR 4915. Hypotype UCR 4915/317, determined here as missing. [Nuculanidae].

Nuculana (*Costelloleda*?) *powersi* (Dickerson, 1914a). [*Yoldia*?]. Moore, 1983. USGS PP 1228-A:A15, pl. 4, figs. 4, 5. Martinez Fm., Paleocene. Near Stewartville, Mt. Diablo quad., Contra Costa Co. UCMP 1556. Holotype UCMP 11724. [Nuculanidae].

Nuculana (*Saccella*) *pulchrisinuosa* (Clark, 1918). [*Leda*]. Moore 1983. USGS PP 1228-A:A18, pl. 2, figs. 18, 19. San Ramon Fm., Miocene. Near mouth of Markley Canyon, Mount Diablo quad., Contra Costa Co. UCMP 3081. Holotype UCMP 11109. [Nuculanidae].

Nuculana (*Saccella*?) *ramonensis* (Clark, 1918). [*Leda*]. Moore 1983. USGS PP 1228-A:A21, pl. 2, fig. 33. San Ramon Fm., Miocene(?).Contra Costa Co. UCMP 1131. Holotype UCMP 11167. [Nuculanidae].

Nuculana taphria (Dall, 1896b). [*Leda*]. Peck 1960. UCPG 36(4):240, pl. 21, fig. 7. Ohlson Ranch Fm., Pliocene. Sonoma Co. UCMP B2062. Hypotype UCMP 31559. **Remarks:** In the genus *Saccella*, *fide* Coan and Valentich-Scott (2012: p. 74). [Nuculanidae].

Nuculana taphria (Dall, 1896b). [*Leda*]. Adegoke 1969. UCPG 80:89, pl. 1, fig. 9. Etchegoin Fm., Pliocene. Domengine Ranch quad., Fresno Co. UCMP B6532. Hypotype UCMP 33331. **Remarks:** In the genus *Saccella*, *fide* Coan and Valentich-Scott (2012: p. 74). [Nuculanidae].

Nuculana (*Saccella*) *taphria* (Dall, 1896b). [*Leda*]. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):150–151, pl. 27, figs. 11–13, 16–18. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4452–4456. **Remarks:** In the genus *Saccella*, *fide* Coan and Valentich-Scott (2012: p. 74). [Nuculanidae].

Nuculana taphria (Dall, 1896b). [*Leda*]. Valpey 1975. Earth Sci. 28(4):189, unnumbered upper fig. Puente Fm., Miocene. Near Elsereno [*sic*], Los Angeles Co. Hypotype current whereabouts unknown. **Remarks:** In the genus *Saccella*, *fide* Coan and Valentich-Scott (2012: p. 74). [Nuculanidae].

Nuculana (*Saccella*) *taphria* (Dall, 1896b). [*Leda*]. Moore 1983. USGS PP 1228-A:A19–A20, pl. 2, figs. 22, 23. San Diego Fm., Pliocene. Balboa Park, San Diego, San Diego Co. SDSNH 1965. Hypotype (of Moore 1968, pl. 23, figs. e, g) SDSNH 77 [=SDSNH 4167]. **Remarks:** In the genus *Saccella*, *fide* Coan and Valentich-Scott (2012: p. 74). [Nuculanidae].

Nuculana temblorensis (Anderson and Martin, 1914). [*Yoldia*]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):170, fig. 62-8. Temblor Fm., Miocene. Kern Co. CASG 26064. Hypotype CASG 5704. **Remarks:** In the genus *Yoldia*, *fide* Moore (1983: p. A23). [Yoldiidae].

Nuculana (*Saccella*) *uvasana* (Dickerson, 1915). [*Leda*]. Moore 1983. USGS PP 1228-A:A17, pl. 2, figs. 11, 41. Tejon Fm., Eocene. Live Oak Creek, Tejon quad., Kern Co. CASG 244. Holotype CASG 250, paratype CASG 251. [Nuculanidae].

Nuculana washingtonensis (Weaver, 1916). [*Leda*]. Phillips et al. 1974. SEPM Guidebook, p. 123, pl. 3, fig. 11 (peel). Tumey Fm., Eocene/Oligocene. Monocline Ridge, Fresno Co. [UCMP D6533]. Hypotype UCMP 37165. **Remarks:** In the subgenus *Saccella*, *fide* Moore (1983: p. A17). [Nuculanidae].

....., pl. 3, fig. 12 (peel). Monocline Ridge, Fresno Co. UCMP D6555 Hypotype UCMP 37166.

....., pl. 3, fig. 8 (with *Macoma pittsburgensis*) (peel). Monocline Ridge, Fresno Co. UCMP D6522. Hypotype UCMP 14052.

Nuculana washingtonensis (Weaver, 1916). [*Leda*]. Watkins 1974. Paleo.3 15:255, fig. 8C [peel, CASG]. Kreyenhagen Fm., Oligocene. Monocline Ridge, Monocline Ridge quad., Fresno Co. UCMPD6533. Hypotype UCMP 37165. **Remarks:** In the subgenus *Saccella*, *fide* Moore (1983: p. A17). [Nuculanidae].

....., fig. 8D [peel, CASG]. Monocline Ridge, Monocline Ridge quad., Fresno Co. UCMP D6555]. Hypotype UCMP 37166.

Nuculana n. sp.? Lutz 1951. UCPG 28(13):384, pl. 15, fig. 7. Sobrante Fm., Miocene. Crow Canyon, Hayward quarangle, Alameda Co. UCMP A4565. Hypotype UCMP 34122. [Nuculanidae].

Nuculana sp. Weaver and Kleinpell 1963. UCPG 43:195, pl. 28, figs. 2,3. Middle Gaviota Fm., Eocene. Ridge west of El Bulito, Pt. Conception quad., Santa Barbara Co. UCMP B6994. Hypotype SU 9247 [=CASG 70196]. [Nuculanidae].

Nuculana ("*Leda*") Fowkes 1982. Coalinga Guidebook, p. 24, unnumbered fig. Tumey Fm., Oligocene. Ciervo Hills, Fresno Co. WHC hypotype lost? **Remarks:** Determined here as *Nuculana* (*Saccella*) *washingtonensis* (Weaver, 1916). [Nuculanidae].

Nuculana (*Saccella*(?)) Rugh 2018. Desert Symposium vol.:112, figs. 3A–F. Reata Glen, northeast of San Juan Capistrano, Orange Co. Monterey Fm., Miocene. [Hypotype at CC]. [Nuculanidae].

Nuculana (*Scaeoleda*) sp. Throckmorton 1988a. USGS OFR 88-59:50, pl. 8, fig. 5. Tesla Fm., Eocene. From isolated sandstone block (float?) Midway quad., Alameda Co. UCMP D8157. UCMP unnumbered hypotype lost *fide*, C. Throckmorton (personal communication, 2002). [Nuculanidae].

Nuttallia alata (Gabb, 1866). [*Gari*]. Moore 2003b. USGS PP 1228-G [electronic format] (family Psammobiidae):8–9, pl. 10, fig. 3 [as *Nuttalia alata* in pl. caption]. San Pablo Fm., Miocene. East of Kirker Creek, north of Mt. Diablo, Contra Costa Co. UCMP 62.]. Hypotype (of Clark 1915, pl. 62, fig. 5) UCMP 11528. [Psammobiidae].

Nuttallia howardi (Dickerson, 1915). [*Tellina*]. Moore 2003b. USGS PP 1228-G [electronic format] (family Psammobiidae):8, pl. 10, fig. 2 [as *Nuttalia howardi* in pl. caption]. Tejon Fm., Eocene. Live Oak Canyon, Tejon quad., Kern Co. CASG 244. Holotype [CASG. 271 not UCMP 271 as cited]. [Psammobiidae].

Nuttallia jamesi Roth and Guruswami-Naidu, 1974 (n. sp.). BSCAS 73(3):141–145, figs. 1–3, 5–7. Merced Fm., Pliocene [=Wilson Grove Fm., Miocene/Pliocene]. Near town of Trenton Sebatsopol quad. (1954), Sonoma Co. CASG 54164. Holotype CASG 54330 [=CASG 54164.01], paratypes CASG 54331, 54332 [=CASG 54164.02, 54164.03], 2 unfigured paratypes CASG 54164.04, 54164.05. [Psammobiidae].

....., "Merced Fm.," Pliocene [=Wilson Grove Fm., Miocene/Pliocene]. North of Trenton, Sonoma Co. LACMIP 16294. Unfigured paratype LACMIP 4980.

Nuttallia salina Roth and Guruswami-Naidu, 1978 (n. sp.). Jour. Paleo. 52(1):62–66, figs.1a–d, f; figs. 2a, 2b. Pancho Rico Fm., Miocene. Lynch Canyon, Salinas Valley, San Ardo quad., Monterey Co. USGS M2283. Holotype USNM 242417, paratypes USNM 242419–242421, unfigured paratypes USNM 242418, 242422. [Psammobiidae].

Nuttallia salina Roth and Guruswami-Naidu, 1978. Moore 2003b. USGS PP 1228-G [electronic format] (family Psammobiidae):9–10, pl. 10, fig. 4 [as *Nuttalia salina* in pl. caption]. Pancho Rico Fm., Miocene. Lynch Canyon, San Ardo quad., Monterey Co. USGS. M2283. Holotype USNM 242417. [Psammobiidae].

Nymphalucina panochensis Kiel , 2013 (n. sp.). Jour. Moll. Studies 79:359–360, fig. 16a. Moreno Fm., Cima Sandstone lens, Paleocene. Cold-seep deposit, Escarpado Canyon, Panoche Hills, west side San Joaquin Valley. San Benito Co. [no locality number given]. Paratype GZG.INV.88316. [Lucinidae].

....., figs. 16b, 16c. Paleocene. Moreno Fm., Paleocene. Panoche Hills, no locality given. Holotype GZG.INV 88316.

....., fig. 16d. Paleocene. Moreno Fm., Paleocene. Panoche Hills, no locality given. Paratype GZG.INV 88318.

Odontogryphaea? *haleyi* (Hertlein, 1933). [*Ostraea*]. Givens 1974. UCPG 109:45, pl. 1, figs. 11–13. Juncal Fm., Eocene. Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4670. Hypotypes UCR 4670/32–4670/34. **Remarks:** In the genus *Phygraea*, *fide* Squires (2018a: p. 16). [Gryphaeidae].

Oppenheimopecten coalingensis (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B76, pl. 33, fig. 3. Etchegoin Fm., Pliocene. Kreyenhagen Ranch on Zapata Chino Creek, Fresno Co. Lectotype (of Moore 1984: p. B76) SU/CASG. [Pectinidae].

Oppenheimopecten juanensis (Grant and Stevenson, 1948). [*Pecten*]. Moore 1984. USGS PP 1228-B:B75–B76, pl. 33, fig. 5. Neroly Fm., Miocene. San Juan Creek, San Luis Obispo Co. UCLA 435 [=LACMIP 20435]. Holotype UCLA. 10441 [=LACMIP. 9137]. [Pectinidae].

Oppenheimopecten sanctaecruzensis (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B75, pl. 32, fig. 3. Pleito Fm., Oligocene. West side of Salt Creek, Kern Co. UCMP 3231. Holotype (of *Pecten dickersoni* Wagner and Schilling, 1923) UCMP 11416. [Pectinidae].

....., pl. 33, fig. 2. Vaqueros Fm., Oligocene/Miocene. Near junction of Two Bar Creek with San Lorenzo River, Santa Cruz Co. SU 111. Holotype SU/CASG 360 [=CASG 61947.01].

Ostera vespertina* Conrad, 1854. Squires and White 1983. SEPM Guidebook 35:222, pl. 1, fig. 4. Saugus Fm. [=Pico Fm.], Pliocene. Browns Canyon, Los Angeles Co. CSUN241D (not CSUN 757 as in fig. caption)] [=LACMIP 16171].

Hypotype UCLA 59406 [=LACMIP 8319]. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). Error for *Ostrea*. [Ostreidae].

Ostrea altatemblorensis Grant and Eaton *in* Eaton et al., 1941 (n. sp.). BAAPG 25(2):220, pl. 2, fig. 2. Temblor Fm., Miocene. Caliente Range, San Luis Obispo Co. UCLA 512 [=LACMIP 20512]. Holotype UCLA 8970 [=LACMIP 8953], [unfigured paratypes UCLA 8966, 8968, 8969, 8971, 8974], [=LACMIP 8954–8958]. **Remarks:** Junior synonym of *Crassostrea*? *ashleyi* (Hertlein, 1934), *fide* Moore (1987: p. C39). [Ostreidae].

....., UCLA 502 [=LACMIP 20502]. Unfigured paratypes, UCLA 8967, 8972, 8973 [=LACMIP 8959–8961].

Ostrea angelica Rochebrune, 1895. Hertlein and Grant 1972. SDSNH Mem. 2(2B):216–217, pl. 38, figs. 2,3. San Diego Fm., Pliocene. San Diego, San Diego Co. UCLA 303 [=LACMIP 20303]. Hypotype UCLA 4008 [=LACMIP 9294]. **Remarks:** Provisionally in the genus *Dendostrea*?, *fide* Moore (1987: p. C26). [Ostreidae].

Ostrea arnoldi Adegoke, 1969 (n. sp.). UCPG 80:106–107, pl. 4, figs. 1, 2, 6, 9; pl. 5, fig. 5. Temblor Fm., Miocene. Domengine Ranch quad., Fresno Co. UCMP D1075. Holotype UCMP 36646, paratypes UCMP 36647, 36648. **Remarks:** Junior synonym of *Crassostrea*? *ashleyi* (Hertlein, 1934), *fide* Moore (1987: p. C39). [Ostreidae].

Ostrea ashleyi Hertlein, 1934. Addicott 1965b. USGS PP 525-C:C106, fig. 4q. Olcese Sand, Miocene. Bakersfield quad. (1906), Kern Co. UCMP B1643. Hypotype UCMP 36565. **Remarks:** Provisionally in the genus *Crassostrea*?, *fide* Moore (1987:p. C39). [Ostreidae].

Ostrea ashleyi Hertlein, 1934. Adegoke 1969. UCPG 80:107–108, pl. 4, fig. 5. Temblor Fm., Miocene. Domengine Ranch quad., Fresno Co. UCMP D1075. Hypotype UCMP 36651. **Remarks:** Provisionally in the genus *Crassostrea*?, *fide* Moore (1987: p. C39). [Ostreidae].

Ostrea atwoodi Gabb, 1866. Woodring et al. 1940 [1941]. USGS PP 195:92, pl. 29, fig. 1. Etchegoin Fm. (*Pseudocardium* Zone), Pliocene. Arroyo Largo, North Dome, Kettleman Hills, Kings Co. USGS 12504. Hypotype USNM 495783. **Remarks:** In the subgenus *Ostrea*, *fide* Moore (1987: p. C28). [Ostreidae].

....., pl. 29, fig. 13. North branch of Arroyo Torcido, east of Double Hill, North Dome, Kettleman Hills, Kings Co. USGS 12400. Hypotype USNM 495795.

Ostrea atwoodi Gabb, 1866. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 3, figs. 3, 7. Pancho Rico Fm., Miocene/Pliocene. Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M1939. Hypotype USNM 649094. **Remarks:** In the subgenus *Ostrea*, *fide* Moore (1987: p. C28). [Ostreidae].

Ostrea atwoodi Gabb, 1866. Addicott and Galehouse, 1973. Jour. Res. USGS 1(5):510, 513, figs. p, r. Paso Robles Fm., Pliocene. Near Atascadero, San Luis Obispo Co. USGS M4621. Hypotypes USNM 416485, 647009. **Remarks:** Label in USNM collection for 416485 reads "specimen never received from author" and presumably determined here missing.. In the subgenus *Ostrea*, *fide* Moore (1987: p.C28). [Ostreidae].

Ostrea (*Ostrea*) *atwoodi* Gabb, 1866. Moore 1987. USGS PP 1228-C:C28, pl. 30, figs. 7, 9. Pancho Rico Fm., Miocene. Pancho Rico Creek, Monterey Co. USGS M1939. Hypotype (of Durham and Addicott 1965, pl. 3, figs. 3, 7) USNM 649094. [Ostreidae].

Ostrea bourgeoisii Rémond, 1863. Eaton et al, 1941. Bull. AAPG 25(2): pl. 3, fig. 1. Briones Fm., Miocene. Caliente Range, San Luis Obispo Co. UCLA 1820 [=LACMIP 21820]. Hypotype UCLA 8975 [=LACMIP 8967]. **Remarks:** Provisionally in the genus S*triostrea*?, *fide* Moore (1987: p. C34). [Ostreidae].

Ostrea bourgeoisii Rémond, 1863. Hertlein 1951. CDM Bull. 154:189, fig. 1.1. Basal San Pablo Fm. [=Cierbo Fm.], Miocene. Kirker's Pass, west side of Markley Canyon, Mt. Diablo quad., Contra Costa Co. UCMP 2040. [Hypotype (of Clark 1915, pl. pl. 43, fig. 1) UCMP 11566]. **Remarks:** Provisionaly in the genus *Striostrea*?, *fide* Moore (1987: p. C34). [Ostreidae].

Ostrea cierboensis Grant and Eaton *in* Eaton et al., 1941 (n. sp.). Bull. AAPG 25(2):pl. 3, fig. 2. Cierbo Fm., Miocene. Caliente Range, San Luis Obispo Co. UCLA 1751 [=LACMIP 21751]. Holotype UCLA 8980 [=LACMIP 8968], [unfigured paratypes UCLA 8981, 8982] [=LACMIP 8969, 8970]. **Remarks:** Junior synonym of *Crassostrea*? *eucorrugata* (Hertlein, 1934), *fide* Moore (1987: p. C39). [Ostreidae].

Ostrea eldridgei Arnold, 1907. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):174, fig. 63-16. Vaqueros Fm., Miocene. Ventura Co. CASG 27409. Hypotype CASG 5964. **Remarks:** Provisionally in the genus/subgenus *Pycnodonte*? (*Crenostrea*?), *fide* Moore (1987: p. C22). [Gryphaeidae].

Ostrea eldridgei Arnold, 1907. Squires and Fritsche 1978. SEPM Guidebook 13:19, 22, pl. 4, fig. 1. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 48 [=LACMIP 16297]. Hypotype UCLA 58199 [=LACMIP 10589]. **Remarks:** Provisionally in the genus/subgenus *Pycnodonte*? (*Crenostrea*?), *fide* Moore (1987: p. C22). [Gryphaeidae].

Ostrea eldridgei Arnold, 1907. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. D. San Onofre Breccia, Miocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8764 [=SBMNH 60174]. **Remarks:** Provisionally in the genus/subgenus *Pycnodonte*? (*Crenostrea*?), *fide* Moore (1987: p. C22). [Gryphaeidae].

Ostrea eldridgei ynezana Loel and Corey, 1932. Addicott 1965b. USGS PP 525-C:C104, fig. 3f. Jewett Sand, Miocene. *Ostrea* biostrome, Woody quad. (1952), Kern Co. UCMP B1654. Hypotype UCMP 36551. **Remarks:** A valid full species in the genus/subgenus *Pycnodonte* (*Pycnodonte*), *fide* Moore (1987: p. C18). [Gryphaeidae].

Ostrea eldridgei ynezana Loel and Corey, 1932. Squires and Fritsche 1978. SEPM Guidebook 13:19, 20, pl. 3, fig. 5. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 53 [=LACMIP 16298]. Hypotype UCLA 58203 [=LACMIP 10590]. **Remarks:** A valid full species in the genus/subgenus *Pycnodonte* (*Pycnodonte*), *fide* Moore (1987: p. C18). [Gryphaeidae].

Ostrea englekyi Hertlein, 1928a. Bereskin and Edwards 1969. AAPG/SEPM Guidebook, p. 77, pl. 32, figs. 4a, b. Vaqueros Fm., Miocene. Upper Cañada Posa, Santa Cruz Is., California Channel Ids. UCSB JK-FA65-106A [=LACMIP 16428]. Hypotype UCSB M10 [=LACMIP 6295]. **Remarks:** Provisionally in the genus *Crassostrea*?, *fide* Moore (1987: p. C38). [Ostreidae?].

Ostrea erici Hertlein, 1929a. Woodring and Bramlette 1950 [1951]. USGS PP 222:85, pl. 8, figs. 17, 18. Sisquoc Fm. (diatomaceous strata), Miocene. Graciosa Ridge near Orcutt, Santa Barbara Co. USGS 14903. Hypotype USNM 560035. **Remarks:** In the genus/subgenus *Pycnodonte* (*Pycnodonte*), *fide* Moore (1987: p. C19). [Gryphaeidae].

....., pl. 9, fig. 1. Santa Barbara Co. USGS 4472. Hypotype USNM 560034.

....., pl. 9, figs. 3, 4. Graciosa Ridge southeast of Orcutt, Santa Barbara Co. USGS 14903. Hypotype USNM 560033.

Ostrea cf. *O. erica** Hertlein, 1929a. Cummings et al. 1962. CDMG Bull. 181:208, ph. 19, fig. 6. Purisima Fm. (San Gregorio Member), Pliocene. Near mouth of Purisima Creek, Half Moon Bay quad., San Mateo Co. 696M. Hypotype determined here as missing. **Remarks:** Error for *erici*. In the genus/subgenus *Pycnodonte* (*Pycnodonte*), *fide* Moore (1987: p. C19). [Gryphaeidae].

Ostrea erici Hertlein, 1929a. Hertlein and Grant 1972. SDSNH Mem. 2(2B):217–218, pl. 38, fig. 4. San Diego Fm., Pliocene. San Diego Co. LACMIP 124. Hypotype LACMIP 4524. **Remarks:** In the genus/subgenus *Pycnodonte* (*Pycnodonte*), *fide* Moore (1987: p. C19). [Gryphaeidae].

....., pl. 38, figs. 6, 8, 9. Balboa Park, San Diego, San Diego Co. LACMIP 107. Hypotypes LACMIP 4525–4527.

Ostrea freudenbergi Hertlein and Jordan, 1927. Adegoke 1969. UCPG 80:108, pl. 4, fig. 7, pl. 5, fig. 7. Temblor Fm., Miocene. Domengine Ranch quad., Fresno Co. UCMP D1075. Hypotype UCMP 36653. **Remarks:** Provisionally in the genus *Striostrea*?, *fide* Moore (1987: p. C34). [Ostreidae].

Ostrea haleyi Hertlein, 1933. Squires 1987. NHMLAC CS 388:58, fig. 97. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 827 [=LACMIP 16153]. Hypotype LACMIP 7514. **Remarks:** In the genus *Phygraea*, *fide* Squires (2018a: p. 16). [Gryphaeidae].

Ostrea haleyi Hertlein, 1933. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 18. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. CSUN 662 [=LACMIP 23779]. Hypotype LACMIP 11482. **Remarks:** In the genus *Phygraea*, *fide* Squires (2018a: p. 16). [Gryphaeidae].

Ostrea hertleini Adegoke, 1969 (n. sp.). UCPG 80:108–109, pl. 4, figs. 3, 4, pl. 5, fig. 4, pl. 6, fig. 9. Temblor Fm.,

Miocene. Below base of massive "reef," Reef Ridge quad., Kings Co. UCMP D1057. Holotype UCMP 36654, paratypes UCMP 36655, 36656. **Remarks:** Junior synonym of *Crassostrea*? *ashleyi* (Hertlein, 1934), *fide* Moore (1987: p. C39). [Ostreidae].

Ostrea howelli Wiedey, 1928. Squires and Fritsche 1978. SEPM Guidebook 13:18, 19, pl. 2, fig. 1. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 39 [=LACMIP 16301]. Hypotype UCLA 58198 [=LACMIP 10586]. **Remarks:** In the genus/subgenus *Pycnodonte*? (*Pycnodonte*?), *fide* Moore (1987: p. C20). [Gryphaeidae?].

....., p. 18, 19, pl. 2, figs. 2, 4, 6. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 32 [=LACMIP 16302]. Hypotypes UCLA 58193–58195 [=LACMIP 10583–10585].

....., p. 18, 19, pl. 2, fig. 3. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 29 [=LACMIP. 16304]. Hypotype UCLA 58192 [=LACMIP 10582].

....., p. 18, 19, pl. 2, fig. 5. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 52 [=LACMIP 16303]. Hypotype UCLA 58202 [= LACMIP 10587].

....., p. 19, 20, pl. 3, fig. 3. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 8 [=LACMIP 16300]. Hypotype UCLA 58190 [=LACMIP 10581].

....., p. 19, 20, pl. 3, fig. 4. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 162 [=LACMIP 16305]. Hypotype UCLA 58209 [=LACMIP 10588].

Ostrea idriaensis Gabb, 1869b. Squires 1984. NHMLAC CS 350:45, fig. 10l. Llajas Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 458 [=LACMIP 16280]. Hypotype LACMIP 6572. **Remarks:** In the genus *Acutostrea*, *fide* Squires (2018a: p. 4). [Ostreidae].

Ostrea idriaensis Gabb, 1869b. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. H. Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Is. Hypotype UCSB 8777 [=SBMNH 60175]. **Remarks:** In the genus *Acutostrea*, *fide* Moore (1987: p. C31). [Ostreidae].

Ostrea iridescens Hanley, 1854. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 58, fig. 3.12A [as *Ostrea iradescens*]. Latrania Fm., Miocene/Pliocene. Painted Gorge, Coyote Mtn., Imperial Co. SDSNH 43. Hypotype SDSNH 23101. **Remarks:** A synonym of *Striostrea prismatica* (Gray, 1825), *fide* Coan and Kabat (2012: p. 303). [Ostreidae].

Ostrea ligminuta Grant and Eaton *in* Eaton et al., 1941 (n. sp.). Bull.AAPG 25(2): pl. 4, fig. 1. Briones Fm., Miocene. Caliente Range, San Luis Obispo Co. UCLA 1795 [=LACMIP 21795]. Holotype UCLA 8985 [=LACMIP 8971], unfigured paratype UCLA 9252 [=LACMIP 8976]. **Remarks:** Junior synonym of *Crassostrea titan* (Conrad, 1853), *fide* Moore (1987: p. C36). [Ostreidae].

....., [UCLA 1840 (=LACMIP 21840). Unfigured paratypes 8986, 8988 (=LACMIP 8972, 12102)].

....., [UCLA 1745 (=LACMIP 21745). Unfigured paratypes UCLA 8987, 8989, 9251, 9253 [=LACMIP 8973–8975, 11042)].

....., [UCLA 1854 [=LACMIP 21854]. Unfigured paratype UCLA 9250 [=LACMIP 11041].

Ostrea (*Agerostrea*) *megodon* Hanley, 1846. Hertlein and Grant 1972. SDSNH Mem. 2(2B):221– 222, pl. 38, figs. 1, 5, 7. San Diego Fm., Pliocene. La Jolla quad., San Diego Co. UCLA 2420 [=LACMIP 22420]. Hypotypes UCLA [48614, 48650 [=LACMIP 9296, 9297)]. **Remarks:** Provisionally in the genus *Ostreola*?, *fide* Moore (1987: p. C29). In the genus *Undulostrea, fide* Coan and Valentich-Scott, (2012: p. 238). [Ostreidae?].

Ostrea simiensis Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1286–1287, figs. 1E–G. Santa Susana Fm., Paleocene. Concretions with abundant oyster debris, Calabasas quad., Simi Hills, Ventura Co. UCR 6899. Holotype UCR 6899/102 (not UCR 6899/1 as in text), paratypes UCR 6899/100, 6899/101. **Remarks:** Junior synonym of *Phygraea haleyi* (Hertlein, 1933), *fide* Squires (2018a: p. 16). [Gryphaeidae].

Ostrea stewarti M.A. Hanna, 1927. Squires 1987. NHMLAC CS 388:58–59, fig. 98. Matilija Sandstone?, Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 216 [=LACMIP 16299]. Hypotype LACMIP 7515. **Remarks:**

Provisionally in the genus/subgenus *Pycnodonte*? (*Crenostrea*?), *fide* Moore (1987: p. C22). [Gryphaeidae].

Ostrea cf. *O. stewarti* M.A. Hanna, 1927. Squires 1987. NHMLAC CS 388:59, fig. 99. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 364 [=LACMIP 16306]. Hypotype LACMIP 7516. **Remarks:** In the genus *Phygraea*, *fide* Squires (2018a: p. 18). [Gryphaeidae].

Ostrea tayloriana Gabb, 1866. Weaver and Kleinpell 1963. UCPG 43:197, pl. 29 (not pl. 31), figs. 6, 8. Alegria Fm., Oligocene. Gaviota quad., Santa Barbara Co. UCMP B7030. Hypotype SU 9259 [=CASG 70204]. **Remarks:** *Nomen dubium*, *fide* Squires (2018a: p. 1).

Ostrea titan Conrad, 1853. Eaton et al. 1941. Bull. AAPG 25(2): pl. 4, fig. 3. Neroly Fm., Miocene. Caliente Range, San Luis Obispo Co. UCLA 1766 [=LACMIP 21766]. Hypotype UCLA 8995 [=LACMIP 8979]. **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). In the genus *Crassostrea*, *fide* Moore (1987: p. C35). [Ostreidae].

Ostrea titan Conrad, 1853. G.D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, fig. 63-14. Santa Margarita Fm., Miocene. Fresno Co. CASG 1282. Hypotype CASG 5961. **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). In the genus *Crassostrea*, *fide* Moore (1987: p. C35). [Ostreidae].

Ostrea titan Conrad, 1853. Shimer and Shrock 1944. Index Foss. N.A., p. 397, pl. 154, figs. 21, 22 (refigured from Conrad 1857c, pl. 4, fig. 17a, pl. 5, fig. 17). [Santa Margarita Fm.], Miocene. San Luis Obispo Co. Type material missing and presumed lost, *fide* Moore (1987: p. C36). **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). In the genus *Crassostrea*, *fide* Moore (1987: p. C35). [Ostreidae].

Ostrea titan Conrad, 1853. Martin 1949. Compass 26(4):360, fig. 2. Santa Margarita Fm., Miocene. Shell Peak, NE of Twitchell Reservoir, Cuyama Valley, San Luis Obispo Co. Hypotype determined herea as missing. In the genus *Crassostrea*, *fide* Moore (1987: p. C35). **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). [Ostreidae].

Ostrea titan Conrad, 1853. Fenton and Fenton, 1958. The Fossil Book, unnumb. fig. p. 167. Miocene. California. [Locality and source-specimen deposition institution unknown]. **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). In the genus *Crassostrea*, *fide* Moore (1987: p. C35). [Ostreidae].

Ostrea titan Conrad, 1853. Addicott 1965b. USGS PP 525-C:C104, fig. 3a. Santa Margarita, Fm., Miocene. Comanche Pt., Tejon Hills, Kern Co. USGS M1702. Hypotype USNM 649163. **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). In the genus *Crassostrea*, *fide* Moore (1987: p. C35). [Ostreidae].

Ostrea titan titan Conrad, 1853. Adegoke 1969. UCPG 80:109, pl. 5, figs. 1, 8. Santa Margarita Fm., Miocene. Prominent ledge-forming *Ostrea-Pecten* "reef," Domengine Ranch quad., Fresno Co. UCMP D701. Hypotype UCMP 36658. **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). In the genus *Crassostrea*, *fide* Moore (1987: p. C35). [Ostreidae].

Ostrea titan Conrad, 1853. Fowkes 1982. Coalinga Guidebook, 1982, p. 25, 27, 199, unnumbered figs. (refigured from Arnold 1909 [1910], pl. 10, fig. 5; and Arnold and Anderson 1910, pl. 32, fig. 5; refigured in Fowkes 1983, p. 17). Santa Margarita Fm., Miocene. *Tamiosoma* Zone above Big Blue, Fresno Co. Hypotype USNM 165617]. **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). In the genus *Crassostrea*, *fide* Moore (1987: p. C35). [Ostreidae].

Ostrea titan Conrad, 1853. Norris and Webb 1990. Geology of California, p. 429, figs. 12–14. Santa Margarita Fm., Miocene. Diablo Range, Fresno Co. [Hypotype SBMNH 60214]. **Remarks:** Supplementary descriptions in Conrad (1854, 1857c) and first illustrated in Conrad (1857c). In the genus *Crassostrea*, *fide* Moore (1987: p. C35). [Ostreidae].

Ostrea titan andersoni Adegoke, 1969 (n. subsp.). UCPG 80:110, pl. 5, figs. 2, 3. Santa Margarita, Miocene. Prominent ledge-forming *Ostrea-Pecten* "reef," Fresno Co. UCMP D701. Holotype UCMP 36661. **Remarks:** Junior synonym of *Crassostrea titan* (Conrad, 1853), *fide* Moore (1987: p. C36). [Ostreidae].

....., pl. 5, fig. 6, pl. 6, fig. 1. Domengine Ranch quad., Fresno Co. UCMP D1101. Paratype UCMP 36662.

Ostrea titan eucorrugata (Hertlein, 1934). [*Ostrea*]. Martin 1949. Compass 26(4):360, fig. 1. Santa Margarita Fm., Miocene. Shell Peak, NE of Twitchell Reservoir, Cuyama Valley, San Luis Obispo Co. Hypotype determined here as missing. **Remarks:** Full species provisionally in the genus *Crassostrea*?, *fide* Moore (1987: p. C39). [Ostreidae].

Ostrea titan subtitan Loel and Corey, 1932. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 1. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH. 4312. Hypotype SDSNH 83238. **Remarks:** Junior synonym of *Crassostrea titan* (Conrad, 1853), *fide* Moore (1987: p. C36). [Ostreidae].

Ostrea titan var. ***prior*** Grant and Eaton *in* Eaton et al., 1941 (n.var.). Bull.AAPG 25(2):pl. 4, fig. 2. Temblor? Fm., Miocene. Branch Canyon, Cuyama Valley, Santa Barbara Co. UCLA 1745 [=LACMIP 21745]. Holotype UCLA 8991 [=LACMIP 8977]. **Remarks:** Junior synonym of *Crassostrea titan* (Conrad, 1853), *fide* Moore (1987: p. C36). [Ostreidae].

....., UCLA1764 [=LACMIP 21764]. Unfigured paratype UCLA 8992 [=LACMIP 8978].

Ostrea vaquerosensis Loel and Corey, 1932. Addicott 1965b. USGS PP 525-C:C104, fig. 3g. Basal Jewett Sand, Miocene. *Ostrea* biostrome, Woody quad. (1952), Kern Co. UCMP B1659. Hypotype UCMP 36552. **Remarks:** Provisionally in the genus *Crassostrea*?, *fide* Moore (1987: p. C38). [Ostreidae].

Ostrea veatchii Gabb, 1866. Hertlein and Grant 1972. SDSNH Mem. 2(2B):219–221, pl. 40, figs. 1, 4. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. SDSNH 6307. Hypotype SDSNH 4343. **Remarks:** In the genus *Myrakeena*, *fide* Squires et al. (2006: p. 7). [Ostreidae].

Ostrea vespertina Conrad, 1854. Woodring et al. 1940 [1941]. USGS PP 195:92, pl. 14, fig. 9. San Joaquin Fm.(*Pecten* Zone), Pliocene. southeast of El Bulto, North Dome, Kettleman Hills, Kings Co. USGS 12384. Hypotype USNM 495752. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). [Ostreidae].

Ostrea vespertina Conrad, 1854. G.D. Hanna and Hertlein 1943. CDM Bull. 118(2):174, fig. 64-4. [Pico Fm.?], Pliocene. Near Camulos, Ventura Co. CASG 725. Hypotype CASG 5912. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). [Ostreidae].

Ostrea vespertina Conrad, 1854. Shimer and Shrock 1944. Index Foss. N.A., p. 397, pl. 155, fig. 3 (refigured from Grant and Gale 1931, pl. 12, fig. 1b). [Pico Fm.?], Pliocene. Holser Canyon, Los Angeles Co. SDSNH 217a. Hypotype SDSNH 116]. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). [Ostreidae].

Ostrea vespertina Conrad, 1854. Woodring and Bramlette 1950 [1951]. USGS PP 222:85, pl. 16, figs. 4, 17. Careaga Fm. (undifferentiated), Pliocene. Casmalia Hills, northeast of Shuman, Santa Barbara Co. USGS 14626. Hypotype USNM 560102. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). [Ostreidae].

Ostrea vespertina Conrad, 1854. Emerson and Hertlein 1964. Tr. SDSNH 13(17):353, fig. 3d (not fig. e). Imperial Fm. [=Latrania Fm.], Pliocene. Painted Gorge area, Imperial Co. CASG 33277A. Hypotype CASG 12715]. **Remarks:** Supplemental descriptions in Conrad (1857b, 1857e) and first illustrated in Conrad (1857b). There are at least four hypotypes at CASG, according to the online database. They cannot be matched, however, to any of the known hypotypes and are thusly noted for the record as CASG 70278–70281. [Ostreidae].

....., fig. e. East of Coyote Mtn., Imperial Co. CASG 691. Hypotype CASG.12714.

....., figs. f–h. Northeast side Coyote Mtn., Imperial Co. CASG 35010. Hypotypes CASG 12716, 12717].

Ostrea vespertina Conrad, 1853. Frazier 1968. Earth Sci. 21(1):14, fig. 8. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. Hypotype current wherebouts unknown. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). [Ostreidae].

Ostrea vespertina Conrad, 1854. Hertlein and Grant 1972. SDSNH Mem. 2(2B):218–219, pl. 39, figs. 1, 2, 7. San Diego Fm., Pliocene. Tijuana River area, San Diego Co. CASG 36555. Hypotypes CASG. 72560, 72561]. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). [Ostreidae].

....., pl. 39, fig. 3. Near U.S./Mexico boundary, San Diego Co. UCLA 312 [=LACMIP 20312]. Hypotype UCLA [48613 [=LACMIP 9295].

....., pl. 39, figs. 5, 6, 8, 9. San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4528, 4529.

Ostrea vespertina Conrad, 1854. Addicott and Galehouse 1973. Jour. Res. USGS 1(5):510, 513, figs. a–c, f, h, l–n. Paso Robles Fm., Pliocene. Near Atascadero, San Luis Obispo Co. USGS M4621. Hypotypes USNM 646995–646997, 647000, 647002, 647006, 647007. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). [Ostreidae].

Ostrea vespertina Conrad, 1854. Stadum 1973. OCF, p. 29, pl. 6, fig. 1. "Fernando Fm." (Repetto Member [= Pico Fm.?]), Pliocene. Brown's Canyon, Los Angeles Co. UCLA 22517 [=LACMIP 22517]. Hypotype UCLA 49522 [=LACMIP 10621]]. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). [Ostreidae].

Ostrea vespertina Conrad, 1854. Addicott et al. 1978. USGS OFR 78-446:59, 72, pl. 4, fig. 17. Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2872. Hypotype USNM 254384. **Remarks:** Determined here as *Myrakeena veatchii* (Gabb, 1866). [Ostreidae].

Ostrea vespertina Conrad, 1854. Addicott et al. 1980. SEPM Guidebook 6:19, 33, pl. 5, fig. 17 (refigured from Addicott et al. 1978, pl. 4, fig. 17). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2872. Hypotype USNM 254384. **Remarks:** Determined here as *Myrakeena veatchii* (Gabb, 1866). [Ostreidae].

Ostrea vespertina Conrad, 1854. Fowkes 1982. Coalinga Guidebook, p. 84, unnumbered fig. Etchegoin/Jacalitos Fm., Miocene/Pliocene. Alcalde Hills, west of Coalinga, Fresno Co. WHC hypotype lost? **Remarks:** Determined here as *Myrakeena veatchii* (Gabb, 1866). [Ostreidae].

Ostrea vespertina Conrad, 1854. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 20. Niguel Fm., Pliocene. Orange Co. SDSNH4080. SDSNH hypotype determined here as missing. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). [Ostreidae].

Ostrea vespertina Conrad, 1854. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. C. Kinton Pt. Fm. [=Vaqueros Fm.], Miocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype SBMNH 60176. **Remarks:** Determined here as *Ostrea* sp. [Ostreidae].

Ostrea vespertina Conrad *loeli* Hertlein, 1928a. Avila and Weaver 1969. AAPG/SEPM Guidebook, p. 59, pl. 34, figs. 8a, b. Rincon Fm., Miocene. East of Cañada Tecolote, north coast Santa Rosa Is., California Channel Ids. UCSB SR67-51 [=LACMIP 16429]. Hypotype UCSB M11 [=LACMIP 6319]. **Remarks:** *Pycnodonte*? (*Pycnodonte*?) *loeli*, *fide* Moore (1987: p. C21). [Gryphaeidae].

Ostrea vespertina sequens Arnold, 1909 [1910]. Woodring et al. 1940 [1941]. USGS PP 195:92, pl. 8, figs. 10–12. San Joaquin Fm. (Upper *Mya* Zone), Pliocene. La Ceja, North Dome, Kettleman Hills, Kings Co. USGS 12326. Hypotypes USNM 495295–495297. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). [Ostreidae].

....., pl. 8, figs. 13, 14. West of El Prado, North Dome, Kettleman Hills, Kings Co. USGS 12549. Hypotypes USNM 495298, 495299.

....., pl. 10, figs. 1–5. San Joaquin Fm. (between upper *Mya* and *Acila* Zone), Pliocene. Branch of Arroyo Seco, North Dome, Kettleman Hills, Kings Co. USGS 12547. Hypotypes USNM 351764 (not USNM. 495307a as in pl. caption), 495308–495311.

Ostrea vespertina sequens Arnold, 1909 [1910]. Edinger 1961. Kern Co. Curr. Sci. Bull. 10:6, 18, 4 unnumbered figs. [San Joaquin Fm.?], Pliocene. South of McKittrick, Kern Co. Hypotypes (Kern County Schools Collection) determined here as missing. **Remarks:** *Myrakeena veatchii* (Gabb, 1866), *fide* Squires et al. (2006: p. 9). [Ostreidae].

"*Ostrea*" *weaveri* Dickerson, 1914a. Moore 1987. USGS PP 1228-C:C29–C30, pl. 29, fig. 2. Martinez Fm., Paleocene. Near Lower Lake, Lake Co. UCMP 781. Holotype UCMP 32624. [Ostreidae].

"*Ostrea*" *wiedeyi* Hertlein, 1928a. Stenzel 1971. Treatise Invert. Paleo. N6(3):N975, fig. J16. Vaqueros Fm., Miocene. San Miguel Is., California Channel Ids. Specimen cited by Stenzel as being in the CASG collection of the San Francisco Academy of Sciences but could not be located and is determined here as presumably missing. **Remarks:** Provisionally in the genus/subgenus *Pycnodonte*? (*Pycnodonte*?) (family Gryphaeidae), *fide* Moore (1987: p. C20). [Gryphaeidae].

Ostrea wiedeyi Hertlein, 1928a. Stadum 1984b. NHFOC Mem. 1:90, pl.1, fig. 3. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH4312. Hypotype SDSNH 83234. **Remarks:** Provisionally in the genus/subgenus *Pycnodonte*? (*Pycnodonte*?) (family Gryphaeidae), *fide* Moore (1987: p. C20). [Gryphaeidae].

Ostrea sp. Hawkins et al. 1971. GSA Bull. 82(1):225, fig. 4A Unnamed Fm. Pliocene. Northeast Bank, southern California Borderland, west of San Diego, San Diego Co. **Remarks:** Hypotype determined here as probably lost. This oyster is *Ostrea palmula* Carpenter, 1857c, currently in the genus *Saccostrea*, *fide* Moore (1987: p. C32). [Ostreidae].

Ostrea sp. Squires 2008. NHMLAC CS 517:5, fig. 39. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13440. [Ostreidae].

Ostrea n. sp. Lutz 1951. UCPG 28(31):385–386, pl. 17, fig. 1. Sobrante Fm., Miocene. Contra Costa Co. UCMP A4930. Hypotype UCMP 34129. [Ostreidae].

Ostrea n. sp. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 19. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR.6899. Hypotype UCR 6899/101 (not UCR 6899/1 as in pl. caption). **Remarks:** *Ostrea simiensis* n. sp., *fide* Zinsmeister 1983b; *Phygraea haleyi* (Hertlein, 1933), *fide* Squires (2018a: p. 16). [Gryphaeidae].

Ostrea Fowkes 1982. Coalinga Guidebook, p. 21, unnumbered fig. Domengine Fm., Eocene. West of Coalinga, Fresno Co. WHC hypotype lost? [Ostreidae].

....., p. 31, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 17, fig. 2; refigured from Arnold and Anderson 1910, pl. 39, fig. 2 (both as *Ostrea atwoodi* Gabb, 1866)). Etchegoin/ Jacalitos Fm. ("*Mulina* (*Pseudocardium*) Zone") [as Etchegoin Fm.], Miocene/Pliocene. North Dome, Kettleman Hills, Kings Co. Hypotype USNM 165531].

Ostrea Fenton and Fenton 1989. The Fossil Book, revised, unnumbered fig. p. 253 (refigured from Fenton and Fenton 1958) refigured also in Rich et al. 1996). Miocene. California. Locality and specimen deposition unknown. **Remarks:** Determined here as *Crassostrea titan* (Conrad, 1853). [Ostreidae].

Ostrea sp. oyster. Cōcke 2015. Foss. Palos Verdes Hills, p. 84, unnumbered fig. on p. 84 (upper). Monterey Fm., Miocene. George F. Canyon, Palos Verdes Hills, Los Angeles Co. Hypotype to be donated to LACMIP. [Ostreidae].

Ostreola conchaphila (Carpenter, 1857b). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C28–C29, pl. 30, figs. 6, 8. San Joaquin Fm. or upper Etchegoin Fm., Pliocene. Fresno Co.. Hypotype (of Howard, 1935, pl. 7, fig. 5) CASG 7044. **Remarks:** In the genus *Ostrea*, *fide* Coan and Valentich-Scott (2012: p. 236). [Ostreidae].

Ostreola? *venturana* (Loel and Corey, 1932). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C29, pl. 31, fig. 7, pl. 33, fig. 5. Vaqueros Fm., Oligocene/Miocene. Alisal Creek, Lompoc quad., Santa Barbara Co. UCMP A321. Holotype UCMP 31751, paratype UCMP 10035. [Ostreidae].

Oyster shell. Hogg 1929. Tour. Topics 10:16, middle fig. [Latrania Fm.], Miocene. Painted Gorge, Imperial Co. Locality and hypotype deposition unknown. **Remarks:** Determined here as *Pycnodonte heermanni* (Conrad 1855a). [Ostreidae].

Oyster shells. Remeika and Lindsay 1992. Geol. Anza-Borrego, p. 206, unnumbered fig. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Fish Creek Wash, Imperial Co. Hypotypes disposition unknown. **Remarks:** Determined here as *Pycnodonte heermanni* (Conrad, 1855a). [Ostreidae].

Pachecoa (*Pachecoa*) *hornii* (Gabb, 1864). [*Arca*]. Moore 1983. USGS PP 1228-A:A48–49, pl. 10, fig. 7. Tejon Fm., Eocene. Ft. Tejon, Kern Co. Paratype ANSP 4460a. Paratype missing, *fide* K. Estes-Smargiassi (personal communication, 2019). [Arcidae].

Pachecoa (*Pachecoa*) *hornii elusa* (Clark and Woodford, 1927). [*Arca*]. Moore 1983. USGS PP 1228-A:A48, pl. 10, fig. 8. Arroyo Hondo Fm. (as Meganos Fm. in pl. caption), Eocene. Vicinity where Urruttia Canyon enters Salt Creek, Coalinga quad., Fresno Co. UCMP 1817. Hypotype (of Vokes 1939, pl. 1, fig. 22) UCMP 15594. [Arcidae].

Pachydesma crassatelloides (Conrad, 1837). [*Cytherea (Trigonella)*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:89, pl. 18, fig. 1. Careaga Fm. (Graciosa Member), Pliocene. Purisima Hills near Harris, Santa Barbara Co. USGS 14752. Hypotype USNM 560147. **Remarks:** Junior synonym of *Tivela* (*Pachydesma*) *stultorum* (Mawe, 1823), *fide* Coan et al. (2000: p. 379). [Veneridae].

Pachydesma inezana Conrad, 1857d. Weaver and Kleinpell 1963. UCPG 43:202, pl. 34, fig. 5. Upper Gaviota Fm., Eocene. Cañada de Santa Anita area, Lompoc quad., Santa Barbara Co. UCMP B7021. Hypotype SU 9293 [=CASG 70203]. [Veneridae].

....., pl. 3, figs. 6, 7. El Jaro Creek, Lompoc quad., Santa Barbara Co. UCMP B6965. Hypotype SU 9292 [=CASG 70207].

Pachyperna? *goniglensis* (M.A. Hanna, 1927). [*Perna*]. Moore, 1983. USGS PP 1228-A:A85, pl. 26, fig. 4 (cast, CASG). Ardath Shale, Eocene. La Jolla quad., San Diego Co. UCMP 4233. Holotype UCMP 30912. [Isognomonidae].

Pachyperna? *joaquinensis* (Vokes, 1939). [*Pedalion*]. Moore 1983. USGS PP 1228-A:A85, pl. 26, fig. 5. Domengine Fm., Eocene. Near San Joaquin coal mine, Coalinga quad., Fresno Co. UCMP 7177. Holotype UCMP 15577. [Isognomonidae].

Pacipecten andersoni andersoni (Arnold, 1906) (not Anderson as in pl. caption). [*Pecten*]. Moore, 1984. USGS PP 1228-B:B45–B46, pl. 14, fig. 1. Monterey(?) Fm., Miocene. Zayante Creek, Santa Cruz Co. Holotype USNM 164932. [Pectinidae].

Pacipecten andersoni (Arnold, 1906). [*Pecten*]. Stadum and Finger 2016. NHMLAC CS 524:39, 42, fig. 43. Monterey Fm. (Saddleback Valley Limestone member). Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 140181. [Pectinidae].

Pacipecten andersoni barkerianus (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B: B45, pl. 20, fig. 2 (refigured from Arnold 1906, pl. 26, fig. 9). Temblor Fm., Miocene. Northeast of Bakersfield. Holotype CASG, missing and presumed destroyed in the San Francisco fire of 1906, *fide* Moore (1984: p. B45). [Pectinidae].

....., pl. 20, fig. 5. [Olcese Sand, Miocene. Northeast of Bakersfield, Kern Co. Hypotype (of Schenck and Keen 1940, pl. 39, fig. 5 (refigured 1950, as *Chlamys barkeriana*) SU/CASG 6588.

Pacipecten andersoni subandersoni (Loel and Corey, 1932). [*Pecten*]. Moore 1984. USGS PP 1228-B:B45, pl. 14, fig. 6. Vaqueros Fm., Oligocene/Miocene. San Luis Obispo Co. UCMP A572. Holotype UCMP 31741. [Pectinidae].

Pacipecten bilineatus (Clark, 1915). [*Pecten*]. Moore 1984. USGS PP 1228-B:B48, pl. 15, fig. 6. Cierbo Fm., Miocene. Near town of Rodeo, Napa quad., Contra Costa Co. UCMP 1632. Holotype UCMP 11579. [Pectinidae].

Pacipecten discus (Conrad, 1857d). [*Pecten*]. Moore 1984. USGS PP 1228-B:B46–B47, pl. 14, figs. 3, 9. San Pablo Group, Miocene. South side of Mt. Diablo, Mt. Diablo quad., Contra Costa Co. UCMP 1492. Holotype (of *Pecten raymondi* Clark, 1915) UCMP 11581, paratype (of *Pecten raymondi* Clark, 1915) UCMP 12371. [Pectinidae].

....., pl. 14, fig. 4. Briones Fm., Miocene. Carquinez quad., Contra Costa Co. UCMP 1176. Holotype (of *Pecten* (*Pecten*) *andersoni gonicostatus* Trask, 1922) UCMP 12370.

....., pl. 14, fig. 5. Sobrante Ridge area, Concord quad., Contra Costa Co. UCMP 14. Holotype (of *Pecten* (*Pecten*) *cierboensis* Clark, 1915) UCMP 11585.

....., pl. 14, fig. 7. Pleasanton quad., Alameda Co. UCMP 3532. Holotype (of *Pecten* (*Pecten*) *raymondi brionianus* Trask, 1922) UCMP 12368.

....., pl. 14, fig. 8. Monterey(?) Fm., Miocene. Between La Purisima and Santa Ynez, T7N, R32W, Santa Barbara Co. Holotype USNM 13335.

Pacipecten discus (Conrad, 1857d). [*Pecten*]. Powell 2015. WSM Ann. Rept. 45:61, figs. 6, 8. Monterey Fm., Miocene. Arroyo Seco, west of Greenfield, Monterey Co. CASG 101093. Hypotypes CASG 101096, 101097. [Pectinidae].

Pacipecten pabloensis (Conrad, 1857c) of Arnold. [*Pecten*]. Moore 1984. USGS PP 1228-B:B47–B48, pl. 15, figs. 1, 3. San Pablo Fm., Miocene. San Pablo Bay, Contra Costa Co. Hypotypes (of Arnold 1906, pl. 27, figs. 5, 6), missing and presumed lost, *fide* Moore (1984: p. B48) SU/CASG 302, 302a [=CASG 69655]. [Pectinidae].

Pacipecten tolmani (Hall and Ambrose, 1916). [*Pecten*]. Moore 1984. USGS PP 1228-B:B46, pl. 14, fig. 2. Briones Fm., Miocene. Vicinity of Welch Creek, Pleasanton quad., Alameda Co. CASG. 61866. Holotype SU/CASG 23 [=CASG 61866.01]. [Pectinidae].

Pacipecten weaveri (Clark, 1915). [*Pecten*]. Moore, 1984. USGS PP 1228-B:B46, pl. 15, figs. 4, 5. Cierbo Fm., Miocene. San Pablo Bay area, Napa quad., Contra Costa Co. UCMP 407. Syntypes UCMP 11575, 11576. [Pectinidae].

Palliolum (*Delectopecten*) *pechami** (Gabb, 1869a). [*Pecten*]. Stadum, 1973. OCF, p. 27, pl. 4, fig. 1. Puente Fm. (La Vida Member), Miocene. Hypotype current whereabouts unknown. **Remarks:** *Ex* Chapman College. In the genus *Delectopecten*, *fide* Moore (1984: p. B15). Error for *peckhami.* [Pectinidae].

Pandora (*Pandorella*) *bilirata* Conrad, 1855a. Hertlein and Grant 1972. SDSNH Mem. 2(2B):335, pl. 47, fig. 1, pl. 48, ,figs. 14, 17, 18. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4835, 4836]. **Remarks:** Supplemantal description in Conrad (1855b). [Pandoridae].

Pandora cf. *P. filosa* (Carpenter, 1864b). [*Kennerlia*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:91, pl. 8, fig. 12. Sisquoc Fm. (diatomaceous strata), Miocene. Solomon Hills, northeast of Los Alamos, Santa Barbara Co. USGS 15020. Hypotype USNM 560040. **Remarks:** In the subgenus *Pandorella*, fide Coan et al. (2000: p. 521). [Pandoridae].

Pandora punctata Conrad, 1837. Woodring and Bramlette 1950 [1951]. USGS PP 222:91–92, pl. 17, fig. 13. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge, near Orcutt, road cut, Santa Barbara Co. USGS 14614. Hypotype USNM 560150. **Remarks:** *Heteroclidus punctatus*, *fide* Coan and Valentich-Scott (2012: p. 964). [Pandoridae].

Pandora cf. *P. punctata* Conrad, 1837. Woodring et al. 1940 [1941]. USGS PP 195:63, pl. 29, fig. 4. Etchegoin Fm. (*Pseudocardium* Zone), Pliocene. Arroyo Conchoso, North Dome, Kettleman Hills, Kings Co. USGS 12524. Hypotype USNM 495786. **Remarks:** *Heteroclidus punctatus*, *fide* Coan and Valentich-Scott (2012: p. 964). [Pandoridae].

Pandora (*Heteroclidus*) *punctata* Conrad, 1837. Hertlein and Grant 1972. SDSNH Mem. 2(2B):336, pl. 42, figs. 2, 3. San Diego Fm., Pliocene. Balboa Park, San Diego, San Diego Co. UCLA 1386 [=LACMIP 21386]. Hypotypes UCLA 48638, 48639 [=LACMIP 9321, 9322]. **Remarks:** *Heteroclidus punctatus*, *fide* Coan and Valentich-Scott (2012: p. 964). [Pandoridae].

....., pl. 42, figs. 9, 10. Embankment at the beach at west end of Diamond St., Pacific Beach, San Diego Co. SDSNH 21. Hypotype SDSNH 4344.

Pandora punctata Conrad, 1837. Perry 1988. SCMA, p. 19, fig. 10C. Purisima Fm., Miocene/ Pliocene. Capitola, Santa Cruz Co. CASG66163. Hypotype CASG 66163.01]. **Remarks:** *Heteroclidus punctatus*, *fide* Coan and Valentich-Scott (2012: p. 964). [Pandoridae].

Pandora (*Heteroclidus*) *punctata* Conrad, 1837. Squires 2012. NHMLAC CS 520:76, fig. 48. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7757. Hypotype LACMIP 14373. **Remarks:** *Heteroclidus punctatus*, *fide* Coan and Valentich-Scott (2012: p. 964). [Pandoridae].

Pandoridae, indeterminate. Powell 2015. WSM Ann. Rept. 45:60–61, fig. 14. Monterey Fm., Miocene. Along Arroyo Seco, west of Greenfield, Monterey Co. CASG 101093. Hypotype CASG 101111]. [Pandoridae].

Panomya beringiana Dall, 1916b. Faustman 1964. UCPG 41(2):125, pl. 1, fig. 9. Rio Dell Fm., Pliocene. Fortuna quad., Humboldt Co. UCMP B7879. Hypotype UCMP 37793. **Remarks:** Junior synonym of *Panomya priapus* (*Tilesius* 1822), *fide* Coan et al. (2000: p. 489). [Hiatellidae].

Panomya cf. *P. beringiana* Dall, 1916b. Hertlein and Grant 1972. SDSNH Mem. 2(2B):329–330, pl. 56, fig. 12. San Diego Fm., Pliocene. San Diego, San Diego Co. CASG 1418. Hypotype CASG 70444. **Remarks:** Junior synonym of *Panomya priapus* (Tilesius 1822), *fide* Coan et al. (2000: p. 489). [Hiatellidae].

Panope (*Panope*) *abrupta* (Conrad, 1849a). [*Mya*]. Moore 1968. SDSNH Occas. Pap. 15:42, pl. 19, unnumbered fig. San Diego Fm., Pliocene. Balboa Park, San Diego, San Diego Co. SDSNH 1965. Hypotype SDSNH 4120. **Remarks:** In the genus *Panopea, fide* Coan et al. (2000: p. 490). Pliocene through Recent specimens of *Panopea* are inferred here as *Panopea generosa* Gould, 1850, *fide* P. Valentich-Scott (personal communication, 2019 as interpreted from Vadopalas et al. 2010). [Hiatellidae].

Panopea abrupta (Conrad, 1849a). [*Mya*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 63, fig. 3.16D. Latrania Fm., Miocene/Pliocene. Alverson Canyon, Imperial Co. SDSNH 345. Hypotype SDSNH 12101. [Hiatellidae].

Panopea abrupta (Conrad, 1849a). [*Mya*]. Stadum and Finger 2016. NHMLAC CS 524:39, 42, fig. 52. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 83237. [Hiatellidae].

Panopea abrupta (Conrad, 1849a). [*Mya*]. Squires 2012. NHMLAC CS 520:76, fig. 46. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14371. **Remarks:** Pliocene through Recent specimens of *Panopea* are inferred to be *P. generosa* Gould, 1850, *fide* P. Valentich-Scott (personal communication, 2019 as interpreted from Vadopalas et al. 2010). [Hiatellidae].

Panope cf. *P. generosa* Gould, 1850. Woodring et al. 1940 [1941]. USGS PP 195:chart opposite p. 38, pl. 14, fig. 11. San Joaquin Fm. (*Pecten* zone), Pliocene. Near Arroyo Pequeño and Arroyo Finito, North Dome, Kettleman Hills, Kings Co. USGS 12343. Hypotype USNM 495754. **Remarks:** Pliocene through Recent specimens of *Panopea* are inferred to be *P. generosa* Gould, 1850, *fide* P. Valentich-Scott (personal communication, 2019 as interpreted from Vadopalas et al. 2010). [Hiatellidae].

Panope generosa Gould, 1850. Moore et al. 1952. Invert. Foss., p. 442, fig. 10-25.8. Listed as Miocene-Pleistocene. Line drawing, source specimen unknown. **Remarks:** Junior synonym of *Panopea abrupta* (Conrad, 1849a), *fide* Coan et al. (2000: p. 490). [Hiatellidae].

Panope (*Panope*) *generosa* Gould, 1850. Stadum 1984b. NHFOC Mem. 1:90, pl. 1, fig. 6. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH4312. Hypotype SDSNH. 83237]. **Remarks:** Junior synonym of *Panopea abrupta* (Conrad 1849a), *fide* Coan et al. (2000: p. 490). Miocene specimens of *Panopea* are inferred to be *P. abrupta* (Conrad, 1849a), *fide* P. Valentich-Scott (personal communication, 2019 as interpreted from Vadopalas et al. 2010). [Hiatellidae].

Panopea generosa Gould, 1850. Hertlein and Grant 1972. SDSNH Mem. 2(2B):328–329, pl. 56, figs. 19, 20. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 4831. **Remarks:** Junior synonym of *Panopea abrupta* (Conrad, 1849a), *fide* Coan et al. (2000: p. 490). Miocene specimens of *Panopea* are inferred to be *P. abrupta* (Conrad, 1849a), *fide* P. Valentich-Scott (personal communication, 2019 as interpreted from Vadopalas et al. 2010). [Hiatellidae].

Panopea generosa Gould, 1850. Perry 1988. SCMA, p. 18, fig. 9G. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. CASG 66079. Hypotype CASG 66079.01]. **Remarks:** Junior synonym of *Panopea abrupta* (Conrad 1849a), *fide* Coan et al. (2000: p. 490). Miocene specimens of *Panopea* are inferred to be *P. abrupta* (Conrad, 1849a), *fide* P. Valentich-Scott (personal communication, 2019 as interpreted from Vadopalas et al. 2010). [Hiatellidae].

Panopea ramonensis (Clark, 1925). [*Panope*]. Addicott 1973b. USGS PP 791:7, 37–38, pl. 8, fig. 20. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646612. [Hiatellidae].

Panopea ramonensis (Clark, 1925). [*Panope*]. Squires and Fritsche 1978. SEPM Guidebook 13:20, 23, pl. 3, fig. 9. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 338 [=LACMIP 16277]. Hypotype UCLA 58215 [=LACMIP 10956]. [Hiatellidae].

Panope tenuis Wiedey, 1928. Adegoke 1969. UCPG 80:153, pl. 7, fig. 8. Temblor Fm., Miocene. Baby King Canyon and Garza Creek area, Reef Ridge quad., Kings Co. UCMP B6518. Hypotype UCMP 36777. **Remarks:** Junior synonym of *Panopea abrupta* (Conrad, 1849a), *fide* Coan et al. (2000: p. 490). Miocene specimens of *Panopea* are inferred to be *P. abrupta* (Conrad, 1849a), *fide* P. Valentich-Scott (personal communication, 2019 as interpreted from Vadopalas et al. 2010). [Hiatellidae].

Panopea tenuis Wiedey, 1928. Stadum and Finger 2016. NHMLAC CS 524:39, 42, fig. 51. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 140185. **Remarks:** Junior synonym of *Panopea abrupta* (Conrad, 1849), *fide* Coan et al. (2000: p. 490). Miocene specimens of *Panopea* are inferred to be *P. abrupta* (Conrad, 1849a), *fide* P. Valentich-Scott (personal communication, 2019 as interpreted from Vadopalas et al. 2010). [Hiatellidae].

Panopea Fowkes 1982. Coalinga Guidebook, p. 30, unnumbered fig. Etchegoin/Jacalitos Fm., Miocene. Jacalitos Creek area, Fresno Co. WHC hypotype lost? **Remarks:** Determined here as *Panopea abrupta* (Conrad, 1849a) based on the inference that Miocene specimens of *Panopea* are *P. abrupta* (Conrad, 1849a), *fide* P. Valentich-Scott (personal communication, 2019 as interpreted from Vadopalas et al. 2010). [Hiatellidae].

....., p. 206, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 18, fig. 4; refigured from Arnold and Anderson 1910 pl. 40, fig. 4 (as *Panopea generosa* (Gould, 1850)). W-K Hill, north of Coalinga, Fresno Co. Hypotype USNM 165556]. **Remarks:** Determined here as *Panopea abrupta* (Conrad, 1849a) based on the inference that Miocene specimens of *Panopea* are *P. abrupta* (Conrad, 1849a), *fide* P. Valentich-Scott (personal communication, 2019 as interpreted from Vadopalas et al. 2010).

Parvamussium alaskensis (Dall, 1871). [*Pecten*]. Moore 1984. USGS PP 1228-B:B11–B12, pl. 2, figs. 1–3. "Fernando Fm.", Pliocene. Fourth and Broadway, Los Angeles, Los Angeles Co. UCMP 3030. Holotype UCMP 11084, paratype UCMP 11779 (both of *Pecten calamitus* M.A. Hanna 1924). **Remarks:** *Parvamussium alaskense*, *fide* Coan et al. (2000: p. 251). [Propeamussiidae].

Parvamussium lajollaense (M.A. Hanna, 1927). [*Pecten*]. Moore 1984. USGS PP 1228-B:B9–10, pl. 1, figs. 12, 13. Ardath Shale, Eocene Soledad Valley area, La Jolla Quad., San Diego Co. UCMP 5062. Syntypes UCMP 31106, 31108. [Propeamussiidae].

Parvamussium mideocenicum (Vokes, 1939). [*Propeamussium*]. Moore 1984. USGS PP 1228-B:B9, pl. 1, fig. 11. Lodo Fm. (Cerros Shale Member), Paleocene [Eocene]. Vicinity of where Urruttia Canyon enters Salt Creek, Coalinga quad., Fresno Co. UCMP 1817. Syntype UCMP 15584. [Propeamussiidae].

Parvamussium riversi (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B10–B11, pl. 1, figs. 16, 18. "Fernando Fm.", Pliocene. Santa Monica Canyon, Los Angeles Co. Holotype SU/CASG 33 [=CASG 61829.01]. **Remarks:** Junior synonym of *Parvamussium alaskense* (Dall, 1871), *fide* Coan et al. (2000:p. 251). [Propeamussiidae].

Parvamussium stanfordense (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B10, pl. 1, fig. 14. Butano(?) Fm., Eocene. Los Trancos Creek, near Stanford University, San Mateo Co. USGS M1492. Hypotype (topotype) (of Addicott 1971, fig. 5) USNM 646446. [Propeamussiidae].

....., pl. 1, fig. 15. Lodo Fm. (Cerros Shale Member), Paleocene [Eocene]. Vicinity of where Urruttia Canyon enters Salt Creek, Coalinga quad., Fresno Co. UCMP 1817. Syntype (of *Parvamussium mideocenicum* Vokes, 1939, pl. 3, fig. 4) UCMP. 15585.

....., pl. 1, fig. 17. Butano(?) Fm., Eocene. Los Trancos Creek, near Stanford University, San Mateo Co. Holotype SU/CASG 12 [=CASG 61862.01].

Parvamussium sp. Squires 1988c. NHMLAC CS 398:18–19, fig. 48. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 983 [=LACMIP 16110]. Hypotype LACMIP 7728. [Propeamussiidae].

Parvamussium sp. Squires 2008. NHMLAC CS 517:5, fig. 40. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17850. Hypotype LACMIP 13441. [Propeamussiidae].

Parvilucina (*Parvilucina*) *tenuisculpta intensa* (Dall, 1874). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D15, pl. 4, figs. 17, 22. San Diego Fm., Pliocene. Near U.S./Mexico boundary, San Diego Co. LACMIP 318. Hypotype (of Hertlein and Grant 1972: pl. 46, fig. 22) LACMIP 4646. **Remarks:** Junior synonym of *Parvilucina approximata* (Dall, 1901b), *fide* Coan et al. (2000: p. 265). [Lucinidae].

....., pl. 4, figs. 19, 21. LACMIP305A [=LACMIP 16862]. Hypotype (of Hertlein and Grant 1972, pl. 46, fig. 17) LAMCIP 4645.

Parvilucina (*Parvilucina*) *tenuisculpta tenuisculpta* (Carpenter, 1864b). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D14-D15, pl. 4, fig. 12. San Pablo Fm., Miocene. Near Layfayette, Concord quad., Contra Costa Co. UCMP 1290. Hypotype (of *Phacoides tenuisculpta* Clark 1915, pl. 62, fig. 3) UCMP 11572. **Remarks:** Junior synonym of *Parvilucina approximata* (Dall, 1901b), *fide* Coan et al. (2000: p. 265). [Lucinidae].

Patinopecten calaverasensis (Hall, 1958). [*Pecten*]. Moore 1984. USGS PP 1228-B:B80, pl. 35, figs. 5, 6. Oursan Fm. (Briones Fm. in locality description), Miocene La Costa Valley quad. (1953), Contra Costa Co. SU 3252. Holotype SU/CASG 8442. [Pectinidae].

Patinopecten caurinus (Gould, 1850). [*Pecten*]. Addicott 1974a. Jour. Paleo. 48(1):184, pl. 1, fig. 6. Wildcat Group (of Ogle 1953:24), Pliocene/Pleistocene. Dredged from Eel Submarine Canyon (40.6°N, 124.5°W), Humboldt Co. USGS M5212. Hypotype USNM 647086. [Pectinidae].

Patinopecten dilleri (Dall, 1901a), var. [*Pecten*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:84, 85, pl. 9, figs. 6–8 (peel). Sisquoc Fm. (diatomaceous strata), Miocene. Casmalia Hills, near Shuman, Santa Barbara Co. USGS 14878. Hypotypes USNM. 560030–560032. [Pectinidae].

....., pl. 11, figs. 1, 9. Foxen Mudstone, Pliocene. Near Casmalia, Santa Barbara Co. L.M. Clark locality 145. Hypotype USNM 560053.

Patinopecten* (*Lituyapecten*) *falorensis MacNeil, 1961 (n. sp.). USGS PP 354J:234–235, pl. 38, figs. 1, 3, pl. 46, figs. 2, 3. Falor Fm. (of Manning and Ogle, 1950:14, 22–25), Pliocene. Vicinity of Blue Lake, Humboldt Co. UCMP A4233. Holotype UCMP 34172 (right valve), 34171 (left valve), hypotype UCMP 31333. **Remarks:** In the genus *Lituyapecten*, *fide* Moore (1984: p. B86). [Pectinidae].

....., pl. 44, figs. 2, 4. Purisima Fm., Pliocene. Purisima Creek, San Mateo Co. UCMP 1788. Hypotype UCMP 15977.

....., pl. 45, fig. 2, pl. 46, fig. 4. Año Nuevo Pt., San Mateo Co. SU 29788. Hypotypes SU 8690a, b [=CASG 70091, 70093, 70096], but unable to match specimens here or below.

....., pl. 45, fig. 4, pl. 46, fig. 1. San Gregorio Creek, San Mateo Co. SU 1095. Hypotype SU/CASG. 8691.

Patinopecten haywardensis (Lutz, 1951). [*Pecten*]. Moore 1984. USGS PP 1228-B:B80, pl. 35, fig. 4, pl. 36, fig. 1 (casts). Sobrante Fm., Miocene. Near junction of Hollis Creek and Eden Creek, Hayward quad., Alameda Co. UCMP A4566. Holotype UCMP 34133 (not UCMP 341133 as in pl. caption), paratype UCMP 34134. [Pectinidae].

Patinopecten healeyi (Arnold, 1906). [*Pecten*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:83–84, pl. 19, fig. 9; pl. 21, fig. 9. Careaga Fm. (Graciosa Member), Pliocene. Near Shuman, Santa Barbara Co. USGS 4474. Hypotypes USNM 560136, 560137. [Pectinidae].

Patinopecten healeyi (Arnold, 1906). [*Pecten*]. Hawkins et al.,1971. GSA Bull. 82(1):225, figs. 4C, D. Unnamed fm., Pliocene. Northeast Bank, southern California Borderland, 230 km west of San Diego, San Diego Co. Hypotype determined here as presumably lost. [Pectinidae].

Patinopecten healeyi (Arnold, 1906). [*Pecten*]. Vedder and Moore 1976. AAPG Misc. Pub. 24:122, 132, pl. 3, figs. 2–5, 8. Unnamed strata, Pliocene. Near Wilson Cove, San Clemente Is., California Channel Ids. USGS M6503. Hypotypes UNSM. 235590–235593, 235595. [Pectinidae].

....., pl. 3, fig. 6. Near Wilson Cove, San Clemente Is., California Channel Ids. USGS M6502. Hypotype USNM 235594.

Patinopecten healeyi (Arnold, 1906). [*Pecten*]. Moore 1979. USGS PP 1103:2–11, pl. 1, fig. 1, pl. 6, figs. 4–7, pl. 8, figs. 1–6, pl. 13, fig. 1. San Diego Fm., Pliocene. Southwest corner of San Diego Co. LACMIP 5108. Hypotypes LACMIP 5219, 5238–5246. [Pectinidae].

....., pl. 1, fig. 2. San Diego, National City quad. (1953), San Diego Co. LACMIP 485. Hypotype LACMIP 5220.

....., pl. 1, figs. 3, 6–8, pl. 3, fig. 5, pl. 4, figs. 3, 5, 6, pl. 10, figs. 1, 3–5, pl. 11, figs. 1–3, pl. 12, figs. 1–3, pl. 13, figs. 2, 5, pl. 14, figs. 2, 3, pl. 15, figs. 2, 3. Balboa Park, San Diego Co. LACMIP 107. Hypotypes LACMIP 5221, 5223–5225, 5227, 5228, 5250, 5252–5255.

....., pl. 1, figs. 4, 5. Vicinity of Pacific Beach, La Jolla quad., San Diego Co. LACMIP 4902. Hypotype LACMIP 5222.

....., pl. 2, figs. 1, 2. Sea cliffs at Pacific Beach, La Jolla quad., San Diego Co. CASG 105. Hypotypes CASG 58250, 58251. CASG hypotypes determined here as missing.

....., pl. 2, fig. 3. Unnamed Fm., Pliocene. San Clemente Is. North quad. (1950), San Clemente Is., California Channel Ids. USGS M6502. Hypotype (of Vedder and Moore 1976, pl. 3, fig. 6) USNM 235594.

....., pl. 2, figs. 4–7, pl. 5, fig. 3. Near Wilson Cove, San Clemente Is. North quad. (1950), San Clemente Is., California Channel Ids. USGS M6503. Hypotypes (all of Vedder and Moore 1976, pl. 3, figs. 2–5, 8) USNM 235590–235593, 235595.

....., pl. 3, fig. 1. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 5226.

....., pl. 3, figs. 2, 3, 6. "Fernando Fm." [=Niguel Fm.?], Pliocene. Newport Beach quad., Orange Co. USGS M5040. Hypotypes USNM 249742, 249743, 249745.

....., pl. 3, fig. 4, pl. 7, fig. 4, pl. 9, fig. 4. Niguel Fm., Pliocene. Vicinity of El Toro, San Juan Capistrano quad. (1949), Orange Co. USGS M2096. Hypotypes USNM 249744, 249751, 249755.

....., pl. 4, figs. 1, 2, 4, pl. 7, fig. 2. "Fernando Fm." [=Niguel Fm.?], Pliocene. Upper Newport Bay, Newport Beach quad., Orange Co. USGS M2753. Hypotypes USNM 249746–249748, 249750.

....., pl. 4, fig. 7, pl. 5, fig. 4. San Diego Fm., Pliocene. Near U.S./Mexico boundry, Palm City, San Diego Co. LACMIP 305. Hypotypes LACMIP 5229, 5233.

....., pl. 4, fig. 8, pl. 6, figs. 1–3, pl. 9, figs. 1, 5–7, pl. 10, fig. 2. Near Pacific Beach, La Jolla quad., San Diego Co. LACMIP 122. Hypotypes LACMIP 5230, 5236, 5237, 5247–5249, 5251.

....., pl. 5, figs. 1,2, 5, 6, pl. 7, fig. 3. Southwest corner of San Diego, Co. LACMIP 5108. Hypotypes LACMIP 5231, 5232, 5234, 5235.

....., pl. 7, fig. 1. Niguel Fm., Pliocene. South of San Juan Capistrano, San Juan Capistrano quad. (1949), Orange Co. USGS M2098. Hypotype USNM 249749.

....., pl. 7, fig. 5. San Diego Fm., Pliocene. Vicinity of Pacific Beach, San Diego Co. USGS M3627. Hypotype USNM 249752.

....., pl. 9, figs. 2, 3. Near Pacific Beach, La Jolla quad., San Diego Co. USGS M3628. Hypotypes USNM 249753, 249754.

Patinopecten healeyi (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B81–B83, pl. 34, fig. 3, pl. 35, fig. 3, pl. 36, fig. 4, pl. 39, fig. 1, pl. 40, fig. 5, pl. 42, figs. 2, 3. San Diego Fm., Pliocene. San Diego, San Diego Co. LACMIP 107. Hypotypes (of Moore 1979, pl. 1, fig. 3, pl. 4, figs. 3, 5, pl. 10, figs. 1, 4; pl. 13, fig. 2, pl. 14, fig. 3) LACMIP 5221, 5228, 5250, 5253, 5254. [Pectinidae].

....., pl. 37, fig. 3. San Diego Co. USGS 2658. Paratype USNM 154162.

....., pl. 38, fig. 2. San Diego, San Diego Co. LACMIP 485. Hypotype (of Moore 1979, pl. 1, fig. 2) LACMIP 5220.

....., pl. 38, fig. 3. Unnamed strata, Pliocene. San Clemente Is., California Channel Ids. USGS M6503. Hypotype (of Moore 1979, pl. 2, fig. 6) USNM 235592.

....., pl. 38, fig. 4. San Diego Fm., Pliocene. San Diego, San Diego Co.. Holotype USNM 148012.

....., pl. 38, fig. 5. Pacific Beach, San Diego Co. LACMIP 4902. Hypotype (of Moore 1979, pl. 1, fig. 4) LACMIP 5222.

....., pl. 41, fig. 2. San Ysidro quad. (1943), San Diego Co. LACMIP 305]. Hypotype (of Moore, 1979 pl. 4, fig. 7) LACMIP 5229.

....., pl. 42, fig. 1. Pacific Beach, San Diego, Co. LACMIP 5108]. Hypotype (of Moore 1979, pl. 5, fig. 1) LACMIP 5231.

Patinopecten healeyi (Arnold, 1906). [*Pecten*]. Groves 1991b. Amer. Conch. 19(4):16, fig. 2.1. Saugus Fm. [=Pico Fm.], Pliocene. Santa Susana Mtns., Ventura Co. CSUN 725 [=LACMIP 29227. Hypotype LACMIP 11614. [Pectinidae].

Patinopecten healeyi (Arnold, 1906). [*Pecten*]. Squires 1997b. Simi Valley Hist. Soc. vol., p. 301, fig. 6d (refigured from Squires and White 1983, pl. 1, fig. 3 (as *Pecten* (*Patinopecten*) *healeyi sanclementensis* Susuki and Stadum, 1978)). Saugus Fm. [=Pico Fm.] Pliocene. North side Simi Valley, Ventura Co. CSUN725 [=LACMIP 29227]. Hypotype UCLA 59405 [=LACMIP 8318]. [Pectinidae].

Patinopecten healeyi (Arnold, 1906). [*Pecten*]. Squires 2012. NHMLAC CS 520:76, fig. 23. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 9659. Hypotype LACMIP 14348. [Pectinidae].

Patinopecten healeyi (Arnold, 1906). Vendrasco et al. 2012. NHMLAC CS 520:17, fig. 2.1. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305B (not 305 as published) [=LACMIP 16817]. Hypotype LACMIP. 14854. [Pectinidae].

Patinopecten healeyi (Arnold, 1906). [*Pecten*]. Specimen illustrated on the front cover of the present paper. Pico Fm., Pliocene. Gillibrand Quarry, north side Simi Valley, Ventura Co. LACMIP 40725. Hypotype LACMIP 14870. [Pectinidae].

Patinopecten lohri (Hertlein, 1928b). [*Pecten*]. Woodring et al. 1940 [1941]. USGS PP 195:91–92, pl. 35, fig. 2. Etchegoin Fm. (*Patinopecten* zone), Pliocene. North Dome, Kettleman Hills, Kings Co. USGS 12428a. Hypotype USNM 495839. [Pectinidae].

....., pl. 35, fig. 3. La Cuna, North Dome, Kettleman Hills, Kings Co. USGS 12715. Hypotype USNM 495840. [Pectinidae].

....., pl. 35, fig. 4. East of La Aleta, North Dome, Kettleman Hills, Kings Co. USGS 12711. Hypotype USNM 495841.

....., pl. 35, fig. 5. Southeast of La Paredes, North Dome, Kettleman Hills, Kings Co. USGS 12426. Hypotype USNM 495842.

Patinopecten lohri (Hertlein, 1928b). [*Pecten*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:83–84, pl. 7, fig. 7. Sisquoc Fm. (Tinaquaic Sandstone Member), Miocene/Pliocene. Sisquoc River, Foxen Canyon area, Santa Barbara Co. USGS 14965. Hypotype USNM 560016. [Pectinidae].

....., pl. 7, fig. 9. Sisquoc River, Foxen Canyon area, Santa Barbara Co. USGS 14961. Hypotype USNM 560015.

Patinopecten lohri (Hertlein, 1928b). [*Pecten*]. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 1, fig. 4. Pancho Rico Fm., Miocene/Pliocene. Long Valley, Monterey Co. Hypotype SU 9753 [=CASG 70324]. [Pectinidae].

....., pl. 3, fig. 1, pl. 4, fig. 1. Monterey Co. UCMP A3161. Hypotypes UCMP 36467, 36468.

Patinopecten lohri (Hertlein, 1928b). [*Pecten*]. Adegoke 1969. UCPG 80:103, pl. 2, figs. 6, 9. Etchegoin Fm., Pliocene. Coalinga quad., Fresno Co. UCMP D1166. Hypotype UCMP 36632. [Pectinidae].

Patinopecten lohri (Hertlein, 1928b). [*Pecten*]. Addicott 1974a. Jour. Paleo. 48(1):186, pl. 2, fig. 4. Etchegoin Fm., Pliocene. Los Gatos Creek area, Fresno Co. USGS M3782. Hypotype USNM 647087. **Remarks:** Label in USNM collection reads "never received from author" and is determined here as presumably missing. [Pectinidae].

Patinopecten lohri (Hertlein, 1928b). [*Pecten*]. Addicott 1978. USGS OFR 78-446:82, unnumbered fig. Pancho Rico, Miocene/Pliocene. Metz quad., Monterey Co. UCMP A3161. Hypotype UCMP 36467. [Pectinidae].

Patinopecten lohri (Hertlein, 1928b). [*Pecten*]. Moore 1979. USGS PP 1103:7–10, pl.13, figs. 3, 4, 6. Sisquoc Fm. (Tinaquaic Sandstone Member), Pliocene. Near Foxen Canyon, Santa Barbara Co. Holotype UCMP 12081. [Pectinidae].

Patinopecten lohri (Hertlein, 1928b). [*Pecten*]. Moore 1984. USGS PP 1228-B:B80–B81, pl. 34, fig. 2, pl. 36, figs. 2, 3. Sisquoc Fm. (Tinaquaic Sandstone Member), Pliocene. Santa Barbara Co. Holotype UCMP 12081. [Pectinidae].

Patinopecten lohri (Hertlein, 1928b). [*Pecten*]. Smith 1991a. USGS PP 1391:66, pl. 2, fig. 9. Sisqouc Fm. (Tinaquaic Sandstone Member), Pliocene. Santa Barbara Co. Holotype UCMP 12801. [Pectinidae].

Patinopecten owenii (Arnold, 1906). [*Pecten*]. Fowkes 1982. Coalinga Guidebook, p. 135, unnumbered fig. Etchegoin/Jacalitos Fm., Miocene/Pliocene. Fresno Co. WHC hypotype lost? **Remarks:** Junior synonym of *Patinopecten lohri* (Hertlein, 1928b), *fide* Moore (1984: p. B80). [Pectinidae].

....., p. 30 (as *Patinopecten*), p. 207, unnumbered figs. (refigured from Arnold 1909 [1910], pl. 23, fig. 1; refigured from Arnold and Anderson 1910, pl. 45, fig. 1 (both as *Pecten* (*Patinopecten*) *oweni*)). Etchegoin Fm., Miocene. Santa Barbara Co. Hypotype UCMP 12081].

Patinopecten purisimaensis (Arnold, 1906). [*Pecten*]. Peck 1960. UCPG 36(4):240, pl. 21, fig. 14. Ohlson Ranch Fm., Pliocene. Annapolis quad., Sonoma Co. UCMP B2063. Hypotype UCMP 31558. **Remarks:** In the genus *Lituyapecten*, *fide* Moore (1984: p. B87). [Pectinidae].

Patinopecten (*Lituyapecten*) *purisimaensis* (Arnold, 1906). [*Pecten*]. MacNeil 1961. USGS PP 354J:233, pl. 44, figs. 1, 3. Purisima Fm., Pliocene. San Gregorio Lagoon area, San Mateo Co. UCMP A4417. Hypotype UCMP 15181.

Remarks: In the genus *Lituyapecten*, *fide* Moore (1984: p. B87). [Pectinidae].

Patinopecten turneri (Arnold, 1906). [*Pecten*]. Peck 1960. UCPG 36(4):240, pl. 21, figs. 15, 16. Ohlson Ranch Fm., Pliocene. Sebatsopol quad., Sonoma Co. UCMP A6894. Hypotypes UCMP 35533, 35534. **Remarks:** In the genus *Lituyapecten*, *fide* Moore (1984: p. B87). [Pectinidae].

Pecten andersoni Arnold, 1906. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, figs. 63-1, 63-2. Temblor Fm., Miocene. Kern River, Kern Co. CASG 2023. Hypotypes CASG 5739, 5739A. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45). [Pectinidae].

Pecten (*Plagioctenium*) *andersoni* Arnold, 1906. Shimer and Shrock, 1944. Index Foss. N.A., p. 407, pl. 162, fig. 8 (refigured from Arnold and Anderson, 1910, pl. 29, fig. 4). Vaqueros Fm., Miocene. Coalinga District, Fresno Co. USGS 4859. Hypotype USNM 165583]. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45). [Pectinidae].

....., pl. 162, figs. 9, 10 (refigured from Arnold 1906, pl. 26, figs. 5, 5a). [Monterey Fm.], Miocene. Zayante Creek, Santa Cruz Co. USGS 4803. Holotype USNM 164932].

Pecten andersoni Arnold, 1906. Fowkes 1982. Coalinga Guidebook, p. 25, unnumbered fig. Temblor Fm., Miocene. "Button" bed, vicinity of Coalinga, Fresno Co. Hypotype at WHC. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B45) [Pectinidae].

Pecten bellus (Conrad, 1857a). [*Janira*]. Weaver and Meyer 1969. AAPG/SEPM Guidebook, p. 101, pl. 33, fig. 6. Potato Harbor Fm., Pliocene. Vicinity of Potato Harbor, Santa Cruz Is., California Channel Ids. UCSB GM65-21 [=LACMIP 16425]. Hypotype UCSB M12 [=LACMIP 6307]. **Remarks:** Supplemental description in Conrad (1857c). *Euvola bella*, *fide* Waller (2007: p. 940). [Pectinidae].

Pecten (*Pecten*) *bellus* (Conrad, 1857a). [*Janira*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B): 174–177, text fig. 7. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. LACMIP16314. Hypotype UCLA 2408 [=LACMIP 9289]. **Remarks:** Supplemental description in Conrad (1857c). *Euvola bella*, *fide* Waller (2007: p. 940). [Pectinidae].

....., pl. 30, figs. 1, 2, 4, 9, pl. 32, fig. 14. Pacific, Beach, San Diego Co. Paratypes CASG 526, 526a [hypotype, *fide* Keen and Bentson 1944: p. 82]. CASG 526b (all paratypes of *Pecten hemphilli* Dall, 1878a) determined here as missing.

....., pl. 30, fig 3. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4480.

Pecten (*Pecten*) *bellus* (Conrad, 1857a). [*Janira*]. Stadum 1973. OCF, p. 29, pl. 5, fig. 1. "Fernando Fm." [=San Diego Fm.], Pliocene. [Pacific Beach, San Diego Co. UCLA 2420 [=LACMIP 22420]. Hypotype UCLA 49519 [=LACMIP 10618]. **Remarks:** Supplemental description in Conrad (1857c). *Euvola bella*, *fide* Waller (2007: p. 940). [Pectinidae].

Pecten (*Pecten*) *bellus* (Conrad, 1857a). [*Janira*]. Vedder and Moore 1976. AAPG Misc. Pub. 24: 124,134, pl. 4, figs. 1, 3, 5. Unnamed strata, Pliocene. Near Lemon Tank Reservoir, San Clemente Is., California Channel Ids. USGS M6501. Hypotypes USNM 235597, 235598. **Remarks:** Supplemental description in Conrad (1857c). *Euvola bella*, *fide* Waller (2007: p. 940). [Pectinidae].

....., pl. 4, figs. 4, 9, 10. San Diego Fm., Pliocene. Pacific Beach, San Diego, San Diego Co. CASG 1130. [Hypotype CASG 56316].

Pecten (*Pecten*) *bellus* (Conrad, 1857a). [*Janira*]. Susuki and Stadum 1978. NHMLAC CS 299:7, 20, fig. 25. Unnamed strata, Pliocene. San Clemente Is. North quad., San Clemente Is., California Channel Ids. UCLA 6316 [=LACMIP 26316]. Hypotype UCLA 38786 [=LACMIP 10833]. **Remarks:** Supplemental description in Conrad (1857c). *Euvola bella*, *fide* Waller (2007: p. 940). [Pectinidae].

Pecten bellus (Conrad, 1857a). [*Janira*]. Meals 1980. Bull. SCPS 13(1-2):8, unnumbered fig. [Pico Fm.?], Pliocene. South side of Santa Clara River, between Piru and Fillmore, Ventura Co. SCPS 103B. Line drawing, source specimen unknown. **Remarks:** Meals' collection now at LACMIP. **Remarks:** Supplemental description in Conrad (1857c). *Euvola bella*, *fide* Waller (2007: p. 940). [Pectinidae].

Pecten (*Pecten*) *bellus* (Conrad, 1857a). [*Janira*]. Squires and White 1983. SEPM Guidebook 35:222, pl. 1, fig. 2. Saugus Fm. [=Pico Fm.], Pliocene. Northern Simi Valley, Santa Susana quad. (1951, PR1969), Ventura Co. CSUN

725 [=LACMIP 29227]. Hypotype UCLA 59404 [=LACMIP. 8317]. **Remarks:** Supplemental description in Conrad (1857c). *Euvola bella*, *fide* Waller (2007: p. 940). [Pectinidae].

Pecten (*Pecten*) *bellus* (Conrad, 1857a). [*Janira*]. Moore, 1984. USGS PP 1228-B:B68–B69, pl. 29, figs. 2, 3. San Diego Fm., Pliocene. San Diego, San Diego Co. Holotype (of *Pecten* (*Pecten*) *hemphilli* Dall, 1878) USNM 7943. **Remarks:** Supplemental description in Conrad (1857c). *Euvola bella*, *fide* Waller (2007: p. 940). [Pectinidae].

Pecten (*Pecten*) *bellus* (Conrad, 1857a). [*Janira*]. Squires 1997b. Simi Valley Hist. Soc. vol., p. 301, fig. 6c (refigured from Squires and White 1983, pl. 1, fig. 2). Saugus Fm. [=Pico Fm.], Pliocene. North side Simi Valley, Ventura Co. CSUN725 (=LACMIP 29227). Hypotype UCLA 59404 (=LACMIP 8317)]. **Remarks:** *Euvola bella*, *fide* Waller (2007: p. 940). [Pectinidae].

Pecten (*Pecten*) *bellus hemphilli* Dall, 1878a. Moore 1968. SDSNH Occas. Pap. 15:50, pl. 23, figs. c, d. [San Diego Fm.], Pliocene. Near Pacific Beach, San Diego Co. SDSNH37. Hypotype SDSNH 4155. **Remarks:** Junior synonym of *Pecten* (*Pecten*) *bellus* (Conrad, 1857a), *fide* Hertlein and Grant 1972: p. 175, *fide* Moore (1984: p. B68). *Euvola bella*, *fide* Waller (2007: p. 940). [Pectinidae].

Pecten cf. *beringianus* Middendorff, 1849. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 28. Niguel Fm., Pliocene. Orange Co. SDSNH 4080. SDSNH hypotype determined here as missing. **Remarks:** *Chlamys behringiana* (Middendorff 1849), *fide* Coan et al. (2000: p. 233). [Pectinidae].

Pecten (*Vertipecten*) *bowersi* Arnold, 1906. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):176, fig. 64-20. Vaqueros Fm., Miocene. Temblor Range, Kern Co. Hypotype CASG 7739. **Remarks:** In the genus *Vertipecten*, *fide* Moore (1984: p. B62). [Pectinidae].

Pecten* (*Chlamys*) *branneri Arnold, 1906 (n. sp.). USGS PP 47:55. Vaqueros Fm., Miocene. Tuff Hill, near Stanford University, Santa Clara Co. Unfigured paratypes (2) LACMIP 7182 [*ex:* SU, *ex:* CIT 4668]. **Remarks:** In the genus *Chlamys*, *fide* Moore (1984: p. B19). [Pectinidae].

Pecten branneri Arnold, 1906. Weaver and Kleinpell 1963. UCPG 43:198, pl. 30, fig. 3. [Vaqueros Fm.], Miocene. Santa Clara Co. Hypotype CASG 12314. Hypotype determined here as missing. **Remarks:** In the genus *Chlamys*, *fide* Moore (1984: p. B19). [Pectinidae].

Pecten caurinus Gould, 1850. G D. Hanna 1952. Pr.CAS 27(9):358, pl. 14, fig. 2. Wildcat Fm., Pliocene. Dredged from 96 ftms., southwest of Trinidad Head, Humboldt Co. CASG 33223. Hypotype CASG 4284 (with *Compsomyax* sp.). **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B83). [Pectinidae].

Pecten (*Lyropecten*) *cerrosensis* Gabb, 1866. Moore 1968. SDSNH Occas. Pap. 15:44, pl. 20, figs. a, b. [San Diego Fm.], Pliocene. Chula Vista, San Diego Co. SDSNH2287. Hypotype SDSNH 4119]. **Remarks:** In the genus *Lyropecten*, *fide* Moore (1984: p. B55). [Pectinidae].

Pecten coalingaensis Arnold, 1906. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):176, fig. 65-10. Etchegoin Fm. (*Pecten coalingaensis* Zone), Pliocene. North Dome, Kettleman Hills, Kings Co. CASG 698. Hypotype CASG 5946. **Remarks:** In the genus *Oppenheimopecten*, *fide* Moore (1984: p. B76). [Pectinidae].

Pecten coalingaensis Arnold, 1906. Grant and Stevenson 1948. Jour. Paleo. 22(6): 804, pl. 124, figs. 5, 6. [Etchegoin Fm.?], Pliocene. North Dome, Kettleman Hills, Kings Co.. UCLA. 681 [=LACMIP 20681]. Hypotype UCLA 3445 [=LACMIP 9136]. **Remarks:** In the genus *Oppenheimopecten*, *fide* Moore (1984: p. B76). [Pectinidae].

Pecten (*Pecten*) *coalingaensis* Arnold, 1906. Adegoke 1969. UCPG 80:96–97, pl. 1, fig. 1. San Joaquin Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP B6539. Hypotype UCMP 36613. **Remarks:** In the genus *Oppenheimopecten*, *fide* Moore (1984:p. B76). [Pectinidae].

....., pl. 1, fig. 14. Reef Ridge quad., Kings Co. UCMP D1196. Hypotype UCMP 36614.

*Pecten coalingensis** Arnold, 1906. Woodring et al. 1940 [1941]. USGS PP 195:90–91, pl. 13, fig. 1. San Joaquin Fm. (*Pecten* Zone), Pliocene. Arroyo Bifido, North Dome, Kettleman Hills, Kings Co. USGS 12327. Hypotype USNM 495727. **Remarks:** In the genus *Oppenheimopecten*, *fide* Moore (1984: p. B76). Error for *coalingaensis*. [Pectinidae].

....., pl. 13, fig. 2. Arroyo Finito, North Dome, Kings Co. USGS 12354. Hypotype USNM 495728.

....., pl. 13, fig. 17. North Dome, Kettleman Hills, Kings Co. USGS 12335. Hypotype USNM 495742.

....., pl. 13, fig. 18. Vicinity of Arroyo Vadoso and Arroyo Largo, North Dome, Kettleman Hills, Kings Co. USGS 12331. Hypotype USNM 495743.

....., pl. 16, fig. 4. Arroyo Bifido, North Dome, Kettleman Hills, Kings Co. USGS 12328. Hypotype USNM 495779 (as *Pecten coalingaensis*).

*Pecten coalingensis** Arnold, 1906. Fowkes 1982. Coalinga Guidebook, p. 33, unnumbered fig. (refigured from Arnold, 1909 [1910], pl. 26, fig. 1; refigured from Arnold and Anderson, 1910, pl. 48, fig. 1). San Joaquin Fm. [as Etchegoin Fm.], Pliocene. Zapato Creek area, Fresno Co. Hypotype USNM 165530. **Remarks:** In the genus *Oppenheimopecten*, *fide* Moore (1984: p. B76). Error for *coalingaensis*. [Pectinidae].

Pecten (*Patinopecten*) aff. *P.* (*P.*) *coosensis* Shumard, 1858. Glen 1959. UCPG 36(2):167, pl. 16, fig. 3 (not fig. c). Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene. San Vicente Creek area San Mateo Co. UCMP B4792. Plastohypotype UCMP 37616. **Remarks:** May be *Lituyapecten dilleri* (Dall, 1901), *fide* Moore (1984: p. B88). [Pectinidae].

Pecten (*Lyropecten*) *crassicardo* (Conrad, 1857a). [*Pallium*]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, fig. 63-8. Santa Margarita Fm., Miocene. Fresno Co. CASG 2036. Hypotype CASG 5979. **Remarks:** In the genus *Lyropecten*, *fide* Moore (1984: p. B51). [Pectinidae].

Pecten crassicardo (Conrad, 1857a). [*Pallium*]. Bereskin and Edwards 1969. AAPG/SEPM Guidebook, p. 77, pl. 32, fig. 9 [*Lyropecten* in text]. Rincon Fm., Miocene. Upper Cañada Posa, Santa Cruz Is., California Channel Ids. UCSB RB65-59 [=LACMIP 16430]. Hypotype UCSB M13 [=LACMIP 6301]. **Remarks:** *Lyropecten submiguelensis* (Loel and Corey, 1932) *auct.*, *fide* Smith 1991a: p. 64, [=*Lyropecten pretiosus* (Hertlein, 1925)], *fide* Smith (1991a: p. 64). [Pectinidae].

*Pecten crossicardo** (*Lyropecten*) (Conrad, 1857a). [*Pallium*]. Fowkes 1982. Coalinga Guidebook, p. 199, unnumbered fig. (refigured in Fowkes 1983, p. 17). Santa Margarita Fm., Miocene. Oil fields north of Coalinga, Fresno Co. WHC hypotype lost? **Remarks:** In the genus *Lyropecten*, *fide* Moore (1984: p. B51). Error for *crassicardo*. [Pectinidae].

Pecten (*Patinopecten*) *dilleri* Dall, 1901. Faustman 1964. UCPG 41(2):116, pl. 2, fig. 8. Rio Dell Fm., Pliocene. Eel River area, Scotia quad., Humboldt Co. UCMP B7644. Hypotype UCMP 37760. **Remarks:** In the genus *Lituyapecten*, *fide* Moore (1984: p. B88). [Pectinidae].

Pecten (*Lituyapecten*) *dilleri* Dall, 1901a. Hertlein and Grant 1972. SDSNH Mem. 2(2B):186–187, pl. 35, figs. 4, 7. San Diego Fm., Pliocene. San Diego, San Diego Co. UCLA 309 [=LACMIP 20309]. Hypotype UCLA 8072 [=LACMIP 9292]. **Remarks:** In the genus *Lituyapecten*, *fide* Moore (1984: p. B88). [Pectinidae].

Pecten eldridgei (*Aequipecten sircularis* [*sic*] *eldridgei*) (Arnold, 1906). Edinger 1961. KCCB 11:6, 18. [San Joaquin? Fm.], Pliocene. South of McKittrick, Kern Co., Hypotypes Kern County Schools Collection, determined here as missing. **Remarks:** Determined here as *Argopecten ventricosus eldridgei* (Arnold, 1906). [Pectinidae].

Pecten (*Lyropecten*) *estrellanus* (Conrad, 1857a). [*Pallium*]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, fig. 63-7. Santa Margarita Fm., Miocene. Cholame Hills, Monterey Co. CASG 28473. Hypotype CASG 5900. **Remarks:** In the genus *Lyropecten*, *fide* Moore (1984: p. B53); *Argopecten* sp., *fide* Smith (1991a: p. 56). Described as *Lyropecten terrysmithae* n. sp., *fide* Powell et al. (2020: pp. 2–7). [Pectinidae].

Pecten (*Lyropecten*) *estrellanus* (Conrad, 1857a). [*Pallium*]. Shimer and Shrock 1944. Index Foss. N.A., p. 407, pl. 162, figs. 3, 4 (refigured from Arnold 1906, pl. 19, figs. 1, 1a). [Santa Margarita Fm.], Miocene. Wildhorse Canyon, Monterey Co. USGS 3586. Hypotype USNM 164851]. **Remarks:** Supplemental descriptions in Conrad (1857c, d) and first illustrated in Conrad (1857c). In the genus *Lyropecten*, *fide* Moore (1984: p. B53). [Pectinidae].

Pecten (*Lyropecten*) *estrellanus* (Conrad, 1857a). [*Pallium*]. Moore et al. 1952. Inv. Foss., p. 442, fig. 10-25:10a-10b. Miocene/Pliocene. Line drawing, source specimen unknown. **Remarks:** Supplemental descriptions in Conrad (1857c) and first illustrated in Conrad (1857c). In the genus *Lyropecten*, *fide* Moore (1984: p. B53). [Pectinidae].

Pecten (*Lyropecten*) *estrellanus* (Conrad, 1857a). [*Pallium*]. Easton 1960. Invert. Paleo., p. 351, fig. 9.12.12 (redrawn from Arnold, 1906, pl. 20, fig. 2). San Pablo Fm., Miocene. Coalinga, Fresno Co. Hypotype CSMB 12871, probably destroyed in 1906 San Francisco earthquake and fire, *fide* Keen and Bentson (1944: p. 85). **Remarks:**

Supplemental descriptions in Conrad (1857c, d) and first illustrated in Conrad (1857c). In the genus *Lyropecten*, *fide* Moore (1984: p. B53). [Pectinidae].

Pecten estrellanus (*Lyropecten*) (Conrad, 1857a). [*Pallium*]. Fowkes 1982. Coalinga Guidebook, p. 199, unnumbered fig. (refigured in Fowkes 1983, p. 17). Santa Margarita Fm., Miocene. Oil fields north of Coalinga, Fresno Co. WHC hypotype lost? **Remarks:** Supplemental descriptions in Conrad (1857c, d) and first illustrated in Conrad (1857c). In the genus *Lyropecten*, *fide* Moore (1984: p. B53). [Pectinidae].

Pecten (*Lyropecten*) *estrellanus terminus* Arnold, 1906. Shimer and Shrock 1944. Index Foss. N.A., p. 407, pl. 161, fig. 20 (refigured from Arnold 1906, pl. 23, fig. 2). Santa Margarita Fm., Miocene. Terraces on east side of Salinas Valley or in tributary canyons to the valley between King City and San Lucas, Monterey Co. Holotype UCMP 11662]. **Remarks:** *Lyropecten terminus* Arnold, 1906, *fide* Moore (1984: p. B54). [Pectinidae].

Pecten etchegoini Anderson, 1905. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):176, fig. 65-18. Etchegoin Fm., Pliocene. CASG. 2032. Hypotype CASG 5945 (designated as lectotype of *Pecten wattsi* Arnold 1906, which was lost in 1906 San Francisco earthquake and fire, *fide* G D. Hanna and Hertlein (1943: p. 176), from approximately same locality). **Remarks:** S*wiftopecten parmeleei etchegoini* Anderson, 1905, *fide* Moore (1984: p. B60). [Pectinidae].

Pecten (*Swiftopecten*) *etchegoini* Anderson subsp. *wattsi* Arnold, 1906. Faustman 1964. UCPG 41(2):116, pl. 2, fig. 1. Rio Dell Fm., Pliocene. Scotia quad., Humboldt Co. UCMP B7642. Hypotype UCMP 37762. **Remarks:** *Nanochlamys nutteri* (Arnold, 1906), *fide* Moore (1984: p. B31). [Pectinidae].

Pecten hastatus G.B. Sowerby II, 1842. Peck 1960. UCPG 36(4):240, pl. 21, fig. 11. Ohlson Ranch Fm., Pliocene. Carson Creek area, Ft. Ross quad., Sonoma Co. UCMP B2156. Hypotype UCMP 31239. **Remarks:** *Chlamys hastata hastata* (G.B. Sowerby II, 1842), *fide* Moore (1984: p. B22). [Pectinidae].

Pecten* (*Patinopecten*) *haywardensis Lutz, 1951 (n. sp.). UCPG 28(13):386–387, pl. 17, figs. 9, 10. Sobrante Fm., Miocene. Near junction of Hollis Creek and Eden Creek, Hayward quad., Alameda Co. UCMP A4566. Plastoholotype UCMP 34133, plastoparatype UCMP 34134. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B80). [Pectinidae].

Pecten* (*Patinopecten*) *haywardensis calaverasensis Hall, 1958 (n.subsp.). UCPG 34(1):51–52, pl. 2, fig. 2, pl. 3, fig. 4, pl. 4, fig. 3. Oursan Fm., Miocene. East of Irvington, La Costa Valley quad. (1953), Alameda Co. SU 3245. Holotype SU/CASG 8442, paratypes SU/CASG 8443, 8444, unfigured paratype SU/CASG 12313 [=CASG 69936, but cannot match to these entries]. **Remarks:** Treated as a valid full species in the genus *Patinopecten*, *fide* Moore (1984: p. B80). [Pectinidae].

....., pp. 51, 52. East of Irvington, La Costa Valley quad. (1953), Alameda Co. LACMIP 16329 [=SU 3245]. Unfigured paratype LACMIP 9138. [*ex* UCLA 46025].

Pecten* (*Patinopecten*) *healeyi Arnold, 1906 (n. sp.). USGS PP 47:103. Purisima Fm., Pliocene. San Gregorio Creek, San Mateo Co. LACMIP16330. Unfigured paratype LACMIP 8549 [*ex* UCLA 46020]. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B1). [Pectinidae].

Pecten (*Patinopecten*) *healeyi* Arnold, 1906. G.D. Hanna and Hertlein 1943. CDM Bull. 118 (2): 176, fig. 65-3. San Diego Fm., Pliocene. Pacific Beach, San Diego, San Diego Co. CASG 105. Hypotype CASG 5920. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B81). [Pectinidae].

Pecten (*Patinopecten*) *healeyi* Arnold, 1906. Shimer and Shrock 1944. Index Foss. N.A., p. 407, pl. 163, fig. 2 (refigured from Arnold 1906, pl. 37, fig. 1). San Diego Fm., Pliocene. San Diego, San Diego Co. Holotype USNM 148012. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B81). [Pectinidae].

Pecten (*Patinopecten*) *healeyi* Arnold, 1906. Cummings et al. 1962. CDMG Bull. 181:200, ph. 15, fig. 4. Purisima Fm. (Tahana Member), Pliocene. Pomponio Creek area, San Gregorio quad., San Mateo Co. locality 470-2M. Hypotype determined here as missing. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B81). [Pectinidae].

Pecten aff. *P. healeyi* Arnold, 1906. Cummings et al. 1962. CDMG Bull. 181:202, ph. 16, fig. 5. Purisima Fm. (Pomponio Member), Pliocene. Lobitos Creek area, Half Moon Bay quad., San Mateo Co. locality 639M. Hypotype determined here as missing. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B81). [Pectinidae].

Pecten (sp. *healeyi*) Arnold, 1906. Frazier 1968. Earth Sci. 21(1):14, figs. 6, 10. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. Hypotype current whereabouts unknown. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B81). [Pectinidae].

Pecten (*Patinopecten*) *healeyi* Arnold, 1906. Moore 1968. SDSNH Occcas. Pap. 15:46, pl. 21, figs. a, b. [San Diego Fm.], Pliocene. Pacific Beach, San Diego Co. SDSNH713. Hypotype SDSNH 4158]. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B81). [Pectinidae].

Pecten healeyi Arnold, 1906. Weaver and Meyer 1969. AAPG/SEPM Guidebook, p. 101, pl. 33, fig. 5. Potato Harbor Fm., Pliocene. North side Potato Harbor, Santa Cruz Is., California Channel Ids. UCSB GM65-21 [=LACMIP 16425]. Hypotype UCSB M14 [=LACMIP 6306]. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B81). [Pectinidae].

Pecten (*Patinopecten*) *healeyi* Arnold, 1906. Hertlein and Grant 1972. SDSNH Mem. (2B):183–185, text figs. 9A, B. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. LACMIP 1633. Hypotype UCLA 1950 [=LACMIP 9291]. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984:p. B81). There are two hypotypes listed in the CASG online database, but neither one can be matched to the specimens listed below; thus they are listed for the record as CASG 72546 and 72553. [Pectinidae].

....., pl. 31, fig. 1. Second ravine west of mouth of Rose Canyon, south slope of Mt. Soledad, San Diego Co. SDSNH 365. Hypotype SDSNH 4336.

....., pl. 31, figs. 4, 6 [paratype of *Pecten expansus* Dall, 1878a]. San Diego, San Diego Co. Hypotype CASG 527 determined here as missing.

....., pl. 31, fig. 7. Pacific Beach, San Diego Co. SDSNH 37. Hypotype SDSNH 4337.

....., pl. 33, fig. 9. Pacific Beach, San Diego Co. CASG 1400. Hypotype CASG [see note above].

....., pl. 36, figs. 8, 9. Pacific Beach, San Diego Co. CASG 105. Hypotypes CASG [see note above].

Pecten (*Patinopecten*) *healeyi* Arnold, 1906. Stadum 1973. OCF, p. 29, pl. 5, fig. 3. [San Diego Fm.], Pliocene. Rose Canyon, San Diego Co. UCLA 2359 [=LACMIP 22359]. Hypotype UCLA 49521 [=LACMIP 10620]. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B81). [Pectinidae].

Pecten (*Patinopecten*) *healeyi* Arnold, 1906. Susuki and Stadum 1978. NHMLAC CS 299:7, 19, figs. 20, 21. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. LACMIP16332. Hypotype (of Hertlein and Grant 1972, text figs. 9A, B) UCLA 1950 [=LACMIP 9291]. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B81). [Pectinidae].

Pecten (*Patinopecten*) *healeyi* Arnold, 1906. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 25. Niguel Fm., Pliocene. Orange Co. SDSNH 4080. Hypotype SDSNH 75915. [Pectinidae].

Pecten* (*Patinopecten*) *healeyi sanclementensis Susuki and Stadum, 1978 (n.subsp.). NHMLAC CS 299:10–11, figs. 18, 19. Unnamed strata, Pliocene. San Clemente Is. North quad., San Clemente Is., California Channel Ids. UCLA 6316 [=LACMIP 26316]. Syntypes UCLA 38790, 38791 [=LACMIP 10823, 10824], unfigured paratypes UCLA 38792, 38793 [=LACMIP 10825, 10826]. **Remarks:** Junior synonym of *Patinopecten healeyi* (Arnold, 1906), *fide* Moore (1984: p. B81). [Pectinidae].

Pecten (*Patinopecten*) *healeyi sanclementensis* Susuki and Stadum, 1978. Squires and White 1983. SEPM Guidebook 35:222, pl. 1, fig. 3. Saugus Fm. [=Pico Fm.], Pliocene. Northern Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 725 [=LACMIP 29227]. Hypotype UCLA 59405 [=LACMIP 8318]. **Remarks:** Junior synonym of *Patinopecten healeyi* (Arnold, 1906), *fide* Moore (1984: p. B81). [Pectinidae].

Pecten hemphilli Dall, 1878a. Woodring and Bramlette 1950 [1951]. USGS PP 222:82–83, pl. 16, figs. 15, 16. Careaga Fm. (Cebada Member), Pliocene. Casmalia Hills, southeast of Waldorf, Santa Barbara Co. USGS 14631. Hypotype USNM 560100. **Remarks:** Junior synonym of *Pecten* (*Pecten*) *bellus* (Conrad, 1857a), *fide* Hertlein and Grant (1972: p. 175); *fide* Moore (1984: p. B68). [Pectinidae].

....., pl. 21, fig. 8. Careaga Fm. (Graciosa Member), Pliocene. Railroad cut a mi. North of Shuman, Santa Barbara Co. USGS 4474. Hypotype USNM 560135.

Pecten (*Pecten*) *hemphilli* Dall, 1878a. Easton 1960. Invert. Paleo., p. 351, fig. 9.12.11a, 11b (redrawn from Arnold 1906, pl. 33, fig. 3b [11a]; redrawn from Arnold 1906, pl. 33, fig. 3 [11b]). [San Diego Fm.], Pliocene. Pacific Beach, San Diego Co. [Holotype USNM 7943]. **Remarks:** Junior synonym of *Pecten* (*Pecten*) *bellus* (Conrad, 1857a), *fide* Moore (1984: p. B68). [Pectinidae].

Pecten hemphilli Dall, 1878a. Weaver, 1971. West (LA Times magazine), April 18, 1971:11, unnumbered fig. (lower right). "Fernando Fm." [=Pico Fm.], Pliocene. Arco Towers excavations, downtown Los Angeles, Los Angeles Co. LACMIP1219]. Hypotypes (3) current whereabouts unknown. **Remarks:** Junior synonym of *Pecten* (*Pecten*) *bellus* (Conrad, 1857a), *fide* Moore (1984: p. B68). [Pectinidae].

Pecten (*Propeamusium*) *interradiatus* Gabb, 1869b. G D. Hanna and Hertlein 1943. CDM Bull. 118 (2):172, fig. 62-28. Kreyenhagen Fm., Eocene. Canoas Creek, Kreyenhagen Ranch, Kings Co. CASG 899. Hypotype CASG 5733. **Remarks:** In the genus *Propeamussium*, *fide* Moore (1984: p. B7). [Propeamussidae].

Pecten* (*Pecten*) *juanensis Grant and Stevenson, 1948 (n. sp.). Jour. Paleo. 22(6):804–805, pl. 124, figs. 1, 4. Neroly Fm., Miocene. Sandstone fossil reef on east side of valley of San Juan Creek, San Luis Obispo Co. UCLA 435 [=LACMIP 20435]. Holotype UCLA 10441 [=LACMIP 9137]. **Remarks:** In the genus *Oppenheimopecten*, *fide* Moore (1984: p. B75). [Pectinidae].

....., pl. 124, fig. 2. Sandstone reef on east side of valley of San Juan Creek, San Luis Obispo Co. UCLA 438 [=CASG 61716]. Paratype CASG 7729 [=CASG 61716.01].

....., pl. 124, fig. 3. San Juan Creek, San Luis Obispo Co. UCLA 435 [=LACMIP 20435]. Paratype USNM 560368.

Pecten (*Pecten*) cf. *P.* (*P.*) *lecontei* Arnold, 1906. Susuki and Stadum 1978. NHMLAC CS 299:7, 20, fig. 24. Unnamed strata, Pliocene. San Clemente Island North quad., San Clemente Is., California Channel Ids. UCLA 6316 [=LACMIP 26316]. Hypotype UCLA 38787 [=LACMIP 10832]. [Pectinidae].

Pecten (*Patinopecten*) *lohri* Hertlein, 1928b. G.D. Hanna and Hertlein 1943. CDM Bull. 118(2):176, fig. 65-1. Jacalitos Fm., Miocene Waltham Creek southwest of Coalinga, Fresno Co. Hypotype CASG 7734, determined here as missing. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B80). [Pectinidae].

Pecten lohri Hertlein, 1928b. Hertlein 1951. CDM Bull. 154:189, fig. 1.2. Purisima Fm., Pliocene. San Gregorio Creek area, San Mateo Co. CASG 28689. [Hypotype CASG 9812]. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B80). [Pectinidae].

Pecten (*Patinopecten*) *lohri* Hertlein, 1928b. Glen 1959. UCPG 36(2):168, pl. 15, fig. 7 (not fig. g). Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene. Near Moss Beach, San Mateo Co. CASG 29579. Hypotype CASG 10498 [=CASG 69970]. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B80). [Pectinidae].

Pecten (*Patinopecten*) *lohri* Hertlein, 1928b. Cummings et al. 1962. CDMG Bull. 181:202, ph. 16, fig. 6. Purisima Fm. (Pomponio Member), Pliocene. El Corte de Madera Creek La Honda quad., San Mateo Co. 726M. Hypotype determined here as missing. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B80). [Pectinidae].

Pecten (*Amussiopecten*) *lompocensis* Arnold, 1906. Susuki and Stadum 1978. NHMLAC CS 299:5, 17, figs. 12–17. Unnamed strata, Miocene. San Clemente Is. North quad., San Clemente Is., California Channel Ids. UCLA 6317 [=LACMIP 26317]. Hypotypes UCLA 38788, 38789, 38895–38897 [=LACMIP 10827–10831]. **Remarks:** In the genus *Amusium*, *fide* Moore (1984: p. B66). [Pectinidae].

Pecten (Amussiopecten) lompocensis Arnold, 1906. Stadum 1984b. NHFOC Mem. 1:90, pl. 1, figs. 1. 2. Monterey Fm., Miocene. Saddleback Valley, Orange Co. SDSNH 4312. Hypotypes SDSNH 83232, 83233]. **Remarks:** In the genus *Amusium*, *fide* Moore (1984: p. B66). [Pectinidae].

Pecten magnolia Conrad, 1857c. Anonymous 1952. Min. Info. Serv. 5(6):1, unnumbered fig. (refigured in Ransom 1964, p. 42, fig. 3). Miocene. Line drawing, source specimen unknown. **Remarks:** In the genus *Macrochlamis*, *fide* Moore (1984: p. B56). [Pectinidae].

Pecten miguelensis Arnold, 1906. Avila and Weaver 1969. AAPG/SEPM Guidebook, p. 59, pl. 34, fig. 9. Rincon Fm., Miocene. Cañada Garanon, Santa Rosa Is., California Channel Is. UCSB SR67-53 [=LACMIP 16404]. Hypotype UCSB M15 [=LACMIP 6320]. **Remarks:** *Lyropecten submiguelensis* (Loel and Corey, 1932) *auct.*, *fide* Smith (1991a:p.

69); [=*Lyropecten pretiosus* (Hertlein, 1925), *fide* Smith (1991a:p. 69). [Pectinidae].

Pecten miguelensis Arnold, 1906. Shapiro 1997. Santa Cruz Is., California Channel Ids. Geol. Guide, p. 40 (as *Lyropecten miguelensis* in faunal list), unnumbered fig. p. 43. Vaqueros Fm., Miocene. Santa Cruz Is., California Channel Ids. Line drawing, source specimen unknown. **Remarks***:* In the genus *Lyropecten*, *fide* Moore (1984: p. B49). [Pectinidae].

Pecten miguelensis (supervariant) Arnold, 1906. Bereskin and Edwards 1969. AAPG/SEPM Guidebook, p. 74, pl. 32, figs. 8a. b (as *Lyropecten* in text). Rincon Fm., Miocene. Cañada de los Sauces area, Santa Cruz Is., California Channel Is. UCSB E8 [=LACMIP 16406]. Hypotype UCSB M16 [=LACMIP 6300]. **Remarks:** In the genus *Lyropecten*, *fide* Moore (1984: p. B49). [Pectinidae].

Pecten miguelensis submiguelensis Loel and Corey, 1932. Bereskin and Edwards 1969. AAPG/SEPM Guidebook, p. 78, pl. 32, fig. 7 (as *Lyropecten* in text). Vaqueros Fm., Miocene. Near Pt., Santa Cruz Is., California Channel Ids. UCSB DWW-16 [=LACMIP 16407]. Hypotype UCSB M17 [=LACMIP 6298]. **Remarks:** *Vertipecten bowersi* (Arnold, 1906), *fide* Smith (1991a: p. 77). [Pectinidae].

Pecten miguelensis submiguelensis Loel and Corey, 1932. Avila and Weaver 1969. AAPG/ SEPM Guidebook, p. 59, pl. 33, fig. 10. Southwest coast Santa Rosa Is., California Channel Ids. UCSB SR64-11P [=LACMIP 16426]. Hypotype UCSB M18 [=LACMIP 6299]. **Remarks:** *Lyropecten submiguelensis*, *fide* Moore (1984: p. B50). [Pectinidae].

Pecten oregonensis Howe, 1922 var. Manning and Ogle, 1950. CDM Bull. 148:23 [as *Pecten caurinus* Gould *oregonensis* Howe var.], pls. 6, 7. Falor Fm., Pliocene. Humboldt Co. UCMP A4233. Hypotype UCMP 34172. **Remarks:** *Patinopecten* (*Lituyapecten*) *falorensis* n.sp, *fide* MacNeil (1961: p. 234). [Pectinidae].

Pecten pabloensis Conrad, 1857c. Hertlein 1951. CDM Bull. 154:191, fig. 2, number 14. San Pablo Fm., Miocene. Near the town of Rodeo, Contra Costa Co. CASG 27420. Hypotype CASG 6081]. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B47). [Pectinidae].

Pecten (*Pseudamusium*) *peckhami* Gabb, 1869a. Easton 1960. Invert. Paleo., p. 351, fig. 9.12.8 (redrawn from Arnold 1906, pl. 3, fig. 8). [Monterey Fm.], Miocene. Southeast of Pinole, Contra Costa Co. Hypotype USNM 164839]. **Remarks:** In the genus *Delectopecten*, *fide* Moore (1984: p. B15). [Pectinidae].

Pecten (*Delectopecten*) *pedroanus* (Trask, 1856). [*Plagiostoma*]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):174, fig. 64-11. Monterey Fm.?, Miocene. Near San Pedro, Los Angeles Co. CASG 1894. Hypotype CASG 5734. **Remarks:** *Nomen dubium* and probably equivalent to *Delectopecten peckhami* (Gabb, 1869), *fide* Moore (1984: p. B15). [Pectinidae].

Pecten (*Pseudamusium*) *pedroanus* (Trask, 1856). [*Plagiostoma*]. Shimer and Shrock 1944. Index Foss. N.A., p. 407, pl. 162, figs. 1, 2 (refigured from Arnold and Anderson 1910, pl. 25, figs. 2, 2a (as *Pecten peckhami* Gabb)).?Tejon Fm., Eocene? Coalinga District, Fresno Co. USGS 4616. Hypotype USNM 165642]. **Remarks:** *Nomen dubium* and probably equivalent to *Delectopecten peckhami* (Gabb, 1869a), *fide* Moore (1984: p. B15). [Pectinidae].

Pecten* (*Patinopecten*) *purisimaensis Arnold, 1906 (n. sp.). USGS PP 47:105. Purisima, Miocene/ Pliocene. Ano Nuevo Pt., San Mateo Co. LACMIP 16332. Unfigured paratype UCLA 46019 [=LACMIP 8555)]. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B87). [Pectinidae].

Pecten (*Patinopecten*) *purisimaensis* Arnold, 1906. Glen 1959. UCPG 36(2):168, pl. 15, figs. 2, 3 (not figs. b, c). Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene. Near Princeton, San Mateo Co. UCMP B4791. Hypotype UCMP 37617. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B87). [Pectinidae].

Pecten (*Patinopecten*) *purisimaensis* Arnold, 1906. Cummings et al. 1962. CDMG Bull. 181:200, ph. 15, fig. 1. Purisima Fm. (Tahana Member), Pliocene. Near Pomponio Creek, San Gregorio quad., San Mateo Co. 469-5M. Hypotype determined here as missing. **Remarks:** In the genus *Patinopecten*, *fide* Moore (1984: p. B87). [Pectinidae].

"*Pecten*" *raymondi brionianus* Trask, 1922. Hoots 1931. USGS PP 165-C:105, pl. 23, fig. A. Modelo Fm., Miocene. Santa Monica Mtns., Los Angeles Co. USNM unknown. USNM hypotype determined here as missing. **Remarks:** Junior synonym of *Pacipecten discus* (Conrad, 1857d), *fide* Moore (1984: p. B47). [Pectinidae].

Pecten (*Pecten*) *raymondi brionianus* Trask, 1922. Hall 1958. UCPG 34(1):51, pl. 3, fig. 1. Briones Fm., Miocene. South of Pleasanton, Niles quad. (1953), Alameda Co. SU 3232. Hypotype SU 8440 [=CASG 69924]. **Remarks:** Junior

synonym of *Pacipecten discus* (Conrad, 1857d), *fide* Moore (1984: p. B47). [Pectinidae].

Pecten santaecruzensis Arnold, 1906. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 2. Temblor Fm. (*Phacoides* Sand member) (of Stinemeyer et al. 1959:12, 13), Miocene. Carneros Rocks quad., Temblor Range, Kern Co. USGS M4467. Hyoptype USNM 646535. **Remarks:** In the genus *Oppenheimopecten*, *fide* Moore (1984: p. B75). [Pectinidae].

Pecten (*Pecten*) *sanctaecruzensis* Arnold, 1906. Addicott 1973b. USGS PP 791:7, 24–25, pl. 2, figs. 4, 7 (refigured from Addicott 1972b, pl. 1, fig. 2). Temblor Fm. (Wygal Sandstone Member), Miocene. Vicinity of Zemorra Creek, Carneros Rocks quad., Kern Co. USGS M4467. Hypotypes USNM 646535, 646536. **Remarks:** In the genus *Oppenheimopecten*, *fide* Moore (1984: p. B75). [Pectinidae].

Pecten sanctaecruzensis Arnold, 1906. Addicott 1979. SEPM Guidebook 14:47–48, pl. 1, figs. 1, 2, 9, 16. Vaqueros (?) Fm. (upper sandstone member), Oligocene. The Indians, Junipero Serra quad., Santa Lucia Range, Monterey Co. SU/CASG 1758. Hypotypes CASG. 60364, 60369, 60374. CASG hypotypes determined here as missing. **Remarks:** In the genus *Oppenheimopecten*, *fide* Moore (1984: p. B75). [Pectinidae].

Pecten (*Chlamys*) cf. *P.* (C.) *sespeensis* Arnold, 1906. Wilson 1954. UCPG 30(2):118, pl. 18, figs. 1, 2. Middle Gaviota Fm., Oligocene. Vicinity of Cañada Omentero, Santa Barbara Co. UCMP A4646. Plastotypes UCMP 33448, 33449. **Remarks:** *Pecten* (*Vertipecten*) *yneziana yneziana* Arnold, 1907, *fide* Weaver and Kleinpell (1963:p. 198); *Vertipecten yneziana* (Arnold, 1907), *fide* Smith (1991a: p. 85). [Pectinidae].

Pecten (*Chlamys*) *sespeensis* Arnold, 1906. Weaver and Kleinpell 1963. UCPG 43:197–198, pl. 29 (not pl. 31), fig. 7; pl. 30, fig. 2 (refigured from Loel and Corey 1932, pl. 21, figs. 2, 5 (as *Pecten sespeensis* in pl. captions)). Vaqueros Fm., Miocene. Near South Mtn., Ventura Co.]. UCMP A244. Hypotypes UCMP 31720, 31721. **Remarks:** In the genus *Chlamys*, *fide* Moore (1984: p. B20). [Pectinidae].

....., pl. 29 (not pl. 31), fig. 9 (refigured from Loel and Corey 1932, pl. 21, fig. 3). [Ridge west of Wiley Canyon mouth, Ventura Co.]. UCMP A252. Hypotype UCMP 31723].

....., pl. 29 (not pl. 31), fig. 10, pl. 30, fig. 1. Upper Gaviota, Eocene. Lompoc quad., Santa Barbara Co. UCMP B7015. Hypotype SU 9261 [=CASG 70223]. **Remarks:** *Vertipecten yneziana* (Arnold, 1907), *fide* Smith (1991a: p. 86).

....., pl. 30, fig. 5 (peel). "Coldwater" Sandstone, Eocene. Along Camino Cielo near Sacate-"Coldwater" contact, San Rafael Mtns. quad., Santa Barbara Co. UCMP B6940. Hypotype SU 9260 [=CASG 70202].

Pecten (sp. *stearnsii*) Dall, 1878a. Frazier 1968. Earth Sci. 21(1):14, fig. 12. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. Hypotype current whereabouts unknown. **Remarks.** In the genus *Flabellipecten*, *fide* Moore (1984: p. B72). [Pectinidae].

Pecten (*Pecten*) *stearnsi* Dall, 1878a. Moore, 1968. SDSNH Occas. Pap. 15:48, pl. 22, figs. a, b. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. SDSNH 4. Hypotypes SDSNH 4152, 4153. **Remarks:** In the genus *Flabellipecten*, *fide* Moore (1984: p. B72). [Pectinidae].

Pecten (*Flabellipecten*) *stearnsii* Dall, 1878a. Hertlein and Grant 1972. SDSNH Mem, (2B):178–180, text fig. 8. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. LACMIP 16314. Hypotype UCLA 2407 [=LACMIP 9290]. **Remarks:** In the genus *Flabellipecten*, *fide* Moore (1984: p. B72). [Pectinidae].

....., pl. 29, figs. 2, 4, pl. 35, fig. 10. Pacific Beach, San Diego Co. Paratype CASG 525a [=CASG. 525].

Pecten (*Flabellipecten*) *stearnsii* Dall, 1878. Stadum 1973. OCF, p. 29, pl. 5, fig. 2. San Diego Pliocene. Pacific Beach, San Diego Co. UCLA 2420 [=LACMIP 22420). Hypotype UCLA 49520 [=LACMIP 10619]. **Remarks:** In the genus *Flabellipecten*, *fide* Moore (1984: p. B72). [Pectinidae].

Pecten (*Flabellipecten*) *stearnsii* Dall, 1878a. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 21. Niguel Fm., Pliocene. Orange Co. SDSNH 4080. SDSNH hypotype determined here as missin. **Remarks:** In the genus *Flabellipecten*, *fide* Moore (1984: p. B72). [Pectinidae].

Pecten. *Purpuratus subdolis* Hertlein, 1925b. Frazier 1968. Earth Sci. 21(1):14, fig. 11. San Diego Fm., Pliocene. San Diego, San Diego Co. Hypotype current whereabouts unknown. **Remarks:** In the genus *Argopecten*, *fide* Moore

(1984:p. B37). [Pectinidae].

Pecten (*Argopecten*) *subdolus* Hertlein, 1925b. Moore 1968. SDSNH Occas. Pap. 15:50, pl. 23, figs. a, b. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. SDSNH 408. Hypotypes SDSNH 4154, 4185. **Remarks:** In the genus *Argopecten*, *fide* Moore (1984: p. B37). [Pectinidae].

Pecten (*Pallium*) *swiftii* Bernardi var. *etchegoini* Anderson, 1905. Glen 1959. UCPG 36(2):167, pl. 15, fig. 6 (not fig. f). Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene. Vicinity of San Vicente Creek, San Mateo Co. UCMP B4793. Hypotype UCMP 37614. **Remarks:** *Swiftopecten swiftii parmeleei* (Dall, 1898), *fide* Masuda (1972:p. 401); *Swiftopecten parmeleei etchegoini*, *fide* Moore (1984: p. B60). [Pectinidae].

Pecten (*Pallium*) *swifti nutteri* Arnold, 1906. Shimer and Shrock 1944. Index. Foss. N.A., p. 407, pl. 161, fig. 19 (refigured from Arnold and Anderson 1910, pl. 49, fig. 3 (as *Pecten nutteri* Arnold 1906)). Etchegoin Fm., Pliocene. Coalinga District, Fresno Co. USGS 4712. Hypotype USNM 165549. **Remarks:** *Nanaochlamys nutteri* (Arnold, 1906), *fide* Moore (1984:p. B31). [Pectinidae].

Pecten (*Pallium*) *swifti nutteri* Arnold, 1906. Moore et al. 1952. Inv. Foss., p. 442, fig. 10-25.7. Pliocene. Line dra ing, source specimen unknown. **Remarks:** *Nanaochlamys nutteri* (Arnold, 1906), *fide* Moore (1984: p. B31). [Pectinidae].

Pecten tolmani Hall and Ambrose, 1916. Hall 1958. UCPG 34(1):51, pl. 2, fig. 1. Briones Fm., Miocene. East of Irvington, La Costa Valley quad. (1953), Alameda Co. SU 3252. Hypotype SU 8441 [=CASG 69923]. **Remarks:** In the genus *Pacipecten*, *fide* Moore (1984: p. B46). [Pectinidae].

Pecten vanvlecki Arnold, 1907. Bereskin and Edwards 1969. AAPG/SEPM Guidebook, p. 78, pl. 32, figs. 5, 6. Vaqueros Fm., Miocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. UCSB RB65-40 [=LACMIP 16431. Hypotypes UCSB M19, M20 [=LACMIP 6296, 6297]. **Remarks:** In the genus *Amussiopecten*, *fide* Moore (1984: p. B69). [Pectinidae].

Pecten (*Oppenheimopecten*) *vogdesi* Arnold, 1906. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):181–182, pl. 29, figs. 1, 3, 6. San Diego Fm., Pliocene San Diego, San Diego Co. LACMIP 320A. Hypotypes LACMIP 4481, 4482]. **Remarks:** In the genus *Oppenheimopecten*, *fide* Moore (1984: p. B77); in the genus *Euvola*, *fide* Coan et al. (2000: p. 225). [Pectinidae].

....., pl. 29, fig. 5. San Diego, San Diego Co. Hypotype SU [=CASG 72557].

Pecten yneziana subyneziana Weaver and Kleinpell, 1963 (n.subsp.). UCPG 43:198, pl. 31, fig. 2. Undifferentiated Sacate/Gaviota fms., Eocene. Lompoc Quad., Santa Barbara Co. UCMP B6963. Paratype SU 9268 [=CASG 70208]. **Remarks:** In the genus *Vertipecten*, *fide* Moore (1984: p. B61). [Pectinidae].

....., pl. 31, figs. 3, 5, 7. "Coldwater" Sandstone, Eocene. Along Camino Cielo Rd. near Sacate-"Coldwater" contact, San Rafael Mtn. quad., Santa Barbara Co. UCMP B6940. Holotype SU/CASG 9265, paratypes SU/CASG 9266, 9267.

Pecten yneziana subyneziana Weaver and Kleinpell, 1963. Smith 1991a. USGS PP 1391:86, pl. 38, fig. 5. "Coldwater" Sandstone (of Weaver and Kleinpell, 1963: pp. 83, 91, 92), Eocene. Along Camino Cielo Rd., San Rafael Mtn., Santa Brabara Co. UCMP B6940. Holotype SU 9265 [=CASG 7021, as *Pecten* (*Vertipecten*) *yneziana yneziana* in online database]. **Remarks:** In the genus *Vertipecten*, *fide* Moore (1984: p. B61). [Pectinidae].

Pecten yneziana yneziana Arnold, 1907. Weaver and Kleinpell 1963. UCPG 43:198, pl. 30, fig. 6. Undiffrentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6955. Hypotype SU/CASG 9263. **Remarks:** In the genus *Vertipecten*, *fide* Moore (1984: p. B61). [Pectinidae].

....., pl. 30, fig. 7. Alegria Fm., Oligocene. Ridge between the main western branches of Cuarta Creek, Santa Ynez Mtns., Lompoc quad., Santa Barbara Co. UCMP B7033. Hypotype SU/CASG 9264.

....., pl. 31, figs. 1, 4. Gaviota Fm., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6985. Hypotype SU/CASG 9262.

Pecten. Edinger 1960. KCCB 10:2, 12, uppermost unnumbered fig., formation unknown, Miocene. Pyramid Hill,

Kern Co. Hypotypes Kern County Schools Collection, determined here as missing. **Remarks:** Determined here as *Vertipecten* sp. [Pectinidae].

Pecten sp. Redman et al. 2007. *Palaios* 22:fig. 3E. Imperial Fm. (=Latrania Fm.), Miocene/Pliocene. Fossil Canyon, Imperial Co. Hypotype probably at SDSU (current whereabouts unknown). [Pectinidae].

Pectinid. Adegoke 1967a. Veliger 9(3):300, pl. 40, fig. 1. Santa Margarita Fm., Miocene. La Panza quad., San Luis Obispo Co. UCMP A742. UCMP hypotype 12160 (pectinid fragment encrusted with bryozoan colony *Canopeum*? sp.). [Pectinidae].

Pectinidae indet. Koch et al. 2004. NPS Tech. Rept. 04/01:14, fig. 9 (upper left specimen). Topanga Fm., Miocene. Santa Monica Mtns., Los Angeles Co. Hypotype SAMO 245. **Remarks:** Determined here as *Vertipecten kernensis* (Hertlein, 1925a). [Pectinidae].

Pegophysema edentuloides (Verrill, 1870). [*Loripes*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 62, fig. 3.16B. Latrania Fm., Miocene/Pliocene. Alverson Canyon (=Shell Canyon), Imperial Co. SDSNH 2701]. Hypotype SDSNH 17701. [Lucinidae].

Pegophysema edentuloides (Verrill, 1870). [*Loripes*]. Powell 2008. USGS SIR 2008-5155:15, fig. 4w. Imperial Fm. [=Latrania Fm.], Pliocene. Vicinity of Travertine Point, Oasis quad., Imperial Co. (not San Diego Co. as in locality description). UCMP A1707 [=UCMP A1705]. Hypotype UCMP 39875, missing, *fide* Powell (2008: p. 12). [Lucinidae].

Pelecyora aequilateralis (Gabb, 1869b). [*Venus*]. Squires 1999c. NHMLAC CS 480:22, figs. 40, 41. Matilija Sandstone, Eocene. Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1450 (=LACMIP 16963). Hypotype LACMIP 12469, 12470. [Veneridae].

Pelecyora gabbi (Arnold, 1909 [1910]). [*Meretrix*]. Givens 1974. UCPG 109:56, pl. 3, figs. 8, 11. Juncal Fm., Eocene. Vicinity of Thorn Meadows, Lion Canyon quad. (1943), Ventura Co. UCR 4683. Hypotypes UCR 4683/701, 4683/702. [Veneridae].

Penitella conradi Valenciennes, 1846. Hertlein and Grant 1972. SDSNH Mem. 2(2B):332–333, pl. 57, figs. 5, 13. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP. 305C [= LACMIP 16817]. Hypotype LACMIP 4832. [Pholadidae].

Penitella durhami Adegoke, 1967d (n. sp.). Pr.CAS 35(1):12–13, 15, figs. 12, 16, 17, 20–22, 24, 25, 28. San Ramon Fm., Oligocene. Walnut Creek quad., Contra Costa Co. UCMP A7762. Holotype UCMP 30101, paratypes UCMP 30102, 30104, 30105, 32504–32508, unfigured paratypes 30103, 30108, 32493–32497, 32503. [Pholadidae].

Penitella durhami Adegoke, 1967d. Kennedy 1974. SDSNH Mem. 8:43–44, figs. 33, 34. San Ramon Fm., Oligocene. Contra Costa Co. UCMP A4296 (not UCMP A7762 corrected in text). Holotype UCMP 30108. [Pholadidae].

....., fig. 35. Contra Costa Co. UCMP A7762. Hypotype UCMP 30102.

Penitella lorenzana (Clark, 1925). [*Pholadidea*]. Adegoke 1967d. PCAS 35(1):11–12, figs. 14, 27. San Ramon Fm., Oligocene. Near town of Walnut Creek, Concord quad., Contra Costa Co. UCMP 1131. Holotype UCMP 30323, paratype UCMP 33491. [Pholadidae].

Penitella lorenzana (Clark, 1925). [*Pholadidea*]. Kennedy 1974. SDSNH Mem. 8:49–50, figs. 28–31. San Ramon Fm., Oligocene. Near town of Walnut Creek, Contra Costa Co. UCMP 1131. Holotype UCMP 30323, paratype UCMP 33491. [Pholadidae].

....., fig. 32. Near Carquinez, Contra Costa Co. CASG 36499. Hypotype CASG 54823.

Penitella penita (Conrad, 1837). [*Pholas*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):333–334, pl. 56, fig. 8. San Diego Fm., Pliocene. Near U.S./Mexico boundary, San Diego Co. SDSNH 417. Hypotype SDSNH 4356. [Pholadidae].

....., pl. 56, figs. 9, 16. Near U.S./Mexicon boundary, San Diego Co. UCLA 312 SDSNH 417, [=LACMIP 20312]. Hypotype UCLA [48637 [=LACMIP 9320].

....., pl. 57, figs. 1, 2. Balboa Park, San Diego, San Diego Co. LACMIP 107. Hypotypes LACMIP 4833, 4834.

Penitella turnerae Evans and Fisher, 1966. Kennedy 1974. SDSNH Mem. 8:54–57, fig. 64. Foxen Mudstone, Pliocene. Vicinity of Guadalupe, Santa Barbara Co. USGS 4473. Hypotype USNM 189803. [Pholadidae].

Periploma cf. *P. discus* Stearns, 1890. Stanton 1966. Jour. Paleo. 40(1):31, pl. 6, figs. 8, 9. Castaic Fm., Miocene. Haskell Canyon area, Los Angeles Co. CIT 1671 [=LACMIP 2556]. Hypotype LACMIP 4149]. **Remarks:** In the subgenus *Circoploma*, *fide* Coan et al. (2000: p. 542). [Periplomatidae].

Periploma stenopa Woodring, 1938. Hertlein and Grant 1972. SDSNH Mem. 2(2B):337–338, pl. 41, figs. 6, 7. San Diego Fm., Pliocene. San Diego Co. LAMCIP 305A [=LACMIP 16862]. Hypotypes LACMIP 4837, 4838 [Periplomatidae].

Periploma n. sp.? Givens 1974. UCPG 109:59, pl. 4, fig. 8. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4732. Hypotype UCR 4732/2. [Periplomatidae].

Periploma sp. Throckmorton 1988a. USGS OFR 88-59:50–51, pl. 6, fig. 9 (refigured in Throckmorton 1988b, pl. 1, fig. 20). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP. D8151. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Periplomatidae].

Perna (*Perna*) *montana* Conrad, 1857d. Moore 1983. USGS PP 1228-A:A70, pl. 18, fig. 4. Unknown fm., Eocene(?) "Probably from the Eocene to Miocene sequence of the eastern Santa Ynez Mtns., presumably from the Miocene as stated, *fide* Conrad (1857d: p. 189). Santa Buenaventura, Santa Barbara Co. [=Ventura, Ventura Co.) Holotype USNM 13329. **Remarks:** Determined here as a *nomen dubium*. [Mytilidae].

Petricola (*Rupellaria*) *carditoides* Conrad, 1837. [*Saxicava*]. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):283, 284, pl. 44, figs. 15,16. San Diego Fm., Pliocene. Near the U.S./Mexico boundary, San Diego Co. SDSNH 331. Hypotype SDSNH 4346. [Petricolidae].

Cast of pholad burrow. Kennedy 1974. SDSNH Mem. 8: fig. 100. "Merced" Fm., Pliocene. Moss Beach, San Mateo Co. CASG 34437. Hypotype CASG 54827. [Pholadidae].

Unidentified pholadid. Kennedy 1974. SDSNH Mem. 8:126, fig. 102. Temblor Fm., Miocene. At the base of Temblor Reef, Jasper Canyon, Fresno Co. CASG 1841. Hypotype CASG 54826 [this specimen is now a paratype of *Chaceia fulcherae* Kennedy, 1993, *fide* Kennedy (1993: p. 399). [Pholadidae].

Pholadidea ovoidea (Gould, 1851), short var. [*Pholas*]. Woodring et al. 1940 [1941]. USGS PP 195: chart opposite p. 38, pl. 14, fig. 6. San Joaquin Fm. (*Pecten* zone), Pliocene. Arroyo Conshoso, North Dome, Kettleman Hills, Kings Co. USGS 12374. Hypotype USNM 495749. **Remarks:** *Pholadopsis pectinata* Conrad, 1849, *fide* Kennedy (1974: p. 69); *fide* label with USNM specimen.[Pholadidae].

Pholadidea penita (Conrad, 1837). [*Pholas*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:91, pl. 8, fig. 6. Sisquoc Fm. (diatomaceous strata), Miocene. Santa Barbara Co. USGS 4472. Hypotype USNM 560039. **Remarks:** *Penitella turnerae* Evans and Fisher, 1966, *fide* label with USNM specimen; *fide* Kennedy (1974: p. 54). [Pholadidae].

....., pl. 14, fig. 3. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14648. Hypotype USNM 560106. **Remarks:** *Penitella turnerae* Evans and Fisher, 1966; *fide* label with USNM specimen; *fide* Kennedy (1974: p. 54).

Pholadomya* (*Bucardiomya*) *givensi Zinsmeister, 1978a (n. sp.). Veliger 21(2):235, fig. 1. [Juncal Fm.], Eocene. Hot Spring Canyon, Topatopa Mtn. quad., Santa Barbara Co. UCR 4662. Holotype UCR 4662/110. [Pholadomyidae].

....., Hot Spring Canyon, Ventura Co. UCR 4659. Paratype UCR 4659/10

....., Hot Spring Canyon, Ventura Co. UCR 4664. Paratypes UCR 4664/5–4664/8.

Pholadomya (*Bucardiomya*) *givensi* Zinsmeister, 1978a. Squires 1987. NHMLAC CS 388:72, fig. 128. Juncal Fm., Eocene. Los Angeles Co. CSUN. 816 [=LACMIP 16336]. Hypotype LACMIP 7543. [Pholadomyidae].

Pholadomya (*Pholadomya*) *kernensis* Wiedey, 1928. Zinsmeister 1978a. Veliger 21(2):234, fig. 4. Temblor Fm., Miocene. North of Poso Creek, Kern Co. SU 438. Holotype SU/CASG 437 [=5166 on CASG label] [=CASG 71527]. [Pholadomyidae].

Pholadomya* (*Bucardiomya*) *mounti Zinsmeister, 1978a (n. sp.). Veliger 21(2):234–235, fig. 3. [Santa Susana Fm.], Paleocene. Simi Hills, Ventura Co. UCR 6899. Paratype UCR 6899/4. [Pholadomyidae].

....., figs. 6, 7. Simi Hills, Ventura Co. UCR 6898. Holotype UCR 6898/101, paratype UCR 6898/102, unfigured paratype UCR 6898/1.

....., North slope Simi Hills, Ventura Co. UCR 4575. Paratypes UCR 4575/33, 4575/34.

....., North slope Simi Hills, Ventura Co. UCR 6602. Paratypes UCR 6602/4.

....., North slope Simi Hills, Ventura Co. UCR 6816. Paratype UCR 6816/2.

....., Vine Hill Fm., Paleocene. Pacheco Rd., Contra Costa Co. UCR 7481. Paratype UCR 7481/1.

Pholadomya mounti Zinsmeister, 1978a. Zinsmeister, 1983a. SEPM Guidebook 35:68, pl. 2, fig. 9. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6898. Paratype UCR 6898/1. [Pholadomyidae].

Pholadomya (*Pholadomya*) *murrayensis* M.A. Hanna, 1927. Zinsmeister 1978a. Veliger 21(2):233–234, fig. 2. Ardath Shale?, Eocene. North of Mission Valley, La Jolla quad., San Diego Co. UCMP 4229. Holotype UCMP 31150. [Pholadomyidae].

Pholadomya (*Pholadomya*) *nasuta* Gabb, 1864. Zinsmeister 1978a. Veliger 21(2):233, fig. 5. [Santa Susana Fm.], Paleocene. Simi Hills, Ventura Co. UCR 6813. Hypotype UCR 6813/4. [Pholadomyidae].

Pholadomya nasuta Gabb, 1864. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 10. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6813 (not UCR 6814 as in pl. caption). Hypotype UCR 6813/4 (not UCR 6814/4 as in pl. caption). [Pholadomyidae].

Pholadomya sp. Weaver and Kleinpell, 1963. UCPG 43:208, pl. 38, fig. 10. Matilija Fm., Eocene. Santa Anita drainage, Vicinity of Cañada de Santa Anita, Lompoc quad., Santa Barbara Co. UCMP B6922. Hypotype SU 9269 (not SU 9326 as it text) [=CASG 70214]. [Pholadomyidae].

Pholadomya (*Pholadomya*) n. sp. Givens 1974. UCPG 109:58, pl. 4, fig. 5. Juncal Fm., Eocene. Hot Springs Creek, Topatopa Mtn. quad. (1943), Ventura Co. UCR 4662. Hypotype UCR 4662/110. **Remarks:** *Pholadomya* (*Bucardiomya*) *givensi* n. sp., *fide* Zinsmeister (1978a:p. 235). [Pholadomyidae].

Pholadopsis pectinata Conrad, 1849b. Kennedy 1974. SDSNH Mem. 8:69–70, figs. 82, 84, 88. San Joaquin Fm. [*Pecten* Zone?], Pliocene. Arroyo Conchoso, North Dome, Kettleman Hills, Kings Co. USGS 12374. Hypotypes (of Woodring and Bramlette 1950 [1951], pl. 14, fig. 6 (as *Pholadidea ovoidea*)) USNM 189804, 189805, 495749. [Pholadidae].

Phygraea badgeri Squires, 2018a (n. sp.). NHMLAC CS 526:18, 21, figs. 174–179. Coldwater Sandstone, Eocene. Derrydale Creek, Upper Sespe Creek area, Ventura Co. LACMIP 23724. Holotype LACMIP 14731, paratypes LACMIP 14732–14734. [Gryphaeidae].

....., fig. 180. Gaviota Fm., Eocene. Gaviota Canyon, Santa Barbara Co. LACMIP 7276. Paratype LACMIP 14734.

....., figs. 181, 182. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23727. Hypotype LACMIP 14735–14736.

....., fig. 183. Gaviota Fm., Eocene. Santa Ynez Range, Santa Barbara Co. LACMIP 7254. Hypotype LACMIP 14737.

Phygraea haleyi (Hertlein, 1933). [*Ostrea*]. Squires, 2018a. NHMLAC CS 526:16–18, figs. 137–139. Pozo Fm., Paleocene. Cañada del Pozo, Santa Cruz Is., California Channel Ids. CASG 5526. Holotype CASG 66752.02. [Gryphaeidae].

....., figs. 140,141 (not 1141 as in pl. caption). Pozo Shale, Paleocene. Pozo Canyon, Santa Cruz Is. California Channel Ids. LACMIP 7890. Hypotype LACMIP 14708.

....., figs. 142–144. Juncal Fm., Eocene. Sespe Hot Springs, Ventua Co. LACMIP 41507. Hypotype LACMIP 14709.

....., fig. 145, 148. Santa Susana Fm., Paleocene. LACMIP 23109. Simi Hills, Ventura Co.Hypotypes LACMIP 14710,

14713.

….., fig. 146, 149. Santa Susana Fm., Paleocene. LACMIP 41691. North side of Simi Valley, Ventura Co. Hypotypes LACMIP 14711, 14714.

….., fig. 147. Santa Susana Fm., Paleocene. LACMIP 23116. Simi Hills, Ventura Co. Hypotype LACMIP 14712.

Phygraea stewarti (M.A. Hanna, 1927). [*Ostrea*]. Squires 2018a NHMLAC CS 526:18, figs.150–158, 162–165, 168–173. Llajas Fm., Eocene. Llajas Canyon, north side of Simi Valley, Ventura Co. LACMIP 22312. Hypotypes LACMIP 14715–14719, 14721–14729. [Gryphaeidae].

….., fig. 159. Ardath Shale, Eocene. Rose Canyon, north of San Diego, San Diego Co. LACMIP 7185. Hypotype LACMIP 14720.

….., figs. 160, 161. Santiago Fm., Eocene. Near Carlsbad, San Diego Co. SDSNH 5570. Hypotype SDSNH 109947.

….., figs. 166, 167. Delmar Fm., Eocene. Sea cliff, Torrey Pines Beach State Park, San Diego Co. UCMP 5062. Holotype UCMP 30921.

Pinna (*Pinna*) *barrowsi* Dickerson, 1914b. Moore 1983. USGS PP 1228-A:A79, pl. 22, figs. 5, 6. Martinez Fm., Paleocene. Just south of Arroyo del Hambre Creek, Concord quad., Contra Costa Co. UCMP 1547. Holotype UCMP 11728. [Pinnidae].

Pinna (*Pinna*) *latrania* G D. Hanna, 1926. Moore 1983. USGS PP 1228-A:A79–A80, pl. 22, fig. 4. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. North side of Coyote Mtn., Imperial Co. USGS 3922. Holotype USNM 324593. [Pinnidae].

Pinna cf. *P. latrania* G D. Hanna, 1926. Powell 2008. USGS SIR 2008-5155:9, fig. 3h. Imperial Fm. [=Latrania Fm.], Pliocene. Travertine Point area, Oasis quad., Imperial Co. (not San Diego Co. as in locality description). UCMP A1705. Hypotype UCMP 39869, missing, *fide* Powell (2008: p. 6). [Pinnidae].

Pinna (*Pinna*) *lewisi* Waring, 1917. Moore 1983. USGS PP 1228-A:A79, pl. 21, fig. 10. Llajas Fm., Eocene. McCray Wells [= Oil Canyon], Susana quad., Ventura Co. SU 2696. Holotype SU/CASG 5194 [=CASG 69886]. [Pinnidae].

Pinna lewisi Waring, 1917. Squires 1984. NHMLAC CS 350:42–43, fig. 10f. Llajas Fm., Eocene. Locality is in type section of formation., Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 475 [=LACMIP 16337]. Hypotype LACMIP 6568. [Pinnidae].

Pinna llajasensis Squires, 1983a (n. sp.). Jour. Paleo. 57(2):359–360, fig. 2L. Llajas Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 458 [=LACMIP 16280]. Holotype UCLA 59196 [=LACMIP 10549]. [Pinnidae].

Pinna llajasensis Squires 1983a. Squires 1984. NHMLAC CS 350:43, fig. 10g. Llajas Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 458 [=LACMIP 16280]. Holotype UCLA 59196 [=LACMIP 10549]. [Pinnidae].

Pinna (*Pinna*) *mendenhalli* G D. Hanna, 1926. Moore 1983. USGS PP 1228-A:A80, pl. 23, fig. 1. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Garnet Canyon, Coyote Mtn., Imperial Co. USGS 3922. Holotype USNM 324593a. [Pinnidae].

Pinna (*Pinna*) *stocktoni* Loel and Corey, 1932. Moore 1983. USGS PP 1228-A:A79, pl. 22, figs. 2, 3. Vaqueros Fm., Oligocene/Miocene. Near Wiley Canyon, Piru quad., Ventura Co. UCMP A252. Syntypes UCMP 31778, 31779. [Pinnidae].

Pinna (*Pinna*) n. sp. Vokes 1939. Moore 1983. USGS PP 1228-A:A79, pl. 22, fig. 1. Domengine Fm., Eocene. West side of Domengine Canyon, UCMP 2287. Hypotype (of Vokes 1939, pl. 2, fig. 14) UCMP 32595. **Remarks:** *Pinna llajasensis* n. sp., *fide* Squires (1983a: p. 359). [Pinnidae].

Pitar addicotti Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1288, figs. 1O, Q. Santa Susana Fm., Paleocene. Calabasas quad., Simi Hills, Ventura Co. UCR 7319 (not UCR 7819 as in pl caption). Holotype UCR 7319/100 (not UCR 7819/100 as in pl. caption or UCR. 7319/1 as in text). [Veneridae].

....., fig. 1N. Simi Hills, Ventura Co. UCR 6893. Partaype UCR 6893/100.

Pitar (*Lamelliconcha*) *avenalensis* Vokes, 1939. Givens 1974. UCPG 109:53, pl. 3, figs. 1, 4. Juncal Fm., Eocene. Thorn Meadows area, Lion Canyon quad. (1943), Ventura Co. UCR 4679. Hypotypes UCR 4679/30, 4679/31. [Veneridae].

Pitar (*Lamelliconcha*) *avenalensis* Vokes, 1939. Squires 2008. NHMLAC CS 517:5, fig. 52. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13453. [Veneridae].

Pitar behri Clark 1915. Adegoke, 1969. UCPG 80:136, p. 7, fig. 3. Temblor Fm., Miocene. From hard, weather-resisting sandstone ledge of upper Temblor Fm. below McLure Shale contact, Reef Ridge quad., Kings Co. UCMP D1051. Hypotype UCMP 14997. [Veneridae].

Pitar (*Katherinella*) cf. *P.* (*K.*) *californica* (Clark, 1918). [*Callocardia (Agrippoma)*]. Addicott 1973b. USGS PP 791:7, 37, pl. 6, figs. 8, 11. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646586. [Veneridae].

Pitar* (*Lamelliconcha*) *dickersoni Givens, 1974 (n. nom.). UCPG 109:53–54, pl. 3, fig. 10. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. CASG 244. Holotype CASG 262, paratype CASG 263, hypotype UCR 4721/171. **Remarks:** Givens (1974) proposed the new name *Pitar* (*Lamelliconcha*) *dickersoni* for the species *Meretrix tejonensis* Dickerson (1915: p. 53 [in part], pl. 3, fig. 5), which, as pointed out by Stewart (1930, p. 236), Dickerson's nameis an objective synonym of *Pitar uvasanus* (Conrad) of Eocene age from the Tejon Formation. [Veneridae].

....., Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4719. Unfigured paratype UCR 4719/121.

Pitar (*Macrocallista*) *horni* (Gabb, 1864). [*Meretrix*]. Shimer and Shrock 1944. Index Foss. N.A., p. 427, pl. 170, fig. 20 (refigured from Stewart, 1930, pl. 12, fig. 8 (as *Macrocallista hornii*)). Tejon Fm., Eocene. Ft. Tejon, Kern Co. Lectotype (of Stewart 1930: p. 243) ANSP 4454]. [Veneridae].

Pitar? *joaquinensis* Vokes, 1939. Stewart 1946. USGS PP 205-C:91, pl. 12, fig. 6. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14497a. Hypotype USNM 498736. **Remarks:** In the genus/subgenus *Pitar* (*Lamelliconcha*), *fide* Squires (1987: p, 69). [Veneridae].

Pitar (*Lamelliconcha*) *joaquinensis* Vokes, 1939. Givens 1974. UCPG 109:54, pl. 3, fig. 7. Juncal Fm., Eocene. South Fork of Piru Creek and near Thorn Meadows, Lockwood Valley quad. (1943), Ventura Co. UCR 4673. Hypotype UCR. 4673/201. [Veneridae].

Pitar (*Lamelliconcha*) *joaquinensis* Vokes, 1939. Squires 1984. NHMLAC CS 350:51, fig. 12k. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6591. [Veneridae].

Pitar (*Lamelliconcha*) *joaquinensis* Vokes, 1939. Squires 1987. NHMLAC CS 388:69, fig. 119. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7536. [Veneridae].

Pitar (*Lamelliconcha*) *joaquinensis* Vokes, 1939. Squires 1988a. SEPM Guidebook 58:110, pl. 2, fig. 10. Matilija Sandstone?, Eocene. Whitaker Peak area, Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7536. [Veneridae].

Pitar (*Lamelliconcha*) *joaquinensis* Vokes, 1939. Squires 1988c. NHMLAC CS 398:19, fig. 52. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 974 [=LACMIP 16193]. Hypotype LACMIP 7732. [Veneridae].

Pitar (*Lamelliconcha*) *joaquinensis* Vokes, 1939. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 24. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 674 [=LACMIP 16082]. Hypotype LACMIP 11487. [Veneridae].

Pitar (*Lamelliconcha*) *joaquinensis* Vokes, 1939. Squires 2008. NHMLAC CS 517:5, fig. 51. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13452. [Veneridae].

Pitar kelleyi Weaver and Kleinpell, 1963 (n. sp.). UCPG 43:204, pl. 35, fig. 10. Gaviota Fm., Eocene. Tecolote Canyon,

Goleta quad., Santa Barbara Co. UCMP B6979. Paratype SU/CASG 9302 [=CASG 70217]. [Veneridae].

....., pl. 35, fig. 11. Goleta quad., Santa Barbara Co. UCMP B6983. Holotype SU/CASG 9301 [=CASG 70216].

....., pl. 36, fig. 1. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek, Los Olivos quad., Santa Barbara Co. UCMP B6933. Paratype SU/CASG 9303 [=CASG 70218].

Pitar lascrucensis Weaver and Kleinpell, 1963 (n. sp.). UCPG 43:204, pl. 36, figs. 2, 5. Upper Gaviota Fm., Eocene. Western Santa Ynez Mtns., Lompoc quad., Santa Barbara Co. UCMP B7019. Holotype SU 9304 [=CASG 70219], paratype SU 9305 [=CASG 70220]. [Veneridae].

....., pl. 36, fig. 3. Middle Gaviota Fm., Eocene. El Jaro Creek area, Lompoc quad., Santa Barbara Co. UCMP B7007. Paratype SU 9306 [=CASG 70221].

Pitar (*Pitar*) cf. *P.* (*P.*) *lascrucensis* Weaver and Kleinpell, 1963. Givens 1974. UCPG 109:52–53, pl. 4, fig. 2. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4732. Hypotype UCR 4732/101. [Veneridae].

Pitar lorenzanus (Clark, 1918). [*Pitaria*]. Weaver and Kleinpell, 1963. UCPG 43:204, pl. 36, fig. 2. Middle Gaviota Fm., Lompoc quad., Santa Barbara Co. UCMP B7006. Hypotype SU 9307 [=CASG 70222]. [Veneridae].

Pitar mulinoidus Weaver and Kleinpell, 1963 (n. sp.). UCPG 43:205, pl. 36, figs. 6, 7, 10. Middle Gaviota Fm., Eocene. El Jaro Creek, Lompoc quad., Santa Barbara Co. UCMP B7000. Holotype SU 9308 [=CASG 70224], paratype SU 9309 [=CASG 70225]. [Veneridae].

Pitar murphyi Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1288–1289, figs. 1K–M, P. Santa Susana Fm., Paleocene. Calabasas quad., Simi Hills, Ventura Co. UCR 6806. Holotype UCR 6806/142 (not UCR 6806/141 as in text), paratypes UCR 6806/141, 6806/143–6806/144. [Veneridae].

Pitar (*Lamelliconcha*) *soledadensis* (M.A. Hanna, 1927). [*Pitaria*]. Givens 1974. UCPG 109:54–55, pl. 3, fig. 2. Juncal Fm., Eocene. Alamo Creek area, San Guillermo quad. (1943), Ventura Co. UCR 4705. Hypotype UCR 4705/1. [Veneridae].

Pitar simiensis (Nelson, 1925). [*Callocardia*]. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 2. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 4569]. Hypotype UCR 4569/5. [Veneridae].

Pitar tejonensis (Dickerson, 1915) (?). [*Meretrix*]. Weaver and Kleinpell 1963. UCPG 43:205, pl. 36, fig. 9. "Coldwater" Sandstone, Eocene. Brush Peak area on Camino Cielo, San Rafael Mtn. quad., Santa Barbara Co. UCMP B6946. Hypotype SU 9310 [=CASG 70226]. [Veneridae].

Pitar uvasana (Conrad, 1855b). [*Meretrix*]. Shimer and Shrock 1944. Index Foss. N.A., p. 427, pl. 170, fig. 21 (refigured from Stewart 1930, pl. 12, fig. 7 (as *Pitar uvasanus*)). Tejon Fm., Eocene. Ft. Tejon, Kern Co. Neotype (of Stewart 1930: p. 236) ANSP. 4457]. [Veneridae].

Pitar uvasana (Conrad, 1855b). [*Meretrix*]. Moore et al. 1952. Invert. Foss., p. 439, fig. 10-23, 7. Eocene. Line drawing, source specimen unknown. [Veneridae].

Pitar (*Calpitaria*) *uvasanus* (Conrad, 1855b). [*Meretrix*]. Squires 1984. NHMLAC CS 350:51, figs. 12i. j. Llajas Fm., Eocene. Devil Canyon area, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6590. [Veneridae].

Pitar (*Calpitaria*) *uvasanus* (Conrad, 1855b). [*Meretrix*]. Squires 1988a. SEPM Guidebook 58:110, pl. 2, fig. 9 (refigured from Squires 1984, fig. 12i). Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6590. [Veneridae].

Pitar (*Calpitaria*) *uvasanus* (Conrad, 1855b). [*Meretrix*]. Squires 2008. NHMLAC CS 517:5, fig. 53. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13454. [Veneridae].

Pitar (*Calpitaria*) *uvasanas coquillensis* Turner, 1938. Stewart 1946. USGS PP 205-C:91, pl. 12, fig. 5. Avenal Sandstone,

Eocene. Reef Ridge, Reef Ridge quad., Fresno Co. USGS 14494. Hypotype USNM 498735. [Veneridae].

Pitar uvasana coquillensis Turner, 1938. Squires 1999b. NHMLAC CS 479:27–28, fig. 62. Santa Susana Fm., Eocene. South side of Simi Valley, Calabasas quad. (1952, PR 1967), Ventura Co. CSUN 1344 [=LACMIP 17192]. Hypotype LACMIP 12701. [Veneridae].

Pitar uvasana coquillensis Turner, 1938. Squires 2001. NHMLAC CS 489:18, figs. 39, 40. Llajas Fm., Eocene. LACMIP 22312. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 22312]. Hypotypes LACMIP 12756, 12757. [Veneridae].

Pitar Fowkes 1982. Coalinga Guidebook, p. 22, unnumbered fig. Avenal Sandstone, Eocene. Kings Co. WHC hypotype lost? [Veneridae].
....., p. 230, unnumbered fig. (refigured in Fowkes 1983, p. 32). Kings Co. WHC hypotype lost?

Pitar (*Lamelliconcha*) sp. Stanton 1966. Jour. Paleo. 40(1):30, pl. 6, figs. 1, 2. Castaic Fm., Miocene. Humphreys quad. (1932, PR 1946), Los Angeles, Co. CIT 1663 [=LACMIP 2555]. [Hypotype LACMIP 4143]. [Veneridae].

Pitar sp. Weaver and Kleinpell 1963. UCPG 43:205, pl. 36, fig. 8. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek area, Lompoc quad., Santa Barbara Co. UCMP B6958. Hypotype SU/CASG 9312. [Veneridae].

Pitar sp. Addicott 1973b. USGS PP 791:37, pl. 6, fig. 10. Temblor Fm. (Wygal Sandstone Member), Miocene. Temblor Creek, Carneros Rocks quad., Kern Co. USGS M3978. Hypotype USNM 646587. [Veneridae].

Pitar sp. Throckmorton 1988a. USGS OFR 88-59:51, pl. 6, fig. 7 (peel) (refigured in Throckmorton 1988b, pl. 1, fig. 13). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8151. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Veneridae].

....., pl. 5, fig. 3 (refigured in Throckmorton 1988b, pl. 1, fig. 14). Tesla Fm., uppermost Cretaceous/lowermost Paleocene. Midway quad., Alameda Co. UCMP D8147. UCMP unnumbered hypotype lost, *fide*, C. Throckmorton (personal communication, 2002).

Pitar sp. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. S. Strata unknown, [Miocene]. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8825 [=SBMNH 60185]. **Remarks:** Determined here as *Mactromeris* cf. *M. catiliformis lenticularis* (Gabb, 1866). [Mactridae].

Pitar n. sp. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, figs. 1, 5. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 7319. Hypotype UCR 7319/100 (not UCR 6893/2 as in pl. caption). **Remarks:** *Pitar addicotti* n. sp., *fide* Zinsmeister 1983b: p. 1288. [Veneridae].

Pitar n. sp. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 4. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6806]. Hypotype UCR 6806/141 (not UCR 6806/15 as in pl. caption). **Remarks:** *Pitar murphyi* n. sp., *fide* Zinsmeister (1983b: p. 1288). [Veneridae].

Placunanomia californica Arnold, 1909 [1910]. Adegoke 1969. UCPG 80:106, pl. 10, fig. 4. San Joaquin Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP B6537. Hypotype UCMP 36644. [Anomiidae].

Placunanomia californica Arnold, 1909 [1910]. Moore 1987. USGS PP 1228-C:C11, C12, pl. 6, figs. 5, 11. Etchegoin Fm., Miocene/Pliocene. South end of Kettleman Hills, Lost Hills quad., Kern Co. USGS 4715. Holotype USNM 165546. [Anomiidae].

Placunanomia granti Hertlein, 1928a. Moore 1987. USGS PP 1228-C:C11, pl. 6, fig. 3. Vaqueros Fm., Oligocene/Miocene. West of Arlington Canyon, Santa Rosa Is., California Channel Ids. CASG 1150. Holotype CASG 4139. [Anomiidae].

Placuanomia hannibali Jordan and Hertlein, 1926. Squires et al. 2006. NHMLAC CS 511:15, 16, figs. 20, 21. Pico Fm., Pliocene. Southwest of Valencia, Oat Mtn. quad. (1952, PR 1969), Los Angeles Co. LACMIP 17777. Hypotypes LACMIP 13349, 13350. [Anomiidae].

Placunanomia Fowkes 1982. Coalinga Guidebook, p. 21, unnumbered fig. Domengine Fm., Eocene. West of Coalinga, Fresno Co. WHC hypotype lost? [Anomiidae].

Plagiocardium (*Schedocardia*) *breweri* (Gabb, 1864). [*Cardium*]. Stewart 1946. USGS PP 205-C:93, pl. 11, fig. 20. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14492. Hypotype USNM 498721. **Remarks:** In the genus/subgenus *Acanthocardia* (*Schedocardia*), *fide* Squires (1984: p. 49; 1987: p. 65); *fide* Moore (2003a: p. 3). [Cardiidae].

Platyodon clarki Adegoke, 1967d (n. sp.). Pr.CAS 35(1):7–8, figs. 7–10, 18. San Pablo Group, Miocene. Vicinity of Walnut Creek, Concord sheet, Contra Costa Co. UCMP 1942. Holotype UCMP 11555, paratypes UCMP 32516. 32517, 32520, unfigured paratypes UCMP 32501, 32511, 32513. 32514, 32518. [Myidae].

Platyodon pecki Adegoke, 1967d (n. sp.). Pr.CAS 35(1):4, 5, figs. 1–3, 5, 6. San Ramon Fm., Oligocene. North side of Arnold Industrial Hwy. (St. Rte. 4), Walnut Creek quad. Contra Costa Co. UCMP A7762. Holotype UCMP 15471, paratypes UCMP 15472, 15473, 15922, unfigured paratypes UCMP 15474, 15923, 15925. [Myidae].

Pleurolucina sp. Powell 2008. USGS SIR 2008-5155:13, fig. 4s. Imperial Fm. [=Latrania Fm.], Pliocene. Vicinity of Travertine Rock, Imperial Co. (not San Diego Co. as in locality description). USGS. M9778. Hypotype USNM 486901. [Lucinidae].

Plicatula juncalensis Squires, 1987 (n. sp.). NHMLAC CS 388:57–58, figs. 95, 96. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958.), Los Angeles Co. CSUN 362 [=LACMIP 16273. Holotype LACMIP 7513. [Plicatulidae].

Plicatula juncalensis Squires, 1987. Squires and Saul 1997. Jour. Paleo. 71(2):295, figs. 4.11–4.13. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 362 [=LACMIP 16273]. Holotype LACMIP 7513. [Plicatulidae].

Plicatula lapidicina Squires and Saul, 1998 (n. sp.). Jour. Paleo. 72(6):1026, 1027, figs. 3.4–3.6. Santa Susana Fm., Paleocene. Quarry Canyon area, Topanga quad. (1952, PR 1981), east-central Santa Monica Mtns., Los Angeles Co. LACMIP 26725. Holotype LACMIP 11278. [Plicatulidae].

....., Vicinity of Quarry and Trailer canyons, Topanga quad. (1952, PR 1981), east-central Santa Monica Mtns., Los Angeles Co. LACMIP 10508. Unfigured paratype LACMIP 11279.

Plicatula ostreiformis Stanton, 1896. Moore 1987. USGS PP 1228-C:C5, pl. 1, figs. 1, 3. Martinez Fm., Paleocene. Near Lower Lake, Lake Co. USGS 4192. Syntypes USNM 157838. [Plicatulidae].

....., pl. 1, fig. 2. Near Lower Lake, Lake Co. UCMP 790. Hypotype (of Dickerson, 1914a, pl. 9, fig. 12) UCMP 11680.

Plicatula ostreiformis Stanton, 1896. Squires and Saul 1997. Jour. Paleo. 71(2):293–295, figs. 4.5, 4.6, 4.8–4.10. Martinez Fm., Paleocene. Vicinity of Herndon Creek near Lower Lake, Lower Lake quad. (1975), Lake Co. LACMIP 7047 [=UCMP 790]. Hypotypes LACMIP 8063–8065. [Plicatulidae].

....., fig. 4.7. Near Lower Lake, Lower Lake quad. (1975), Lake Co. UCMP 790 [=LACMIP 7047]. Holotype (of *Ostrea buwaldana* Dickerson, 1914a) UCMP 11719.

Plicatula simiensis Squires and Saul, 1998 (n. sp.). Jour. Paleo. 72(6):1026, figs. 3.1–3.3. Santa Susana Fm., Paleocene. Northeast of Meier Canyon, Santa Susana quad. (1951, PR 1969), south side Simi Valley, Ventura Co. UCMP 3754. Holotype UCMP 154004. [Plicatulidae].

Plicatula trailerensis Squires and Saul, 1998 (n. sp.). Jour. Paleo. 72(6):1027–1028, figs. 3.7–3.9. Santa Susana Fm., Paleocene. Trailer Canyon area, Topanga quad. (1952, PR 1981), east-central Santa Monica Mtns., Los Angeles Co. LACMIP 10508. Holotype LACMIP 11280. [Plicatulidae].

Pododesmus cf. *P. macrochisma* (Deshayes, 1839). [*Anomia*]. Stanton 1966. Jour. Paleo. 40(1): 28, pl. 5, fig. 7. Castaic Fm., Miocene. Dry Canyon Dam area, Los Angeles Co. CIT 1670 [=LACMIP 7751. Hypotype LACMIP 4092]. **Remarks:** In the subgenus *Monia*, *fide* Coan et al. (2000: p. 256). [Anomiidae].

Pododesmus macrochisma (Deshayes, 1839). [*Anomia*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):225–226, pl. 40, fig. 3, pl. 41, fig. 9. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4532, 4533. **Remarks:** In the subgenus *Monia*, *fide* Coan et al. (2000: p. 256). [Anomiidae].

....., pl. 41, figs. 12, 13. Pacific Beach, San Diego Co. UCLA 2420 [=LACMIP 22420]. Hypotype UCLA [48615 [=LACMIP 9298].

Pododesmus (*Monia*) *macrochisma* (Deshayes, 1839). [*Anomia*]. Vedder and Moore 1976. AAPG Misc. Pub. 24:123,128, pl. 1, fig. 3. Unnamed strata, Pliocene. Near Lemon Tank Reservoir, San Clemente Is., California Channel Ids. USGS M6501. Hypotype USNM 235576. [Anomiidae].

Pododesmus (*Monia*) *macroschisma* (Deshayes, 1839). [*Anomia*]. Squires and White 1983. SEPM Guidebook 35:222, pl. 1, fig. 5. Saugus Fm. [=Pico Fm.], Pliocene. Northern Simi Valley, Santa Susana quad. (1951, PR1969), Ventura Co. CSUN 725 [=LACMIP 29227]. Hypotype UCLA 59407 [=LACMIP 8320]. [Anomiidae].

Pododesmus macrochisma (Deshayes, 1839). [*Anomia*]. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 24. Niguel Fm., Pliocene. Orange Co. SDSNH 4080. Hypotype determined here as missing. **Remarks:** In the subgenus *Monia*, *fide* Coan et al. (2000: p. 256). [Anomiidae].

Pododesmus (*Monia*) *macrochisma* (Deshayes, 1839). [*Anomia*]. Moore 1987. USGS PP 1228-C:C13, pl. 9, fig. 7. Etchegoin Fm., Miocene/Pliocene. Coalinga area, Fresno Co. USGS 4767. Hypotype (of Arnold 1909 [1910], pl. 14, fig. 1], USNM 165602. [Anomiidae].

Pododesmus macrochisma (Deshayes, 1839). [*Anomia*]. Squires 2012. NHMLAC CS 520:76, fig. 24. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14349. [Anomiidae].

Pododesmus cf. *P. macrochisma* (Deshayes, 1839) [*Anomia*]. Powell et al. 2019a. USGS SIR 2019-5021:3, 29. 30, pl. 2, figs. 7, 15. Wilson Grove Fm., Miocene. Near Bloomfield, Sonoma Co. CASG 54135. Hypotypes CASG 78426, 78429. **Remarks:** In the subgenus *Monia*, *fide* Coan et al. (2000: p. 256). [Anomiidae].

Porterius woodfordi (M.A. Hanna, 1927). [*Barbatia*]. Moore 1983. USGS PP 1228-A:A46–A47, pl. 10, figs. 3, 4. Ardath Fm., Eocene. Near mouth of Soledad Valley, La Jolla quad., San Diego Co. UCMP 5062. Holotype UCMP 31062. [Parallelodontidae].

Portlandia (*Portlandia*) *markleyensis* (Clark, 1938). [*Yoldia*]. Moore 1983. USGS PP 1228-A:A29, pl. 4, fig. 16. Kreyenhagen Fm. (Markley Sandstone Member), Eocene Pleasants Creek area Napa quad., Solano Co. UCMP. A1297. Holotype UCMP 30833. [Yoldiidae].

Portlandia (*Portlandia*) *mortuasuensis* (Clark and Woodford, 1927). [*Yoldia*]. Moore 1983. USGS PP 1228-A:A29, pl. 4, fig. 15. Meganos Fm., Paleocene/Eocene. North of Briones Valley, Brentwood quad., Contra Costa Co. UCMP 3577. Holotype UCMP. 31337. [Yoldiidae].

Portlandia (*Portlandia*) *mosesi* (Palmer, 1923). [*Yoldia*]. Moore 1983. USGS PP 1228-A:A30, pl. 4, fig. 10. Capay(?) Fm., Eocene. Ualtis Creek, just south of Dunn's Peak, Vaca Valley, Napa quad., Solano Co. UCMP 3573. Holotype UCMP 30704. [Yoldiidae].

Portlandia (*Portlandia*) *packardi* (Clark, 1918). [*Malletia*]. Moore 1983. USGS PP 1228A:A30, pl. 4, fig. 11. Kirker Tuff, Oligocene. West of Kirker's Creek, Mt. Diablo quad., Contra Costa Co. UCMP 2033. Holotype UCMP 11154. [Yoldiidae].

Portlandia (*Portlandia*) *rosa* (M.A. Hanna, 1927). [*Leda*]. Moore 1983. USGS PP 1228-A:A29, pl. 4, fig. 9. Ardath Fm., Eocene. Rose Creek, east of La Jolla, La Jolla quad., San Diego Co. UCMP 3993. Holotype UCMP 31090. [Yoldiidae].

Pristes oblongus Carpenter, 1864b. Hertlein and Grant, 1972. SDSNH Mem. 2(2B):240–241, pl. 44, figs. 9, 10, 13, 14, pl. 45, figs. 5, 8, 9, 12. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP 4629–4634. **Remarks:** In the genus/subgenus *Thecodonta* (*Pristes*), *fide* Moore (1992: p. E9). [Lasaeidae].

Propeamussiidae, indet. (Propeamussid in figure caption) Squires 1987. NHMLAC CS 388:57, fig. 94. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 362 [=LACMIP 16273]. Hypotype LACMIP 7512. [Propeamussidae].

Propeamussium interradiatum (Gabb, 1869b). [*Pecten*]. Stewart 1946. USGS PP 205-C:95, pl. 12, fig. 8. Kreyenhagen Fm., Eocene. Reef Ridge, Dark Hole quad., Fresno Co. USGS 14563. Hypotype USNM 498738. [Propeamussiidae].

....., pl. 12, fig. 9. Reef Ridge, Dark Hole quad., USGS 14564. Hypotype USNM 498739.

Propeamussium (*Propeamussium*) *interradiatum* (Gabb, 1869b). [*Pecten*]. Addicott 1971. Veliger 13(3):227, figs. 6, 11. Kreyenhagen Fm., Eocene. Near Idria, San Benito Co. USGS 5742 or 5743 (both cited in text). Hypotypes USNM 646450, 646451. [Propeamussiidae].

Propeamussium interradiatum (Gabb, 1869b). [*Pecten*]. Moore 1984. USGS PP 1228-B:B7, pl. 1, fig. 1. Kreyenhagen Fm., Eocene/Oligocene. East of New Idria, Priest Valley quad., San Benito Co. Lectotype (of Stewart, 1930:124) ANSP 4652 (not ANSP 4442 as in Stewart 1930: p. 124). [Propeamussiidae].

Propeamussium interradiatum (Gabb, 1869b). [*Pecten*]. Squires 1994b. SEPM Guidebook 74:52, pl. 1, fig. 8. Cozy Dell Shale, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23686. Hypotype LACMIP 11633. [Propeamussiidae].

Propeamussium (*Parvamussium*) *stanfordensis* (Arnold, 1906). [*Pecten*]. Addicott 1971. Veliger 13(3):228, 229, figs. 3, 8, 10. Kreyenhagen Fm., Eocene. Cantua Creek, Fresno Co. USGS 5749. Hypotypes USNM 646445–646448. **Remarks:** In the genus *Parvamussium*, *fide* Moore (1984: p. B10). [Propeamussiidae].

....., fig. 5. Butano(?) Sandstone (of Dibblee, 1966), Eocene. Palo Alto quad., San Mateo Co. USGS M1492. Hypotype USNM 646446.

Propeamussium stanfordensis (Arnold, 1906). [*Pecten*]. Phillips et al. 1976. SEPM Symposium vol. p. 148, pl. 4, figs. 6, 7. Gallaway Fm., Oligocene. North of Iverson Pt., Saunders Reef quad., Mendocino Co. UCMP D7149. Hypotypes UCMP 14438, 14439. **Remarks:** In the genus *Parvamussium*, *fide* Moore (1984: p. B10). [Propeamussiidae].

Propeamussium Fowkes 1982. Coalinga Guidebook, p. 23, unnumbered fig. Kreyenhagen Fm., Eocene/Oligocene. Vicinity of Zapato Creek, Kings Co. WHC hypotype lost? [Propeamussiidae].

Protothaca staleyi (Gabb, 1866). [*Dosinia*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:89, 90, pl. 21, figs. 2, 4. Careaga Fm. (Graciosa Member), Pliocene. Purisima Hills, Harris area, Santa Barbara Co. USGS 14752. Hypotype USNM 560148. **Remarks:** In the genus *Leukoma*, *fide* P. Valentich-Scott (personal communication, 2019). [Veneridae].

....., pl. 21, fig. 3. Graciosa Ridge, southeast of Orcutt, Santa Barbara Co. USGS 14618. Hypotype USNM 560149.

Protothaca staleyi (Gabb, 1866). [*Dosinia*]. Addicott, 1969. Pr.CAS 37(3):63, 66, 73, pl. 2, figs. 5, 6, 8. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM 650965, 650966. **Remarks:** In the genus *Leukoma*, *fide* P. Valentich-Scott (personal communication, 2019). [Veneridae].

....., pl. 4, fig. 1. Palo Alto quad., Santa Clara Co. USGS M1720. Hypotype USNM 650981.

Protothaca staleyi (Gabb, 1866). [*Dosinia*]. Addicott et al. 1978. USGS OFR 78-446:59, 72, pl. 4, fig. 4. Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5034. Hypotype USNM 254373. **Remarks:** In the genus *Leukoma*, *fide* P. Valentich-Scott (personal communication, 2019). [Veneridae].

Protothaca staleyi (Gabb, 1866). [*Dosinia*]. Addicott et al. 1980. SEPM Guidebook 6:19, 33, pl. 5, fig. 4 (refigured from Addicott et al. 1978, pl. 4, fig. 4). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5034. Hypotype USNM 254373. **Remarks:** In the genus *Leukoma*, *fide* P. Valentich-Scott (personal communication, 2019). [Veneridae].

Protothaca staleyi (Gabb, 1866). [*Dosinia*]. Perry 1988. SCMA, p. 18, fig. 9F. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. CASG 66111. Hypotype CASG 66111.01]. **Remarks:** In the genus *Leukoma*, *fide* P. Valentich-Scott (personal communication, 2019). [Veneridae].

Protothaca staleyi hannibali (Howe, 1922). [*Paphia*]. Adegoke 1969. UCPG 80:146, pl. 3, fig. 10. Etchegoin Fm., Pliocene. Coalinga quad., Fresno Co. UCMP B6545. Hypotype UCMP 36714. **Remarks:** In the genus *Leukoma*, *fide* P. Valentich-Scott (personal communication, 2019). [Veneridae].

Protothaca staminea (Conrad, 1837) [*Venus*]. Bedrossian 1974. Calif. Geol. 27(8):175 unnumbered fig, upper center specimen; 179, unnumbered fig. "Merced" Fm., Pliocene [=Wilson Grove Fm.], Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotype CASG determined here as missing. **Remarks:** In the genus *Leukoma*, *fide* Coan and

Valentich-Scott (2012: p. 778). [Veneridae].

Protothaca tenerrima (Carpenter *in* Gould and Carpenter, 1857). [*Tapes*]. Cummings et al. 1962. CDMG Bull. 181:204, ph. 17, fig. 1. Purisima Fm. (Pomponio Member), Pliocene. Purisima Creek area, Half Moon Bay quad., San Mateo Co.. 645-1M. Hypotype determined here as missing. **Remarks:** In the genus *Callithaca*, *fide* Coan and Valentich-Scott (2012: p. 756.) [Veneridae].

Protothaca (*Callithaca*) *tenerrima* (Carpenter *in* Gould and Carpenter, 1857). [*Tapes*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):277–278, pl. 51. fig. 1. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 4733. **Remarks:** In the genus *Callithaca*, *fide* Coan and Valentich-Scott (2012: p. 756). [Veneridae].

....., pl. 51, fig. 2. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 473].

....., pl. 51, fig. 3. Cabrillo Canyon, Balboa Park, San Diego, San Diego Co. CASG 1402. Hypotype CASG [=CASG 72558].

....., pl. 52, figs. 13, 14. San Diego, Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotype LACMIP 4735.

Protothaca (*Callithaca*) *tenerrima alta* (Waterfall, 1929). [*Paphia*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):278–279, text fig. 12. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotype LACMIP 4736. **Remarks:** Junior synonym of *Protothaca* (*Callithaca*) *tenerrima* (Carpenter *in* Gould and Carpenter, 1857), *fide* Coan et al. (2000: p. 376); in the genus *Callithaca*, *fide* Coan and Valentich-Scott (2012: p. 756). [Veneridae].

Protothaca sp. Alt and Hyndman 1975. Roadside Geol. Calif., p. 70, unnumbered fig. (as fossil clam shells) (refigured in Alt and Hyndman 2000, p. 156, unnumbered fig.). Scotia Bluffs Fm., Pliocene. Unknown locality, Humboldt Co. **Remarks:** Specimens figured in outcrop and were never collected. Figure also includes *Chione* sp., *Clinocardium* sp., and *Macoma* sp. [Veneridae].

Psammotreta (*Florimetis*) *biangulata* (Carpenter, 1856a). [*Scrobicularia*]. Stanton 1966. Jour. Paleo. 40(1):30–31, pl. 6, fig. 5. Castaic Fm., Miocene. Northeast side of Castaic Canyon Los Angeles Co. CIT 2093 [=LACMIP 11853. Hypotype CIT 2093 [=LACMIP 4129]. **Remarks:** Junior synonym of *Psammotreta* (*Leporimetis*) *obesa* (Deshayes, 1855), *fide* Coan and Valentich-Scott (2012: p. 617). [Tellinidae].

Psammotreta viridotincta (Carpenter, 1856b) [*Scrobicularia*]. Rugh 2016. Desert Symposium vol.:140, fig. 2-1. Latrania Fm., Miocene. Andrade Canyon, Imperial Co. [ABDSP 5051.2]. [Hypotype ABDSP I 10987]. **Remarks:** *Tellina ochracea* Carpenter (1864a), *fide* S. Rugh (personal communication, 2019). [Tellinidae].

Psephidia ovalis Dall, 1902. Hertlein and Grant 1972. SDSNH Mem. 2(2B):280, pl. 47, figs. 5, 9; pl. 51, figs. 8. 9. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotypes LACMIP 4737, 4738]. **Remarks:** In the genus *Nutricola*, *fide* Coan et al. (2000: p. 383). [Veneridae].

Psephidia stephensae Hertlein and Grant, 1972 (n. sp.). SDSNH Mem. 2(2B):280. 281, pl. 44, figs. 21, 22, 24, 26. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Holotype LACMIP 4739paratypes LACMIP 4740, 4741. **Remarks:** Junior synonym of *Nutricola cymata* (Dall, 1913), *fide* Coan et al. (2000: p. 383). [Veneridae].

....., San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Unfigured paratypes LACMIP 4742–4767, unfigured (4) CASG paratypes 72551, 72559].

Psephidia? n. sp. Woodring et al. 1940 [1941]. USGS PP 195:94–95, pl. 24, figs. 4–6. San Joaquin Fm. [upper oolite between *Neverita* Zone and Cascajo Conglomerate Member], Pliocene. North of El Campo, North Dome, Kettleman Hills, Kings Co. USGS 12841. Hypotypes USNM 495341–495343. [Veneridae?].

Pseudocardium densatum (Conrad, 1857a) of Arnold. [*Mulinia*]. Woodring et al. 1940 [1941]. USGS PP 195:93–94, pl. 37, fig. 3. Etchegoin Fm. (*Pseudocardium*-bearing sandstone), Pliocene. South Dome, , Kettleman Hills, Kings Co. USGS 12641. Hypotype USNM 495361. [Mactridae].

....., pl. 39, fig. 8. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. Arroyo Pino, North Dome, Kettleman Hills, Kings Co. USGS 12814. Hypotype USNM 495857.

Pseudocardium densatum (Conrad, 1857a). [*Mulinia*]. Hall 1958. UCPG 34(1):53, pl. 4, fig. 1. Cierbo Fm., Miocene. Southeast of Pleasanton, La Costa Valley quad. (1943), Alameda Co. SU 2739. Hypotype SU 8450 [=CASG 69925]. [Mactridae].

Pseudocardium aff. *P. densatum* (Conrad, 1857a). [*Mulinia*]. Glen 1959. UCPG 36(2):175–176, pl. 17, fig. 5 (not fig. e). Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene. San Vicente Creek, San Mateo Co. UCMP B4790. Hypotype UCMP 37647. [Mactridae].

Pseudocardium densatum (Conrad, 1857a). [*Mulinia*]. Cox et al. 1969b. Treatise Invert. Paleo. N6(2):N601, Fig. E94 10a (refigured from Packard 1916, pl. 31, fig. 1). [Etchegoin Fm.], Pliocene. [Coalinga quad., Fresno Co. UCMP 504. Hypotype UCMP 11449]. Hypotype missing, *fide* Keen and Bentson 1944: p. 70, however specimen located at UCMP June 2002, *fide* LTG (senior author). [Mactridae].

....., figs. E94 10b, c (refigured from Packard 1916, pl. 32, fig. 4, pl. 33, fig. 2). San Pablo Fm., Miocene, Pliocene. Locality unknown. Hypotypes UCMP 11441,11447.

?*Pseudocardium densatum densatum* (Conrad, 1857a). [*Mulinia*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):3–4, pl. 5, figs. 6, 7. Monterey Fm.?, Miocene. Santa Barbara Co. CASG 66542. Hypotype CASG 66542.01. [Mactridae].

Pseudocardium densatum (Conrad, 1857a) of Arnold, vars. [*Mulinia*]. Woodring et al. 1940 [1941]. USGS PP 195:93–94, pl. 24, figs. 14, 15. San Joaquin Fm. (Cascajo Conglomerate Member), Pliocene. Cascajo Hill, South Dome, Kettleman Hills, Kings Co. USGS 12645 and 12802. Hypotypes USNM. 495350, 495351. [Mactridae].

Pseudocardium densatum (Conrad, 1857a) of Arnold, medium-sized var. [*Mulinia*]. Woodring et al. 1940 [1941]. USGS PP 195:93–94 pl. 24, fig. 19. Etchegoin Fm. (*Pseudocardium-Anadara* Zone), Pliocene. Arroyo Culebrino area, Middle Dome, Kettleman Hills, Kings Co. USGS 12719. Hypotype USNM 495355. [Mactridae].

....., pl. 24, fig. 20. Arroyo Culebrino area, Middle Dome, Kettleman Hills, Kings Co. USGS 12662. Hypotype USNM 495356.

Pseudocardium densatum (Conrad, 1857a) of Arnold, short var. [*Mulinia*]. Woodring et al. 1940 [1941]. USGS PP 195:93–94, pl. 37, figs. 4–6. Etchegoin Fm. (*Pseudocardium*-bearing sandstone), Pliocene. South Dome, Kettleman Hills, Kings Co. USGS 12641. Hypotypes USNM 495362, 495363.[Mactridae].

Pseudocardium densatum (Conrad, 1857a) of Arnold, var. cf. *gabbii* Rémond, 1863. [*Cardium*]. Woodring et al. 1940 [1941]. USGS PP 195:94, pl. 29, fig. 16, pl. 30, figs. 1–8. Etchegoin Fm. (Upper *Pseudocardium* Zone), Pliocene. Ridge El Perno area, North Dome, Kettleman Hills, Kings Co. USGS 12460. Hypotypes USNM 495798–495806. **Remarks:** Junior synonym of *Pseudocardium densatum* (Conrad, 1857a), *fide* Moore (2003a: p. 4). [Mactridae].

....., pl. 37, figs. 7, 8. Etchegoin Fm. (*Pseudocardium*-bearing conglomerate), Pliocene. Middle Dome, Kettleman Hills, Kings Co. USGS 12671. Hypotype USNM 495358.

....., pl. 37, fig. 10. Middle Dome, Kettleman Hills, Kings Co. USGS 12673. Hypotype USNM 495360.

Pseudocardium densatum (Conrad, 1857a) of Arnold, var. cf. *gabbii* Rémond, 1863. Woodring and Bramlette,1950 [1951]. USGS PP 222:88, pl. 17, fig. 14; pl. 19, fig. 2. Careaga Fm. (Graciosa Member), Pliocene. Purisima Hills, near Harris, Santa Barbara Co. USGS 14752. Hypotype USNM 560144. **Remarks:** Junior synonym of *Pseudocardium densatum* (Conrad, 1857), *fide* Moore (2003a: p. 4). [Mactridae].

Pseudocardium densatum minor (Arnold, 1909 [1910]). [*Mulinia*]. Stewart 1946. USGS PP 205-C:100, pl. 17, fig. 6. Temblor Fm., Miocene. Reef Ridge, Garza Canyon area, Reef Ridge quad., Kings Co. USGS 14399. Hypotype USNM 498744. [Mactridae].

Pseudocardium densatum minor (Arnold, 1909 [1910]). [*Mulinia*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):5–6, pl. 5, fig. 4. Temblor Fm., Oligocene/Miocene. Jasper Creek, Fresno Co. USGS 4777. Holotype USNM 165601. [Mactridae].

Pseudocardium meganosensis (Clark and Woodford, 1927). [*Spisula*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):2–3, pl. 5, figs 2, 5. Meganos Fm., Paleocene/Eocene. Vicinity of March Creek, Brentwood

quad., Contra Costa Co. UCMP 3579. Holotype UCMP 31338 (as 31339 in pl. caption fig. 2). [Mactridae].

....., pl. 5, fig. 1. North of Mt. Diablo, Contra Costa Co. UCMP 3586]. Paratype UCMP 31339.

Pseudocardium? *orthomorpha* (Grant and Gale, 1931). [*Mactra*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Mactridae):7, pl. 5, fig. 8. Etchegoin Fm., Miocene/Pliocene. Federal Exploration Company's well, Kinsella 1, depth 2794 ft. (852 m), near Tipton, Tulare Co. [SDSNH 4413]. Holotype SDSNH 193. [Mactridae].

Pseudocardium pabloensis (Packard, 1916). [*Mulinia*]. Hall 1958. UCPG 34(1):53, pl. 4, fig. 2. Briones Fm., Miocene. East of Irvington, La Costa Valley quad. (1943), Alameda Co. SU 3242. Hypotype SU 8451 [=CASG 69926]. [Mactridae].

Pseudocardium pabloensis (Packard, 1916). [*Mulinia*]. Moore 2003a. USGS 1228-F [electronic format] (family Mactridae):6, pl. 5, fig. 3. San Pablo Group, Miocene. Near Shell Ridge, Concord quad., Contra Costa Co. UCMP 1946. Holotype UCMP 11442. [Mactridae].

Pseudocardium panzanum (Loel and Corey, 1932). [*Mulinia*]. Moore 2003a. USGS PP 1223-F [electronic format] (family Mactridae):3–4, pl. 5, fig. 13. Vaqueros Fm., Oligocene/Miocene. Vicinity of Anderson's Creek, edge of Carrizo Plains, La Panza Mtns., San Luis Obispo Co. UCMP A505. Holotype UCMP 31792 (not USNM as in pl. caption). [Mactridae].

Pseudocardium Fowkes 1982. Coalinga Guidebook, p. 31, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 17, fig. 3; refigured from Arnold and Anderson 1910, pl. 39, fig. 3 (both as *Mulinia densata* (Conrad, 1857a)), Etchegoin Fm., Miocene. Kings Co. Hypotype USNM 165531. **Remarks:** Determined here as *Pseudocardium densatum* (Conrad, 1857a). [Mactridae].

....., p. 96, unnumbered fig. East of Coalinga Sulphur Baths, west of Coalinga, Fresno Co. WHC Hypotype lost? **Remarks:** Determined here as *Pseudocardium densatum* (Conrad, 1857a).

....., p. 229, unnumbered fig. (refigured in Fowkes 1983, p. 31). Temblor Fm., Miocene. Temblor "reef," Kings Co. WHC hypotype lost? **Remarks:** Determined here as *Pseudocardium densatum* (Conrad, 1857a).

Pseudocardium? sp. Addicott 1973b. USGS PP 791:7, 29, pl. 5, fig. 5. Temblor Fm. (Wygal Sandstone Member), Miocene. Vicinity of Zemorra Creek, Carneros Rocks quad., Kern Co. USGS M4466. Hypotype USNN 646573. [Mactridae?].

Pteria berryi Adegoke, 1969 (n. sp.). UCPG 80:95–96, pl. 1, figs. 10, 12. Temblor Fm., Miocene. Beds crop out just below the top of ridge along north bank of Garza Creek, Reef Ridge quad., Kings Co. UCMP D1063. Holotype UCMP 36611, paratype UCMP 36612. [Pteriidae].

Pteria berryi Adegoke, 1969. Moore 1983. USGS PP 1228-A:A82, pl. 24, fig. 5. Upper Temblor Fm., Miocene. Reef Ridge, Fresno Co. UCMP D1063. Holotype UCMP 36611. [Pteriidae].

Pteria clarki Weaver and Palmer, 1922. Squires 2014b. Veliger 51(4):227, 228, fig. 33. Near top of Tejon Group. Eocene. Near Tecuya Creek, Tejon quad., Kern Co. UCMP 460. Hypotype UCMP 15487. [Pteriidae].

....., fig. 35. Near Martinez, Contra Costa Co. Hypotype UCMP 15578.

....., figs. 36, 39. Llajas Fm., Eocene. Simi Arroyo area, Simi Valley, Santa Susana quad., Ventura Co. LACMIP 15450. Hypotypes LACMIP 12749, 13480.

....., fig. 38. Domengine Fm., Eocene. Big Tar Canyon area, Garza Peak quad., Kings Co. UCMP A975. Hypotype UCMP 32623.

Pteria hertleini Wiedey, 1928. Moore 1983. USGS PP 1228-A:A82, pl. 24, fig. 6. Vaqueros Fm., Oligocene/Miocene. East side of Vaqueros Creek, Junipero Serra quad., Monterey Co. SU 200 [=CASG 71528]. Holotype SU 5160 [=CASG 71528]. [Pteriidae].

Pteria howei Nelson, 1925. Moore 1983. USGS PP 1228-A:A81–A82, pl. 24, fig. 2. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCMP 3767. Holotype UCMP 30515. **Remarks:** Figured by Squires (2014b: fig. 31). [Pteriidae].

"*Pteria*" *howei* Nelson, 1925. Squires 2014b. Veliger 514(4):227, fig. 30. Santa Susana Fm., Paleocene. Calabasas quad., Ventura Co. UCMP 3783. Paratype UCMP 30516. [Pteriidae].

Pteria jordani Wiedey, 1928. Moore 1983. USGS PP 1228-A:A83, pl. 25, fig. 1. Topanga Fm., Miocene. Dry Canyon area, south of Calabasas, Santa Monica Mtns., , Calabasas quad., Los Angeles Co. SU 425 [=SDSNH 425, *fide* Keen and Bentson (1944: p. 104]. Holotype SDSNH 25. [Pteriidae].

Pteria pellucida (Gabb, 1864). [*Avicula*]. Weaver and Kleinpell 1963. UCPG 43:197, pl. 29 (not pl. 31), fig. 5. "Coldwater" Sandstone, Eocene. Along Camino Cielo near Sacate-"Coldwater" contact, San Rafael Mtn. quad., Santa Barbara Co. UCMP B6940. Hypotype SU 9257 [=CASG. 70230]. **Remarks:** *Pteria clarki*, *fide* Squires (2014b: p. 227). [Pteriidae].

Pteria pellucida (Gabb, 1864). [*Avicula*]. Givens 1974. UCPG 109:43, pl. 1, fig. 10. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4714. Hypotype UCR 4714/6. **Remarks:** *Pteria clarki*, *fide* Squires (2014b: p. 227). [Pteriidae].

Pteria pellucida (Gabb, 1864). [*Avicula*]. Moore 1983. USGS PP 1228-A:A82, pl. 24, fig. 3. Domengine(?) Fm., Eocene. Near Martinez, Contra Costa Co. CGS 198]. Lectotype (of Vokes 1939:50) UCMP 11983. **Remarks:** *Pteria clarki*, *fide* Squires (2014b: p. 227). [Pteriidae].

Pteria pellucida (Gabb, 1864). [*Avicula*]. Squires 2001. NHMLAC CS 489:15–16, fig. 32. Llajas Fm., Eocene. Simi Arroyo, Santa Susana quad. (1951, PR 1969). Ventura Co. CSUN 548 [=LACMIP 15450]. Hypotype LACMIP 12749. **Remarks:** *Pteria clarki*, *fide* Squires (2014b: p. 227). [Pteriidae].

Pteria rositae Hertlein, 1928a. Moore 1983. USGS PP 1228-A:A83, pl. 24, fig. 7. Rincon Fm., Oligocene/Miocene. Vicinity of San Augustine Canyon, Santa Rosa Is., California Channel Ids. CASG 1156. Holotype CASG 4142. [Pteriidae]. **Remarks:** Junior synonym of *Pteria sterna*, *fide* Coan et al. (2000: p. 193). [Pteriidae].

Pteria sterna (Gould, 1851) [*Avicula*]. Rugh 2014a. Desert Symposium vol.:136, fig. 1-11 (left specimen). Latrania Fm., Miocene. Andrade Canyon, Imperial Co. ABDSP5050.3. Hypotype ABDSP I 10967. [Pteriidae].

Pteria sp. Clark and Woodford, 1927. Moore 1983. USGS PP 1228-A:A82, pl. 24, fig. 1. Meganos Fm., Paleocene/Eocene. Deer Valley, Mt. Diablo quad., Contra Costa Co. UCMP 3152. Hypotype UCMP 31321. **Remarks:** Also figured as "*Pteria*" sp., *fide* Squires (2014b: fig. 32). [Pteriidae].

Pteria sp. Squires 2014b. Veliger 51(4):225, 227, fig. 29. Santa Susana Fm., Paleocene. Upper Pulga Canyon, Topanga quad., Santa Monica Mtns., Los Angeles Co. LACMIP 17868. Hypotype LACMIP 13478. [Pteriidae].

Pulvinites californica Zinsmeister, 1978b (n. sp.). Jour. Paleo. 52(3):568, pl. 1, figs. 7–10 [mislabeled *Pulvinites pacifica* in pl. caption]. [Santa Susana Fm.], Paleocene. Meier Canyon, Simi Hills, Ventura Co. UCR 6821. Holotype UCR 6821/19, paratypes UCR. 6821/20–6821/22, unfigured paratypes UCR 6821/23–6821/25. [Pulvinitidae].

Pulvinites californica Zinsmeister, 1978b. Moore, 1983. USGS PP 1228-A:A85–A86, pl. 26, fig. 6. Upper Santa Susana Fm., Paleocene. Meier Canyon, Simi Hills, Ventura Co. UCR 6821. Holotype UCR 6821/19. [Pulvinitidae].

Pulvinites californica Zinsmeister, 1978b. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 10 [mislabeled *Pulvinites pacifica* in pl. caption]. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 6821]. Hypotype UCR 6821/20 (not UCR 7342/1 as in pl. caption). [Pulvinitidae].

Pulvinites pacifica Zinsmeister, 1978b. (n. sp.). Jour. Paleo. 52(3):569, pl. 1, figs. 5, 6 (as *Pulvinites californica* in pl. caption). Santa Susana Fm., Paleocene. Near Meier and Runkle canyons, Ventura Co. UCR 6900. Holotype UCR. 7342/1 (not UCR 6900/101 as in text), paratype UCR 6900/102. [Pulvinitidae].

....., North slope of Simi Hills, Ventura Co. UCR 7326. Unfigured paratypes UCR 7326/1, 7326/8, 7326/9.

....., North slope of Simi Hills, Ventura Co. UCR. 7342. Unfigured paratypes UCR 7342/7–7342/15.

Pulvinites pacifica Zinsmeister, 1978b. Moore 1983. USGS PP 1228-A:A86, pl. 26, fig. 2. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCMP 3771. Hypotype (of Nelson 1925, pl. 49, figs. 8, 9 (of *Pedalion* sp.). UCMP 30513. [Pulvinitidae].

....., pl. 26, fig. 7. Lower Santa Susana Fm., Paleocene. Calabasas quad., Ventura Co. UCR 7342. Holotype UCR 7342/1.

Pulvinites pacifica Zinsmeister, 1978b. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, figs. 12, 13 (as *Pulvinites californica* in pl. caption). Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 7342. Holotype UCR 7342/1 (not UCR 6900/4 as in pl. caption). [Pulvinitidae].

Pycnodonte? (*Crenostrea*?) *eldridgei* (Arnold, 1907). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C22, pl. 21, figs. 1, 4. Vaqueros Fm., Oligocene/Miocene. East of Grimes Canyon, near Filmore, Piru quad. Ventura Co. Holotype USNM 164966 (not USNM 164986, as cited in Keen and Bentson (1944: p. 75). [Gryphaeidae?].

Pycnodonte (*Phygraea*) cf. *Pycnodonte (Phygraea) pacifica* Squires and Demetrion, 1990. Squires 2001. NHMLAC CS 489:16, fig. 33. Llajas Fm., Eocene. Chivo Canyon, Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 7405. Hypotype LACMIP 12750. **Remarks:** *Phygraea stewarti* (M.A. Hanna 1927), *fide* Squires (2018: p. 18). [Gryphaeidae].

Pycnodonte (*Pycnodonte*?) *heermanni* (Conrad, 1855a). [*Ostrea*]. Powell 1985. WSM Ann. Rept. 17:32, pl. 1, fig. 1. Imperial Fm. Latrania Sand member [=Latrania Fm.], Miocene/Pliocene. Garnet Hill area, Riverside Co. CIT 192 [=LACMIP 16347]. Hypotype LACMIP 7162 [=LACMIP 7867], determined here as missing. **Remarks:** Supplemental description in Conrad (1855b). [Gryphaeidae].

Pycnodonte? (*Pycnodonte*?) *heermanni* (Conrad, 1855a). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C21, pl. 13, figs. 1, 4, 6, 7, pl. 14, fig. 4, pl. 16, fig. 4. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Colorado Desert, Imperial Co. Syntypes (as holotype in text) ANSP 13367, 13367b. **Remarks:** Supplemental description in Conrad (1855b). [Gryphaeidae].

Pycnodonte heermani [*sic*] (Conrad, 1855a). [*Ostrea*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 57, fig. 3.12B (refigured in Maars et al. 2020, p. 193, fig. 4). Latrania Fm., Miocene/Pliocene. Yuha Hills, Imperial Co. SDSNH. 360. Hypotype SDSNH 23331. **Remarks:** Supplemental description in Conrad (1855b).[Gryphaeidae].

Pycnodonte? (*Pycnodonte*?) *howelli* (Wiedey, 1928). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C20, pl. 14, figs. 1, 3, 5, 7. Vaqueros Fm., Oligocene/Miocene (Temblor Fm. in locality description). Near Sespe Creek, Mt. Pinos quad., Ventura Co. SU 446 [251 on specimen label]. Syntypes CASG. 2981, 2982. [Gryphaeidae].

Pycnodonte cf. *P. howelli* (Wiedey, 1928) [*Ostrea*]. Stadum and Finger 2016. NHMLAC CS 524:39, 42, fig. 38. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad., SDSNH 4312. Hypotype SDSNH 83234. [Gryphaeidae].

Pycnodonte? (*Pycnodonte*?) *loeli* (Hertlein, 1928a). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C21, pl. 18, figs. 7, 8. Vaqueros Fm., Oligocene/Miocene. Santa Rosa Is., California Channel Ids. CASG 1153. Holotype CASG 4117. [Gryphaeidae].

Pycnodonte (*Phygraea*) sp., aff. *Pycnodonte* (*Phygraea*) *pacifica* Squires and Demetrion, 1990. Squires 1999b. NHMLAC CS 479:24, 25, figs. 54, 56. Santa Susana Fm., Paleocene/Eocene. South side of Simi Valley, Calabasas quad. (1952, PR 1967), Ventura Co. CSUN 1343 [=LACMIP 17186]. Hypotypes LACMIP 12696, 12697. **Remarks:** In the genus *Phygraea*, *fide* Squires (2018a: p. 17). [Gryphaeidae].

Pycnodonte? (*Crenostrea*?) *stewarti* (M.A. Hanna, 1927). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C22, pl. 19, figs. 4, 7, 8. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Vicinity of Soledad Valley, La Jolla quad., San Diego Co. UCMP 5062. Syntypes UCMP 30921, 30922. **Remarks:** In the genus *Phygraea*, *fide* Squires (2018a: p. 18). [Gryphaeidae].

Pycnodonte? (*Pycnodonte*?) *wiedeyi* (Hertlein, 1928a). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C20-C21, pl. 15, figs. 1, 4, 5, 8. Vaqueros Fm., Oligocene/Miocene. Vicinity of San Augustine Canyon, Santa Rosa Is., California Channel Ids. CASG 1154. Holotype CASG 4129, paratype CASG 4130. [Gryphaeidae].

Pycnodonte (*Pycnodonte*) *yneziana* (Loel and Corey, 1932). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C18–C19, pl. 11, figs. 1, 3, 4, 6. Vaqueros Fm., Oligocene/Miocene. Santa Barbara Co. UCMP A317. Holotype UCMP 31745. [Gryphaeidae].

Raeta? *plicatella longior* (Grant and Gale, 1931). [*Anatina*]. Moore 2003a. USGS PP 1228-F [electronic format] (family

Mactridae):37, pl. 12, figs. 2, 3. Upper Fruitvale Sand, Miocene. Superior Oil Company well, Ansolabehere 1, depth 4525-7 ft., near Bakersfield, Kern Co. [SDSNH 4412]. Holotype SDSNH 192. [Mactridae].

Raeta? *transmontana* (Conrad, 1857a). [*Lutraria*]. Moore 2003a. USGS 1228-F [electronic format] (family Mactridae):37–38, pl. 12, fig. 7. Topanga(?) Fm., Miocene(?). Rancho Triumpho, Los Angeles Co. Holotype USNM 13322. [Mactridae].

Saccella cellulita (Dall, 1896a). [*Leda*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:80, pl. 15, figs. 3, 26. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., brachiopod bed, Santa Barbara Co. USGS 14770. Hypotype USNM 560095. **Remarks:** In the genus/subgenus *Nuculana* (*Jupiteria*), *fide* Coan et al. (2000: p. 88). [Nuculanidae].

Saccella ochsneri (Anderson and Martin, 1914). [*Leda*]. Moore 1963 [1964]. USGS PP 419:57, pl. 13, figs. 1–3, 7. Temblor Fm., Miocene. Kern River about, Caliente quad., Kern Co. CASG Holotype CASG 103 [=CASG 68.01], paratype CASG 105 [=CASG 68.04]. **Remarks:** In the genus/subgenus *Nuculana* (*Saccella*), *fide* Moore (1983: p. B19). [Nuculanidae].

Saccella orcutti (Arnold, 1907). [*Leda*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:80, pl. 8, figs. 5, 7, 8, 13. Sisquoc Fm. (diatomaceous strata), Miocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14902. Hypotypes (4) USNM 560023. **Remarks:** In the genus/subgenus *Nuculana* (*Saccella*), *fide* Moore (1983: p. B20). [Nuculanidae].

....., pl. 10, fig. 3. Foxen Mudstone, Pliocene. Santa Barbara Co. USGS 4473. Hypotype USNM 560051.

Saccella redondoensis (Burch, 1944). [*Nuculana*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:81, pl. 16, fig. 18. Careaga Fm. (Cebada member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14648. Hypotype USNM 560096. **Remarks:** Junior synonym of *Nuculana* (*Jupiteria*) *penderi* (Dall and Bartsch, 1910), *fide* Coan et al. (2000: p. 89). [Nuculanidae].

Saccella taphria (Dall, 1896b) [*Leda*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:80–81, pl. 21, fig. 7. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14614. Hypotype USNM 560134. [Nuculanidae].

Saccella taphria (Dall, 1896b). [*Leda*]. Moore 1968. SDSNH Occas. Pap. 15:50, pl. 23, figs. e–g. [San Diego Fm.], Pliocene. Balboa Park, San Diego, San Diego Co. SDSNH 1965. Hypotypes SDSNH 4167, 4168]. [Nuculanidae].

Sanguinolaria alata (Gabb, 1866). [*Gari (Psammocola)*]. Hall 1958. UCPG 34(1):56, pl. 8, fig. 2. Cierbo Fm., Miocene. Southeast of Pleasanton, La Costa Valley quad. (1943), Alameda Co. SU 2739. Hypotype SU 8467 [=CASG 69934]. **Remarks:** In the genus *Nuttallia*, *fide* Moore (2003b: p. 8). [Psammobiidae].

Sanguinolaria cf. *S. nuttalli* Conrad, 1837. Woodring et al. 1940 [1941]. USGS PP 195:70, pl. 36, fig. 10. Etchegoin Fm. (*Patinopecten* Zone), Pliocene. Vicinity of Arroyo Doblegado, southeast of Las Paredes, North Dome, Kettleman Hills, Kings Co. USGS 12426. Hypotype USNM 495847. **Remarks:** In the genus *Nuttallia*, *fide* Coan et al. (2000: p. 429). [Psammobiidae].

Sanguinolaria cf. *S. nuttalli* Conrad, 1837. Stanton 1966. Jour. Paleo. 40(1):31, pl. 6, figs. 3, 4. Castaic Fm., Miocene. Castaic Canyon, Los Angeles Co. CIT 2093 [=LACMIP 11853. Hypotype LACMIP 4126]. **Remarks:** In the genus *Nuttallia*, *fide* Coan et al. (2000: p. 429). [Psammobiidae].

Saulella undulifera (Gabb, 1869b). [*Tellina*]. Zinsmeister 1983b. Jour. Paleo. 57(6):1288, fig. 1I. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCLA5996 [=LACMIP 25996]. Hypotype (not holotype as in text) UCLA 59255 [=LACMIP 10984]. [Tellinidae].

....., fig. 1J. Simi Hills, Ventura Co. UCR 6848. Hypotype UCR 6848/100.

Saulella undulifera (Gabb, 1869b). [*Tellina*]. Squires 1999a. Calif. Geol. 52(4):13, fig. 4 (refigured from Gabb 1869b, pl. 30, fig. 74). [Martinez Fm., Paleocene]. Martinez, Contra Costa Co. Lectotype (of Stewart 1930: p. 204) ANSP 4551], missing, *fide* K. Estes-Smargiassi (personal communication, 2019). [Tellinidae].

Saulella undulifera (Gabb, 1869b). [*Tellina*]. Squires 1999b. NHMLAC CS 479:27, fig. 60 (peel). Santa Susana Fm., Eocene. North side Simi Valley, Santa Susana quad. (1951., PR 1969), Ventura Co. LACMIP 26610 [=CSUN 967].

Hypotype LACMIP 12699. [Tellinidae].

Saxidomus sp. aff. *S. nuttalli* Conrad, 1837. Moore 1968. SDSNH Occas. Pap. 15:52, pl. 24, figs. a, b. San Diego Fm., Pliocene. Balboa Park, San Diego, San Diego Co. SDSNH 1965. Hypotype SDSNH 4157]. [Veneridae].

Saxidomus nuttalli Conrad, 1837. Hertlein and Grant 1972. SDSNH Mem. 2(2B):271, pl. 50, fig. 9. San Diego Fm., Pliocene. Near U.S./Mexico boundary, San Diego Co. UCLA 312 [=LACMIP 20312]. Hypotype UCLA 48622 [=LACMIP 9305]. [Veneridae].

Saxidomus nuttalli Conrad, 1837. Fowkes 1982. Coalinga Guidebook, p. 33 (as *Saxidomus*), p. 206, unnumbered figs. (refigured from Arnold 1909 [1910], pl. 21, fig. 4; refigured from Anderson and Arnold 1910, pl. 40, fig. 4). Jacalitos Fm., Miocene. At northwest end of Anticline Ridge, 6 mi. north-northeast of Coalinga, Fresno Co. Hypotype USNM 165529. [Veneridae].

Saxidomus nuttalli Conrad, 1837. Squires and White 1983. SEPM Guidebook 35:222, pl. 1, fig. 8. Saugus Fm. [=Pico Fm.], Pliocene. North side of Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 725 [=LACMIP 29227]. Hypotype UCLA 59410 [=LACMIP 8323]. [Veneridae].

Saxidomus nuttali Conrad, 1837. Squires 2012. NHMLAC CS 520:76, fig. 37. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17921. Hypotype LACMIP 14361. [Veneridae].

Saxidomus nuttalli latus Stewart *in* Woodring et al., 1940 [1941]. Adegoke 1969. UCPG 80:142, pl. 7, figs. 1, 4. Etchegoin Fm., Pliocene. Coalinga quad., Fresno Co. UCMP B6546. Hypotype UCMP 36701. **Remarks:** Junior synonym of *Saxidomus nuttalli* Conrad, 1837, *fide* Coan et al. (2000: p. 386). [Veneridae].

Saxidomus nuttalli latus Stewart *in* Woodring et al., 1940 [1941]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):272, pl. 50, figs. 8, 10. San Diego Fm., Pliocene. San Diego well, Balboa Park, San Diego, San Diego Co. CASG 12051. Hypotype CASG 70447. **Remarks:** Junior synonym of *Saxidomus nuttalli* Conrad, 1837, *fide* Coan et al. (2000: p. 386). [Veneridae].

Saxidomus vaquerosensis Arnold, 1909 [1910]. Stadum and Finger 2016. NHMLAC CS 524:39, 42, fig. 50, 58. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 180184. [Veneridae].

Saxolucina sp. or a variant of *Eomiltha turneri* (Stanton, 1896). [*Lucina*]. Smith 1975b. SEPM Symposium vol., p. 376, pl. 1, fig. 22. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype SU 10233 [=CASG 61666.16]. [Lucinidae].

Scapharca (*Cunearca*) *hamelini* (Wiedey, 1928). [*Arca*]. Moore 1983. USGS PP 1228-A:A45, pl. 9, fig. 12. Vaqueros Fm., Miocene. Near junction of Little Sespe River with Big Sespe River, Ventura Co. SDSNH 407. Holotype SDSNH 18. [Arcidae].

Scapharca? (*Scapharca*?) *obispoana obispoana* (Conrad, 1857d). [*Arca*]. Moore 1983. USGS PP 1228A:A44, pl. 9, fig. 3. Santa Margarita(?) Fm., Miocene. Near San Luis Obispo, San Luis Obispo Co. Lectotype (of Grant and Gale 1931:955) USNM 13330. [Arcidae].

Scapharca? (*Scapharca*?) *obispoana pedisparis* (Wiedey, 1928). [*Arca*]. Moore 1983. USGS PP 1228-A:A44, pl. 9, fig. 6. Monterey Fm., Miocene. Vicinity of Zayante railroad station, Santa Cruz Co. SDSNH 443. Holotype SDSNH 23. [Arcidae].

Scapharca? *obispoana perdisparis* (Wiedey, 1928). [*Arca*]. Powell 2015. WSM Ann. Rept. 45:59–60, figs. 7, 10. Monterey Fm., Miocene. Arroyo Seco, west of Greenfield, Monterey Co. [CASG 101093. Hypotypes CASG 101094, 101095]. [Arcidae].

Scapharca (*Cunearca*) *rivulata* (Wiedey, 1928). [*Arca*]. Moore 1983. USGS PP 1228-A:A45, A46, pl. 9, fig. 13. Upper Temblor Fm. (Santos Shale Member) (as Monterey Fm. in text), Miocene. Near Simmler, La Panza quad., San Luis Obispo Co. SU 432. Holotype SDSNH 432. **Remarks:** The number 432 was used independently by SU and SDSNH for the same locality and is not an error in cataloguing (Kesler Randall, personal communication, 2020). [Arcidae].

Scapharca (*Cunearca*) *santaclarana* (Loel and Corey, 1932). [*Arca*]. Moore 1983. USGS PP 1228-A:A44–A45, pl. 9,

figs. 10, 11. Vaqueros Fm., Miocene. Near mouth of Wiley Canyon, Piru quad., Ventura Co. UCMP A252. Holotype UCMP 31765. [Arcidae].

Schizothaerus cf. *S. nuttallii* (Conrad, 1837). [*Lutraria (Cryptodon)*]. Woodring et al. 1940 [1941]. USGS PP 195:94 (as *Saxidomus nuttalli*), pl. 11, fig. 25. San Joaquin Fm. (*Acila* Zone), Pliocene. El Perro, North Dome, Kettleman Hills, Kings Co. USGS 12368. Hypotype USNM 495726. **Remarks:** In the genus *Tresus*, *fide* Coan et al. (2000: p. 463). [Mactridae].

....., pl. 33, fig. 9. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. Los Jinetes, North Dome, Kettleman Hills, Kings Co. USGS 12393. Hypotype USNM 495829.

Schizothaerus nuttalli (Conrad, 1837). [*Lutraria (Cryptodon)*]. Glen 1959. UCPG 36(2):176, pl. 17, fig. 13 [as *Schizothaerus* cf. *S. nuttalli* in fig. caption, not fig. m]. Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene. Vicinity of San Vicente Creek, San Mateo Co. UCMP B4790 (not UCMP B4807 as in text). Hypotype UCMP 37648. **Remarks:** In the genus *Tresus*, *fide* Coan et al. (2000: p. 463). [Mactridae].

Schizothaerus pajaroanus (Conrad, 1857d). [*Venus*]. Peck 1960. UCPG 36(4):240, pl. 21, fig. 12. Ohlson Ranch Fm., Pliocene. Annapolis quad., Sonoma Co. UCMP B2055. Hypotype UCMP 12559. **Remarks:** In the genus *Tresus*, *fide* Adegoke (1969: p. 123). [Mactridae].

Schizothaerus pajaroanus (Conrad, 1857d). [*Venus*]. Cummings et al. 1962. CDMG Bull. 181:204, ph. 17, fig. 5. Purisima Fm. (Pomponio Member), Pliocene. Tunitas Rd. area, Woodside quad., San Mateo Co. 657M. Hypotype determined here as missing. **Remarks:** In the genus *Tresus*, *fide* Adegoke (1969: p. 123) [Mactridae].

Securella cryptolineata (Clark, 1918). [*Chione*]. Parker 1949. Jour. Paleo. 23(6):589–590, pl. 93, figs. 8, 17; pl. 94, figs. 2, 5, 10, 11, 13, 21; pl. 95, fig. 10. San Ramon Fm., Oligocene. Southwest of Walnut Creek, Contra Costa Co. UCMP 1131. Holotype UCMP 11178, holotype (of *Chione mediostriata* Clark 1918) UCMP 11181, hypotypes UCMP 36090–36095. [Veneridae].

Securella cf. *S. cryptolineata* (Clark, 1918). [*Chione*]. Addicott 1973b. USGS PP 791:7, 37, pl. 6, fig. 5. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646583. [Veneridae].

Securella elsmerensis (English, 1914a). [*Chione*]. Parker 1949. Jour. Paleo. 23(6):590, pl. 93, figs. 14, 16 (refigured from Grant and Gale 1931, pl. 16, figs. 6b, 7). [Pico Fm.], Pliocene. Elsmere Canyon, Los Angeles Co. SDSNH 202. Lectotype (of Parker 1949:590) SDSNH 151, hypotype SDSNH 152. [Veneridae].

....., pl. 94, fig. 9. "Fernando Fm." [= Pico Fm.], Pliocene. Elsmere Canyon, San Fernando quad., Los Angeles Co.. UCMP 1735. Holotype (refigured from English 1914a, pl. 23, fig. 1) UCMP lost, *fide* Keen and Bentson (1944: p. 36); *fide* Parker (1949: p. 590).

....., Jacalitos Fm. [Etchegoin Fm. as per UCMP online database], Pliocene. Coalinga quad., Fresno Co. UCMP 2655. Unfigured hypotype UCMP 33055.

Securella juanensis (Loel and Corey, 1932). [*Chione*]. Parker 1949. Jour. Paleo. 23(6):591, pl. 93, figs. 11, 15. Temblor Fm., Miocene. La Panza quad., San Luis Obispo Co. UCMP A505. Holotype UCMP 31803. [Veneridae].

Securella margaritana (Anderson and Martin, 1914). [*Chione*]. Adegoke 1969. UCPG 80:140, pl. 6, figs. 2, 13. Santa Margarita Fm., Miocene. Domengine Ranch quad., Fresno Co. UCMP D1102. Hypotype UCMP 36696. [Veneridae].

Securella panza (Anderson and Martin, 1914). [*Chione*]. Parker 1949. Jour. Paleo. 23(6):592–593, pl. 94, figs. 3, 7, pl. 95, fig. 3. Freeman Silt, Miocene. Bakersfield area, Bakersfield quad., Kern Co. Hypotype SU 6954, 6955 [=CASG 72123, 72124]. [Veneridae].

....., pl. 95, fig. 5. Temblor Fm.?, Miocene. Near Mayfield, Santa Clara Co. SU 448. Hypotype (paratype of *Chione valentinei* Wiedey, 1928) SU 6956 [=CASG 72125].

Securella panza (Anderson and Martin, 1914). [*Chione*]. Adegoke 1969. UCPG 80:139–140, pl. 6, figs. 8, 11. Temblor Fm., Miocene. Garza Creek area, Reef Ridge quad., Kings Co. UCMP B6511. Hypotype UCMP 36695. [Veneridae].

Securella securis (Shumard, 1858). [*Venus*]. Parker 1949. Jour. Paleo. 23(6):593, pl. 94, fig. 8, 19. Wildcat Fm., Pliocene. Humboldt Co. Hypotype UCMP 31961. [Veneridae].

Semele ashleyi Hertlein and Grant, 1972 (n. sp.). SDSNH Mem. 2(2B):299–300, pl. 48, fig. 3. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Paratype LACMIP 4790, unfigured paratypes LACMIP 4792, 4793]. **Remarks:** Junior synonym of *Semele* (*Semele*) *rubropicta* Dall, 1871, *fide* Coan et al. (2000: p. 432). [Semelidae].

....., pl. 48, figs. 5, 6, 9, 10. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Holotype LACMIP 4789, unfigured paratypes LACMIP 4791, 4794–4800].

....., , San Diego Co. LACMIP 318. Unfigured paratypes LACMIP 4801–4804].

Semele (*Semele*) *ashleyi* Hertlein and Grant, 1972. Moore 2003b. USGS PP 1228-G [electronic format] (family Semelidae):3–4, pl. 11, fig. 4. San Diego Fm., Pliocene. Hills south of Tia Juana [*sic*], San Diego Co. Holotype LACMIP 4789. **Remarks:** Junior synonym of *Semele* (*Semele*) *rubropicta* Dall, 1871, *fide* Coan et al. (2000: p. 432). [Semelidae].

Semele diabloi Dickerson, 1915. Moore 2003b. USGS PP 1228-G [electronic format] (family Semelidae):6, pl. 11, fig. 8. "Tejon Fm.", Eocene. Mt. Diablo quad., Contra Costa Co. UCMP 469. Holotype UCMP 11654. [Semelidae].

Semele (*Semele*) *fausta* Nomland, 1917a. Moore 2003b. USGS PP 1228-G [electronic format] (family Semelidae):2, pl. 11, fig. 2 (as *Semele fausata*). Etchegoin Fm., Miocene/Pliocene. Zapato Creek, Fresno Co. UCMP 2991. Holotype UCMP 11102. [Semelidae].

Semele (*Semele*) *gayi* Arnold, 1908. Moore 2003b. USGS PP 1228-G [electronic format] (family Semelidae):1, pl. 11, fig. 1. San Lorenzo Fm., Eocene/Oligocene. Near headwaters of San Lorenzo River and Pescadero Creek, Santa Cruz quad., San Mateo Co. Holotype USNM 165435. [Semelidae].

Semele morani Anderson and Martin, 1914. Moore 2003b. USGS PP 1228-G [electronic format] (family Semelidae):6, 7, pl. 11 fig. 9. Vaqueros Fm., Oligocene/Miocene. San Luis Obispo Co. CASG 126. Holotype CASG 129. [Semelidae].

Semele cf. *S. rubropicta* Dall, 1871. Woodring et al. 1940 [1941]. USGS PP 195:33, pl. 11, fig. 18. San Joaquin Fm. (*Acila* Zone), Pliocene Arroyo Hondo, North Dome, Kettleman Hills, Kings Co. USGS 12340. Hypotype USNM 495719. **Remarks:** *Semele rubropicta* Dall 1871, *fide* Adegoke (1969: p. 125). [Semelidae].

Semele rubropicta Dall, 1871. Shimer and Shrock, 1944. Index Foss. N.A., p. 429, pl. 171, fig. 8 (refigured from Arnold and Anderson 1910, pl. 47, fig. 3). [Etchegoin Fm.], Pliocene. Coalinga District, Fresno Co. USGS 4758. Hypotype USNM 165517. [Semelidae].

Semele cf. *S. rubropicta* Dall, 1871. Woodring and Bramlette 1950 [1951]. USGS PP 222:88, pl. 14, fig. 12. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotype USNM 560104. **Remarks:** *Semele rubropicta*, *fide* Adegoke 1969: p. 125. [Semelidae].

Semele rubropicta Dall, 1871. Hertlein and Grant 1972. SDSNH Mem. 2(2B):300, pl. 48, figs. 1, 2, 7. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817. Hypotype LACMIP 4806. [Semelidae].

....., pl. 48, fig. 11. San Diego Co. LACMIP 318. Hypotype LACMIP 4807.

Semele n. sp.? Woodring et al. 1940 [1941]. USGS PP 195:chart opposite p. 66, pl. 33, fig. 4. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. Arroyo Robador, east of Cerro Ultimo, North Dome, Kettleman Hills, Kings Co. USGS 12413. Hypotype USNM 495824. [Semelidae].

Semele sp. Hertlein and Grant 1972. SDSNH Mem. 2(2B):300, pl. 48, figs. 4, 8. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotype LACMIP 4805. **Remarks:** Probably a juvenile of *Semele ashleyi* n. sp., *fide* Hertlein and Grant (1972: p. 300). [Semelidae].

Septifer bifurcatus (Conrad, 1837). [*Mytilus*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):165–166, pl. 42, figs. 6, 12. San Diego Fm., Pliocene. West of Goat Canyon, San Ysidro quad. (1953), San Diego Co. SDSNH 47 [=SDSNH 5047]. Hypotype SDSNH [4319. [Mytilidae].

Septifer (*Septifer*) *bifurcatus* (Conrad, 1857d). [*Mytilus*]. Moore 1983. USGS PP 1228-A:A71, pl. 18, figs. 7, 9. San Diego Fm., Pliocene. West of Goat Canyon, San Ysidro quad. (1953), San Diego Co. SDSNH 47 [= SDSNH 5047]. Hypotype (of Hertlein and Grant 1972, pl. 42, figs. 6, 12) SDSNH 4319. [Mytilidae].

Septifer (*Septifer*) *coalingensis* Arnold, 1909 [1910]. Moore 1983. USGS PP 1228-A:A71, pl. 18, fig. 10. Etchegoin Fm., Miocene/Pliocene. Near Coalinga, Fresno Co. USGS 4634. Holotype USNM 165580. [Mytilidae].

Septifer (*Septifer*) *elegans* Waring, 1917. Moore 1983. USGS PP 1228-A:A70–A71, pl. 18, fig. 11. Llajas Fm., Eocene. North side of Simi Valley, Ventura Co. CASG 322 [=CASG 61913]. Neotype (of Moore 1983: p. A70) SU 322 [=CASG 61913.07, as syntype in CASG collection]. [Mytilidae].

Septifer (*Septifer*) cf. *S.* (*S.*) *elegans* Waring, 1917. Squires 1987. NHMLAC CS 388:56–57, fig. 93. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 364 [=LACMIP 16306]. Hypotype LACMIP 7511. [Mytilidae].

Septifer Fowkes 1982. Coalinga Guidebook, p. 21, unnumbered ig. Domengine Fm., Eocene. West of Coalinga, Fresno Co. WHC hypotype lost? [Mytilidae].

Septifer n. sp. Deméré et al. 1979. SEPM Guidebook 4:98, pl. 1, fig.12. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20769. [Mytilidae].

Siliqua cf. *S. alta* (Broderip and G.B. Sowerby I, 1829). [*Solen*]. Glen 1959. UCPG 36(2):174, pl. 17, fig. 12 (not fig. l). Pillar Pt. "Merced" Fm. [= Purisima Fm.] Pliocene. Vicinity of San Vicente Creek, Moss Beach area, San Mateo Co. UCMP B4790. Hypotype UCMP 37639. [Pharidae].

Siliqua lucida (Conrad, 1837). [*Solecurtus*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):311, pl. 49, fig. 2. San Diego Fm., Pliocene. Reynard Wy., San Diego, San Diego Co. SDSNH 43. Hypotype SDSNH 4350. [Pharidae].

Siliqua lucida (Conrad, 1837). [*Solecurtus*]. Moore 2003a. USGS 1228-F [electronic format] (family Pharidae):3–4, pl. 14, fig. 8. San Diego Fm., Pliocene. Reynard Wy., San Diego, San Diego Co. SDSNH 43. Hypotype SDSNH 4350 (of Hertlein and Grant 1972, pl, 49, fig. 2) SDSNH 4350]. [Pharidae].

Siliqua cf. *S. media* (G.B. Sowerby I, 1839). [*Solen*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:91, pl. 7, fig. 1. Sisquoc Fm. (Tinaquaic Sandstone Member), Pliocene. South of Foxen Canyon, , Santa Barbara Co. USGS 15008. Hypotype USNM 560018. **Remarks:** Junior synonym of *Siliqua alta* (Broderip and G.B. Sowerby I, 1829), *fide* Coan et al. (2000: p. 448). [Pharidae].

....., pl. 7, fig. 5. Sisquoc Ranch, Santa Barbara Co. USGS 14938. Hypotype USNM 560019.

Siliqua oregonia Dall, 1900c. Faustman 1964. UCPG 41(2):123–124, pl. 2, fig. 6. Scotia Bluffs Fm., Pliocene. Fortuna quad., Humboldt Co. UCMP B7908. Hypotype UCMP 37788. [Pharidae].

Siliqua sp. Woodring et al. 1940 [1941]. USGS PP 195:95–96, pl. 33, fig. 3. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. Arroyo Torcido, North Dome, Kettleman Hills, Kings Co. USGS 14108. Hypotype USNM 495823. [Pharidae].

Siliqua sp. Bedrossian 1974. Calif. Geol. 27(8):175, unnumbered fig., lower specimen; back cover, lower specimen. "Merced Fm.," Pliocene [=Wilson Grove Fm.], Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotype CASG determined here as missing. [Pharidae].

Simomactra falcata brioniana (Trask, 1922). [*Spisula*]. Moore 2003a. USGS 1228-F [electronic format] (family Mactridae):33–34, pl. 10, fig. 6 (as *Simomactra falcata barioniana* in pl. caption). Briones Sandstone, San Pablo Group, Miocene. South of Walnut Creek Concord quad., Contra Costa Co. UCMP 3522. Holotype UCMP 12380. [Mactridae].

Solemya ventricosa, auct. Talmadge, 1974. Veliger 16(3):315, fig. 3. Rio Dell Fm., Pliocene. Eel River at Rio Dell, Humboldt Co. Hypotype not located at CASG where Talmadge deposited numerous other specimens. [Solemyidae].

Solen? *domenginicus* Vokes, 1939. Moore 2003a. USGS 1228-F [electronic format] (family Solenidae):3–4, pl. 14, fig. 9 (not fig. 7 as in text). Domengine Fm., Eocene. Coalinga quad., Fresno Co. UCMP A1167. Holotype UCMP 15711. [Solenidae].

Solen aff. *S. gravidus* Clark, 1918. Addicott 1973b. USGS PP 791:7, 30, pl. 4, fig. 9. Temblor Fm. (Wygal Sandstone

Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646557. [Solenidae].

Solen perrini Clark, 1915. Woodring et al. 1940 [1941]. USGS PP 195:95, pl. 8, fig. 9. San Joaquin Fm. (Upper *Mya* Zone), Pliocene. Las Alturas, Middle Dome, Kettleman Hills, Kings Co. USGS 12685. Hypotype USNM 495294. **Remarks:** Junior synonym of *Solen* (*Ensisolen*) *sicarius* Gould, 1850, *fide* Coan et al. (2000: p. 445). [Solenidae].

....., pl. 24, fig. 1. San Joaquin Fm. (upper oolite between *Neverita* Zone and Cascajo Conglomerate Member), Pliocene. North of El Campo, North Dome, Kings Co. USGS 12841. Hypotype USNM 495338.

Solen rosaceus Carpenter, 1864b. Hertlein and Grant 1972. SDSNH Mem. 2(2B):308, pl. 48, fig. 12. San Diego Fm., Pliocene. Mt. Soledad, San Diego Co. Hypotype SDSNH 5006 [=SDSNH 4349]. **Remarks:** Determined by P. Don Vito and T. Deméré (SDSNH) to be *Solena* sp. from SDSNH 8, an undetermined Eocene fm. from the base of Mt. Soledad. [Solenidae].

Solen sicarius Gould, 1850. Hertlein and Grant 1972. SDSNH Mem. 2(2B):308–309, pl. 49, fig. 7. San Diego Fm., Pliocene. South slope of Mt. Soledad, San Diego Co. SDSNH 4. Hypotype SDSNH 5005 [=SDSNH 4351]. **Remarks:** In the subgenus *Ensisolen*, *fide* Coan et al. (2000: p. 445). [Solenidae].

Solen sicarius Gould, 1850. Perry 1977. Foss. Santa Cruz Co., p. 23, lower left fig. Purisima Fm., Pliocene. Near Capitola Beach], Santa Cruz Co. SCCM1. Hypotype SCCM 9685.02]. **Remarks:** In the subgenus *Ensisolen*, *fide* Coan et al. (2000: p. 445). [Solenidae].

Solen sicarius Gould, 1850. Perry 1988. SCMA, p. 18, fig. 9E. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. CASG 66175. Hypotype CASG 66175.01]. **Remarks:** In the subgenus *Ensisolen*, *fide* Coan et al. (2000: p. 445). [Solenidae].

Solen (*Ensisolen*) *sicarius* Gould, 1850. Squires 2012. NHMLAC CS 520:76, fig. 44. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14368. [Solenidae].

Solen sp., cf. *S. perrini* Clark, 1915. Squires 2012. NHMLAC CS 520:76, fig. 45. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14369. **Remarks:** Junior synonym of *Solen* (*Ensisolen*) *sicarius* Gould, 1850, *fide* Coan et al. (2000: p. 445).

Solena (*Eosolen*) *coosensis* Turner, 1938. Givens 1974. UCPG 109:49–50, pl. 2, fig. 1. Juncal Fm., Eocene. Lockwood Valley quad. (1943), Ventura Co. UCR 4676. Hypotype UCR 4676/22. **Remarks:** Junior synonym of *Solena* (*Eosolen*) *novacularis* (Anderson and G D. Hanna, 1925), *fide* Squires (1987: p. 67). [Solenidae].

Solena coosensis Turner, 1938. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, fig. 12. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20781. **Remarks:** *Solena* (*Eosolen*) *novacularis* (Anderson and G D.Hanna, 1925), *fide* Squires (1987: p. 67). [Solenidae].

Solena (*Plectosolen*) *gravidus gravidus* (Clark, 1918). [*Solen*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Solenidae):5–6, pl. 13, fig. 6. San Ramon Fm., Miocene. Southwest of town of Walnut Creek, Concord quad., Contra Costa Co. UCMP 1131. Holotype UCMP 11133. [Solenidae].

Solena (*Plectosolen*) *gravidus baileyi* (Loel and Corey, 1932). [*Solen*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Solenidae):6, pl. 13, fig. 1. Vaqueros Fm., Oligocene/Miocene. Vicinity of Santa Paula near west end of South Mtn., Santa Paula quad., Ventura Co. UCMP A244. Holotype UCMP 31831. [Solenidae].

Solena (*Eosolen*?) *lorenzanus* (Wagner and Schilling, 1923). [*Solen*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Solenidae):8–9, pl. 13, figs. 10, 11 (not fig. 9 as in pl. caption). San Emigdio Fm., Eocene. East of Muddy Creek, Mt. Pinos quad., Kern Co. UCMP 3212. Holotype UCMP 11421. [Solenidae].

Solena (*Eosolen*) *novacularis* (Anderson and G D.Hanna, 1925). [*Solen*]. Squires 1984. NHMLAC CS 350:50, Fig. 12d. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6585. [Solenidae].

Solena (*Eosolen*) *novacularis* (Anderson and G D. Hanna, 1925). [*Solen*]. Squires 1987. NHMLAC CS 388:67–68, fig. 115. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 827 [=LACMIP 16153]. Hypotype

LACMIP 7532. [Solenidae].

Solena (*Eosolen*) *novacularis* (Anderson and G D. Hanna, 1925). [*Solen*]. Squires 1988a. SEPM Guidebook 58:110, pl. 2, fig. 8. Llajas Fm. ("Domengine Stage"), Eocene. Simi Valley, Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6585. [Solenidae].

Solena (*Eosolen*) *novacularis* (Anderson and G D. Hanna, 1925). [*Solen*]. Moore, 2003b. USGS PP 1228-F [electronic format] (family Solenidae):9, pl. 14, figs. 10, 11 (not figs. 8, 9 as in text). Tejon Fm., Eocene. Tecuya Creek, Kern Co. CASG 792. Holotype CASG 882 [=CASG 792.01]. [Solenidae].

Solena (*Eosolen*) *perrini* (Clark, 1915). [*Solen*]. Moore 2003a. USGS 1228-F [electronic format] (family Solenidae):9–10, pl. 13, fig. 3. San Pablo Fm., Miocene. Southeast of Walnut Creek, Contra Costa Co. UCMP 1478. Holotype UCMP 11564. **Remarks:** Junior synonym of *Solen* (*Ensisolen*) *sicarius* Gould, 1850, *fide* Coan et al. (2000: p. 445). [Solenidae].

Solena (*Eosolen*) *stantoni* (Weaver, 1905). [*Solen*]. Zinsmeister 1983a. SEPM Guidebook 35: 67, pl. 1, fig. 18. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. [UCR 6665]. Hypotype UCR 6665/1 (not UCR 6834/3 as in pl. caption). [Solenidae].

Solena (*Eosolen*) *stantoni* (Weaver, 1905). [*Solen*]. Squires and Kennedy 1998. Veliger 41(2):163–166, figs. 11, 12. Santa Susana Fm., Paleocene. Upper Pulga Canyon, Palisades Highlands, east-central Santa Monica Mtns., Topanga quad. (1952, PR 1981), Los Angeles Co. LACMIP 16897. Hypotype LACMIP 7943. [Solenidae].

Solena (*Eosolen*) *stantoni* (Weaver, 1905). [*Solen*]. Moore 2003a. USGS 1228-F [electronic format] (family Solenidae):7–8, pl. 13, figs. 4, 5, 7. Meganos Fm., Paleocene/Eocene. Between Martinez and Walnut Creek in Vaca Canyon, Concord quad., Contra Costa Co. UCMP 532. Holotype UCMP 11941. [Solenidae].

Solena (*Eosolen*) *subverticulata* Vokes, 1939. Moore 2003a. USGS 1228-F [electronic format] (family Solenidae):8, pl. 13, fig. 2. Avenal Sandstone, Eocene. Near Big Tar Canyon, Reef Ridge, Cholame quad., Kings Co. UCMP A816. Holotype UCMP 15713. [Solenidae].

Sphenia cf. *S. luticola* (Valenciennes, 1846). [*Corbula*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):321–322, pl. 56, figs. 21, 22. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4826. [Myidae].

Spisula (Stereomactra) abcissa (Gabb, 1866). [*Schizodesma*]. Cox et al. 1969b. Treatise Invert. Paleo. N6(2):N604, fig. E96 5a (refigured from Packard 1916, pl. 23, fig. 4). San Pablo Fm., Miocene. Near San Pablo Bay, Contra Costa Co. UCMP 1608. Hypotype UCMP 11472. **Remarks:** In the genus *Stereomactra*, *fide* Moore (2003a: p. 31). [Mactridae].

....., fig. E96 5b (refigured from Stewart 1930, pl. 16, fig. 6). Miocene. South of Martinez, Contra Costa Co. Holotype ANSP 4548].

Spisula cf. *S. albaria* (Conrad, 1848). [*Mactra*]. Addicott, 1973b. USGS PP 791:7, 29, 30, pl. 4, figs. 3, 4. Temblor Fm. (Wygal Sandstone Member), MioceneCarneros Rocks quad., Kern Co. USGS M3578. Hypotypes USNM 646552, 646553. **Remarks:** In the genus *Mactromeris*, *fide* Moore (2003a: p. 16). [Mactridae].

....., pl. 4, fig. 8. South of Zemorra Creek, Carneros Rocks quad., Kern Co. USGS M3979. Hypotype USNM 646554.

Spisula albaria coosensis Howe, 1922. Addicott, 1969. Pr.CAS 37(3):62, 68, 70, 71, pl. 3, figs. 1, 6, 8; pl. 4, figs. 8, 9 (as *Spisula labaria coosensis*). Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM 650971–650973, 650985. **Remarks:** In the genus *Mactromeris*, *fide* Moore (2003a: p. 18). [Mactridae].

Spisula albaria coosensis Howe, 1922. Perry 1977. Foss. Santa Cruz Co., p. 23, lower right fig. Purisima Fm., Pliocene. Near Capitola Beach, Santa Cruz Co. SCCM 1. Hypotype SCCM 9686. **Remarks:** In the genus *Mactromeris*, *fide* Moore (2003a: p. 18). [Mactridae].

Spisula albaria coosensis Howe, 1922. Yancey 1978. Pr.CAS 41(15):364, 369, fig. 5G. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. USGS M5754. Hypotype USNM 251803. **Remarks:** In the genus *Mactromeris*, *fide* Moore (2003a: p. 18). [Mactridae].

Spisula albaria var. *selbyensis* Packard, 1916. Lutz 1951. UCPG 28(13):388, pl. 15, figs. 1, 3. Sobrante Fm., Miocene. Near junction of Norris Creek with Crow Creek, Hayward quad., Alameda Co. UCMP A4565. Hypotypes UCMP 34143, 34144. **Remarks:** *Mactromeris albaria selbyensis* (Packard, 1916), *fide* Moore (2003a: p. 18). [Mactridae].

Spisula bisculpturata Anderson and G D. Hanna, 1925. Givens 1974. UCPG 109:49, pl. 2, fig. 5. Matilija Fm., Eocene. San Guillermo quad. (1943), Ventura Co. UCR 4743. Hypotype UCR 4743/701. **Remarks:** In the genus *Mactromeris*, *fide* Moore (2003a:p. 9). [Mactridae].

Spisula bisculpturata Anderson and G D. Hanna, 1924. Deméré et al. 1979. SEPM Guidebook 4:98, pl. 1, figs. 8, 9. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20766. **Remarks:** In the genus *Mactromeris*, *fide* Moore (2003a: p. 9). [Mactridae].

Spisula (*Hemimactra*) *brevirostrata* Packard, 1916. Faustman 1964. UCPG 41(2):124, pl. 1, fig. 8. Rio Dell Fm., Pliocene. Scotia quad., Humboldt Co. UCMP B7642. Hypotype UCMP 37790. **Remarks:** In the genus *Mactromeris*, *fide* Moore (2003a: p. 21). [Mactridae].

Spisula catilliformis Conrad, 1867. Lutz 1951. UCPG 28(13):388, pl. 15, fig. 8. Sobrante Fm., Miocene. Shell Ridge, Contra Costa Co. UCMP 305. Hypotype UCMP 34145. **Remarks:** In the genus *Mactromeris*, *fide* Coan et al. (2000: p. 454). [Mactridae].

....., pl. 15, fig. 9. Shell Ridge, Contra Costa Co. UCMP A4928. Hypotype UCMP 34146.

Spisula (*Mactromeris*) *catilliformis* Conrad, 1867. Hertlein and Grant 1972. SDSNH Mem. 2(2B):313–314, pl. 54, fig. 5. San Diego Fm., Pliocene. Balboa Park, San Diego, San Diego Co. LACMIP 107. Hypotype LAMCIP 4812. **Remarks:** In the genus *Mactromeris*, *fide* Coan et al. (2000: p. 454). [Mactridae].

....., pl. 54, fig. 7. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4813.

Spisula coosensis Howe, 1922. Perry 1988. SCMA, p. 18, fig. 9C. Purisima Fm., Miocene/ Pliocene. Vicinity of Capitola, Santa Cruz Co. CASG66151. Hypotype CASG 66151.01]. **Remarks:** *Mactromeris albaria coosensis* (Howe 1922), *fide* Moore (2003a: p. 18). [Mactridae].

Spisula aff. *Spi. eugenensis* (Clark, 1925) [*Mulinia*]. Powell et al. 2019b. *PaleoBios* 36:12, fig. 20. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland Hills, Alameda Co. UCMP IP13004. Hypotype UCMP 410439. [Mactridae].

Spisula (*Mactromeris*) cf. *S.* (*M.*) *falcata* (Gould, 1850). [*Mactra*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):314, pl. 54, fig. 8. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 4814. **Remarks:** In the genus *Simomactra*, *fide* Coan et al. (2000: p. 458). [Mactridae].

*Spisula gaviotaensis** (Conrad, 1857d). [*Mactra*]. Weaver and Kleinpell 1963. UCPG 43:206, pl. 37, figs. 3, 4. Gaviota Fm., Eocene. East of Tecolote Canyon, Goleta quad., Santa Barbara Co. UCMP B6979. Hypotype SU 9314 [=CASG 70233]. **Remarks:** Error for *gabiotensis*, but likely a misprint in original description as the type locality is listed as Gaviote Pass. Provisionally in the genus *Mactromeris*?, *fide* Moore (2003a: p. 26). [Mactridae].

Spisula (*Hemimactra*) *hemphilla** (Dall, 1894). [*Mactra*]. Glen 1959. UCPG 36(2):175, pl. 17, fig. 3 (not fig. c). Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene. Vicinity of San Vicente Creek, San Mateo Co. UCMP B4790. Hypotype UCMP 37642 determined herea as missing. **Remarks:** Error for *hemphillii.* In the genus *Mactromeris*, *fide* Moore (2003a: p. 23). [Mactridae].

Spisula (*Mactromeris*) *hemphillii* (Dall, 1894). [*Mactra*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):315–316, pl. 54, figs. 1, 2; pl. 57, fig. 16. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943 San Diego Co. LACMIP 305. Hypotypes LACMIP 4815, 4816, 4819. **Remarks:** In the genus *Mactromeris*, *fide* Coan et al. (2000). [Mactridae].

....., pl. 54, figs. 3, 4. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotypes LACMIP [4817, 4818, 4820 (with *Ensis myrae* Berry 1953a, hypotype LACMIP 4811)].

....., pl. 54, fig. 9. Reynard Wy., San Diego, San Diego Co. SDSNH 154]. Hypotype SDSNH 2946 [=SDSNH 4355].

Spisula (*Mactromeris*) *mercedensis* Packard, 1916. Hertlein and Grant 1972. SDSNH Mem. 2 (2B):316, pl. 54, fig. 12. San Diego Fm., Pliocene. Balboa Park, San Diego, San Diego Co. LACMIP 107. Hypotype LACMIP 4821. **Remarks:** This specimen is not from the San Diego Fm. According to accession records, it is from the Johnson collection and is from the San Benito River area, San Benito Co. [=LACMIP 2960] Junior synonym of *Mactromeris catilliformis* (Conrad, 1867), *fide* Coan et al. (2000: p. 454). [Mactridae].

Spisula merriami Packard, 1916. Stewart 1946. USGS PP 205-C:91, pl. 11, fig. 23. Avenal Sandstone, Eocene. Reef Ridge, southeast of Big Tar Canyon, Reef Ridge quad., Kings Co. USGS 14495. Hypotype USNM 498724. **Remarks:** Provisionally in the genus *Mactromeris*?, *fide* Moore (2003a: p. 25). [Mactridae].

Spisula merriami Packard, 1916. Squires 1987. NHMLAC CS 388:67, fig. 114. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 828 [=LACMIP 16141]. Hypotype LACMIP 7531. **Remarks:** Provisionally in the genus *Mactromeris*?, *fide* Moore (2003a: p. 25). [Mactridae].

Spisula* (*Hemimactra*) *mossbeachensis Glen, 1959 (n. sp.). UCPG 36(3):175, pl. 15, fig. 8 (not fig. h); pl. 16, fig. 1 (not fig. a). Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene]. North of San Vicente Creek, San Mateo Co. UCMP B4790. Holotype UCMP 37643, paratype UCMP 37644. **Remarks:** In the genus *Mactromeris*, *fide* Moore (2003a:p. 19). [Mactridae].

Spisula packardi Dickerson, 1917. Weaver and Kleinpell 1963. UCPG 43:206, pl. 37, figs. 5, 6. Gaviota Fm., Eocene. East of Tecolote Canyon, Goleta quad., Santa Barbara Co. UCMP B6979. Hypotypes SU 9315, 9316 [=CASG 70238, 70239]. **Remarks:** In the genus *Pseudocardium*, *fide* Moore (2003a: p. 3). [Mactridae].

Spisula (*Mactromeris*) cf. *S.* (*M.*) *planulata* (Conrad, 1837). [*Mactra*]. Hertlein and Grant 1972. SDSNH mem. 2(2B):316–317, pl. 57, fig. 12. [as *Spisula* (*Mactromeris*) cf. *M*. (*M*.) *planulata*]. San Diego Fm., Pliocene. Near U.S./ Mexico boundary, San Diego Co. UCLA 294 [=LACMIP 20294]. Hypotype UCLA 48634 [=LACMIP 9317]. **Remarks:** In the genus *Simomactra*, *fide* Coan et al. (2000: p. 458). [Mactridae].

Spisula ramonensis Packard, 1916. Addicott 1973b. USGS PP 791:7, 30, pl. 4, fig. 5. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646555. **Remarks:** In the genus *Mactromeris*, *fide* Moore (2003a: p. 10). [Mactridae].

Spisula cf. *S. rushi* Wagner and Schilling, 1923. Addicott 1973b. USGS PP 791:7, 30, pl. 4, fig. 14. Temblor Fm. (Wygal Sandstone Member), Miocene. Vicinity of Zemorra Creek, Carneros Rocks quad., Kern Co. USGS M3979. Hypotype USNM 646562. **Remarks:** In the genus *Mactromeris*, *fide* Moore (2003a: p. 11). [Mactridae].

Spisula (*Hemimactra*) *voyi* (Gabb, 1866). [*Callista*]. Faustman 1964. UCPG 41(2):124. pl. 1, fig. 6. Rio Dell Fm., Pliocene. Scotia quad., Humboldt Co. UCMP B7871. Hypotype UCMP 37789. **Remarks:** In the genus *Mactromeris*, *fide* Moore (2003a: p. 21). [Mactridae].

Spisula n. sp.? Addicott 1973b. USGS PP 791:7, 30, pl. 4, fig. 1. Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Rocks quad., Kern Co. USGS M3579. Hypotype USNM 646548. [Mactridae].

Spisula sp. Bedrossian 1974. Calif. Geol. 27(8):175, unnumbered fig, upper left specimen. "Merced" Fm., Pliocene [=Wilson Grove Fm.], Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotype CASG, determined here as missing. [Mactridae].

Spisula sp. Throckmorton 1988a. USGS OFR 88-59:52, pl. 8, fig. 6 (refigured in Throckmorton 1988b, pl. 1, fig. 3). Tesla Fm., Eocene. From isolated sandstone block (float?) Midway quad., Alameda Co. UCMP D8157. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Mactridae].

Spondylus bostrychites Guppy, 1867. Moore 1987. USGS PP 1228-C:C8, pl. 2, fig. 2, pl. 3, fig. 2. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Coyote Mtn., Imperial Co. UCMP 738. Hypotypes (of G D. Hanna 1926, pl. 24, figs. 3, 4). UCMP 32279, 32280. [Spondylidae].

Spondylus bostrychites Guppy, 1867. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 60, fig. 3.14C. Latrania Fm., Miocene/Pliocene. Alverson Canyon, Imperial Co. SDSNH 2995. Hypotype SDSNH 23240. [Spondylidae].

Spondylus carlosensis Anderson, 1905. Weaver and Kleinpell 1963. UCPG 43:199, pl. 31, fig. 6. Cozy Dell Shale, Eocene. Nojoqui Canyon, Santa Barbara Co. UCMP B6932. Hypotype SU 9270 [=CASG 70234]. [Spondylidae].

Spondylus carlosensis Anderson, 1905. Squires 1984. NHMLAC CS 350:43, fig. 10j. Llajas Fm., Eocene. Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6571. [Spondylidae].

Spondylus carlosensis Anderson, 1905. Moore 1987. USGS PP 1228-C:C6–C7, pl. 1, fig. 5. Domengine Fm., Eocene. West and north of Coalinga, Fresno Co. CASG 66738]. Holotype CASG 56 [=CASG 66738.01]. [Spondylidae].

Spondylus cf. *S. carlosensis* Anderson, 1905. Squires 1991c. SEPM Guidebook 35:222, pl. 2, fig. 17. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. CSUN 662 [=LACMIP 23779]. Hypotype LACMIP 11481. **Remarks:** *Spondylus carlosensis* Anderson, 1905, *fide* Squires (1999b: p. 24). [Spondylidae].

Spondylus carlosensis Anderson, 1905. Squires 1999b. NHMLAC CS 479:24, figs. 52, 53. Santa Susana Fm., Paleocene/Eocene. South side Simi Valley, Calabasas quad. (1952, PR 1967), Ventura Co. CSUN 1343 [=LACMIP 17186]. Hypotype LACMIP 12695. [Spondylidae].

Spondylus carlosensis Anderson, 1905. Squires 2008. NHMLAC CS 517:5, fig. 42. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13443. [Spondylidae].

Spondylus cliffensis M.A. Hanna, 1927. Moore 1987. USGS PP 1228-C:C7, pl. 2, fig. 3 (cast). "Rose Canyon Fm." [= possibly Ardath Shale], Eocene. South of mouth of Soledad Valley, La Jolla quad., San Diego Co. UCMP 5062. Holotype UCMP 31025. [Spondylidae].

"Spondylus estrellanus Conrad." Moore 1987. USGS PP 1228-C:C8–C9, pl. 5, fig. 2. Santa Margarita Fm., Miocene. Estrella Valley, San Luis Obispo Co. Holotype (hypotype) USNM 13312. **Remarks:** Supplemental descriptions in Conrad (1857c, d) and first illustrated in Conrad (1857c). In the genus *Lyropecten*, *fide* Moore (1987: p. C8). [Pectinidae].

Spondylus perrini Wiedey, 1928. Avila and Weaver, 1969. AAPG/SEPM Guidebook, p. 59, pl. 34, figs. 11a, b. Monterey Fm. (Beechers Bay Member), Miocene. East central Santa Rosa Is., California Channel Ids. UCSB SR64-9 [=LACMIP 16434]. Hypotype UCSB M23 [=LACMIP 6322]. [Spondylidae].

Spondylus perrini Wiedey, 1928. Squires and Fritsche 1978. SEPM Guidebook 13:20, 21, pl. 3, fig. 6. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns.,Ventura Co. CSUN 125 [=LACMIP 16363]. Hypotype UCLA 58205 [=LACMIP 10593]. [Spondylidae].

Spondylus perrini Wiedey, 1928. Stadum 1984b. NHFOC Mem. 1:90, pl. 1, fig. 4. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH 4312. Hypotype SDSNH 83235]. [Spondylidae].

Spondylus perrini Wiedey, 1928. Moore 1987. USGS PP 1228-C:C7-C8, pl. 2, figs. 1, 4–7; pl. 9, fig. 1. Vaqueros Fm., Oligocene/Miocene. Wiley Canyon, Piru quad., Ventura Co. SDSNH 437. Holotype SDSNH 28, holotype (of *Spondylus inezana* Wiedey, 1928) SDSNH 29. [Spondylidae].

Spondylus scotti Brown and Pilsbry, 1913. Stadum and Finger 2016. NHMLAC CS 524:39, 42, fig. 47. Monterey Fm. (Saddleback Valley Limestone member), Miocene. North of Aliso Parkway, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4520 [error for SDSNH 5421]. Hypotype SDSNH 83255. [Spondylidae].

?*Spondylus* sp. aff. *S. ursipes* Berry, 1959. Smith 1989. SEPM Guidebook 63:34, pl. 4, fig. 6. Imperial Fm., Miocene. Southwestern Coyote Mtns., Imperial Co. J.T. Smith locality 88JS9. No hypotype nor museum data given. [Spondylidae].

Spondylus victoriae G.B. Sowerby II, 1860. Powell 1985. WSM Ann. Rept. 17:32, pl. 1, fig. 4. Imperial Fm. (Latrania Sand Member) [=Latrania Fm.], Miocene/Pliocene. East of Whitewater River, San Gorgonio Pass, Riverside Co. UCMP A3188. Hypotype UCMP 37532. **Remarks:** Junior synonym of *Spondylus princeps* Broderip, 1833, *fide* Moore (1987: p. C8). [Spondylidae].

Spondylus sp. Stanton, 1966. Jour. Paleo. 40(1):28, pl. 5, fig. 8. Castaic Fm., Miocene. Vicinity of junction of Castaic and Fish creeks, Los Angeles Co. CIT 2104 [=LACMIP 7775]. [Hypotype LACMIP 4102]. [Spondylidae].

Stereomactra abcissa (Gabb, 1869). [*Schizodesma*]. Moore 2003a. USGS 1228-F [electronic format] (family Mactridae):26–27, pl. 12, figs. 1, 6. Etchegoin Fm., Miocene/Pliocene. South of Martinez, Contra Costa Co. Holotype ANSP 4548. [Mactridae].

Striostrea? *appressa* (Gabb, 1869b). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C33–C34, pl. 12, fig. 3 (refigured from Gabb 1869b, pl. 34, fig. 104a), pl. 16, fig. 5 (refigured from Gabb 1869, pl. 34, fig. 104). Temblor(?) Fm. (of Clark 1940:135) or Tejon Fm. (of Gabb 1869b: pp. 203, 204), Oligocene/Miocene. Vicinity of Salt Creek, southwest of Round Valley, Mendocino Co. [MCZ 1062]. Paratype (syntype in text) MCZ 15013 [=MCZ 112951]. [Ostreidae].

Striostrea? *bourgeoisii bourgeoisii* (Rémond, 1863). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C34–C35, pl. 25, fig. 1, pl. 26, fig. 5. San Pablo Fm., Miocene. Kirker's Pass area Mt. Diablo quad., Contra Costa Co. UCMP 2040]. Hypotype (of Clark, 1915, pl. 43) UCMP 11566. [Ostreidae].

Striostrea? *bourgeoisii perrini* (Hall and Ambrose, 1916). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C35, pl. 26, fig. 4, pl. 27, fig. 5. Briones Fm., Miocene. Pleasanton quad., Alameda Co. Holotype SU/CASG 502 [=CASG 69811]. [Ostreidae].

Striostrea? *subtitan* (Loel and Corey, 1932). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C34, pl. 22, figs. 3–5. Vaqueros Fm., Oligocene/Miocene. Northwest of mouth of Lion Canyon, Ventura quad., Ventura Co. UCMP A326. Holotype UCMP 31750. [Ostreidae].

Striostrea? *tayloriana* (Gabb, 1866). [*Ostrea*]. Moore 1987. USGS PP 1228-C:C33, pl. 29, figs. 7, 8. Gaviota Fm., Eocene/Oligocene. San Marcos Pass, near Santa Barbara, Santa Ynez quad., Santa Barbara Co. Holotype UCMP 12005. **Remarks:** *Nomen dubium*, *fide* Squires (2018a: p. 15). [Ostreidae].

Striostrea? *tayloriana* (Gabb, 1866). [*Ostrea*]. Squires 1994b. SEPM Guidebook 74:54, pl. 3, fig. 1. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. CSUN 252 [=LACMIP 16670]. Hypotype LACMIP 11659. **Remarks:** *Nomen dubium*, *fide* Squires (2018a: p. 15). [Ostreidae].

Strophocardia megastropha (Gray, 1825). [*Venericardia*]. Powell 2008. USGS SIR 2008-5155: 11, 12, fig. 4t. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Rock, Imperial Co. (not San Diego Co. as in locality description). USGS M9778. Hypotype USNM 486907. [Carditidae].

Swiftopecten adekunbiana Adegoke, 1969 (n. sp.). UCPG 80:104, pl. 6, figs. 3, 5. Santa Margarita Fm., Miocene. Oyster-pecten bed, Coalinga quad., Fresno Co. UCMP D1088. Holotype UCMP 36639. **Remarks:** Junior synonym of *Lyropecten crassicardo* (Conrad, 1857a), *fide* Smith (1991: p. 52). [Pectinidae].

Swiftopecten(?) *hamlini* (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B60, pl. 24, fig. 5. Santa Margarita(?) Fm., Miocene. Head of Slacks Canyon, Priest Valley quad., Monterey Co. USGS 3851. Holotype USNM 164844. [Pectinidae].

Swiftopecten parmeleei (Dall, 1898). [*Pecten*]. Squires 2012. NHMLAC CS 520:76, fig. 21. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP. Hypotype LACMIP 14346. [Pectinidae].

Swiftopecten parmeleei (Dall, 1898). [*Pecten*]. Powell et al. 2019a. USGS SIR 2019-5021:3, 30–31, pl. 2, figs. 8, 9. Wilson Grove Fm., Miocene. North of Bloomfield, Sonoma Co. CASG 54135. Hypotypes CASG 78405, 78406. [Pectinidae].

Swiftopecten parmeleei parmeleei (Dall, 1898). [*Pecten*]. Moore 1984. USGS PP 1228-B:B59–B60, pl. 23, fig. 1. Wildcat Group, Pliocene. Humboldt, Co. USGS 3352. Hypotype (of Arnold 1906, pl. 12, fig. 5) USNM 164842. [Pectinidae].

....., pl. 23, fig. 3 (refigured from Arnold, 1906, pl. 41, fig. 1). Etchegoin Fm., Pliocene. [East of Zapato Creek, Coalinga quad., Fresno Co. USGS 4712]. Holotype (of *Swiftopecten wattsi* (Arnold, 1906) CASG?, determined here as missing.

....., pl. 23, fig. 4. San Diego Fm., Pliocene. San Diego, San Diego Co. Holotype USNM 154479.

Swiftopecten parmeleei etchegoini (Anderson, 1905). [*Pecten*]. Moore 1984. USGS PP 1228-B: B60, pl. 22, fig. 2. Etchegoin Fm., Pliocene. Zapata (Zapato) Chino Creek area, Mt. Diablo Range, Fresno Co. CASG 66740. Holotype CASG 55 [=CASG 66740.01]. [Pectinidae].

....., pl. 22, fig. 3. Priest Valley, Monterey Co. USGS4149]. Holotype (of *Swiftopecten morani* (Arnold 1906)) USNM 164929.

Swiftopecten swifti (Bernardi, 1858). [*Pecten*]. Masuda 1972. Trans. Proc. Paleo. Soc. Japan 87:399–401, pl. 48, fig. 5; pl. 49, figs. 3, 4. "Wildcat" Group, Pliocene. Crescent City area, Del Norte Co. Hypotypes (3) SU 4838 [=CASG 70407]. **Remarks:** *Swiftopecten parmeleei parmeleei* (Dall, 1898), *fide* Moore (1984: p. B59). [Pectinidae].

Swiftopecten swifti (Bernardi, 1858). [*Pecten*]. Masuda 1986. Paleo. Soc. Japan Spec. Pub. 29:102, pl. 8, figs. 2, 3. "Wildcat" Group, Pliocene. Crescent City area, Del Norte Co. Hypotypes (2) SU 4838 [=CASG 70407]. **Remarks:** *Swiftopecten parmeleei* (Dall, 1898), *fide* Moore (1984: p. B59). [Pectinidae].

Swiftopecten swifti parmeleei (Dall, 1898). [*Pecten*]. Masuda 1972. Trans. Proc. Paleo. Soc. Japan 84:401–402, pl. 48, fig. 6. Purisima Fm., Pliocene. East of Capitola, Santa Cruz Co. Hypotype SU 47210 [=CASG 58929]. **Remarks:** *Swiftopecten parmeleei* (Dall, 1898), *fide* Moore (1984: p. B59). [Pectinidae].

....., pl. 48, fig. 7; pl. 49, figs. 6, 8. San Diego Fm., Pliocene. South central part of San Diego Co. LACMIP 305A [=LACMIP 16862. Hypotypes LACMIP 4999–5001].

....., pl. 49, fig. 7. Tijuana River, southwestern San Diego Co. Hypotype IGPS 92043.

Swiftopecten spec. Adegoke 1967b.Veliger 9(3):337–338, pl. 47, figs. 1, 2. Santa Margarita Fm., Miocene. From oyster and pecten-bearing bed, Coalinga quad., Fresno Co. UCMP D1088. Hypotype UCMP 36639. **Remarks:** *Swiftopecten adekumbiana* n. sp., *fide* Adegoke (1969: p. 104). Junior synonym of *Lyropecten crassicardo* (Conrad, 1857a), *fide* Smith (1991a: p. 52). [Pectinidae].

Tagelus clarki Loel and Corey, 1932. Peska 1974. BSCPS 6(6):59, unnumbered fig. Vaqueros Fm., Miocene Anaheim, Orange Co. Line drawing, source specimen unknown. [Solecurtidae].

Taras cf. *T. parilis* (Conrad, 1848). [*Loripes*]. Woodring et al. 1940 [1941]. USGS PP 195:70, pl. 35, fig. 6. Etchegoin Fm. (*Patinopecten* zone), Pliocene. Vicinity of La Aleta, North Dome, Kettleman Hills, Kings Co. USGS 12711. Hypotype USNM 495843. **Remarks:** In the genus *Felaniella*, *fide* Moore (1988: p. D29). [Ungulinidae].

Taras parilis (Conrad, 1848). [*Loripes*]. Shimer and Shrock 1944. Index Foss. N.A., p. 423, pl. 168, fig. 33 (refigured from Arnold and Anderson 1910, pl. 39, fig. 5 (as *Diplodonta parilis* (Conrad 1848)). Etchegoin Fm., Pliocene. Coalinga District, Fresno Co. USGS 4806. Hypotype USNM 165484]. **Remarks:** In the genus *Felaniella*, *fide* Moore (1988: p. D29). [Ungulinidae].

aff. *Tehamatea* n. sp. Powell et al. 2019b. *PaleoBios* 36: 9–10, fig. 15. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP 13001. Hypotype UCMP 410562. [Lucinidae].

Tellina aragonia Dall, 1909. Adegoke 1969. UCPG 80:132, pl. 8, fig. 2. Etchegoin Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP D1138. Hypotype UCMP 36768. **Remarks:** Provisionally in the subgenus *Peronidia*?, *fide* Moore (2003b: p. 21). [Tellinidae].

Tellina (*Peronidia*?) *agaronia* Dall, 1909. Powell 2015. WSM Ann. Rept. 45:61, fig. 9 (as *Tellina* aff. *T.* (*Peronidia*?) *agaronia*). Monterey Fm., Miocene. Along Arroyo Seco, west of Greenfield, Monterey Co. CASG 101093. Hypotypes CASG 101099, 101100]. [Tellinidae].

Tellina cf. *T. bodegensis* Hinds, 1844. Woodring et al. 1940 [1941]. USGS PP 195:92 pl. 33, fig. 2. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. Vicinity of La Aleta, North Dome, Kettleman Hills, Kings Co. USGS 12430. Hypotype USNM 495822. **Remarks:** In the subgenus *Peronidia*, *fide* Coan et al. (2000: p. 404). [Tellinidae].

Tellina (*Peronidia*) *bodegensis* Hinds, 1844. Hertlein and Grant 1972. SDSNH Mem. 2(2B):289–290, pl. 53, fig. 9. San Diego Fm., Pliocene. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotype LACMIP 4779. [Tellinidae].

....., pl. 53, fig. 18. Near U.S./ Mexico boundary, San Diego Co. UCLA. 312 [=LACMIP 20312]. Hypotype UCLA 48625 [=LACMIP 9308].

Tellina (*Cadella*?) *californica* Gabb, 1864. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):11–12, pl. 2, fig. 4 (refigured from Gabb 1864, pl. 30, fig. 245). Meganos Fm., Paleocene/Eocene. East of Mt. Diablo, Contra Costa Co. Type material missing, *fide* Stewart (1930: p. 7). [Tellinidae].

Tellina (*Moerella*) *carpenteri* Dall, 1900b. Hertlein and Grant 1972. SDSNH Mem. 2(2B):288–289, pl. 53, figs. 1, 15. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotypes LACMIP [4775, 4777]. **Remarks:** In the subgenus *Angulus*, *fide* Coan et al. (2000: p. 400). [Tellinidae].

....., pl. 53, fig. 7, pl. 56, fig. 14. San Diego Co. LACMIP 305A [=LACMIP 16862]. Hypotypes LACMIP 4776, 4778].

Tellina (*Angulus*) *carpenteri* Dall, 1900b. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):2–3, pl. 1, fig. 2. San Diego Fm., Pliocene. San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotype (of Hertlein and Grant 1972, pl. 56, fig. 14) LACMIP 4778. [Tellinidae].

Tellina castacana Anderson and G.D. Hanna, 1925. Givens 1974. UCPG 109:50, pl. 2, fig. 2. Matilija Fm., Eocene. San Guillermo quad. (1943), Ventura Co. UCR 4743. Hypotype UCR 4743/502. **Remarks:** Provisionally in the subgenus *Angulus*?, *fide* Moore (2003b: p. 6). [Tellinidae].

Tellina castacana Anderson and G D. Hanna, 1925. Deméré et al. 1979. SEPM Guidebook 4:98, pl. 1, fig. 15. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20772. **Remarks:** Provisionally in the subgenus *Angulus*?, *fide* Moore (2003b: p. 6). [Tellinidae].

Tellina (*Angulus*?) *castacana* Anderson and G D. Hanna, 1925. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):6–7, pl. 1, fig. 8. Tejon Fm., Eocene. Live Oak Creek, Kern Co. CASG 244. Holotype CASG 796. [Tellinidae].

Tellina congesta Conrad, 1855b. Addicott et al. 1978. USGS OFR 78-446:59–60, pl. 1, fig. 2. Monterey Fm. (Hames Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M1680. Hypotype USNM 254351. **Remarks:** Provisionally in the subgenus *Cadella*?, *fide* Moore (2003b: p. 12). [Tellinidae].

Tellina congesta Conrad, 1855b. Addicott et al. 1980. SEPM Guidebook 6:19–20, pl. 1, fig. 2 (refigured from Addicott et al. 1978, pl. 1, fig. 2). Monterey Fm. (Hames Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M1680. Hypotype USNM. 254351. **Remarks:** Provisionally in the subgenus *Cadella*?, *fide* Moore (2003b: p. 12). [Tellinidae].

Tellina (*Cadella*?) *congesta* Conrad, 1855b. Moore, 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):12, pl. 4, figs. 10a, b. Monterey Fm., Miocene. Monterey, Monterey Co. Holotype USNM 1849. [Tellinidae].

Tellina (*Megangulus*?) *crooki* Nelson, 1925. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):16–17, pl. 2, fig. 11. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCMP 3776. Holotype UCMP 30523. [Tellinidae].

Tellina (*Angulus*?) *diabloensis* Clark, 1915. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):8–9, pl. 1, fig. 11. San Pablo Fm., Miocene. Southeast of town of Walnut Creek, Concord quad., Contra Costa Co. UCMP 1478. Holotype UCMP 11531. [Tellinidae].

"*Tellina*" *domenginensis* Vokes, 1939. Squires 1999c. NHMLAC CS 480:24–25, fig. 44. Matilija Sandstone, Eocene. North Fork of Matilija Creek, Matilija quad. 1952, PR 1967), Ventura Co. CSUN 1445 [=LACMIP 24259). Hypotype LACMIP 12473. **Remarks:** In the genus *Tellina* and provisionally in the subgenus *Angulus*?, *fide* Moore (2003b: p. 7). [Tellinidae].

....., figs. 45–47. North Fork of Matilija Creek, Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1450 [=LACMIP 16963]. Hypotypes LACMIP 12474–12476.

Tellina (*Angulus*?) *domenginensis* Vokes, 1939. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):7, pl. 1, fig. 12. Domengine Fm., Eocene. Domengine Creek, Coalinga quad., Fresno Co. UCMP 3315. Holotype UCMP 15694. [Tellinidae].

Tellina (*Oudardia*) *emacerata* Conrad, 1849a. Addicott 1973b. USGS PP 791:7, 32, pl. 4, fig. 11. Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Rocks quad., Kern Co. USGS M3578. Hypotype USNM 646560. **Remarks:** Provisionally in the subgenus *Oudardia*?, *fide* Moore (2003b: p. 19). [Tellinidae].

Tellina (*Phyllodina*?) *englishi* Clark, 1915. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):23–24, pl. 3, figs. 8a, b. San Pablo Fm., Miocene. Contra Costa Co. UCMP 481. Holotype UCMP 11533. [Tellinidae].

Tellina (*Eurytellina*?) *hannibali* Clark, 1915. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):15–16, pl. 2, fig. 9. San Pablo Fm., Miocene. Concord quad., Contra Costa Co. UCMP 1942. Holotype UCMP 11532. [Tellinidae].

Tellina (*Eurytellina*?) *herndonensis* Dickerson, 1914a. Moore 2003b. USGS PP 1228-G [electronic format] (family

Tellinidae):13, pl. 2, fig. 6. Martinez Fm., Paleocene. Near Lower Lake, Lake Co. UCMP 784. Holotype UCMP 33262. [Tellinidae].

Tellina (*Tellinella*) *idae* Dall, 1891. Hertlein and Grant 1972. SDSNH Mem. 2(2B):285–286, pl. 53, figs. 6, 11. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1953), San Diego Co. LACMIP 305. Hypotype LACMIP 4771. [Tellinidae].

Tellina (*Tellinella*) *idae* Dall, 1891. Squires 2012. NHMLAC CS 520:76, fig. 42. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17920. Hypotype LACMIP 14367. [Tellinidae].

"*Tellina*" *joaquinensis* Arnold, 1909 [1910]. Squires 1999c. NHMLAC CS 480:22, 24, figs. 42, 43. Matilija Sandstone, Eocene. North Fork of Matilija Creek, Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1445. Hypotypes LACMIP 12471, 12472. **Remarks:** In the genus *Tellina* and provisionally in the subgenus *Angulus*?, *fide* Moore (2003b: p. 4). [Tellinidae].

Tellina (*Angulus*?) *joaquinensis* Arnold, 1909 [1910]. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):4–5, pl. 4, fig. 11. Domengine Fm. [as Tejon Domengine in pl. caption], Eocene. Northwest of Coalinga, Coalinga quad., Fresno Co. USGS 4801. Holotype USNM 165619. [Tellinidae].

Tellina (*Angulus*?) *jollaensis* Dickerson, 1916. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):7, pl. 1, fig. 10 (not fig. 9). "Rose Canyon Shale," Eocene. Rose Canyon, La Jolla quad., San Diego Co. UCMP 2226. Holotype UCMP 33252. [Tellinidae].

Tellina (*Megangulus*?) *kewi* Dickerson, 1914a. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):17, pl. 2, fig. 12. Martinez Fm., Paleocene. Near Lower Lake, Lake Co. UCMP 784. Holotype UCMP 11715. [Tellinidae].

Tellina lebecki Anderson and G D. Hanna, 1925. Squires 1994b. SEPM Guidebook 74:52, pl. 1, fig. 7 (cast). Upper Matilija Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23688. Hypotype LACMIP 11632. **Remarks:** Provisionally in the subgenus *Phyllodina*?, *fide* Moore (2003b: p. 22). [Tellinidae].

Tellina (*Phyllodina*?) *lebecki* Anderson and G D. Hanna, 1925. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):22–23, pl. 3, fig. 7. Tejon Fm., Eocene. Live Oak Creek, Tejon Quad., Kern Co. CASG 800. Holotype CASG 244 [=CASG 70903]. [Tellinidae].

Tellina (*Angulus*?) *longa* Gabb, 1864. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):5–6, pl. 1, figs. 6a (refigured from Gabb, 1864, pl. 22, fig.131)-b. Meganos Fm., Paleocene/Eocene. Near Martinez, Contra Costa Co. Paratype MCZ 15037, missing *fide* Moore (2003b: p. 5). [Tellinidae].

Tellina lorenzoensis Arnold, 1908. Perry 1977. Foss. Santa Cruz Co., p. 7, upper fig. San Lorenzo Fm., Oligocene. San Lorenzo River, Santa Cruz Co. SCCM 37. Hypotype SCCM 21003. **Remarks:** Provisionally in the subgenus *Eurytellina*?, *fide* Moore (2003b: p. 14). [Tellinidae].

Tellina cf. *T. lutea* Gray, 1839. Woodring and Bramlette, 1950 [1951]. USGS PP 222:87, pl. 8, fig. 15. Sisquoc Fm. (diatomaceous strata), Miocene. Gato Ridge, Santa Barbara Co. USGS 15032. Hypotype USNM 560037. **Remarks:** *Tellina lutea alternidentata* Broderip and G.B. Sowerby I, 1829, *fide* Coan (1971: p. 8); *Tellina* (*Meganulus*) *lutea* Wood, 1828, *fide* Coan et al. (2000: p. 403). [Tellinidae].

Tellina cf. *T. lutea* Wood, 1828 [not Gray]. Addicott 1969. Pr.CAS 37(3):62, 66, 72, pl. 2, fig. 7. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650967. **Remarks:** *Tellina lutea alternidentata* Broderip and G.B. Sowerby I, 1829, *fide* Coan (1971: p. 8); *Tellina* (*Meganulus*) *lutea* Wood, 1828, *fide* Coan et al. (2000: p. 403). [Tellinidae].

Tellina (*Eurytellina*?) *martinezensis* Weaver, 1905. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):13–14, pl. 2, fig. 7. Martinez Fm., Paleocene. Vicinity of Martinez, Concord quad., Contra Costa Co. UCMP337. Holotype UCMP 11876. [Tellinidae].

Tellina nevadensis Anderson and Martin, 1914. Addicott 1965b. USGS PP 525-C:C106, fig. 4e. Olcese Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1599. Hypotype USNM 649168. **Remarks:** Junior synonym of *Tellina* (*Olcesia*) *piercei* (Arnold, 1909 [1910]), *fide* Addicott (1973b: p. 31); Moore (2003b: p. 18). [Tellinidae].

Tellina (*Olcesia*?) *ocoyana* Conrad, 1855b. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):19, pl. 3, fig. 2. Temblor Fm., Oligocene/Miocene. Ocoya Creek [probably Poso Creek, Kern Co., *fide* Keen and Bentson (1944: p. 115). Holotype missing, *fide* Keen and Bentson (1944: p. 115); *fide* Moore (2003b: p. 19). [Tellinidae].

Tellina? cf. *T.*? *oldroydi* Wiedey, 1928. Woodring et al. 1940 [1941]. USGS PP 195:92, pl. 14, fig. 8. San Joaquin Fm. (*Pecten* Zone), Pliocene. North DomeKettleman Hills, Kings Co. USGS locality 12331. Hypotype USNM 495751. **Remarks:** Hypotype now a paratype of *Tellina* (*Angulus*?) *woodringi* Adegoke, 1969, *fide* Moore (2003b: p. 9). [Tellinidae].

....., pl. 33, fig. 5. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. Arroyo Pino, north of Bullwheel Ridge, North Dome, Kettleman Hills, Kings Co. USGS 12815. Hypotype USNM 495825. **Remarks:** Hypotype now a paratype of *Tellina* (*Angulus*?) *woodringi* Adegoke 1969, *fide* Moore (2003b: p. 9).

"*Tellina*" *oldroydi* Wiedey, 1928. Adegoke 1969. UCPG 80:132, pl. 8, fig. 3. Santa Margarita Fm., Miocene. Domengine Ranch quad., Fresno Co. UCMP D1101. Hypotype UCMP 36767. **Remarks:** In the genus *Tellina* and provisionally in the subgenus *Eurytellina*?, *fide* Moore (2003b: p. 14). [Tellinidae].

Tellina (*Eurytellina*?) *oldroydi* Wiedey, 1928. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):14–15, pl. 2, fig. 8. Topanga Fm., Miocene. Vicinity of Dry Canyon, south of Calabasas, Santa Monica Mtns., Calabasas quad., Los Angeles Co. SU 425. Holotype SDSNH 36. [Tellinidae].

Tellina (*Angulus*?) *packardi* Dickerson, 1914a. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):4, pl. 1, fig. 5. Martinez Fm., Paleocene. Near Lower Lake, Lake Co. UCMP 784. Holotype UCMP 11739. [Tellinidae].

Tellina (Subgenus?) *perrini* Dickerson, 1914a. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):26–27, pl. 4, fig. 3. Martinez Fm., Paleocene. Near Lower Lake, Lake Co. UCMP 784. Holotype UCMP 11716. [Tellinidae].

Tellina (*Olcesia*) *piercei* (Arnold, 1909 [1910]). [*Macoma*]. Addicott 1973b. USGS PP 791:7, 31, 32, pl. 4, fig. 10. Temblor Fm. (Wygal Sandstone Member), Miocene. Temblor Creek, Carneros Rocks quad., Kern Co. USGS M3978. Hypotype USNM 646558. [Tellinidae].

....., pl. 4, fig. 12. Carneros Rocks quad., Kern Co. USGS M3578. Hypotype USNM 646559.

....., pl. 5, figs. 12, 13. Olcese Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1599. Hypotypes USNM 646574, 646575 (hypotype 646575 determined here as lost).

Tellina piercei (Arnold, 1909 [1910]). [*Macoma*]. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 6. Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek, La Panza Range, San Luis Obispo Co. USGS M2869. Hypotype USNM 254355. **Remarks:** In the subgenus *Olcesia*, *fide* Moore (2003b: p. 18). [Tellinidae].

Tellina piercei (Arnold, 1909 [1910]). [*Macoma*]. Addicott et al. 1980. SEPM Guidebook 6:18, 20, pl. 1, fig. 6 (refigured from Addicott et al. 1978, pl. 1, fig. 6). Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek, La Panza Range, San Luis Obispo Co. USGS M2869. Hypotype USNM 254355. **Remarks:** In the subgenus *Olcesia*, *fide* Moore (2003b: p. 18). [Tellinidae].

Tellina (*Olcesia*) *piercei* (Arnold, 1909 [1910]). Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):18, pl. 3, fig. 1. Temblor Fm. (Wygal Sandstone Member), Oligocene. Lower Kern River, Kern Co. CASG 65. Holotype (of *Tellina nevadensis* Anderson and Martin, 1914) CASG 124. [Tellinidae].

Tellina (Subgenus?) *praecuta* Clark, 1918. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):29–30, pl. 4, fig. 9. San Ramon Fm., Miocene. In valley north of Sobrante Ridge, Concord quad., Contra Costa Co. UCMP 14. Holotype UCMP 11166. [Tellinidae].

Tellina aff. *T. radiata* Linneaus, 1758. Lutz 1951. UCPG 28(13):387, pl. 15, fig. 5. Sobrante Fm., Miocene. Vicinity of Crow Creek near Castro Valley, Alameda Co. UCMP A4932. Plastotype UCMP 34137. [Tellinidae].

Tellina (Subgenus?) *remondii* Gabb, 1864. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):27, pl. 4, fig. 4. Meganos Fm.(?), Paleocene/Eocene. Mt. Diablo area, Mt. Diablo Quad., Contra Costa Co. UCMP holotype 31451 [as UCMP 3145 in text]. [Tellinidae].

Tellina (*Macaliopsis*) new species? aff. *T.* (*M.*) *rosa* (M.A. Hanna, 1927). [*Macoma*]. Squires 1987. NHMLAC CS 388:68, fig. 116. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 845 [=LACMIP 16137]. Hypotype LACMIP 7533. [Tellinidae].

Tellina (*Cadella*) *salmonea* (Carpenter, 1864b). [*Maera*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):286–287, pl. 53, figs. 2–4, 8, 16. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1953), San Diego Co. LACMIP 305. Hypotypes LACMIP 4772–4774. **Remarks:** Junior synonym of *Tellina* (*Cadella*) *nuculoides* (Reeve, 1854), *fide* Coan et al. (2000: p. 403). [Tellinidae].

Tellina (*Angulus*?) *scrippsensis* M.A. Hanna, 1927. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):8, pl. 1, fig. 9. "Rose Canyon Shale," Eocene. Near Soledad Valley, La Jolla quad., San Diego Co. UCMP 5062. Holotype UCMP 31022. [Tellinidae].

Tellina (*Angulus*?) *simiensis* Nelson, 1925. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):6, pl. 1, figs. 7a, 7b. Martinez Fm. [=Santa Susana Fm.], Paleocene. South of Simi Valley, Calabasas quad., Ventura Co. UCMP 3778. Holotype UCMP 30522, paratype UCMP 30521. [Tellinidae].

Tellina cf. *T. soledadensis* M.A. Hanna, 1927. Weaver and Kleinpell 1963. UCPG 43:206, pl. 37, fig. 7. Middle Gaviota Fm., Eocene. Vicinity of Cañada Omentaro, Gaviota quad., Santa Barbara Co. UCMP B7011. Hypotype SU 9317 [=CASG 70243]. **Remarks:** *Tellina* (Subgenus?) *soledadensis* M.A. Hanna 1927, *fide* Moore (2003b: p. 27). [Tellinidae].

Tellina soledadensis M.A. Hanna, 1927. Givens 1974. UCPG 109:50, pl. 2, fig. 7. Juncal Fm., Eocene. Lockwood Valley quad. (1943), Ventura Co. UCR 4678. Hypotype UCR 4678/16. **Remarks:** *Tellina* (Subgenus?) *soledadensis* M.A.Hanna, 1927, *fide* Moore (2003b: p. 27). [Tellinidae].

Tellina (Subgenus?) *soledadensis* M.A. Hanna, 1927. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):27–28, pl. 4, fig. 5a. "Rose Canyon Shale," Eocene. Rose Canyon, La Jolla quad., San Diego Co. UCMP 3975. Syntype 31368. [Tellinidae].

....., pl. 4, fig. 5b. Tecolote Creek, La Jolla quad., San Diego Co. UCMP 5091. Syntype UCMP. 31369 (not UCMP 31370 as in text)].

Tellina soledadensis M.A. Hanna, 1927. Ekdale and Ekdale 2018. Paleo.3 493: fig. 5B. Scripps Fm., Eocene. Torrey Pines Science Center, San Diego Co. [SDSNH 4552]. Hypotype SDSNH 80165. [Tellinidae].

Tellina? *sutterensis* Dickerson, 1913. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):30, pl. 4, figs. 8a, b. Meganos Fm., Paleocene/Eocene. Marysville Buttes, Marysville Buttes quad., Sutter UCMP 1853. Holotype UCMP 11767. [Tellinidae].

Tellina tehachapi Anderson and G.D. Hanna, 1925. Weaver and Kleinpell 1963. UCPG 43:207, pl. 37, fig. 8. "Coldwater" Sandstone, Eocene. West of San Marcos Pass at Sacate-"Coldwater" contact, San Rafael Mtn. quad., Santa Barbara Co. UCMP B6941. Hypotype SU 9318 [=CASG 70255]. **Remarks:** *Tellina* (Subgenus?) *tehachapi* Anderson and G D. Hanna, 1925, *fide* Moore (2003b: p. 28). [Tellinidae].

Tellina (Subgenus?) *tehachapi* Anderson and G D. Hanna, 1925. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):28, pl. 4, fig. 6. Tejon Fm., Eocene. Live Oak Creek, Tejon quad., Kern Co. CASG 244. Holotype CASG 878. [Tellinidae].

Tellina (*Tellinella*) *tenuilineata* Clark, 1918. Addicott 1973b. USGS PP 791:7, 32, pl. 5, fig. 2. Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Rocks quad., Kern Co. USGS M3578. Hypotype USNM 646569. [Tellinidae].

....., pl. 5, fig. 8. Basal Vaqueros Sandstone [=Temblor Fm., Wygal Sandstone Member], Miocene. Kern Co. USGS. 9432. Hypotype USNM 646570.

Tellina (*Tellinella*) *tenuilineata* Clark, 1918. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):24–25, pl. 4, fig. 1. San Lorenzo Fm., Eocene/Oligocene. Contra Costa Co. UCMP 1175. Holotype UCMP 11130. [Tellinidae].

Tellina cf. *T. townsendensis* Clark, 1925. Addicott 1973b. USGS PP 791:7, 32–33, pl. 6, fig. 7. Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Rocks quad., Kern Co. USGS M3578. Hypotype USNM 646585. [Tellinidae].

Tellina n. sp.? aff. *T. townsendensis* Clark, 1925. Givens 1974. UCPG 109:51, pl. 2, fig. 3. Matilija Fm., Eocene. 2500 ft., San Guillermo quad. (1943), Ventura Co. UCR 4743. Hypotype UCR 4743/6. [Tellinidae].

Tellina n. sp.? Givens 1974, aff. *T. townsendensis* Clark, 1925. Deméré et al. 1979. SEPM Guidebook 4:98, pl. 1, fig. 14. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH. 20771. [Tellinidae].

Tellina n. sp.? Givens 1974, aff. *T. townsendensis* Clark, 1925. Throckmorton 1988a. USGS OFR 88-59:52, pl. 7, fig. 3 (refigured in Throckmorton 1988b, pl. 1, fig. 26). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8154. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Tellinidae].

Tellina undulifera Gabb, 1869b. Shimer and Shrock 1944. Index Foss. N.A., p. 429, pl. 170, fig. 26 (refigured from Nelson, 1925, pl. 53, fig. 8a). Martinez Fm. [=Santa Susana Fm.], Paleocene. South side Simi Valley, Ventura Co. UCMP 3783. Hypotype UCMP 30512. **Remarks:** In the subgenus *Saulella*, *fide* Moore (2003b: p. 9]. [Tellinidae].

Telliina undulifera Gabb, 1869b. Moore et al. 1952, p. 439, fig. 10-23.15. Paleocene. Line drawing, source specimen unknown. **Remarks:** In the subgenus *Saulella*, *fide* Moore (2003b: p. 9). [Tellinidae].

"*Tellina*" n.gen. *undulifera* Gabb, 1869b. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 8. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR6848. Hypotype UCR 6848/100 (not UCR 6848/1 as in pl. caption). **Remarks:** *Tellina* (*Saulella*) *undulifera* Gabb, 1869b, *fide* Moore (2003b: p. 9). [Tellinidae].

Tellina (Saulella) undulifera Gabb, 1869b. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):9–10, pl. 2, fig. 2a. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCLA 5996 [=LACMIP 25996]. Hypotype UCLA 59255 [=LACMIP 10984]. [Tellinidae].

....., pl. 2, fig. 2b. [Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR.6848]. Hypotype UCR 6848/100.

Tellina? cf. *T. vancouverensis* Clark and Arnold, 1923. Addicott 1973b. USGS PP 791:7, 33, pl. 4, fig. 13. Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Rocks quad., Kern Co. USGS M3578. Hypotype USNM 646561. [Tellinidae].

Tellina (*Angulus*) *vorbei* M.A. Hanna, 1927. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):1–2, pl. 1, fig. 1. "Rose Canyon Shale" (possibly Ardath Shale), Eocene. Soledad Canyon, La Jolla quad., San Diego Co. UCMP 5074. Holotype UCMP 30984. [Tellinidae].

Tellina sp. cf. *T. vorbei* of Ekdale and Ekdale, 2018. Paleo.3, 493:fig. 5D. Scripps Fm., Eocene. Qualcomm Central Plant, San Diego Co. SDSNH 5598. Hypotype SDSNH 103702. [Tellinidae].

...., fig. 5F, Torrey Pines Science Center, San Diego Co. SDSNH 4894. Hypotype SDSNH 91046. [Tellinidae].

Tellina (Subgenus?) *wilsoni* Anderson and Martin, 1914. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):29, pl. 4, figs. 7a, b. Temblor Fm., Oligocene/Miocene. Pozo quad., San Luis Obispo Co. CASG 126. Holotype CASG 127. [Tellinidae].

"*Tellina*" *woodringi* Adegoke, 1969 (n. sp.). UCPG 80:132–133, pl. 8, figs. 1, 6. San Joaquin Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP D1193. Holotype UCMP 36771. **Remarks:** In the genus *Tellina* and provisionally in the subgenus *Angelus*?, *fide* Moore (2003b: p. 9). [Tellinidae].

....., pl. 8, figs. 4, 5. Etchegoin Fm., Pliocene. Coalinga quad., Fresno Co. UCMP D1156. Paratypes UCMP 36772, 36773.

Tellina (*Angelus*?) *woodringi* Adegoke, 1969. Moore 2003b. USGS PP 1228-G [electronic format] (family Tellinidae):9, pl. 2, fig. 1. San Joaquin Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP D1193. Holotype UCMP 36771. [Tellinidae].

Tellina sp. Weaver and Kleinpell, 1963. UCPG 43:207, pl. 38, fig. 1. "Coldwater" Sandstone, Eocene. Along Camino Cielo Rd. west of San Marcos Pass at Sacate-"Coldwater" contact, San Rafael Mtn. quad., Santa Barbara Co. UCMP B6941. Hypotype SU 9176 (not SU 9320 as published) [=CASG 70242] [Tellinidae].

....., pl. 38, fig. 4. Middle Gaviota Fm., Eocene. Ridge west of El Bulito, Pt. Conception quad., Santa Barbara Co. UCMP B6994. Hypotype SU 9319 [=CASG 70254]. [Tellinidae].

Tellina species. Addicott 1969. Pr.CAS 37(3):62, 70, 72, pl. 4, fig. 3. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650983. [Tellinidae].

Tellina sp. Throckmorton 1988a. USGS OFR 88-59:52, pl. 7, fig. 4 (refigured in Throckmorton 1988b, pl. 1, fig. 27). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8154. UCMP

Tellina sp. Ekdale and Ekdale, 2018. Paleo. 3 493:fig. 5C. Scripps Fm., Eocene. Advanced Tissues Studies, San Diego Co. SDSNH 4147. Hypotype SDSNH 65080. [Tellinidae].

Tellina? sp. Squires 2008. NHMLAC CS 517:5, fig. 49. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17850. Hypotype LACMIP 13450. [Tellinidae].

Tellinidae, indeterminate. Powell 2015. WSM Ann. Rept. 45:61, figs. 11, 13. Monterey Fm., Miocene. West of Greenfield, Monterey Co. CASG 101093. Hypotypes CASG 101099, 101100. [Tellinidae].

Teredo? sp. Squires 1984. NHMLAC CS 350:53–54, fig. 12n. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad., Los Angeles Co. CSUN 524 [=LACMIP 16379]. Hypotype LACMIP 6593. [Teredinidae].

Teredo? sp. Squires 1987. NHMLAC CS 388:71, fig. 127. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 362 [=LACMIP 16273]. Hypotype LACMIP 7542. [Teredinidae].

Teredinid. Squires 2008. NHMLAC CS 517:5, fig. 55. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17850. Hypotype LACMIP 13456. [Teredinidae].

Teredinidae, genus et species indeterminate. Squires 1988c. NHMLAC CS 398:20, fig. 55. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 987 [=LACMIP 16175]. Hypotype LACMIP 7735. [Teredinidae].

Thecodonta (*Pristes*) *oblongus* (Carpenter, 1864b). [*Pristes*]. Moore 1992. USGS PP 1228-E:E9, pl. 4, figs. 3–4. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype (of Hertlein and Grant 1972, pl. 44, figs. 9, 13) LACMIP 4630. **Remarks:** In the genus *Pristes*, *fide* Coan et al. (2000: p. 327). [Lasaeidae].

Thracia aff. *T. condoni* Dall, 1909. Squires et al. 1988. SEPM Guidebook 58:185, pl. 1, fig. 10. Goler Fm., Eocene. Inyokern SE quad. (1972), El Paso Mtns., Kern Co. USGS M9067. Hypotype USNM 424898. **Remarks:** In the subgenus *Cetothrax*, *fide* Coan et al. (2000: p. 531). [Thraciidae].

Thracia dilleri Dall, 1898. Weaver and Kleinpell 1963. UCPG 43:208, pl. 38, fig. 6. Middle Gaviota Fm., Eocene. West of Agua Caliente, Lompoc quad., Santa Barbara Co. UCMP B6995. Hypotype SU/CASG 9219 (not CASG 9325 as published) [=CASG 70247]. [Thraciidae].

....., pl. 38, figs. 7, 9. Near junction of Yridisis Creek with EL Jaro Creek, Lompoc quad., Santa Barbara Co. UCMP. B7007D. Hypotype SU 9217 (not CAS 9324 as published) [=CASG 70248].

Thracia (*Thracia*) *dilleri* Dall, 1898. Givens 1974. UCPG 109:59, pl. 4, fig. 4. Matilija Fm., Eocene. Lion Canyon quad. (1943), Ventura Co. UCR 4731. Hypotype UCR 4731/81. [Thraciidae].

Thracia kanakoffi Hertlein and Grant, 1972 (n. sp.). SDSNH Mem. 2(2B):338–339, pl. 42, figs. 11, 14, 15. Originally referred to as Pico Fm. (Pliocene) but most likely is Castaic Fm. (Miocene). Silt beds south of Humphrey railroad station [now removed], Mint Canyon quad., Los Angeles Co. LACMIP 291. Holotype LACMIP 4839, unfigured paratypes LACMIP 4840–4877. **Remarks:** Junior synonym of *Thracia* (*Homoeodesma*) *trapezoides* Conrad, 1849a, *fide* Coan et al. (2000: p. 532. [Thraciidae].

....., pl. 42, fig. 13. San Diego Fm., Pliocene. San Diego, San Diego Co. SDSNH 34. Paratype SDSNH 4345.

....., Balboa Park, San Diego, San Diego Co. LACMIP 107. Unfigured paratypes LACMIP 4878–4881].

Thracia trapezoides Conrad, 1849. Peck, 1960. UCPG 36(4):240, pl. 21, fig. 13. Ohlson Ranch Fm., Pliocene. Annapolis quad., Sonoma Co. UCMP A9410. Hypotype UCMP 15779. **Remarks:** In the subgenus *Homoeodesma*, *fide* Coan et al. (2000: p. 532). [Thraciidae].

Thracia trapezoides Conrad, 1849a. Cummings et al. 1962. CDMG Bull.181:204, ph. 17, fig. 4. Purisima Fm. (Pomponio Member), Pliocene, Purisima Creek area, Half Moon Bay quad., San Mateo Co. Locality 645-1M. Hypotype determined here as missing. **Remarks:** In the subgenus *Homoeodesma*, *fide* Coan et al. (2000: p. 532). [Thraciidae].

Thracia trapezoides Conrad, 1849a. Faustman 1964. UCPG 41(2):117, pl. 1, fig. 5. Rio Dell Fm., Pliocene. Fleener Creek area, Ferndale quad., Humboldt Co. UCMP B7954. Hypotype UCMP 37765. **Remarks:** In the genus *Homoeodesma*, *fide* Coan et al. (2000: p. 532). [Thraciidae].

Thyasira bisecta (Conrad, 1849a). [*Venus*]. Glen 1959. UCPG 36(2):170, pl. 17, fig. 2 (not fig. b). Pillar Pt. "Merced" Fm., [=Purisima Fm.], Pliocene. Near the town of Princeton, San Mateo Co. UCMP B4791. Hypotype UCMP 37623. **Remarks:** In the genus *Conchocele*, *fide* Coan et al., (2000: p. 277). (Thyasiridae).

Thyasira cf. *bisecta* (Conrad, 1849a). [*Venus*]. Phillips et al. 1974. SEPM Guidebook, p. 123, pl. 3, figs. 3, 4 (peels). Tumey Fm., Eocene/Oligocene. Monocline Ridge, Fresno Co. UCMP D6536]. Hypotypes UCMP 37157, 37158. **Remarks:** In the genus *Conchocele*, *fide* Coan et al., (2000: p. 277). [Thyasiridae].

Thyasira cf. *bisecta* (Conrad, 1849a). [*Venus*]. Watkins 1974. Paleo.3 15:253, figs. 7A, B [peel, CASG]. Kreyenhagen Fm., Oligocene. Monocline Ridge, Monocline Ridge quad. (1955), Fresno Co. [UCMP D6536]. Hypotypes UCMP 37157, 37158. **Remarks:** In the genus *Conchocele*, *fide* Coan et al. (2000: p. 277). [Thyasiridae].

Thyasira (*Conchocele*) *folgeri* Wagner and Schilling, 1923. Moore 1988b. USGS PP 1228-D:D24, pl. 7, fig. 9. San Emigdio Fm., Eocene. Devil's Kitchen area Kern Co. UCMP 3195. Holotype UCMP 11434. **Remarks:** Possibly in the genus *Maorithyas*, *fide* Hryniewicz et al., (2017: p. 719), but confirmed earlier by Kiel and Peckham (2007: p. 348). [Thyasiridae].

Thyasira gouldii (Philippi, 1845). [*Lucina*]. Hertlein and Grant, 1972. SDSNH Mem. 2(2B):255–257, pl. 43, fig. 17. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. ACMIP 305. Hypotype LACMIP 4652. **Remarks:** Junior synonym of *Thyasira flexuosa* (Montagu 1803), *fide* Coan et al. (2000: p. 275). [Thyasiridae].

....., pl. 43, fig. 21. Near U.S./Mexico boundary, San Diego Co. UCLA 294 [=LACMIP 20294]. Hypotype UCLA 48620 [=LACMIP 9303].

Thyasira (*Thyasira*) *gouldi* (Philippi, 1845). [*Lucina*]. Moore 1988b. USGS PP 1228-D:D24, pl. 7, figs. 4, 21. San Diego Fm., Pliocene. San Ysidro quad. (1943), San Diego Co. LACMIP 305]. Hypotype (of Hertlein and Grant 1972, pl. 43, fig. 17) LACMIP 4652. **Remarks:** Junior synonym of *Thyasira flexuosa*, *fide* Coan et al. (2000: p. 275). [Thyasiridae].

Thyasira Fowkes 1982. Coalinga Guidebook, p. 24, unnumbered fig. Tumey Fm., Oligocene. Ciervo Hills, Fresno Co. WHC hypotype lost? [Thyasiridae].

Thyasirid. Watkins 1974. Paleo.3 15:252, fig. 6C. Kreyenhagen Fm., Oligocene. Monocline Ridge, Monocline Ridge quad., Fresno Co. UCMP D6534. Hypotype UCMP 37156. [Thyasiridae].

Tivela diabloensis Clark, 1915. Hall, 1958. UCPG 34(1):53, pl. 5, fig. 4. Briones Fm., Miocene. Southeast of Pleasanton, Alameda Co. SU 3232. Hypotype SU 8452 [=CASG 69983]. **Remarks:** In the subgenus *Pachydesma*, *fide* Clark (1915: p. 462). [Veneridae].

Tivela (*Pachydesma*) *gabbi* Clark, 1915. Richey 1943. UCPG 27(2):34, pl. 3, fig. 3. Orinda Fm., Miocene. Concord quad. (1915), Contra Costa Co. UCMP A2569. Hypotype UCMP 30673. [Veneridae].

Tivela stanfordia Hall, 1958 (n. sp.). UCPG 34(1):53, pl. 6, figs. 1–7. Briones Fm., Miocene. East of Irvington, La Costa Valley quad. (1943), Alameda Co. SU 3244. Holotype SU 8454 [=CASG 69986, paratypes SU 8453, 8455 [=CASG 69984, 69985]. [Veneridae].

Tivela (*Pachydesma*) *stultorum* (Mawe, 1823). [*Donax*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):266–267, pl. 50, fig. 4. San Diego Fm., Pliocene. Near U.S./Mexico, San Diego Co. UCLA 312 [=LACMIP 20312]. Hypotype UCLA 48621 [=LACMIP 9304]. [Veneridae].

....., pl. 50, figs. 5, 6. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotype LACMIP 4685.

Tivela (*Pachydesma*) *weaveri* (Packard *in* Dickerson, 1914a). [*Spisula*]. Squires and Deméré 1991. SEPM Guidebook 68:184, figs. 3F, G. Friars Fm., Eocene. San Diego Co. SDSNH 3278. Hypotype SDSNH 28375. [Veneridae].

Trachycardium (*Trachycardium*) *arcumbona* (Wiedey, 1928). [*Cardium*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Cardiidae):7–8, pl. 4, fig. 8. Temblor Fm., Oligocene/ Miocene. Vicinity of Syncline Hill, La Panza quad., San Luis Obispo Co. SU 432. Holotype SDSNH 31. [Cardiidae].

Trachycardium cf. *Trachycardium quadragenarium* (Conrad, 1837). [*Cardium*]. Woodring et al. 1940 [1941]. USGS PP 195:95, pl. 16, fig. 2. San Joaquin Fm. (*Pecten* zone), Pliocene. Surprise Canyon, North Dome, Kettleman Hills, Kings Co. USGS 12322. Hypotype USNM 495777. **Remarks:** In the genus *Dallocardia*, *fide* Coan and Valentich-Scott (2012: p. 413). [Cardiidae].

Trachycardium (*Dallocardia*) *quadragenarium* (Conrad, 1837). [*Cardium*]. Squires 2012. NHMLAC CS 520:76, fig. 31. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14356. **Remarks:** In the genus *Dallocardia*, *fide* Coan and Valentich-Scott (2012: p. 413). [Cardiidae].

Trachycardium (*Dallocardia*) *quadragenarium fernandoensis* (Arnold, 1907). [*Cardium*]. Moore 2003a. USGS 1228-F [electronic format] (family Cardiidae):9–10, pl. 3, figs. 18, 19 (not fig. 17; misnumbered 16 and 18 on pl). Pico Fm., Pliocene. Elsmere Canyon, Los Angeles Co. Holotype USNM 164947. **Remarks:** Junior synonym of *Trachycardium quadragenarium* (Conrad, 1837), *fide* Coan et al. (2000: p. 362); in the genus *Dallocardia*, *fide* Coan and Valentich-Scott (2012: p. 413). [Cardiidae].

Trachycardium sagaseri Adegoke, 1969 (n.sp). UCPG 80:116–117, pl. 3, figs. 4, 8. Etchegoin Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP D1134. Holotype UCMP 36686. **Remarks:** Possibly in the genus *Dallocardia*. [Cardiidae].

....., pl. 3, fig. 6. Reef Ridge quad., Kings Co. UCMP D1128. Paratype UCMP 36687.

Trachycardium (*Dallocardia*) *sagaseri* Adegoke, 1969. Moore 2003a. USGS 1228-F [electronic format] (family Cardiidae):10, pl. 3, fig. 15. Etchegoin Fm., Miocene/ Pliocene [Miocene/ Pleistocene in pl. caption]. Reef Ridge quad., Kings Co. UCMP D1134. Holotype UCMP 36686. **Remarks:** Possibly in the genus *Dallocardia*. [Cardiidae].

Trachycardium vaquerosensis (Arnold, 1908). [*Cardium*]. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 18. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH 4312. Hypotype SDSNH 83251]. [Cardiidae].

Trachycardium (*Trachycardium*) *vaquerosensis* (Arnold, 1908). [*Cardium*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Cardiidae):6–7, pl. 4, figs. 9, 11. Vaqueros Fm., Oligocene/Miocene. Vicinity of Mindego Creek and Alpine Creek, Santa Cruz quad., San Mateo Co. Holotype USNM 165467 (not USNM 105467 as in pl. caption). [Cardiidae].

Trachycardium (*Trachycardium*) *woodringi* (Loel and Corey, 1932). [*Cardium*]. Moore 2003a. USGS PP 1228-F [electronic format] (family Cardiidae):8, pl. 3, fig. 16 (not fig. 15 as on pl. caption). Vaqueros Fm., Oligocene/Miocene. Eastern foothills of La Panza Mtns., La Panza quad., San Luis Obispo Co. UCMP A495. Holotype UCMP 31774 (not UCMP 31714 as in pl. caption). [Cardiidae].

Trachycardium sp. Stadum and Finger 2016. NHMLAC CS 524:39, 42, fig. 48. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 93837. [Cardiidae].

Transenella joaquinensis Anderson and Martin, 1914. Keen 1943. Tr.SDSNH 10(2):41–42, pl. 3, figs. 1, 2. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Hypotypes SU 7528, 7528a [=CASG 72013]. [Veneridae].

Transenella tantilla (Gould, 1853). [*Venus*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):282, pl. 44, fig. 20. San Diego Fm., Pliocene. San Ysidro quad. (1953), San Diego Co. LACMIP 305C [=LACMIP 16817]. Hypotype LACMIP 4768. **Remarks:** In the genus *Nutricola*, *fide* Coan et al. (2000: p. 384). [Cardiidae].

....., pl. 44, figs. 23, 27. San Diego Co. LACMIP 309. Hypotypes LACMIP 4769, 4770.

....., pl. 44, fig. 25. Balboa Park, San Diego, San Diego Co. UCLA 1386 [=LACMIP 21386]. Hypotype UCLA 48624 [=LACMIP 9307].

Transenella tantila (Gould, 1853). [*Venus*]. Yancey 1978. Pr.CAS 41(15):364, 369, figs. 5E, F. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D3386. Hypotypes USNM 251801, 251802. **Remarks:** In the genus *Nutricola*, *fide* Coan et al. (2000: p. 384). [Cardiidae].

Transenella sp. Russell et al. 1992. Lethaia 25:353–358, fig. 5. Etchegoin Fm., Miocene/Pliocene. Kettleman Hills, Kings Co. UCMP D9939. Hypotype UCMP 37442. **Remarks:** Determined here as in the genus *Nutricola*. [Cardiidae].

Tresus nuttallii (Conrad, 1837). [*Lutraria (Cryptodon)*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):318, pl. 54, fig. 11; pl. 55, fig. 9. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LAMCIP 4822. [Mactridae].

....., pl. 55, figs. 13, 14, 17. La Jolla quad., San Diego Co. UCLA 2420 [=LACMIP 22420]. Hypotype UCLA 48635 [=LACMIP 9318]. **Remarks:** Specimen actually from Pleistocene Bird Rock terrace overlying San Diego Fm., *fide* G.L. Kennedy (personal communication, 2001).

Tresus nuttallii (Conrad, 1837). [*Lutraria (Cryptodon)*]. Squires 2012. NHMLAC CS 520:76, fig. 38. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14370. [Mactridae].

Tresus pajaroanus (Conrad, 1857d). [*Venus*]. Adegoke 1969. UCPG 80:123, pl. 7, fig. 5. Etchegoin Fm., Pliocene. Canoas Creek, Reef Ridge quad., Kings Co. UCMP D1154. Hypotype UCMP 36736. [Mactridae].

Tresus pajaroanus (Conrad, 1857d). [*Venus*]. Perry 1988. SCMA, p. 18, fig. 9A. Purisima Fm., Miocene/Pliocene. Southwest of Escalona Gulch, Santa Cruz Co. CASG66088. Hypotype CASG 66088.01]. [Mactridae].

Tresus pajaroanus (Conrad, 1857d) [*Venus*]. Powell et al. 2019a. USGS SIR 2019-5021:3, 32, pl. 3, figs. 5, 7. Wilson Grove Fm., Miocene. North of Bloomfield, Sonoma Co., CASG 54136, Hypotype CASG 78414. [Mactridae].

Tresus saxadomoides (Clark, 1918). [*Spisula*?]. Moore 2003a. USGS 1228-F [electronic format] (family Mactridae):35, pl. 12, fig. 5. San Ramon Fm., Miocene. Near town of Walnut, Concord quad., Contra Costa Co. UCMP 1131. Holotype UCMP 11268. [Mactridae].

Trigoniocardia aff. *T. antillarum* (d'Orbigny, 1842). [*Cardium*]. Woodring et al. 1946. USGS PP 207:27, pl. 28, figs. 24, 25 (clay peel). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotypes USNM 497092, 497093. **Remarks:** Determined here as *Americardia biangulata* (Broderip and G.B. Sowerby I, 1829).[Cardiidae].

cf. *Trigonicardia* sp, shell. Cōcke 2015. Foss. Palos Verdes Hills, p. 84, unnumbered fig. on p. 84 (lower). Monterey Fm., Miocene. George F. Canyon, Palos Verdes Hills, Los Angeles Co. Hypotype to be donated to LACMIP. [Cardiidae].

Undetermined species, scallop. Cōcke 2015. Foss. Palos Verdes Hills, p. 81, unnumbered figs. on p. 81 (upper and lower). Monterey Fm., Miocene. George F. Canyon, Palos Verdes Hills, Los Angeles Co. Hypotype to be donated to LACMIP. [Pectinidae].

Unknown bivalve. Bedrossian 1974. Calif. Geol. 27(8): back cover, unnumbered fig., center right specimen. "Merced" Fm., Pliocene [=Wilson Grove Fm.), Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotype CASG determined here as missing. Possibly a cardiid.

Venericardia* (*Leuroactis*) *alisoensis Verástegui, 1953 (n. sp). Pal. Amer. 3(25):52–53, pl. 10, figs. 1–3a. Llajas Fm., Eocene. West side of Aliso Canyon, Los Angeles Co. UCMP 7019]. Holotype UCMP 30176. **Remarks:** Junior synonym of *Venericardia* (*Pacificor*) *aragonia joaquinensis* (Vokes, 1939), *fide* Squires (1984: p. 46; 1987: p. 63); *fide* Moore (1992: p. E23). [Carditidae].

Venericardia (*Pacificor*) *aragonia diabloensis* Verástegui, 1953. Moore, 1992. USGS PP 1228-E:E20, pl. 2, fig. 8; pl. 5, fig. 2. Meganos Fm., Paleocene/Eocene. Meganos Fm., Marsh Creek, Brentwood, Contra Costa Co. UCMP paratype 32799. [Carditidae].

....., pl. 2, fig. 9; pl. 5, fig. 5. Marsh Creek, Brentwood, Contra Costa Co. CASG61967]. Holotype SU 411 [=CASG 61967.01).

Venericardia (*Pacificor*) *aragonia joaquinensis* (Vokes, 1939). [*Megacardita*]. Squires 1988a. SEPM Guidebook 58:110, pl. 2, fig. 4. Juncal Fm., Eocene. Whitaker Peak area, Ventura Co. CSUN 815 [=LACMIP 16401]. Hypotype

LACMIP 7525. [Carditidae].

Venericardia (*Pacificor*) *aragonia joaquinensis* (Vokes, 1939). [*Megacardita*]. Saul 1983b. SEPM Guidebook 35:76, pl. 2, figs. 7, 8. Llajas Fm., Eocene. Bus Canyon, Calabasas quad., Ventura Co. UCMP 7193. Hypotypes UCMP 37432, 37433. [Carditidae].

Venericardia (*Pacificor*) *aragonia joaquinensis* (Vokes, 1939). [*Megacardita*]. Squires 1984. NHMLAC CS 350:46, fig. 10p. Llajas Fm., Eocene. Thousand Oaks quad. (1950, PR 1967), Ventura Co. UCMP 7193 [=CSUN 702; =UCLA 7030]. Hypotype UCMP 37433. [Carditidae].

Venericardia (*Pacificor*) *aragonia joaquinensis* (Vokes, 1939). [*Megapitaria*]. Squires 1987. NHMLAC CS 388:63, fig. 108. Juncal Fm., EoceneWhitaker Peak quad. (1958), Los Angeles Co. CSUN 815 [=LACMIP 16401]. Hypotype LACMIP 7525. [Carditidae].

Venericardia (*Pacificor*) *aragonia joaquinensis* (Vokes, 1939). [*Megacardita*]. Moore 1992. USGS PP 1228-E:E23–E24, pl. 6, figs. 1, 9. Avenal Sandstone [=Domengine Fm.?], Eocene. San Carlos Creek, Priest Valley quad. (1927), Fresno Co. UCMP A1022]. Hypotype UCMP 15615 [=paratype of *Venericardia* (*Pacificor*) *vallecitosensis* (Vokes, 1939), *fide* Keen and Bentson (1944: p. 65]. [Carditidae].

....., pl. 6, figs. 2, 8. Llajas Fm., Eocene. West side of Aliso Canyon, Los Angeles Co. UCMP 7019. Holotype (of *Venericardia* (*Leuroactis*) *alisoensis* Verástegui, 1953) UCMP 30176.

....., pl. 6, figs. 3, 10. Avenal Sandstone, Eocene. Big Tar Canyon area, Cholame quad., Fresno Co. UCMP 4169. Paratype UCMP 15617.

....., pl. 6, figs. 4, 6. Santa Susana Fm. (of Verástegui 1953: p. 50), Paleocene. Camulos quad., Ventura Co. [CASG 66532.] Holotype SU 8003 [=CASG 66532.01] (of *Venericardia* (*Leuroactis*) *schencki* Verástegui, 1953).

....., pl. 6, figs. 5, 7; pl. 9, fig. 17. Domengine Fm., Eocene. Parson's Peak area, Coalinga quad., Fresno Co. UCMP 672. Holotype UCMP 15626, paratype (of *Venericardia* (*Pacificor*) *smileyi* (Vokes, 1939)) UCMP 15627.

....., pl. 8, fig. 3; pl. 9, fig. 19. Avenal Sandstone, Eocene Big Tar Canyon area, Cholame quad., Kings Co.]. Paratype (of *Venericardia* (*Pacificor*) *vokesi* Verástegui, 1953) SU 8016 [=CASG 72185].

Venericardia* (*Pacificor*) *argentea Verástegui, 1953 (n. sp.). Pal. Amer. 3(24):25–26, pl. 1, figs. 10–14. Lodo Fm., Paleocene. Near junction of Panoche and Silver Creeks, Panoche quarangle, Fresno Co. SU 2073 [=CASG 66535]. Holotype SU 7995 [=CASG 66535.02]. **Remarks:** Junior synonym of *Glyptoactis* (*Claibornicardia*) *keenae* (Verástegui, 1953), *fide* Moore (1992: p. E27). [Carditidae].

Venericardia (*Pacificor*) *calafia* Stewart, 1930. Verástegui 1953. Pal. Amer. 3(25):28–30, pl. 15, figs. 3–5, 7. Domengine Fm., Eocene. Vicinity of Oil City, Fresno Co. Hypotype CASG 1828. **Remarks:** *Venericardia* (*Pacificor*) *hornii calafia* Stewart, 1930, *fide* Squires (1984: p. 46). [Carditidae].

....., pl. 16, fig. 1. Llajas Fm., Eocene. Las Llajas Canyon, Simi Valley, Santa Susana quad., Ventura Co. UCMP 7004. Holotype UCMP 31450. **Remarks:** *Venericardia* (*Pacificor*) *hornii calafia* Stewart, 1930, *fide* Squires (1984: p. 46).

....., pl. 16, figs. 2, 3; pl. 17, figs. 1, 2a. [Las] Llajas Canyon, Simi Valley, Ventura Co. Hypotype [topotype] SU 8017 [=CASG 72167]. **Remarks:** *Venericardia* (*Pacificor*) *hornii calafia* Stewart, 1930, *fide* Squires (1984: p. 46).

Venericardia (*Pacificor*) *calafia calafia* Stewart, 1930. Moore 1992. USGS PP 1228-E:E21–E22, pl. 3, figs. 1,2, 5, 6 (figs. 1 and 5 refigured in Moore 2000, unnumbered figs. on p. 54 and 55). Llajas Fm., Eocene. Simi Valley, Ventura Co. Hypotype (of Verástegui 1953, pl. 16, figs. 2, 3; pl. 17, figs 1, 2a) CASG 8017. [Carditidae].

....., pl. 3, figs. 3, 4. Las Llajas Canyon Simi Valley, Santa Susana quad., Ventura Co. UCMP 7004. Holotype UCMP 31450.

....., pl. 3, figs. 11, 19. "Rose Canyon Shale" (of M.A. Hanna 1927:256) (possibly Ardath Shale), Eocene. Rose Creek, La Jolla quad., San Diego Co. UCMP 3990. Holotype (of *Venericardia* (*Pacificor*) *hertleini* Verástegui, 1953) UCMP 30415.

Venericardia (*Pacificor*) *calafia gabbi* Verástegui, 1953. Moore 1992. USGS PP 1228-E:E22, pl. 4, figs. 2, 6, 8, 10. Tejon

Fm., Eocene. Grapevine Canyon, Kern Co. CASG 245. Holotype CASG 685 (not CASG 686 as in pl. caption) [=CASG 245.01], hypotype (of M.A. Hanna 1925, pl. 39, fig. 1) CASG 686 (not CASG 685 as in pl. caption). [Carditidae].

Venericardia (*Pacificor*) *calafia lutmani* Turner, 1938. Moore, 1992. USGS PP 1228-E:E20, pl. 2, figs. 1, 2. Juncal Fm., Eocene. Vicinity of Vickers Hot Springs, Ventura Co. CASG 829. Holotype (of *Venericardia* (*Pacificor*) *durhami* Verástegui, 1953) SU 8005 [=CASG 66528.01]. [Carditidae].

Venericardia (*Pacificor*) *calafia susanaensis* Verástegui, 1953. Moore 1992. USGS PP 1228-E:E19–E20, pl. 1, figs. 14, 16–18. Santa Susana Fm. (of Verástegui 1953), Paleocene. McCray Oil Wells, Oil Canyon, Camulos quad., Ventura Co. SU CA-33 [CASG 66527]. Holotype SU 8004 [=CASG 66527.01)] [Carditidae].

Venericardia (*Pacificor*) *calafia susanensis* Verástegui, 1953. Squires 1999b. NHMLAC CS 479:25, fig. 58. Santa Susana Fm., Paleocene/Eocene. Santa Susana quad., Ventura Co. UCMP 7009. Hypotype UCMP 37431. [Carditidae].

Venericardia (*Pacificor*) *carlosensis* (Vokes, 1939). [*Megacardita*]. Verástegui 1953. Pal. Amer. 3(25):36–37, pl. 13, figs. 4, 5. Domengine Fm., Eocene. Fresno Co. UCMP A1017. Holotype UCMP 15619. **Remarks:** Junior synonym of *Venericardia* (*Venericor*) *vallecitosensis* (Vokes, 1939), *fide* Moore (1992: p. E25). [Carditidae].

....., pl. 13, figs. 6–9. San Carlos Creek, San Benito Co. Hypotypes SU 8012–8015 [=CASG 72168–72171].

Venericardia (*Pacificor*) *clarki clarki* Weaver and Palmer, 1922. Squires 1994b. SEPM Guidebook 74:54, pl. 3, figs. 2. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23724. Hypotype LACMIP 11660. [Carditidae].

....., pl. 3, fig. 3. Upper Sespe Creek, Ventura Co. LACMIP 20581. Hypotype LACMIP 11661.

Venericardia (*Pacificor*) *clarki popenoei* Verástegui, 1953. Moore 1992. USGS PP 1228-E:E24–E25, pl. 9, figs. 7, 15. "Coldwater" Sandstone (of Verástegui 1953), Eocene. Sespe Gorge, Ventura Co. UCLA 581 [=LACMIP 20581]. Holotype (photocopy of Verástegui 1953, *fide* Moore (1992: pl. 9 caption), UCLA (not UCMP as in pl. caption) 15689 [=LACMIP 10845]. [Carditidae].

Venericardia* (*Pacificor*) *diabloensis Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):27–28, pl. 5, figs. 5–7a. Meganos Fm. ("D" member), Eocene. Marsh Creek, Brentwood, Contra Costa Co. CASG. 61967. Holotype SU 411 [=CASG 61967.01]. **Remarks:** *Venericardia* (*Pacificor*) *agaronia diabloensis*, *fide* Moore (1992: p. E20). [Carditidae].

Venericardia (*Glyptoactis*) *domenginica* Vokes, 1939. Verástegui, 1953. Pal. Amer. 3(25):43–44, pl. 13, fig. 1. Domengine Fm., Eocene. Domengine Ranch, Coalinga quad., Fresno Co. UCMP A1219. Holotype UCMP 15611. **Remarks:** In the genus/subgenus *Glyptoactis* (*Claibornicardia*), *fide* Moore (1992: p. E27). [Carditidae].

Venericardia* (*Pacificor*) *durhami Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):23, pl. 7, figs. 1, 2. Juncal Fm., Eocene. Vicinity of Vickers Hot Springs, Ventura Co. CASG 829 [=CASG 66528]. Holotype CASG 8005 [=CASG 66528.01]. **Remarks:** Junior synonym of *Venericardia* (*Pacificor*) *calafia lutmani* Turner, 1938, *fide* Moore (1992: p. E20). [Carditidae].

Venericardia* (*Pacificor*) *gabbi Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):30, 31, pl. 19, figs. 1, 5, 6. Tejon Fm., Eocene. Grapevine Canyon, Kern Co. Holotype CASG 685 (not CASG 686 as in pl. caption). **Remarks:** *Venericardia* (*Pacificor*) *calafia gabbi* Verástegui, 1953, *fide* Moore (1992: p. E22). [Carditidae].

Venericardia* (*Pacificor*) *hertleini Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):24–25, pl. 15, figs. 1, 2, 6. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Near junction of San Clemente and Rose Canyons, San Diego Co. UCMP 3990. Holotype UCMP 30415. **Remarks:** Junior synonym of *Venericardia* (*Pacificor*) *calafia calafia* Stewart, 1930, *fide* Moore (1992: p. E21). [Carditidae].

Venericardia (*Pacificor*) *hornii* (Gabb, 1864). [*Cardita*]. Verástegui 1953. Pal. Amer. 3(25):33–35, pl. 18, figs. 1, 4. Tejon Fm., Eocene. Tejon, Kern Co. Lectotype (of Stewart 1930: p. 167) ANSP. 4558.

....., pl. 18, figs. 2, 3, 5, 7. Live Oak Canyon, Kern Co. Hypotypes SU 8018–8020 [=CASG 72173–72175].

....., pl. 19, fig. 7. Live Oak Creek, Kern Co. CASG 244. Hypotype CASG 7728.

Venericardia (*Pacificor*) *hornii* (Gabb, 1864). [*Cardita*]. Moore 1968. SDSNH Occas. Pap. 15:30, pl. 13, figs. e, f. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Rose Canyon, San Diego Co. SDSNH 1667. Hypotype SDSNH 4145]. [Carditidae].

Venericardia (*Pacificor*) *hornii* (Gabb, 1864). [*Cardita*]. Givens 1974. UCPG 109:46–47, pl. 3, fig. 3. Matilija Fm., Eocene. Vicinity of Alamo Creek, Dry Canyon, and the Cuyama River Valley, Reyes Peak quad. (1943), Ventura Co. UCR 4745. Hypotype UCR 4745/1. [Carditidae].

Venericardia hornii (Gabb, 1864). [*Cardita*]. Moore 1992. USGS PP 1228-E:E23, pl. 5, figs. 17, 18. Tejon Fm., Eocene. Live Oak Canyon, Kern Co. Lectotype (of Stewart 1930: p. 167) ANSP 4558. [Carditidae].

Venericardia hornii (Gabb, 1864) var. [*Cardita*]. G.D. Hanna and Hertlein 1943. CDM Bull. 118 (2):172, figs. 62-31, 62-32. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Rose Canyon, San Diego, San Diego Co. CASG 12122. Hypotype CASG 5982. [Carditidae].

Venericardia (*Pacificor*) *hornii* (Gabb) cf. subsp. *calafia* Stewart, 1930. Givens 1974. UCPG 109:47, pl. 4, fig. 1. Juncal Fm., Eocene. Near Thorn Meadows and Thorn Pt., Lion Canyon quad. (1943), Ventura Co. UCR 4684. Hypotype UCR 4684/6. **Remarks:** *Venericardia* (*Pacificor*) *calafia calafia* Stewart, 1930, *fide* Moore (1992: p. E21). [Carditidae].

Venericardia (*Pacificor*) *hornii calafia* Stewart, 1930. Saul, 1983b. SEPM Guidebook 35:76, pl. 2, fig. 16. Llajas Fm., Eocene. Bus-Trough Canyon area, Calabasas quad., Ventura Co. UCLA 7071 [=LACMIP 27071]. Hypotype UCLA 59383 [=LACMIP 10438]. **Remarks:** *Venericardia* (*Pacificor*) *calafia calafia* Stewart, 1930, *fide* Moore (1992: p. E21). [Carditidae].

....., pl. 2, fig. 17. Las Llajas Canyon, Santa Susana quad., Ventura Co. UCLA 2312 [=LACMIP 22312]. Hypotype UCLA 59378 [=LACMIP 10439].

Venericardia (*Pacificor*) *hornii calafia* Stewart, 1930. Squires 1984. NHMLAC CS 350:46, figs. 10n, o. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotypes LACMIP 6573, 6574. **Remarks:** *Venericardia* (*Pacificor*) *calafia calafia* Stewart, 1930, *fide* Moore (1992: p. E21). [Carditidae].

Venericardia (*Pacificor*) *hornii calafia* Stewart, 1930. Squires 1997b. Simi Valley Hist. Soc. vol., p. 297, fig. 2h (refigured from Squires, 1984, fig. 10n). Llajas Fm., Eocene. Ventura Co. CSUN374 [=LACMIP 7242). Hypotype LACMIP 6573]. **Remarks:** *Venericardia* (*Pacificor*) *calafia calafia* Stewart, 1930, *fide* Moore (1992: p. E21). [Carditidae].

Venericardia (*Pacificor*) *hornii lutmani* Turner, 1938. Givens, 1974. UCPG 109:47, pl. 1, fig. 16, pl. 2, fig. 8. Juncal Fm., Eocene. Hot Springs Creek, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4662. Hypotype UCR 4662/40. **Remarks:** *Venericardia* (*Pacificor*) *calafia lutmani* Turner, 1938, *fide* Moore (1992: p; E20). [Carditidae].

Venericardia (*Pacificor*) *hornii lutmani* Turner, 1938. Saul 1983b. SEPM Guidebook 35:76, pl. 2, fig. 6. Juncal Fm., Eocene. Hot Springs Canyon, Topatopa Mtns. quad., Ventura Co. UCLA 4244 [=LACMIP 24244]. Hypotype UCLA 59381 [=LACMIP 10437]. **Remarks:** *Venericardia* (*Pacificor*) *calafia lutmani* Turner, 1938, *fide* Moore (1992: p. E21). [Carditidae].

Venericardia (*Pacificor*) *hornii lutmani* Turner, 1938. Squires 1987. NHMLAC CS 388:63, fig. 107. Juncal Fm., Eocene. Cobblestone Mtn. quad. (1958), Los Angeles Co. CSUN 824 [=LACMIP 16402]. Hypotype LACMIP 7524]. **Remarks:** *Venericardia* (*Pacificor*) *calafia lutmani* Turner, 1938, *fide* Moore (1992: p. E20). [Carditidae].

Venericardia (*Pacificor*) *hornii susanaensis* Verástegui, 1953. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 14. Santa Susana Fm., Paleocene. North of Las Llajas Canyon, Santa Susana quad., Ventura Co. UCMP 7000. Hypotype UCMP 37431. **Remarks:** *Venericardia* (*Pacificor*) *calafia susanensis* Verástegui, 1953, *fide* Squires (1999b: p. 25). [Carditidae].

Venericardia ionensis Waring, 1914. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, fig. 62-27. [Domengine Fm.?], Eocene. Near Big Tar Canyon, Kings Co. CASG 1930. Hypotype CASG 7738. **Remarks:** *Venericardia* (*Pacificor*) *agaronia joaquinensis* (Vokes, 1939), *fide* Moore (1992: p. E23). [Carditidae].

Venericardia (*Leuroactis*) *joaquinensis* (Vokes, 1939). [*Megacardita*]. Verástegui 1953. Pal. Amer. 3(25):60–61, pl. 11, figs. 1, 3, 4. Avenal Sandstone, Eocene. Big Tar Canyon, Reef Ridge area, Cholame quad., Kings Co. UCMP 4170.

Holotype UCMP 15616. **Remarks:** *Venericardia* (*Pacificor*) *agaronia joaquinensis* (Vokes, 1939), *fide* Moore (1992: p. E23). [Carditidae].

....., pl. 11, fig. 2. Domengine Fm., Eocene. Panoche Hills, Panoche Hills quad., Fresno Co. Hypotype SU 8010 [=CASG 72176].

....., pl. 12, figs. 4–6. Llajas Fm., Eocene. Simi Valley, Ventura Co. UCMP 4003. Hypotype UCMP 30414.

Venericardia* (*Glyptoactis*) *keenae Verástegui, 1953 (n.sp). Pal. Amer. 3(25):41–42, pl. 1 figs. 1–5. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Panoche quad., Fresno Co. SU 2072 (not SU 2073 as published) [=CASG 66535]. Holotype CASG 7993 [=CASG. 66535.01]. **Remarks:** In the genus/subgenus *Glyptoactis* (*Claibornicardia*), *fide* Moore (1992: p. E27). [Carditidae].

Venericardia (*Glyptoactis*) *keenae* Verástegui, 1953. Smith 1975b. SPEM Symposium vol., p. 479, pl. 2, fig. 5. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype SU 7993 (not SU 7992 as in pl. caption) [=CASG 66535]. **Remarks:** In the genus/subgenus *Glyptoactis* (*Claibornicardia*), *fide* Moore (1992: p. E27). [Carditidae].

Venericardia (*Pacificor*) *lisa* Verástegui, 1953. Weaver and Kleinpell 1963. UCPG 43:200, pl. 33, figs. 4, 7. Upper Gaviota Fm., Eocene. Near Cañada San Onofre, Gaviota quad., Santa Barbara Co. UCMP. B7026. Hypotype SU 9281 [=CASG 70258]. **Remarks:** Junior synonym of *Venericardia* (*Pacificor*) *clarki popenoei* Verástegui, 1953 (in part), *fide* Moore (1992: p. E24). [Carditidae].

....., pl. 33, fig. 5. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6955. Hypotype SU 9280 [=CASG 70272]. **Remarks:** *Venericardia* (*Pacificor*) *hornii* (Gabb, 1864), *fide* Moore (1992: p. E23). [Carditidae].

Venericardia* (*Glyptoactis*) *marksi Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):44, pl. 19, figs. 2–4. Tejon Fm., Eocene. Live Oak Canyon, Kern Co. SU 183 [=CASG 66536]. Holotype SU 8021 [= CASG 66536.01]. **Remarks:** In the genus/subgenus *Glyptoactis* (*Claibornicardia*), *fide* Moore (1992: p. E27). [Carditidae].

Venericardia (*Glyptoactis*) *marksi* Verástegui, 1953. Weaver and Kleinpell 1963. UCPG 43:200, pl. 33, fig. 2. "Coldwater" Sandstone, Eocene. Vicinity of Brush Peak on Camino Cielo, San Rafael Mtn. quad., Santa Barbara Co. UCMP B6946. Hypotype SU 9279 [=CASG 70265]. **Remarks:** In the genus/subgenus *Glyptoactis* (*Claibornicardia*), *fide* Moore (1992: p. E27). [Carditidae].

Venericardia* (*Glyptoactis*) *mcmastersi Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):42–43, pl. 13, figs. 2. 3. La Jolla Fm., Eocene. San Clemente Canyon, San Diego Co. [CASG 66534]. Holotype SU 8011 [=CASG 66534.01]. **Remarks:** Junior synonym of *Glyptoactis* (*Claibornicardia*) *sandiegoensis* (M.A. Hanna, 1927), *fide* Moore (1992: p. E26). [Carditidae].

Venericardia* (*Pacificor*) *mulleri Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):20–21, pl. 1, figs. 6–9. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Panoche quad., Fresno Co. SU 2073 [=CASG 66535]. Holotype SU 7994 [=CASG 72179, listed as voucher in CASG online database]. [Carditidae].

Venericardia mulleri Verástegui, 1953. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, fig. 8. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype UCMP 14207. [Carditidae].

Venericardia (*Pacificor*) *mulleri* Verástegui, 1953. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 8. Coal Canyon Fm. [=Santa Susana Fm.] ("Martinez" Stage), Paleocene. Garapito Creek, Santa Monica Mtns., Los Angeles Co. LACMIP 16403. Hypotype UCLA 59137 [=LACMIP 10426]. [Carditidae].

Venericardia (*Pacificor*) *mulleri* Verástegui, 1953. Moore 1992. USGS PP 1228-E:E19, pl. 1, figs. 1, 5, 11. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Panoche quad., Fresno Co. SU 2073. Holotype SU 7994 [=CASG 72179, as voucher in CASG online database]. [Carditidae].

Venericardia* (*Pacificor*) *nelsoni Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):21–22, pl. 2, figs. 1, 5, pl. 3, fig. 5. Martinez "group" ["Martinez marine member" (of Nelson, 1925:401)] [=Santa Susana Fm.], Paleocene. Simi Hills, Camulos quad., Ventura Co. UCMP 3765. Holotype UCMP 32804. [Carditidae].

Venericardia (*Pacificor*) *nelsoni* Verástegui, 1953. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 20. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6825. Hypotype UCR 6838/100 (not UCR 6825/1 as in pl. caption). [Carditidae].

Venericardia (*Pacificor*) *nelsoni* Verástegui, 1953. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 7. Santa Susana Fm., Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCMP 3765. Holotype (of *Venericardia* (*Pacificor*) *transversaria* Verástegui, 1953) UCMP 32804a determined here as missing. [Carditidae].

Venericardia (*Pacificor*) *nelsoni* Verástegui, 1953. Moore, 1992. USGS PP 1228-E:E19, pl. 1, figs. 3, 20. Santa Susana Fm. (of Zinsmeister, 1983a: p. 62), Paleocene. Simi Hills, Camulos quad., Ventura Co. UCMP 3765. Holotype UCMP 32804 determined here as missing. [Carditidae].

Venericardia* (*Leuroactis*) *popenoei Verástegui, 1953 (n. sp.). Pal. Amer. 3(25): 62–63, pl. 22, figs. 1–3. "Coldwater" Sandstone, Eocene. On east side of main branch of Sespe Gorge, Ventura Co. UCLA L581 [=LACMIP 20581]. Holotype UCLA 15689 [=LACMIP 10845]. **Remarks:** *Venericardia* (*Pacificor*) *clarki popenoei* Verástegui, 1953, *fide* Moore (1992: p. E24). [Carditidae].

Venericardia cf. *V. sandiegoensis* (M.A. Hanna, 1927). [*Cardita*]. Stewart 1946. USGS PP 205-C: 93, p. 12, fig. 7. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14492. Hypotype USNM 498737. **Remarks:** In the genus/subgenus *Glyptoactis* (*Claibornicardia*), *fide* Moore (1992: p. E26). [Carditidae].

Venericardia* (*Leuroactis*) *schencki Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):50–51, pl. 4, figs. 6–8. Santa Susana Fm., Eocene. Simi Hills area, Camulos quad., Ventura Co. CASG 66532. Holotype SU 8003[=CASG 66532.01]. **Remarks:** Junior synonym of *Venericardia* (*Pacificor*) *aragonia joaquinensis* (Vokes, 1939), *fide* Moore (1992: p. E23). [Carditidae].

Venericardia* (*Venericor*) *simiana Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):47–48, pl. 4, figs. 1–4. Martinez "group" ("Martinez marine member" of Nelson 1925:401) [=Santa Susana Fm.], Paleocene. Simi Hills area, Calabasas quad., Ventura Co. SU 2697 [=CASG 66533]. Holotype SU 8001 [=CASG 66533.01], paratype SU 8002 [=CASG 72180]. **Remarks:** Junior synonym of *Venericardia* (*Venericor*) *venturensis* Waring, 1914, *fide* Moore (1992: p. E25). [Carditidae].

Venericardia (*Leuroactis*) *smileyi* (Vokes, 1939). [*Megacardita*]. Verástegui 1953. Pal. Amer. 3(25):55–56, pl. 10, figs. 4, 5. Avenal Sandstone, Eocene. Coalinga quad., Fresno Co. UCMP 672. Holotype UCMP 15626. **Remarks:** Junior synonym of *Venericardia* (*Pacificor*) *aragonia joaquinensis* (Vokes, 1939), *fide* Moore (1992: p. E23). [Carditidae].

Venericardia* (*Pacificor*) *susanaensis Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):22–23, pl. 5, figs. 1–4. Santa Susana Fm., Eocene. From McCray Oil Wells, Oil Canyon, Camulos quad., Ventura Co. SU Ca-33 [=CASG 66527]. Holotype SU 8004 [=CASG 66527.01]. **Remarks:** *Venericardia* (*Pacificor*) *calafia susanensis* Verástegui, 1953, *fide* Moore (1992: p. E19). [Carditidae].

Venericardia* (*Pacificor*) *taliaferroi Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):38–39, pl. 1, figs. 15, 16. Dip Creek Fm., Paleocene. Vicinity of Nacimiento River, Adelaida quad., San Luis Obispo Co. CASG 66526]. Holotype SU 7996 [=CASG 66526.01], paratype SU 7997 [=CASG 72181]. [Carditidae].

Venericardia (*Pacificor*) *taliaferroi* Verástegui, 1953. Saul 1986. SEPM Guidebook 49:29, figs. 39–40. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6525 [=LACMIP 26525]. Hypotype LACMIP 7558. [Carditidae].

Venericardia (*Pacificor*) *taliaferroi* Verástegui, 1953. Moore 1992. USGS PP 1228-E:E17, pl. 5, figs. 3, 7, 8. Dip Creek Fm. (of Verástegui 1953:433), Cretaceous/Paleocene. Vicinity of Nacimiento River, Adelaida quad., San Luis Obispo Co. CASG 66526]. Holotype SU 7996 [=CASG 66526.01], paratype (hypotype in pl. caption) CASG 7997 [=CASG 72181]. [Carditidae].

Venericardia* (*Pacificor*) *transversaria Verástegui, 1953 (n.sp). Pal. Amer. 3(25):37–38, pl. 2, figs. 2–4. Martinez "group" ("Martinez marine member" of Nelson 1925:401) [=Santa Susana Fm.], Paleocene. Simi Hills area, Camulos quad., Ventura Co. UCMP 3765. Holotype UCMP 32804a determined here as missing. **Remarks:** Junior synonym of *Venericardia* (*Pacificor*) *nelsoni* Verástegui, 1953, *fide* Moore (1992: p. E19). [Carditidae].

Venericardia (*Pacificor*) *vallecitosensis* (Vokes, 1939). [*Megacardita*]. Verástegui 1953. Pal. Amer. 3(25):35–36, pl. 12,

figs. 1–3. Domengine Fm., Eocene. Vallecitos Syncline, Priest Valley quad., San Benito Co. UCMP A1022. Holotype UCMP 15614, hypotype [topotype] UCMP 30177. [Carditidae].

Venericardia (*Venericor*) *vallecitosensis* (Vokes, 1939). [*Megacardita*]. Moore 1992. USGS PP 1228-E:E25–E26, pl. 2, figs. 3, 4. Domengine Fm., Eocene. Priest Valley quad., San Benito Co. UCMP A1017. Holotype (of *Venericardia* (*Pacificor*) *hornii carlosensis* Verástegui, 1953) UCMP 15619. [Carditidae].

....., pl. 2, figs. 5, 7. San Carlos Creek area, Priest Valley quad., San Benito Co. San Benito Co. UCMP A1022. Holotype UCMP 15614, paratype UCMP 15615.

Venericardia (*Venericor*) *venturensis* Waring, 1917. Verástegui 1953. Pal. Amer. 3(25):45–47, pl. 3, figs. 1–3. Martinez "group" ("Martinez marine member" of Nelson 1925:411) [=Santa Susana Fm.], Paleocene. Probably from Simi Valley, Ventura Co. Hypotype SU 7998 [=CASG 72183]. [Carditidae].

....., pl. 3, fig. 4. Vicinity of Las Virgenes Canyon, Simi Hills, Camulos quad., Ventura Co. SU 2697. Hypotype SU 7999 [=CASG 72183].

....., pl. 4, fig. 5. Simi Hills area, Calabasas quad., Ventura Co. SU2697. Hypotype SU 8000 [=CASG 72184].

Venericardia (*Venicor*)* *venturensis* Waring, 1917. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 21. Santa Susana Fm., Paleocene. Meier Canyon, Simi Valley, Ventura Co. UCR 4572]. Hypotype UCR 4572/1. **Remarks:** Error for *Venericor*. [Carditidae].

Venericardia (*Venericor*?) *venturensis* Waring, 1917. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 4 (not fig. 6 as in pl. caption). Santa Susana Fm. ("Martinez" Stage), Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCLA 2689 [=LACMIP 22689]. Hypotype UCLA 59362 [=LACMIP 10425]. [Carditidae].

Venericardia (*Venericor*) *venturensis* Waring, 1917. Moore 1992. USGS PP 1228-E:E25, pl. 8, figs. 1, 2, 4, 5, 7, 9, 11, 14. Santa Susana Fm. (of Zinsmeister, 1983a: p. 62), Paleocene. Las Virgenes Canyon area, Simi Hills, Camulos quad., Ventura Co. SU 2697. Holotype CASG 159 [=CASG 61667.08, as syntype in CASG online database], hypotypes [paratypes, *fide* Keen and Bentson 1944: p. 120] CASG 318, 319 [=CASG 72182–72184, unable to match specimens to numbers], holotype SU/CASG 8001 [=CASG 66533], paratype SU/CASG 8002 [=CASG 72180] (both of *Venericardia* (*Venericardia*) *simiana* Verástegui, 1953). [Carditidae].

Venericardia* (*Leuroactis*) *vokesi Verástegui, 1953 (n. sp.). Pal. Amer. 3(25):61–62, pl. 14, figs. 1, 2. Avenal Sandstone, Eocene. Vicinity of Big Tar Canyon, Cholame quad., Kings Co. UCMP A819. Holotype UCMP 15618. **Remarks:** Junior synonym of *Venericardia* (*Pacificor*) *aragonia joaquinensis* (Vokes, 1939), *fide* Moore (1992: p. E23). [Carditidae].

....., pl. 14, figs. 3, 3a. Vicinity of Big Tar Canyon, Cholame quad., Kings Co. Paratype SU 8016 [=CASG 72185].

Venericardia sp. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. R. Cañada Fm., Eocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8758 [= SBMNH 60181]. **Remarks:** Determined here as *Venericardia* (*Venericor*). [Carditidae].

Veneridae, indeterminate. Powell 2015. WSM Ann. Rept. 45:62, figs. 15–18, 20. Monterey Fm., Miocene. West of Greenfield, Monterey Co. CASG 101093 Hypotypes CASG 101112, 101113, 101115–101118].

Venerupis laciniata hannibali (Howe, 1922). [*Paphia*]. Woodring et al. 1940 [1941]. USGS PP 195:94, pl. 29, fig. 5. Etchegoin Fm. (Upper *Pseudocardium* Zone), Pliocene. La Cima, North Dome, Kettleman Hills, Kings Co. USGS 12414. Hypotype USNM 495787. **Remarks:** *Protothaca staleyi* (Gabb) *hannibali* (Howe), *fide* Adegoke (1969: p. 146). Possibly in the genus *Leukoma*, *fide* P. Valentich-Scott (personal communication, 2019). [Veneridae].

Ventricolaria welchensis Hall, 1958 (n. sp.). UCPG 34(1):54–55, pl. 7, figs. 3, 4. Cierbo Fm., Miocene. Northeast of Hercules, Contra Costa Co. SU 3255 [=CASG 100138]. Holotype SU 8460 [=CASG 69989]. [Veneridae].

....., pl. 7, fig. 5 (cast). Briones Fm., Miocene. East of Irvington, La Costa Valley quad. (1943), Alameda Co. SU 3239. Paratype SU 8461 [=CASG 69967].

Venus (*Chione*) *securis* Shumard, 1858. Shimer and Shrock 1944. Index Foss. N.A., p. 427, pl. 170, fig. 10 (refigured from Grant and Gale 1931, pl. 17, fig. 1). [Wildcat Fm.], Pliocene. [Scotia Bluffs, Humboldt Co. Hypotype SU. 622

[=CASG 71594]. **Remarks:** In the genus *Securella*, *fide* Parker (1949: p. 593). [Veneridae].

....., pl. 172, fig. 19 (refigured from Arnold and Anderson 1910, pl. 37, fig. 2 (as *Chione securis* (Shumard)). [Jacalitos Fm.], Miocene. Coalinga District, Fresno Co. USGS. 4763. Hypotype USNM 165599].

Venus sp.? Hall 1958. UCPG 34(1):55, pl. 7, fig. 1. Briones Fm., Miocene. East of Irvington, La Costa Valley quad. (1943), Alameda Co. SU 3252. Hypotype SU 8464 (not SU 8446 as in pl. caption) [=CASG 69988]. [Veneridae].

Verticordia (*Trigonulina*) *ornata* (d'Orbigny, 1853). [*Trigonulina*]. Hertlein and Grant 1972. SDSNH Mem. 2(2B):344, pl. 43, figs. 23, 26, 27, 31. San Diego Fm., Pliocene. Southwestern San Diego Co., San Ysidro quad. (1943), San Diego Co. LACMIP 305. Hypotype LACMIP 4884. **Remarks:** *Trigonulina pacifica* Jung, 1996, *fide* Coan et al. (2000: p. 563). [Verticordiidae].

Vertipecten alexclarki Addicott, 1973b (n. sp.). USGS PP 791:7, 26–27, pl. 1, figs. 9, 13. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotypes USNM 46523, 646525. [Pectinidae].

....., pl. 1, fig. 10. North side of Chico Martinez Creek, Carneros Rocks quad., Kern Co. USGS M3636. Hypotype USNM 646524.

....., pl. 2, fig. 1. South side of Stone Corral Creek, Kern Co. USGS M3285 (not in text locality register). Hypotype USNM 646528.

....., pl. 2, fig. 3. Media Agua Creek about 200 ft. above dirt road, Las Yeguas Ranch quad., Kern Co. USGS M3772. Hypotype USNM 646529 [holotype, *fide* Smith (1975a: pl. 1, fig. 7); paratype, *fide* Moore (1984: pl. 24, fig. 1)].

....., pl. 2, fig. 5. Carneros Rocks quad., Kern Co. USGS M3579. Hypotype USNM 646530.

....., pl. 2, fig. 8, pl. 3, fig. 1. Las Yeguas Ranch quad., Kern Co. USGS M3281. Hypotypes USNM 646531 (lectotype, *fide* Moore, 1984: p. B62; *fide* Smith (1991a: pl. 38, fig. 1), 646539 (not USNM 646538 as in pl. caption).

....., pl. 2, fig. 9. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646532.

....., pl. 3, fig. 4. Stone Corral Creek, Las Yeguas Ranch quad. Kern Co. USGS M3985. Hypotype USNM 646538 (not USNM 646539 as in pl. caption; [syntype in USNM print out]). **Remarks:** See also Addicott 1972b, pl. 1, fig. 16 (as *Vertipecten* n. sp.).

Vertipecten alexclarki Addicott, 1973b. Smith, 1975a. Pacific Section SEPM Symposium vol., p. 460, pl. 1, fig. 7. Temblor Fm. (Wygal Sandstone Member), Oligocene. Central Temblor Range, Las Yeguas Ranch quad., Kern Co. USGS M3772. Holotype USNM 646529 [see Addicott 1973b, pl. 2, fig. 3, above]. [Pectinidae].

Vertipecten alexclarki Addicott, 1973b. Moore 1984. USGS PP 1228-B:B61–B62, pl. 24, figs. 1, 4. Temblor Fm. (Wygal Sandstone Member), Oligocene. Las Yeguas Ranch quad., Kern Co. USGS M3281. Lectotype (of Moore 1984: p. B62) USNM 646531; paralectotype (of Moore 1984, in caption of pl. 24, fig. 1) USNM 646529. [Pectinidae].

....., pl. 24, fig. 2. Temblor Fm. (Wygal Sandstone Member), Kern Co. Hypotype CASG 60682.

Vertipecten alexclarki Addicott, 1973b. Smith 1991a. USGS PP 1391:77, pl. 38, fig. 1. Temblor Fm. (Wygal Sandstone Member), Oligocene. Media Agua Creek area, Las Yeguas Ranch quad., Kern Co. USGS M3281. Lectotype (of Moore, 1984:B62) USNM 646531. [Pectinidae].

....., pl. 38, fig. 2. Temblor Range, Carneros Creek area, Carneros Rocks quad., Kern Co. CASG 27625. Hypotype CASG 60862.

....., pl. 38, fig. 3 (refigured from Addicott 1973b, pl. 3, fig. 4). Temblor Range, Stone Corral Creek, Las Yeguas Ranch quad., Kern Co. USGS M3985. Hypotype USNM 646538 (not USNM 646539 as in pl. caption).

....., pl. 38, fig. 4 (refigured from Addicott 1973b, pl. 2, fig. 3). Temblor Range, Media Agua Creek area, Las Yeguas Ranch quad., Kern Co. USGS. M3772. Hypotype USNM 646529.

Vertipecten bowersi (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B62, pl. 24, fig. 6; pl. 25, fig. 1. Topanga(?) Fm., Miocene. Santa Inez [*sic*] Canyon, Santa Ynez quad., Santa Barbara Co. Holotype UCMP 12075. [Pectinidae].

Vertipecten bowersi (Arnold, 1906). [*Pecten*]. Smith 1991a. USGS PP 1391:77–79, pl. 32, fig. 4. Vaqueros Fm., Miocene. North flank of Santa Ynez Mtns., Santa Barbara Co. Holotype UCMP 12075. [Pectinidae].

....., top fig. on cover; pl. 32, fig. 5; pl. 35, figs. 2–4. Monterey Fm. (Saltos Shale Member), Miocene. Caliente Range, Salisbury Canyon quad., San Luis Obispo Co. USGS M3436. Hypotype USNM 335951.

Vertipecten diabloensis (Clark *in* G D. Hanna, 1924). [*Pecten*]. Moore 1984. USGS PP 1228-B:B64, pl. 21, fig. 2, pl. 39, fig. 4. San Ramon Fm., Miocene. Vicinity of Muir Station, Contra Costa Co. UCMP 1311. Holotype UCMP 11138, paratype UCMP 11139. [Pectinidae].

Vertipecten fucanus (Dall, 1898). [*Pecten*]. Smith 1991a. USGS PP 1391:80–81, pl. 33, figs. 2, 4. Olcese Sand, Miocene. North of Poso [=Ocoya Creek], Knob Hill quad., Kern Co. CASG 1452. Hypotype CASG 6098. [Pectinidae].

Vertipecten kernensis (Hertlein, 1925a). [*Pecten*]. Moore 1984. USGS PP 1228-B:B64–B65, pl. 28, fig. 6. Jewett Sand (Monterey Fm. in pl. caption), Miocene. Near Pyramid Hill, Caliente quad., Kern Co. SU 150 [=CASG 61886]. Holotype SU 128 [=CASG 61886.01]. [Pectinidae].

Vertipecten kernensis (Hertlein, 1925a). [*Pecten*]. Smith 1991a. USGS PP 1391:81–84, pl. 2, fig. 6. Basal Jewett Sand, Miocene. Pyramid Hil areal, Rio Bravo Ranch quad., Kern Co. USGS M1590. Hypotype USNM. 335002. [Pectinidae].

....., pl. 2, fig. 7, pl. 36, fig. 4. Jewett Sand (Pyramid Hill Sand Member), Miocene. Pyramid Hill area, Rio Bravo Ranch quad., Kern Co. USGS M5211. Hypotype (of *Vertipecten perrini* (Arnold, 1906) of Addicott, 1974a, pl. 1, figs. 3, 4), determined here as missing. **Remarks:** Hypotype never received from author, according to label in USNM collection.

....., pl. 32, fig. 3, pl. 36, fig. 3. Basal Jewett Sand, Miocene. Pyramid Hill area, Rio Bravo Ranch quad., Kern Co. LACMIP 462. Hypotypes LACMIP 5873, 5874.

....., pl. 33, figs. 1, 5. Freeman Silt/Jewett Sand undivided, Miocene. Poso Creek, Coffee Canyon area, Pine Mtn. quad., Kern Co. UCMP B1673. Hypotype (of *Vertipecten nevadanus* (Conrad, 1855b) of Addicott 1965b, fig. 3k) UCMP 36554.

....., pl. 33, fig. 6; pl. 36, fig. 1. Vaqueros Fm., Oligocene/Miocene. Los Vaqueros Valley, Junipero Serra quad., Monterey Co. CASG 31524. Hypotype CASG 60986.

....., pl. 36, fig. 2. Freeman Silt/Jewett Sand undivided, Miocene. Near Pyramid Hill, Rio Bravo Ranch quad., Kern Co. SU 150. Holotype SU 128 [=CASG 61886.01]

....., pl. 36, fig. 5. San Ramon Fm., San Lorenzo Series (of Clark, 1918 :83–109), Miocene. Walnut Creek area, Concord quad., Contra Costa Co. UCMP 1311. Holotype (of *Pecten* (*Lyropecten*) *gabbi* Clark, 1918 and of *Pecten diabloensis* Clark *in* G D. Hanna, 1924) UCMP 11138.

Vertipecten nevadanus (Conrad, 1855b). [*Pecten*]. Addicott 1965b. USGS PP 525-C: C104, fig. 3k. Jewett Sand, Miocene. Poso Creek, north of Coffee Canyon, Pine Mtn. quad., Kern Co. UCMP B1673. Hypotype UCMP 36554. **Remarks:** Junior synonym of *Vertipecten kernensis* (Hertlein, 1925a), *fide* Moore (1984: p. B64). [Pectinidae].

Vertipecten nevadanus (Conrad, 1855b). [*Pecten*]. Addicott 1972b. SEPM Symposium vol., p. 10, pl. 2, fig. 9. Temblor Fm. (Carneros Sand Member) (of Stinemeyer et al. 1959:9, 13), Miocene. Temblor Range, Kern Co. USGS 4941. Hypotype USNM 646793a (not USNM 646793 as in pl. caption). **Remarks:** *Vertipecten bowersi* (Conrad, 1855b), *fide* Smith (1991a: p. 81), [=*Vertipecten kernensis* (Hertlein, 1925a), *fide* Smith (1991a: p. 81). [Pectinidae].

Vertipecten nevadanus (Conrad, 1855b). [*Pecten*]. Smith 1975a. Pacific Section SEPM Symposium vol., p. 460, pl. 1, figs. 1, 3 (refigured from Addicott 1974a, pl. 1, figs. 3, 4, as *Vertipecten perrini*). Jewett Sand, Miocene. Pyramid Hill area, Rio Bravo Ranch quad., Kern Co. USGS M5211. Hypotype USNM 647085. **Remarks:** Label in USNM collection reads "never received from author" and is determined here as presumably missing. Junior synonym of *Vertipecten kernensis* (Hertlein, 1925a), *fide* Moore (1984: p. B64). [Pectinidae].

....., pl. 1, fig. 2. Pyramid Hill, Kern Co. USGS M1561. Hypotype USNM.

Vertipecten perrini (Arnold, 1906). [*Pecten*]. Addicott 1974a. Jour. Paleo. 48(1):184, pl. 1, figs. 3, 4. Jewett Sand (Pyramid Hill Sand Member), Miocene. Kern River area, Kern Co. USGS M5211. Hypotype USNM 647085. **Remarks:** Label in USNM collection reads "never received from author" and is determined here as presumbably missing. *Vertipecten kernensis* (Hertlein, 1925a), *fide* Smith (1991a: p. 81). [Pectinidae].

Vertipecten perrini (Arnold, 1906). [*Pecten*]. Smith 1975a. Pacific Section SEPM Symposium vol., p. 460, pl. 1, figs. 4, 5. Vaqueros Fm., Oligocene. Between Morro and Torro creeks, Morro Bay North quad., San Luis Obispo Co. UCLA 6204 [=LACMIP 26204]. Holotype SU 13 [=CASG 61824.01]. [Pectinidae].

Vertipecten perrini (Arnold, 1906). [*Pecten*]. Moore 1984. USGS PP 1228-B:B62–B63, pl. 25, figs. 4–6. Vaqueros Fm., Oligocene/Miocene. Between Morro and Toro Creeks, San Luis Obispo Co. Holotype SU 13 [=CASG 61824.01]. [Pectinidae].

Vertipecten perrini (Arnold, 1906). [*Pecten*]. Smith 1991a. USGS PP 1391:84–85, pl. 32, fig. 2, pl. 37, figs. 5, 6. Vaqueros Fm., Oligocene/Miocene. Between Morro and Toro Creeks, Santa Lucia Range, Cayucos quad., San Luis Obispo Co. Type area rediscovered, *fide* Hall and Prior (1975), to be on Morro Bay North quad., UCLA 6204, *fide* Smith (1991a: p. 84). Holotype SU 13 [=CASG 61824.01]. [Pectinidae].

Vertipecten cf. *V. propatulus* (Conrad, 1849a). [*Pecten*]. Stewart 1946. USGS PP 205-C:99, pl. 17, fig. 4. Temblor Fm., Miocene. Reef Ridge, near Roundtop, Reef Ridge quad., Fresno Co. USGS 14393. Hypotype USNM 498742. **Remarks:** *Patinopecten propatulus* (Conrad, 1849a), *fide* Moore (1984: p. B79). However, also included in the synonymy of *Vertipecten fucanus* (Dall, 1898), *fide* Moore (1984: p. B63). [Pectinidae].

Vertipecten yneziana (Arnold, 1907). [*Pecten*]. Smith 1975a. SEPM Symposium vol., p. 460, pl. 1, fig. 6. Gaviota Fm., Eocene/Oligocene. Nojoqui Creek, Los Olivos quad., Santa Barbara Co. UCMP B6985. Hypotype (of *Pecten* (*Vertipecten*) *yneziana yneziana* Arnold of Weaver and Kleinpell 1963, pl. 31, figs. 1, 4) SU/CASG 9262. [Pectinidae].

Vertipecten yneziana yneziana (Arnold, 1907). [*Pecten*]. Moore 1984. USGS PP 1228-B:B61, pl. 25, figs. 2, 3. Gaviota Fm., Eocene. Lompoc, Lompoc quad., Santa Barbara Co. USGS 4507. Holotype USNM 165313a, paratype USNM 165313. [Pectinidae].

Vertipecten yneziana (Arnold, 1907). [*Pecten*]. Smith 1991a. USGS PP 1931:85–86, pl. 32, fig. 1. Gaviota Fm. (of Dibblee 1950:29–30), Eocene. Nojoqui Creek, Santa Ynez Mtns., Los Olivos quad., Santa Barbara Co. UCMP B6985 [=SU 2908a]. Hypotype (of *Pecten* (*Vertipecten*) *yneziana yneziana* Arnold of Weaver and Kleinpell 1963, pl. 31, figs. 1, 4) SU/CASG 9262. [Pectinidae].

....., pl. 38, fig. 6. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek, Santa Ynez Mtns., Los Olivos quad., Santa Barbara Co. UCMP B6955. Hypotype (of *Pecten* (*Vertipecten*) *yneziana yneziana* Arnold of Weaver and Kleinpell 1963, pl. 30, fig. 6) SU/CASG. 9263.

....., pl. 38, figs. 7, 8. Gaviota Fm., Eocene. Lompoc area, Santa Ynez Mtns., Lompoc quad., Santa Barbara Co. USGS M4507. Holotype USNM 165313a, paratype USNM 165313.

Vertipecten yneziana subyneziana (Weaver and Kleinpell, 1963). [*Pecten*]. Moore 1984. USGS PP 1228-B:B61, pl. 24, fig. 3 (cast). Coldwater Sandstone, Eocene. Along Camino Cielo near Sacate-"Coldwater" contact, San Rafael Mtn. quad., Santa Barbara Co. UCMP B6940. Holotype SU/CASG 9265. [Pectinidae].

Vertipecten n. sp. Addicott, 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 16. Temblor Fm. (Wygal Sandstone Member), Oligocene. South side of Stone Corral, Las Yeguas Ranch quad., Temblor Range, Kern Co. USGS M3985 (not M3984 as in pl. caption). Hypotype USNM 646538. **Remarks:** *Vertipecten alexclarki* n. sp., *fide* Addicott (1973b: p. 26). [Pectinidae].

....., pl. 1, fig. 18. Las Yeguas quad., Temblor Range, Kern Co. USGS M3281. Hypotype USNM 646531. **Remarks:** *Vertipecten alexclarki* n. sp., *fide* Addicott (1973b: p. 26).

Vesicomya (*Vesicomya*) aff *V.* (*V.*) *tschudi* Olsson, 1931. Squires and Gring 1996. Jour. Paleo. 70(1):69–70, figs. 9–12. Wagonwheel Fm., Eocene. Wagonwheel Mtn. Emigrant Hill quad. (1953, PR 1973), Kern Co. CSUN 1580 [=LACMIP 16886]. Hypotypes LACMIP 12360–12362. [Vesicomyidae].

Vesicomyidae(?), indeterminate. Powell 2015. WSM Ann. Rept. 45:62, fig. 12. Monterey Fm., Miocene. Along Arroyo Seco, west of Greenfield, Monterey Co. CASG 101093. Hypotype CASG 101110]. [Vesicomyidae].

Vesicomyidae indeterminate. Powell et al. 2019b. *PaleoBios* 36:11, 12, fig. 17. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland Hills, Alameda Co. UCMP IP16025. Hypotype UCMP 123686. [Vesicomyidae].

….., fig. 18. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland Hills, Alameda Co. UCMP IP16027. Hypotype UCMP 123690.

….., fig. 18. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland Hills, Alameda Co. UCMP IP16022. Hypotype UCMP 123682.

Volsella cf. *V. capax* (Conrad, 1837). [*Modiola*]. Woodring et al. 1940 [1941]. USGS PP 195:90, pl. 16, fig. 3. San Joaquin Fm. (*Pecten* zone), Pliocene. Arroyo Pequeño and Arroyo Finito area, North Dome, Kettleman Hills, Kings Co. USGS 12343. Hypotype USNM 495778. **Remarks:** In the genus *Modiolus*, *fide* Coan and Valentich-Scott (2012: p. 146). [Mytilidae].

Volsella (*Modiolus*) cf. *gabbi* (Clark, 1915). [*Modiolus*]. Richey 1943. UCPG 27(2):34, pl. 3, fig. 1. Orinda Fm., Miocene. Concord quad. (1915), Contra Costa Co. UCMP A2569. Hypotype UCMP 30671. **Remarks:** In the genus/subgenus *Brachidontes* (*Aeidimytilus*), *fide* Moore (1983: p. A69). [Mytilidae].

Volsella cf. *V. modiolus* (Linneaus, 1758). [*Modiolus*]. Woodring et al. 1940 [1941]. USGS PP 195:90, pl. 37, figs. 1, 2. Etchegoin, Pliocene. Vicinity of El Vejon, South Dome, Kettleman Hills, Kings Co. USGS 12652. Hypotypes USNM 495364, 495365. **Remarks:** In the genus *Modiolus*, *fide* Moore (1983: p. A77). [Mytilidae].

Volsella cf. *V. recta* (Conrad, 1837). [*Modiolus*]. Woodring et al. 1940 [1941]. USGS PP 195: 90, pl. 13, fig. 15. San Joaquin Fm. (*Pecten* zone), Pliocene. Near Arroyo Vadoso and Arroyo Largo, North Dome, Kettleman Hills, Kings Co. USGS 12331. Hypotype USNM 495740. **Remarks:** In the genus *Modiolus*, *fide* Moore (1983: p. A76). [Mytilidae].

....., pl. 20, fig. 13. San Joaquin Fm. (*Neverita* zone), Pliocene. Arroyo Bifido, North Dome, Kettleman Hills, Kings Co. USGS 12493. Hypotype USNM 495330.

....., pl. 20, fig. 14. East fork of Arroyo Torcido, North Dome, Kettleman Hills, Kings Co. USGS 12509. Hypotype USNM 495328.

Volsella recta (Conrad, 1837). [*Modiolus*]. Shimer and Shrock 1944. Index Foss. N.A., p. 413, pl. 164, fig. 15 (refigured from Arnold and Anderson 1910, pl. 42, fig. 4 (as *Modiolus rectus* Conrad)). [Etchegoin Fm.], Pliocene. Coalinga District, Fresno Co. USGS 4698. Hypotype USNM 165535]. **Remarks:** In the genus *Modiolus*, *fide* Moore (1983: p. A76). [Mytilidae].

Volsella fragments. Woodring et al. 1940 [1941]. USGS PP 195: pl. 19, fig. d (refigured in Raup and Stanley 1971, p. 21, fig. 1-12; refigured in Raup and Stanley 1978:19, fig. 1-10; refigured in Prothero 2006, p. 236, fig. 7.3). San Joaquin Fm. (*Neverita* Zone), Pliocene. North Dome, Kettleman Hills, Kings Co. USGS 12499. Hypotype USNM (slab with *Neverita reclusiana* (=*Glossaulax reclusiana*), *Olivella* cf. *O. pedroana* (=*Calianax alectrona*) and *Anadara trilineata*) determined here as missing. [Mytilidae].

Vulsella? *clarki* Vokes, 1939. Moore 1983. USGS PP 1228-A:A87, pl. 26, figs. 11, 12. Lodo Fm. (Cerros Shale Member), Paleocene/Eocene. Near where Urruttia Canyon enters Salt Creek, Coalinga quad., Fresno Co. UCMP 1817. Holotype UCMP 15743. [Malleidae].

Yoldia (*Kalayoldia*?) *carnarosensis* Clark, 1915. Moore 1983. USGS PP 1228-A:A26, pl. 4, fig. 17. San Pablo Fm. (Neroly Fm. in text), Miocene. Carneros Creek, Napa Co. Holotype UCMP 11539. [Yoldiidae].

Yoldia (*Kalayoldia*) cf. *Y.* (*K.*) *carnarosensis* Clark, 1915. Addicott 1973b. USGS PP 791:23, pl. 1, fig. 12. Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS. M1596. Hypotype USNM 646526. [Yoldiidae].

Yoldia cooperi supramontereyensis Arnold, 1908. Lutz 1951. UCPG 28(13):385, pl. 15, fig. 2. Sobrante Fm., Miocene. Near Pacheco, Contra Costa Co. UCMP A4929. Hypotype UCMP 34123. **Remarks:** Probably junior synonym of *Yoldia* (*Kalayoldia*) *cooperi* Gabb, 1865, *fide* Coan et al. (2000: p. 113). [Yoldiidae].

Yoldia gala Woodring *in* Woodring and Bramlette, 1950 [1951] (n. sp.). USGS PP 222:81, pl. 8, fig. 1. Sisquoc Fm. (diatomaceous strata), Miocene. Gato Ridge, Santa Barbara Co. USGS 15023. Hypotype USNM 560027. **Remarks:** Provisionally in the genus *Yoldia*?, *fide* Moore (1983: p. A28). [Yoldiidae].

....., pl. 8, fig. 2. Solomon Hills, near Los Alamos, Santa Barbara Co. USGS 15020. Holotype USNM 560024.

....., pl. 9, fig. 9. Gato Ridge, Santa Barbara Co. USGS 15025. Hypotype USNM 560026.

....., pl. 9, fig. 10 (cast). Solomon Hills, near Los Alamos, Santa Barbara Co. USGS 15021. Hypotype USNM 560025.

Yoldia? *gala* Woodring *in* Woodring and Bramlette, 1950 [1951]. Moore 1983. USGS PP 1228-A:A28, A29, pl. 4, fig. 6. Sisquoc Fm. (Todos Santos Claystone Member), Miocene/Pliocene. Solomon Hills, Vicinity of Los Alamos, Santa Barbara Co. USGS 15020. Holotype USNM 560024. [Yoldiidae].

Yoldia (*Kalayoldia*?) *gesteri* Dickerson, 1914a. Moore 1983. USGS PP 1228-A:A26, pl. 4, fig. 8. Martinez Fm., Paleocene. East of Lower Lake village, near Herndon Creek, Lake Co. UCMP 790. Holotype UCMP 11685. [Yoldiidae].

Yoldia gesteri Dickerson, 1914a. Zinsmeister 1983a. SEPM Guidebook 35:67, pl. 1, fig. 7. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6684. Hypotype UCR 6684/17. **Remarks:** Provisionally in the subgenus *Kalayoldia*?, *fide* Moore (1983: p. A26). [Yoldiidae].

Yoldia impressa Conrad, 1849a. [Nucula]. Perry 1977. Foss. Santa Cruz Co., p. 10, upper fig. Monterey, Miocene. Felton quad.], Santa Cruz Co. SCCM 6. Hypotype SCCM 21006]. **Remarks:** Junior synonym of *Litorhadia astoriana* (Henderson, 1920), *fide* Moore (1983: p. A23). [Nuculanidae].

Yoldia (*Cnesterium*) *seminuda* Dall, 1871. Moore 1983. USGS PP 1228-A:A28, pl. 4, fig. 7. Pico Fm., Pliocene. Ventura Co. UCMP 7100. Holotype (of *Yoldia* (*Cnesterium*) *imleri* Waterfall, 1929) UCMP 31420. [Yoldiidae].

....., pl. 4, fig. 18. Upper Rio Dell Fm./lower Scotia Bluffs Sandstone, Pliocene. North of Scotia, Humboldt Co. CASG119]. Hypotype (of Roth 1979, pl. 1, fig. 10) CASG 59926 (not CASG 59920 as in pl. caption).

Yoldia (*Kalayoldia*) *submontereyensis* Arnold, 1908. Moore 1983. USGS PP 1228-A:A24–A25, pl. 3, fig. 13. Vaqueros Fm. (=Unnamed Miocene of Dibblee 1966), Oligocene/Miocene. On San Francisquito Creek (below dam), near confluence with Los Trancos Creek, Santa Cruz quad., San Mateo Co. SU 35. Holotype USNM 165459 [=USNM 165460]. **Remarks:** The hypotype of *Turritella ineziana* Conrad, 1857 of Arnold, 1908 also carries the number USNM 165459 on specimen and label, but is apparently corrected on USNM list in specimen tray as USNM 165460. However, Warren Blow (personal communication, 1999), confirmed that the correct hypotype number for *Yoldia* (*Kalayoldia*) *submontereyensis* is USNM.165460. [Yoldiidae].

Yoldia cf. *Y. submontereyensis* Arnold, 1908. Powell et al. 2019b. *PaleoBios* 36: 7, figs. 6, 7. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP 13003. Hypotypes UCMP 218771, 218804. [Yoldiidae].

Yoldia supramontereyensis Arnold, 1908. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 5. Monterey Fm. (Hames Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M2044. Hypotype USNM 254354. **Remarks:** In the subgenus *Kalayoldia*, *fide* Moore (1983: p. A25). [Yoldiidae].

Yoldia supramontereyensis Arnold, 1908. Addicott et al. 1980. SEPM Guidebook 6:18, 20, pl. 1, fig. 5 (refigured from Addicott et al. 1978, pl. 1, fig. 5). Monterey Fm. (Hames Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M2044. Hypotype USNM 254354. **Remarks:** In the subgenus *Kalayoldia*, *fide* Moore (1983: p. A25). [Yoldiidae].

Yoldia (*Kalayoldia*) *supramontereyensis* Arnold, 1908. Moore 1983. USGS PP 1228-A:A25, pl. 3, fig. 14. Unnamed Miocene (of Dibblee, 1966). Tusk Gully area, south of Mayfield (now part of Palo Alto) near Stanford University, Santa Cruz quad., Santa Clara Co. Holotype CASG 5362 [=CASG 69778] . [Yoldiidae].

Yoldia cf. *Y. supramontereyensis* Arnold, 1908. Powell et al. 2019b. *PaleoBios* 36: 7, fig. 8. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP 13003. Hypotype UCMP 218714. [Yoldiidae].

Yoldia (*Yoldia*?) *temblorensis* Anderson and Martin, 1914. Moore 1983. USGS PP 1228-A:A23–A24, pl. 4, fig. 14. Round Mtn. Silt, Miocene. North bank of Kern River, Caliente quad., Kern Co. CASG 68. Holotype CASG 106. [Yoldiidae].

Yoldia tenuissima Clark, 1918. Weaver and Kleinpell 1963. UCPG 43:196, pl. 28, fig. 4. Upper Gaviota Fm., Eocene. El Jaro Creek area, Lompoc quad., Santa Barbara Co. UCMP B7017. Hypotype SU 9248 [=CASG 70244]. **Remarks:** In the subgenus *Kalayoldia*, *fide* Addicott (1973b: pp. 22, 23); Moore 1983: p. A24. [Yoldiidae].

Yoldia (*Kalayoldia*) *tenuissima* Clark, 1918. Addicott 1973b. USGS PP 791:7, 22, 23, pl. 1, figs. 2, 3, 5. Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Rocks quad., Kern Co. USGS M3578. Hypotypes USNM 646513–646515. [Yoldiidae].

....., pl. 1, fig. 8. Round Mtn. Silt, Miocene. North bank of Kern River, 10 to 11 mi. northeast of Bakersfield, float rock at base of bluff below where fossils were collected at USGS 6623, Kern Co.] USGS 6622. Hypotype USNM 646516.

Yoldia (*Kalayoldia*) *tenuissima* Clark, 1918. Moore 1983. USGS PP 1228-A:A24, pl. 3, fig. 10. San Ramon Fm., Miocene(?). Concord quad., Santa Cruz Co. UCMP 798. Holotype UCMP 11110. [Yoldiidae].

Yoldia thraciaeformis Storer, 1838. Cummings et al. 1962. CDMG Bull.181:204, ph. 17, fig. 7. Purisima Fm. (Pomponio Member), Pliocene. Arroyo Cañada Verde area, Half Moon Bay quad., San Mateo Co. Locality F685-3M. Hypotype determined here as missing. **Remarks:** In the genus *Megayoldia*, *fide* Coan et al. (2000: p. 114). [Yoldiidae].

Yoldia (*Orthoyoldia*) sp. Phillips et al. 1974. SEPM Guidebook, p. 123, pl. 3, fig. 5 (peel). Tumey Fm., Eocene/Oligocene. Monocline Ridge, Fresno Co. UCMP D6528]. Hypotype UCMP 37159. [Yoldiidae].

Yoldia (*Orthoyoldia*) sp. Watkins 1974. Paleo.3 15:253, fig. 7C [cast]. Kreyenhagen Fm., Oligocene. Monocline Ridge, Monocline Ridge quad., Fresno Co. UCMP D6528. Hypotype UCMP 37159. [Yoldiidae].

Yoldia sp. Bedrossian 1974. Calif. Geol. 27(8):175, unnumbered fig., left-center specimen. "Merced" Fm., Pliocene [=Wilson Grove Fm.], Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotype CASG, determined here as missing. [Yoldiidae].

Yoldia sp. indeterminate. Powell et al. 2019a. USGS SIR 2019-5021:3, 29, pl. 2, figs. 1, 4–6. Wilson Grove Fm., Miocene. Vicinity of Bloomfield, Sonoma Co. CASG 54135. Hypotypes CASG 78401, 78402. [Yoldiidae].

Yoldia? sp. Powell et al., 2019b. *PaleoBios* 36:7, fig. 5. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP 13003. Hypotype UCMP 218702. [Yoldiidae].

Zirfaea dentata Gabb, 1866. Kennedy 1974. SDSNH Mem. 8:29–31, fig. 13. Vaqueros Fm., Miocene. On Laval grade north of Coalinga, "Button bed" 200± ft. above Eocene unconformity, Fresno Co. USGS. 4803. Hypotype (of Arnold 1909 [1910], pl. 7, fig. 5; of Arnold and Anderson 1910, pl. 29, fig. 5) USNM.165573. [Pholadidae].

....., figs. 14, 15. San Pablo Group, Miocene. North of Mt. Diablo, Contra Costa Co.? UCMP.1003. Hypotype UCMP 31180 [possible holotype, *fide* Kennedy 1974: p. 31].

Zirfaea gabbi Tryon, 1863, var. Woodring et al. 1940 [1941]. [*Zirphaea*]. USGS PP 195:68, pl. 34, fig. 7. Etchegoin Fm. (*Macoma* zone), Pliocene. Vicinity of El Chichon, North Dome, Kettleman Hills, Kings Co. USGS 12421. Hypotype USNM 495837. **Remarks:** *Zirfaea pilsbryi* Lowe, 1931, *fide* Kennedy (1974: p. 31). [Pholadidae].

Zirfaea gabbi femii Adegoke, 1969 (n.subsp.). UCPG 80:154–155, pl. 9, figs. 2, 8, 11, 12; pl. 10, figs. 3, 5, 6, 13. San Joaquin Fm., Pliocene. Reef Ridge quadangle, Kings Co. UCMP.B6538. Holotype UCMP 36795, paratypes UCMP 36796–36798. **Remarks:** Junior synonym of *Zirfaea pilsbryi* Lowe, 1931, *fide* Kennedy (1974: p. 31). [Pholadidae].

Zirfaea? species. Addicott 1969. Pr.CAS 37(3):63, 66, 74, pl. 2, fig. 9 (cast). Merced Fm. (?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650968. **Remarks:** *Zirfaea pilsbryi* Lowe, 1931, *fide* Kennedy (1974: p. 31). [Pholadidae].

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Acanthina perrini Trask, 1922. Hall 1958. UCPG 34(1):58, pl. 11, figs. 4, 5. Cierbo Fm., Miocene. Southeast of Pleasanton, La Costa Valley quad. (1943), Alameda Co. SU 2739. Hypotypes SU 8477, 8478 [=CASG 68839, 68840].

[Muricidae].

Acanthina n. sp. Durham and Addicott, 1965. Addicott 1978. USGS OFR 78-446:88–89, pl. 1, fig. 5. Pancho Rico Fm., Miocene/Pliocene. Northeast of San Lucas, Monterey Co. USGS M903. Hypotype USNM 254350 determined here as missing. [Muricidae].

Acanthinucella emersoni (Hertlein and Allison, 1959). [*Acanthina*]. Squires et al. 2006. NHMLAC CS 511:16, 17, fig. 22. Pico Fm., Pliocene. Southwest of Valencia, Oat Mtn. quad. (1952, PR 1969), Los Angeles Co. LACMIP 15719. Hypotype LACMIP 13351. [Muricidae].

Acmaea n. sp.? cf. *A. mitra* Eschscholtz *in* Rathke, 1833. Vedder and Moore 1976. AAPG Misc. Pub. 24:124, 130, pl. 2, fig. 8. Unnamed strata, Pliocene. Near Lemon Tank Reservoir, San Clemente Is., California Channel Ids. USGS M6501. Hypotype USNM 235586. [Acmaeidae].

Acrilla* (*Ferminoscala*) *durhami Zinsmeister, 1983b (n. sp.). Jour Paleo. 57(6):1291–1292, figs. 2N, O. Santa Susana Fm., Paleocene. Meier Canyon, Calabasas quad., Simi Hills, Ventura Co. UCR 6670. Holotype UCR 6670/240 determined here as missing. Paratype UCR 6670/241. **Remarks:** *Ferminoscala* =*Amaea*, *fide* WoRMS (2020), thus making the name *Amaea durhami* (Zinsmeister, 1983b) a secondary homonym of *Amaea durhami* (Keen, 1954). Comparison of images of both of these species shows that they are definitely not the same genus. In addition, Zinsmeister's species is missing its morphologically diagnostic aperture. His species might not even be an epitoniid. [Undetermined].

Acrilla procerus Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1291, figs. 2G, H (latex casts). Santa Susana Fm., Paleocene. Runkle Canyon, Calabasas quad., Simi Hills, Ventura Co. UCR 4579. Holotype UCR 4579/100 (not UCR. 4579/10 as in text) paratype UCR 4579/101. [Epitoniidae].

Acrilla n. sp. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 11. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 4579. Hypotype UCR 4579/101 (not UCLA 4579/4 as in pl. caption). **Remarks:** Described as *Acrilla procerus* n. sp., *fide* Zinsmeister (1983b: p. 1291). [Epitoniidae].

Acrilla (*Ferminoscala*) n. sp. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 12. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6670. Hypotype UCR 6670/12 [same number also listed for *Cancellaria crassa* Waring, 1917 of Zinsmeister 1983a]. **Remarks:** Described as *Acrilla* (*Ferminoscala*) *durhami* n. sp., *fide* Zinsmeister (1983b: p. 1291). [Epitoniidae].

Acteocina culcitella? (Gould, 1853). [*Bulla* (*Akera*)]. Squires 2012. NHMLAC CS 520:77, fig. 99. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7760. Hypotype LACMIP 14416. [Tornatinidae].

Acteon boulderana Etherington, 1931. Keen 1943. Tr. SDSNH 10(2):42, pl. 4, fig. 22. Basal Round Mtn. Silt (possibly uppermost Olcese Sand), Miocene. Kern River area, Bakersfield or Caliente quad., Kern Co. SU 2641. Hypotype SU 7529 [=CASG 72019]. **Remarks:** *Acteon boulderanus* Etherington, 1931, *fide* Addicott (1970: p. 137). [Acteonidae].

Acteon cf. *A. boulderana* Etherington, 1931. Stanton 1966. Jour. Paleo. 66(1):35, pl. 7, fig. 17. Castaic Fm., Miocene. Castaic Canyon Los Angeles Co. CIT 2093 [=LACMIP 11853[. Hypotype LACMIP 4215. **Remarks:** *Acteon boulderanus* Etherington, 1931, *fide* Addicott (1970: p. 137). [Acteonidae].

Acteon boulderanus Etherington, 1931. Addicott 1970. USGS PP 642:137, pl. 19, fig. 27. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650271. [Acteonidae].

....., pl. 19, figs. 28, 29. Oil Center quad. (1954), Kern Co. USGS M1602. Hypotype USNM 650272.

....., pl. 19, fig. 32. *Tivela* bed Rio Bravo Ranch quad. (1954), Rio Bravo Ranch quad., Kern Co. USGS M1600. Hypotype USNM 650273.

Acteon quercus Anderson and G D. Hanna, 1925. Givens 1974. UCPG 109:92–93, pl. 10, fig. 11. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4722. Hypotype UCR 4722/14. [Acteonidae].

Acteon* (*Rictaxis*) *weaveri Addicott, 1970 (n. sp.). USGS PP 642:137, pl. 20, fig. 9. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M2601. Holotype USNM 650282. **Remarks:** Determined here as in the genus *Rictaxis.* [Acteonidae].

Acteon sp. Squires 2008. NHMLAC CS 517:5, fig. 34. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17850. Hypotype LACMIP 13435. [Acteonidae].

Admete clatskaniensis Anderson and Martin, 1914. Adegoke 1969. UCPG 80:191, pl. 12, fig. 9. Temblor Fm., Miocene. Domengine Ranch quad., Fresno Co. UCMP D1078. Hypotype UCMP 36899. [Cancellariide].

Admete gracilior (Carpenter *in* Gabb 1869a) of Arnold. [*Cancellaria*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:77, pl. 15, fig. 10. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotype USNM 560088. **Remarks:** Gabb's description of this species was quoted from Carpenter (in lit.) and he is clearly not the author *fide*, Groves and Squires (2018: p. 118). [Cancellariide].

Agaronia mathewsonii (Gabb, 1864). [*Olivella*]. Stewart 1946. USGS PP 205-C:91, pl. 11, fig. 1. Avenal Sandstone, Eocene. Reef Ridge, southeast of Big Tar Canyon, Reef Ridge quad., Kings Co. USGS 14495. Hypotype USNM 498702. [Olividae].

Agaronia Fowkes 1982. Coalinga Guidebook, p. 22, unnumbered fig. Avenal Sandstone, Eocene. Head of Tar Canyon, Kings Co. WHC hypotype lost? **Remarks:** Determinded here as *Agaronia mathewsonii* (Gabb, 1864). [Olividae].

Agaronia? sp. Powell 2008. USGS SIR 2008-5155:17–18, fig. 5aa. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Rock, Imperial Co. (not San Diego Co. as in locality description). USGS M9779 [=USGS M9778]. Hypotype USNM 486906. [Olividae].

Agasoma sinuatum (Gabb, 1866). [*Clavella*]. Wenz 1941. Handbh. Palaoz. 6:1185, fig. 3372 (refigured from English 1914b:250, pl. 25, fig. 6; refigured from Trask 1922, pl. 8, figs. 3a, 3b (as *Koilopleura sinuata*); refigured from Clark 1929, pl. 34, figs. 2, 3 (as *Agasoma sinuata*)). [Briones Fm.], Miocene. San Pablo, Walnut Creek, Contra Costa Co. UCMP 1354. Hypotype [UCMP 11900]. [Buccinidae].

Agasoma sinuatum (Gabb, 1866). [*Clavella*]. Woodring 1956. Jour. Paleo. 30(3):712–713, figs. 1, 2. [Santa Margarita? Fm.], Miocene. Cuyama Valley, Santa Barbara Co. USGS 13021. Hypotype USNM 562011. [Buccinidae].

....., figs. 3–5. [Santa Margarita Fm.], Miocene. Branch Canyon, northeast flank of anticline, Cuyama Valley, Santa Barbara Co. UCLA 1718 [=LACMIP 21718]. Hypotype UCLA 27800 [=LACMIP 10977].

Akera maga Vokes, 1939. Squires 2001. NHMLAC CS 489:15, figs. 28, 29. Llajas Fm., Eocene. Chivo Canyon, Ventura Co. LACMIP 26624. Hypotype LACMIP 12746. [Akeridae].

*Aletes aquamigerus** Carpenter, 1857a. Cummings et al. 1962. CDMG Bull. 181:200, ph. 15, fig. 5. Purisima Fm. (Tahana Member), Pliocene. Vicinity of Pomponio Creek, San Gregorio quad., San Mateo Co. locality F467-7M. Hypotype determined here as missing. **Remarks:** Error for *squamigerus*. In the genus *Thylacodes*, *fide* Golding et al. (2014: pp. 9, 14). [Vermetidae].

Alia tuberosa (Carpenter, 1864b). [*Amycla*]. Squires 2012. NHMLAC CS 520:77, fig. 82. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14399. **Remarks:** In the genus *Mitrella*, *fide* deMaintenon (2019: p. 176). [Columbellidae].

Amaea (*Scalina*) sp., cf. *A.* (*S.*) *edwilsoni* DuShane, 1977. Squires, 2012. NHMLAC CS 520:77, 86, fig. 74. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14393. [Epitoniidae].

Amaurellina caleocia Vokes, 1939. Marincovich 1977. BAP 70(294):241–243, pl. 20 figs. 11, 12; pl. 21, fig. 1. Domengine Fm., Eocene. Parson's Peak area, north of Coalinga, Coalinga quad., Fresno Co. UCMP 672. Holotype UCMP 33781, paratype UCMP 15862. [Naticidae].

....., pl. 20, fig. 13; pl. 21, fig. 2. Garza Creek, Cholame quad., Kings Co. UCMP A1164]. Holotype UCMP 15863, paratype UCMP 15864 (both of *Amaurellina garzaensis* Vokes, 1939).

Amaurellina caleocia Vokes, 1939. Squires 1987. NHMLAC CS 388:37, fig. 45. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 219 [=LACMIP 16100]. Hypotype LACMIP 7470. [Naticidae].

Amaurellina caleocia Vokes, 1939. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 9. Juncal Fm.?, Eocene. Northern

Lockwood Valley area, Ventura Co. CSUN 979 [=LACMIP 16081]. Hypotype LACMIP 7707. [Naticidae].

Amaurellina caleocia Vokes, 1939. Squires 1988c. NHMLAC CS 398:12–13, fig. 26. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad., Ventura Co. CSUN 979 [=LACMIP 16081]. Hypotype LACMIP 7707. [Naticidae].

Amaurellina caleocia Vokes, 1939. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 26. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. LACMIP 23779 (not LACMIP 13779 as in pl. caption) [=CSUN 662]. Hypotype LACMIP 11466. [Naticidae].

Amaurellina caleocia Vokes, 1939. Squires 2001. NHMLAC CS 489:9, fig. 15. Llajas Fm., Eocene. Devil Canyon, Oat Mtn. quad. (1952, PR 1969), southwestern Santa Susana Mtns., Ventura Co. LACMIP 7418. Hypotype LACMIP 12735. [Naticidae].

Amaurellina (*Euspirocrommium*?) *clarki* Stewart, 1926 [1927]. Stewart 1946. USGS PP 205-C:91 pl. 11, fig. 3. Avenal Sandstone, Eocene. Reef Ridge, near Big Tar Canyon, Reef Ridge quad., Kings Co. USGS 14495. Hypotype USNM 498704. **Remarks:** In the genus *Pachycrommium*, *fide* Marincovich (1977: p. 238). [Naticidae].

Amaurellina clarki Stewart, 1926 [1927]. Hertlein 1951. CDM Bull. 154:191, fig. 2.7. Domengine Fm., Eocene. Near Somersville, Contra Costa Co. CASG 261. Hypotype CASG 6725]. **Remarks:** In the genus *Pachycrommium*, *fide* Marincovich (1977: p. 238). [Naticidae].

Amaurellina clarki Stewart, 1926 [1927]. Easton 1960. Invert. Paleo., p. 398, fig. 10.18.3 (redrawn from Stewart, 1926 [1927], pl. 26, fig. 8). [Llajas Fm.], Eocene. Las Llajas Canyon, Simi Valley, Ventura Co.. UCMP 7004. Holotype UCMP 31385]. **Remarks:** In the genus *Pachycrommium*, *fide* Marincovich (1977: p. 238). [Naticidae].

Amaurellina (*Euspirocrommium*) *clarki* Stewart, 1926 [1927]. Weaver and Kleinpell 1963. UCPG 43:188, pl. 27, fig. 15. Gaviota Fm., Eocene. Stratigraphically just above Sacate-Gaviota contact in narrow gorge of branch of Cañada del Corral, Los Olivos quad., Santa Barbara Co. UCMP B6982. Hypotype SU 9202 [=CASG 70129]. **Remarks:** In the genus *Pachycrommium*, *fide* Marincovich (1977: p. 238). [Naticidae].

Amaurellina lajollaensis Stewart, 1926 [1927]. Stewart 1946. USGS PP 205-C:91, pl. 11, fig. 2. Avenal Sandstone, Eocene. Reef Ridge, Vicinity of Canoas Canyon, Dark Hole quad., Fresno Co. USGS 14503. Hypotype USNM 498703. Remarks: Junior synonym of *Tejonia moragai* (Stewart, 1926 [1927], *fide* Marincovich (1977: p. 233). [Naticidae].

Amaurellina moragai Stewart 1926, [1927]. Weaver and Kleinpell 1963. UCPG 43:188, pl. 25, figs. 1, 2. Cozy Dell Shale, Eocene. Nojoqui Creek area, Santa Barbara Co. UCMP B6932. Hypotype SU 9203 [=CASG 70132]. **Remarks:** In the genus *Tejonia*, *fide* Marincovich (1977: p. 233). [Naticidae].

Amaurellina moragai lajollaensis Stewart, 1926 [1927]. Shimer and Shrock 1944. Index Foss. N.A., p, 481, pl. 197, fig. 30 (refigured from Stewart, 1926 [1927], pl. 28, fig. 2). [La Jolla quad. (="Rose Canyon group")], Eocene. Vicinity of Rose Canyon, San Diego Co. UCMP 3976. Holotype UCMP 31401]. [Naticidae]. **Remarks:** Junior synonym of *Tejonia moragai* (Stewart, 1926 [1927]), *fide* Marincovich (1977: p. 233). [Naticidae].

Amaurellina moragai lajollaensis Stewart, 1926 [1927]. Moore 1968. SDSNH Occas. Pap. 15:26, pl. 11, fig. a. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Rose Canyon, San Diego Co. [SDSNH 2363. Hypotype SDSNH 4182]. **Remarks:** Junior synonym of *Tejonia moragai* (Stewart, 1926 [1927]), *fide* Marincovich (1977: p. 233). [Naticidae].

Amaurellina Fowkes 1982. Coalinga Guidebook, p. 22, unnumbered fig. Avenal Sandstone, Eocene. Tar Canyon area, Kings Co. WHC hypotype lost? [Naticidae].

Amauropsis martinezensis Dickerson, 1914a. Marincovich 1977. BAP 70(294):221–222, pl. 17, figs. 5, 6. Martinez Fm., Paleocene. Near Stewartville, Contra Costa Co. UCMP 154]. Holotype UCMP 11702. [Naticidae].

....., pl. 17, fig. 7. Martinez Fm. [=Santa Susana Fm.], Paleocene. [Burro Flats], Simi Hills, Ventura Co. UCR 6814. Hypotype UCR. 6814/500.

....., pl. 17, fig. 8. Calabasas quad., Simi Hills, Ventura Co. UCR 6825. Hypotype UCR 6825/4. **Remarks:** Described as *Amauropsis meirensis* n. sp., *fide* Zinsmeister (1983b: p. 1292). Holotype UCR 6825/100.

....., pl. 17, fig. 9. Simi Hills, Ventura Co. CASG 391. Hypotype CASG 72654.

....., pl. 17, fig. 10. North slope of Simi Hills, Ventura Co. UCR. 6803. Hypotype UCR 6803/11.

Amauropsis martinezensis Dickerson, 1914a. Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, figs. 16. 17. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6814. Hypotype UCR 6814/500 (not UCR. 6814/1 as in pl. caption). [Naticidae].

Amauropsis martinezensis Dickerson, 1914a. Zinsmeister 1983b. Jour. Paleo, 57(6):1292–1293, fig. 2K. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6814. Hypotype UCR 6814/500 (not UCR 6814/100 as in pl. caption). [Naticidae].

Amauropsis meierensis Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1292–1293, fig. 2L. Santa Susana Fm., Paleocene. Calabasas quad., Simi Hills, Ventura Co. UCR 6825. Holotype UCR 6825/100 (not UCR 6825/4 as in text). [Naticidae].

....., fig. 2M. Simi Hills, Ventura Co. UCR 6901. Paratype UCR 6901/200.

Amauropsis n. sp. Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, fig. 14. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6825. Hypotype UCR 6825/100 (not UCR 6825/4 as in pl. caption). **Remarks:** Described as *Amauropsis meierensis* n. sp., *fide* Zinsmeister (1983b: p. 1292). [Naticidae].

....., pl. 3, fig. 15. Simi Hills, Ventura Co. UCR 6901. Hypotype UCR 6901/200 (not UCR 6901/2 as in pl. caption). **Remarks:** Described as *Amauropsis meierensis* n. sp., *fide* Zinsmeister)1983b: p. 1292).

Amphissa reticulata Dall, 1916a. Yancey 1978. Pr.CAS 41(15):364, 369, fig. 5L. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D3690. Hypotype USNM 251808. [Columbellidae].

Amphissa versicolor Dall, 1871 var. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):176, fig. 65-15. [Careaga Fm.?], Pliocene. Northeast of Schumann [*sic*], Santa Barbara Co. CASG. 568. Hypotype CASG 5728. [Columbellidae].

Amphissa versicolor Dall, 1871. Moore et al. 1952. Invert. Foss., p. 326, fig. 8-40.13. Pliocene, (unknown California locality). Line drawing, source specimen unknown. [Columbellidae].

Amphissa wahrhaftigi Adegoke, 1969 (n. sp.). UCPG 80:180, pl. 11, figs. 4, 8, 9, 12. Temblor Fm., Miocene. Garza Creek, Reef Ridge quad., Kings Co. UCMP D1056. Holotype UCMP 36861, paratype UCMP 36862, unfigured paratypes UCMP 36863, 36864. [Columbellidae].

Amphissa sp. Squires 2012. NHMLAC CS 520:77, fig. 83. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14400. [Columbellidae].

Ampullella hewitti G D. Hanna and Hertlein, 1949 (n. sp.). Jour. Paleo. 23(4):393–394, pl. 77, figs. 1, 3, text fig. 2. Domengine Fm., Eocene. Vicinity of Carneros Creek, Kern Co. CASG 32388A [=CASG 61884.01]. Holotype CASG 9430 [=CASG 61884], paratypes CASG 9431–9433 [=CASG 61884.02–61884.04 (61884.03 unfigured)]. Additional unfigured paratypes (2) CASG 72122.00. **Remarks:** In the genus *Euspirocrommium*, *fide* Marincovich (1977:p. 237). [Naticidae].

Ampullella hewitti G.D. Hanna and Hertlein, 1949. Givens 1974. UCPG 109:74, pl. 8, fig. 13. Juncal Fm., Eocene. Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4668. Hypotype UCR 4668/21. **Remarks:** In the genus *Euspirocrommium*, *fide* Marincovich (1977: p. 237). [Naticidae].

Ampullela schencki Vokes, 1939. Givens and Kennedy 1976. Jour. Paleo. 50(5):963, 966, 969, pl. 2, figs. 15, 17. Delmar Fm. [=Santiago Fm.?], Eocene. Vicinity of Vista and San Marcos, San Diego Co. UCR 4865. Hypotype UCR 4865/7. **Remarks:** Junior synonym of *Crommium pinyonensis* (Dickerson, 1914), *fide* Marincovich (1977: p. 227). [Naticidae].

Ampullospira susanaensis Nelson, 1925. Marincovich 1977. BAP 70(294):231–232, pl. 19, fig. 5. Martinez Fm. [=Santa Susana Fm.], Paleocene. South of Simi Valley, Ventura Co. [CASG 391]. Holotype CASG 985. [Naticidae].

Ampullina sp. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 2 (pl. 1 in caption), fig. F. Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8720 [=SBMNH 60194].

Ameranella kewi (Dickerson, 1915). [*Nyctilochus*]. Beu 1988. Saito Ho-on Kai Spec. Rept., pp. 82–83, pl. 2, fig. 8. Tejon Fm., Eocene. Live Oak Canyon, near Tejon, Kern Co. UCMP 7200. Hypotype (topotype) UCMP 51052 (published as UCMP 7200). [Ranellidae].

Anachis watsonae Keen, 1943 (n. sp.). Tr. SDSNH 10(2):42–43, pl. 4, figs. 1, 2. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU. 2121 [=CASG 71992]. Holotype SU 7530 [=CASG 71992.00]. **Remarks:** In the subgenus *Costoanachis, fide* Addicott (1970: p. 86). [Columbellidae].

Anachis (*Costoanachis*) *watsonae* Keen, 1943. Addicott, 1970. USGS PP 642:86, pl. 9, fig. 11. Lower Round Mtn. Silt, Miocene. North of Kern River, Kern Co. USGS 6065. Hypotype USNM. 650139. [Columbellidae].

....., pl. 9, fig. 12, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1612. Hypotype USNM. 650140.

Anachis (*Costoanachis*) sp. Woodring et al. 1946. USGS PP 207:27, pl. 28, fig. 7 (clay peel). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, west side of George F. Canyon, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotype USNM 497073. [Columbellidae].

Ancilla (*Oliverato*) *californica* Cooper, 1894. Coan 1981 [1982]. Univ. Idaho Press, p. 159, fig. 12.6–12.11 (refigured from Cooper 1894, pl. 1, figs. 6 [missing] 7–11). Capay Fm., Eocene. Marysville Buttes, Sutter Co. CSMB 13736. Syntypes CASG 8 (fig. 7), 8a (fig. 8), 8b (fig. 9), 8c (fig. 11), 8d (fig. 10). **Remarks:** In the genus *Cryptochorda* (family Volutidae), *fide* Vokes (1939: p.140). [Volutidae].

Ancilla (*Spirancilla*) *gabbi* Cossmann, 1899. Squires 1984. NHMLAC CS 350:34, fig. 8n. Llajas Fm., Eocene. Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 489 [=LACMIP 16103]. Hypotype LACMIP 6544. [Ancillariidae].

Ancilla gabbi Cossmann, 1899. Squires 1987. NHMLAC CS 388:43, fig. 60. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080. Hypotype LACMIP 7483. [Ancillariidae].

Ancillarina sp. Squires 1999b. NHMLAC CS 479:19, figs. 39, 40. Santa Susana Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 961 [=LACMIP 17191]. Hypotype LACMIP 12686. [Olividae].

Ancistrolepis? carolineae Squires, 1984 (n. sp.). NHMLAC CS 350:30–31, figs. 8d, e. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Holotype UCLA 59401 [=LACMIP 10554] determined here as missing, unfigured paratypes UCLA 59402 [=LACMIP 10555–10557]. [Buccinidae].

Anomalosipho sp. Stanton 1966. Jour. Paleo. 40(1):33–34, pl. 7, figs. 11, 12. Castaic Fm. Miocene. Haskell Canyon area, Los Angeles Co. CIT 1671 [=LACMIP 2556]. [Hypotypes LACMIP 4201, 4202]. [Buccinidae].

Antillophos posunculensis (Anderson and Martin, 1914). [*Amphissa*]. Addicott 1970. USGS PP 642:96–98, pl. 11, fig. 8. Upper Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 32852. [Columbellidae].

....., pl. 11, fig. 11. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650158.

....., pl. 11, figs. 9, 10. Lower Round Mtn. Silt, Miocene. Kern River area, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1604. Hypotype USNM 650159.

....., pl. 11, fig. 13. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotype UCMP 33014.

....., pl. 11, fig. 28. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Hypotype USNM 650163.

Antillophos posunculensis (Anderson and Martin, 1914). [*Amphissa*]. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 10. Monterey Fm. (Saltos Shale Member), Miocene. Indian Creek, La Panza Range, San Luis Obispo Co. USGS M3814. Hypotype USNM 254359. [Columbellidae].

Antillophos posunculensis (Anderson and Martin, 1914). [*Amphissa*]. Addicott et al. 1980. SEPM Guidebook 6:18, 20, pl. 1, fig. 10 (refigured from Addicott et al. 1978, pl. 1, fig. 10). Monterey Fm. (Saltos Shale Member), Miocene. Indian Creek, La Panza Range, San Luis Obispo Co. USGS M3814. Hypotype USNM 254359. [Columbellidae].

Antillophos cf. *posunculensis* (Anderson and Martin, 1914). [*Amphissa*]. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 6. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH 4312. Hypotype SDSNH 83242. [Columbellidae].

Antillophos woodringi Addicott, 1970 (n. sp.). USGS PP 642:98, pl. 11, figs. 7, 12, 14, 19, 22. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650165; hypotypes USNM 650164, 650166, 650167. [Columbellidae].

Antillophos woodringi Addicott, 1970. Stadum and Finger, 2016. NHMLAC CS 524:38, 40, 50, fig. 22. Monterey Fm., (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 83242. [Columbellidae].

Antillophos sp. Addicott 1979. SEPM Guidebook 14:47–48, pl. 1, fig. 10. Vaqueros (?) Fm. (lower sandstone member), Oligocene. The Indians, Junipero Serra quad., Santa Lucia Range, Monterey Co. SU 1756. Hypotype CASG 60370. [Columbellidae].

Antiplanes perversa (Gabb, 1865). [*Pleurotoma*]. Faustman 1964. UCPG 41(2):126, pl. 3, fig. 20. Upper Rio Dell Fm., Pliocene. Ferndale quad., Humboldt Co. UCMP B7950. Hypotype UCMP 37799. [Pseudomelatomidae].

Antiplanes voyi (Gabb, 1866). [*Pleurotoma*]. Faustman 1964. UCPG 41(2):126–127, pl. 3, fig. 19. Upper Rio Dell Fm., Pliocene. Vicinity of Fleener Creek, Ferndale quad., Humboldt Co. UCMP B7939. Hypotype UCMP 37800. [Pseudomelatomidae].

Antiplanes sp. Stanton 1966. Jour. Paleo. 40(1):35, pl. 7, fig. 16. Castaic Fm., Miocene. Vicinity of Reynier and Sand canyons, Los Angeles Co. CIT 1849 [=LACMIP 2557]. Hypotype LACMIP 4203. [Pseudomelatomidae].

Apiotoma andersoni (Dickerson, 1914a). [*Surcula (Surculites)*]. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, figs. 21, 22. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6670. Hypotype UCR 6670/3, determined here as missing. [Cochlespiridae].

Apiotoma californiana Squires, 1987 (n. sp.). NHMLAC CS 388:48–49, fig. 74. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 360 [=LACMIP 16109]. Holotype LACMIP 7494. [Cochlespiridae].

Apiotoma californiana Squires, 1987. Squires 1988c. NHMLAC CS 398:16, fig. 38. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 983 [=LACMIP 16110]. Hypotype LACMIP 7718. [Cochlespiridae].

Architectonia* llajasensis Sutherland, 1966 (n. sp.). LACM CS 117:1–3, figs. 1, 2. Llajas Fm., Eocene. Las Llajas Canyon area, Santa Susana Mtns., Ventura Co. LACMIP 461B [=LACMIP 16812]. Holotype LACMIP 1140. **Remarks:** Error for *Architectonica*. [Architectonicidae].

Architectonica (*Stellaxis*) *cognata* Gabb, 1864. Shimer and Shrock 1944. Index Foss. N.A., p. 491, pl. 200, fig. 15 (refigured from Stewart, 1926 [1927], pl. 28, fig. 7 as (*Architectonica cognata*)). Tejon Fm., Eocene. Martinez, Contra Costa Co. MCZ 1043. Hypotype MCZ 27811 [=MCZ 112952]. [Architectonicidae].

Architectonica (*Stellaxis*) *cognata* Gabb, 1864. Stewart 1946. USGS PP 205-C:91, pl. 11, fig. 4. Avenal Sandstone, Eocene. Reef Ridge, southeast of Big Tar Canyon, Reef Ridge quad., Kings, Co. USGS 14495. Hypotype USNM 498705. [Architectonicidae].

Architectonica (*Stellaxis*) *cognata* Gabb, 1864. Givens 1974. UCPG 109:68, pl. 7, figs. 1–3. Juncal Fm., Eocene. Vicinity of San Guillermo Mtn., San Guillermo quad. (1943), Ventura Co. UCR 4750. Hypotype UCR 4750/20. [Architectonicidae].

Architectonica (*Stellaxis*) *cognata* Gabb, 1864. Squires 1984. NHMLAC CS 350:19–20, fig. 6l. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6518 (not LACMIP 6516 as in pl. caption). [Architectonicidae].

Architectonica (*Stellaxis*) *cognata* Gabb, 1864. Squires 1987. NHMLAC CS 388:29, fig. 27. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 358 [=LACMIP 16114]. Hypotype LACMIP 7455. [Architectonicidae].

Architectonica (*Stellaxis*) *cognata* Gabb, 1864. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 5. Juncal Fm.?, Eocene. Northern Lockwood Valley area, Ventura Co. CSUN 983 [=LACMIP 16110]. Hypotype LACMIP 7698. [Architectonicidae].

Architectonica (*Stellaxis*) *cognata* Gabb, 1864. Squires 1988c. NHMLAC CS 398:11, fig. 17. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943). Ventura Co. CSUN 983 [=LACMIP 16110]. Hypotype LACMIP 7698. [Architectonicidae].

Architectonica (*Architectonica*) *hornii* Gabb, 1864. Givens 1974. UCPG 109:68, pl. 7, figs. 5–7. Matilija Fm., Eocene. East of confluence of Alamo Creek, Dry Canyon, and Cuyama River valley, Reyes Peak quad. (1943), Ventura Co. UCR 4741. Hypotype UCR 4741/60. [Architectonicidae].

Architectonica hornii Gabb, 1864. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, fig. 1. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20775. [Architectonicidae].

Architectonica (*Architectonica*) *hornii* Gabb, 1864. Squires 1994b. SEPM Guidebook 74:52, pl. 1, fig. 4 (cast). Upper Matilija Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23688. Hypotype LACMIP 11629. [Architectonicidae].

Architectonica (*Architectonica*) *llajasensis* Sutherland, 1966. Squires 1984. NHMLAC CS 350:19, fig. 6k. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6517 (not LACMIP 6515 as in pl. caption). [Architectonicidae].

Architectonica (*Architectonica*) *llajasensis* Sutherland, 1966. Squires 1999b. NHMLAC CS 479:21–22, figs. 43, 44. Santa Susana Fm., Eocene. North side Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 26609. Hypotype LACMIP 12689. [Architectonicidae].

Architectonica nobilis Röding, 1798. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 56, fig. 3.5A. Latrania Fm., Miocene/Pliocene. Alverson Canyon, Imperial Co. SDSNH 351. Hypotype SDSNH 23148. [Architectonicidae].

Architectonica nobilis Röding, 1798. Vendrasco et al. 2012. NHMLAC CS 520:17, figs. 2.10, 2.11. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico border, San Diego Co. LACMIP 305. Hypotype LACMIP 14850]. [Architectonicidae].

Architectonica (*Solariaxis*) *ullreyana* Dickerson, 1916. Givens 1974. UCPG 109:68–69, pl. 7, fig. 9. Juncal Fm., Eocene. Thorn Meadows area, San Guillermo quad. (1943), Ventura Co. UCR 4690. Hypotype UCR 4690/9. [Architectonicidae].

Architectonica Fowkes 1982. Coalinga Guidebook, p. 22, unnumbered fig. Avenal Sandstone, Eocene. Tar Canyon area, Kings Co. WHC hypotype lost?. **Remarks:** Determined here as *Architectonica* (*Stellaxis*) *cognata* Gabb, 1864. [Architectonicidae].

Architectonica sp. Throckmorton 1988a. USGS OFR 88-59:53, pl. 8, fig. 10 (latex peel) (refigured in Throckmorton 1988b, pl. 1, fig. 29). Tesla Fm., Eocene. From isolated sandstone block (float?) Midway quad., Alameda Co. UCMP D8157. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Architectonicidae].

Arene mcleani Squires, 1988c (n. sp.). NHMLAC CS 398:9–10, figs. 9–11. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 983 [=LACMIP 16110]. Holotype LACMIP 7691, paratypes LACMIP 7692, 7693. [Arenidae].

Arene mcleani Squires, 1988c. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 8. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. CSUN 662 [=LACMIP 23779]. Hypotype LACMIP 11452. [Arenidae].

Arene* (*Arene*) *stephensoni Schremp, 1981 (n. sp.). Jour. Paleo. 55(5):1133–1134, pl. 2, figs. 6–8, 20. Imperial Fm. [=Latrania Fm.], Pliocene. Whitewater River area, San Jacinto quad., Riverside Co. UCMP A1415] [=UCR 7477]. Holotype UCMP 14663 determined here as missing; unfigured paratypes UCMP 14664–14666. [Arenidae].

....., East side of Super Creek, Riverside Co. UCR 7477. Unfigured paratypes UCR 7477/16, 7477/17.

....., Whitewater River area, Riverside Co. CASG 27. Unfigured paratypes CASG 60218, 60219.

Argobuccinum (Fusitriton) *arnoldi* Martin, 1914. Faustman 1964. UCPG 41(2):134, pl. 3, fig. 22. Rio Dell Fm., Pliocene. Eel River area, near Scotia and Rio Dell, Humboldt Co. UCMP A4539. Hypotype UCMP 37829. **Remarks:** Provisonally in the genus "*Beringinus*" [*sic*] [=*Beringius*] *fide* Smith (1970: p. 520). [Ranellidae].

Argobuccinum (*Fusitriton*) *coosense* Dall, 1909. Faustman 1964. UCPG 41(2):134, pl. 3, fig. 21. Rio Dell Fm., Pliocene. Scotia quad., Humboldt Co. UCMP B7643. Hypotype UCMP 37827. **Remarks:** Junior synonym of *Fusitriton oregonense* (Redfield, 1846), *fide* Smith (1970: p. 520). [Ranellidae].

Asperiscala hemphilli (Dall, 1878a). [*Scalaria*]. DuShane 1979. Veliger 22(2):101, fig. 7 (as *Scalaria hemphilli*). San Diego Fm., Pliocene. Balboa Park, San Diego Co. Holotype USNM 7991. [Epitoniidae].

Asperiscala sp., cf. *A. minuticostata* (De Boury, 1912). [*Scala*]. Squires 2012. NHMLAC CS 520:77, fig. 73. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7757. Hypotype LACMIP 14392. [Epitoniidae].

Assorted marine invertebrate fossils. Rugh 2001. Quarterly Dose (IDEC Pharmaceuticals Corp.) 21(3):8, unnumbered fig. (lower specimen). Santiago Fm., Eocene. NIMO (New IDEC manufacturing operation) site, Oceanside, San Diego Co. SDSNH 4572. Hypotype SDSNH. 158088]. **Remarks:** *Turritella* sp. cf. *T. uvasana* Conrad, 1855, *fide* S. Rugh (personal communication, 2019).

Astraea (*Pomaulax*) *biangulata* (Gabb, 1866). [?*Pachypoma*]. Addicott 1970. USGS PP 642:44–45, pl. 2, figs. 2, 3, 7–9. Upper Olcese Sand/lower Round Mtn. Silt, Miocene. Temblor locality 1, Caliente quad. (presumably from the Round Mtn. Silt near Kern River), Kern Co. UCMP 2713. Hypotypes UCMP 11333, 12147, 12148. [Turbinidae].

....., pl. 2, fig. 6. Upper Olcese Sand, Miocene. Caliente quad. (1914), Kern Co. UCMP B1615. Hypotype UCMP 12149.

Astraea biangulata (Gabb,1866). [?*Pachypoma*]. Addicott et al. 1978. USGS OFR 78-446:59, 72, pl. 4, fig. 2. Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2859. Hypotype USNM 254371. [Turbinidae].

Astraea biangulata (Gabb, 1866). [?*Pachypoma*]. Addicott et al. 1980. SEPM Guidebook 6:19, 33, pl. 5, fig. 2 (refigured from Addicott et al., 1978, pl. 4, fig. 2). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2859. Hypotype USNM 254371. [Turbinidae].

Astraea cf. *A.* (*Pomaulax*) *gradata* Grant and Gale, 1931. Stanton 1966. Jour. Paleo. 40(1):31–32, pl. 6, figs. 10, 11. Castaic Fm., Miocene. Southeast of Elderberry Canyon, Los Angeles Co. CIT 2077 [=LACMIP 16117]. [Hypotype LACMIP 4162]. **Remarks:** Determined here as in the genus *Megastraea*. [Turbinidae].

....., pl. 6, fig. 12. South edge of Humphreys quad. (1932, RP 1946), Los Angeles Co. CIT 2069 [=LACMIP 2558. Hypotype LACMIP 4163].

Astraea (*Pomaulax*) *gradata* Grant and Gale, 1931. Stadum 1973. OCF, p. 31, pl. 6, fig. 3. Pliocene. ?Los Angeles Co. LACMIP 16118. Hypotype UCLA 49523 [=LACMIP 10622]. **Remarks:** Determined here as in the genus *Megastraea*. [Turbinidae].

Astraea (*Pomaulax*) *gradata* Grant and Gale, 1931. Vedder and Moore 1976. AAPG misc. Pub. 24:123, 130, pl. 2, fig. 9 (peel). Unnamed strata, Pliocene. Near Lemon Tank Reservoir, San Clemente Is., California Channel Ids. USGS M6501. Hypotype USNM 235587. [Turbinidae]. **Remarks:** Determined here as in the genus *Megastraea*.

Astraea sp. Vedder and Moore 1976. AAPG Misc. Pub. 24:123, 130, pl. 2, fig. 11 (peel). Unnamed strata, Pliocene. Near Lemon Tank Reservoir, San Clemente Is., California Channel Ids. USGS M6501. Hypotype USNM 235588. **Remarks:** Determined here as in the genus *Megastraea*. [Turbinidae].

Astraea (*Pomaulax*) n. sp. Addicott 1970. USGS PP 642:43–44, pl. 2, fig. 1. Upper Olcese Sand, Miocene. Caliente quad. (1914), Kern Co. UCMP B1616. Hypotype UCMP 11064. **Remarks:** In the genus Pomaulax (J.H. McLean, personal communication, 2011). [Turbinidae].

Athleta roddai Squires, 1987 (n. sp.). NHMLAC CS 388:46–47, figs. 65–68. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 845 [=LACMIP 16137]. Holotype LACMIP 7488, paratype LACMIP 7489. [Volutidae].

Atys? sp. Powell 2008. USGS SIR 2008-5155:18, fig. 5cc. Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Rock, Imperial Co. (not San Diego Co. as in locality description). USGS M9779 [=USGS M9778]. Hypotype USNM 486900. [Haminoeidae].

Austrotrophon kernensis (Anderson, 1905). [*Trophon*]. Adegoke 1969. UCPG 80:175–176, pl. 11, fig. 14. Temblor Fm., Miocene. Garza Creek, Reef Ridge quad., Kings Co. UCMP D1061. Hypotype UCMP 36844. [Muricidae].

Balcis conchita Keen, 1943 (n. sp.). Tr.SDSNH 10(2):43, pl. 4, fig. 5. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Holotype SU 7538 [=CASG 71993], unfigured paratypes SU 7970. 7970a [=CASG 72186]. [Eulimidae].

....., Caliente quad., Kern Co. LACMIP 16140 (*ex* SU 2121). Unfigured paratypes LACMIP. 9379–9383].

....., SDSNH 5422 (*ex* SU 2121). Unfigured paratypes SDSNH. 617, 936].

Balcis conchita Keen, 1943. Addicott 1970. USGS PP 642:57–58, pl. 20, figs. 1, 32. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1612. Hypotypes USNM 650274, 650275. [Eulimidae].

Balcis lutzi Addicott, 1970 (n. sp.). USGS PP 642:58, pl. 21, figs. 13–15. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650309, paratypes USNM 650307, 650308. [Eulimidae].

Balcis cf. *B. oldroydi* (Bartsch, 1917b). [*Melanella*]. Addicott 1970. USGS PP 642:58, pl. 21, fig. 10. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650303. Eulimidae].

Balcis petrolia Addicott, 1970 (n. sp.). USGS PP 642:58, pl. 20, fig. 13. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. USGS 6623. Hypotype USNM 650286. [Eulimidae].

....., pl. 21, fig. 16. Upper Olcese Sand, Miocene. Bakersfield and Caliente quads. (1914), Kern Co. UCMP B1600. Holotype UCMP. 37112.

Barbarofusus arnoldi (Cossmann, 1903). [*Fusus*]. Natland 1971. Terra 10(2):22, fig. 12 (not fig. 11), bottom row. "Fernando Fm." [=Pico Fm.], Pliocene. Arco Towers excavation, downtown Los Angeles, Los Angeles Co. LACMIP 1219. Hypotypes current whereabouts unknown. [Fasciolariidae].

Barbarofusus barbarensis (Trask, 1855). [*Fusus*]. Squires, 2012. NHMLAC CS 520:77, 86, fig. 84. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14401. [Fasciolariidae].

Bathybembix sp. Perry 1977. Foss. Santa Cruz Co., p. 6, lower fig. San Lorenzo Fm. (Rices Mudstone Member), Eocene/Oligocene. San Lorenzo River, Big Basin quad., Santa Cruz Co. SCCM37. Hypotype SCCM 21002. [Eucyclidae]

Bathytoma pacifica Squires, 2001 (n. sp.). NHMLAC CS 489:14–16, figs. 26, 27. Llajas Fm., Eocene. Chivo Canyon, Simi Valley, Ventura Co. LACMIP 22371. Holotype LACMIP 12744. [Borsoniidae].

Batillaria californica Taylor, 1983 (n. sp.). CMPUM 26(13):290–293, figs. 1a–d. Bouse Fm., Miocene. Imperial Co. USGS M3091. Holotype USNM 305208, paratypes USNM 305209–305211. [Batillariidae].

Batillaria ocoyana (Anderson and Martin, 1914). [*Drillia*]. Addicott 1970. USGS PP 642:53, pl. 3, fig. 2. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650069. [Batillariidae].

....., pl. 3, fig. 8. Bakersfield and Caliente quads. (1914), Kern Co. UCMP B1600. Hypotype UCMP 14995.

....., pl. 3, figs. 9–12. On west bank of Ely Fork Oil Center quad. (1954), Kern Co. USGS M1602. Hypotypes USNM 649170, determined here as missing, 650070.

Batillaria ocoyana (Anderson and Martin, 1914). [*Drillia*]. Stadum 1973. OCF, p. 27, pl. 4, fig. 9. Topanga Fm., Miocene. Orange Co. Hypotype possibly at SDSNH (current whereabouts unknown). **Remarks:** *Ex* Grouard collection. [Batillariidae].

Batillaria ocoyana (Anderson and Martin, 1914). [*Drillia*]. Susuki 1992, Topanga Story, p. 7, fig. 3. Topanga Fm., Miocene (Cold Creek Member). Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP 22635 [=UCLA

2635]. Hypotype LACMIP 13075 [=UCLA 57334]. [Batillariidae].

Benoistia cantonensis Squires, 1987 (n. sp.). NHMLAC CS 388:30–31, figs. 30, 31. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 802 [=LACMIP 16144]. Holotype LACMIP 7458. [Littorinidae].

Benoistea umpquaensis* Turner, 1938. Givens and Kennedy 1976. Jour. Paleo. 50(5):960, 964, 965, pl. 1, figs. 16, 17. Llajas Fm., Eocene. Simi Valley, Ventura Co. UCMP 7005. Holotype (of *Tectarius ligniticus* Vokes 1939) UCMP 15838. **Remarks:** Error for *Benoistia*. [Littorinidae].

.....pl. 1, figs. 18–21. Delmar Fm. [=Santiago Fm.?], Eocene. Between Vista and San Marcos, San Diego Co. UCR 4865. Hypotypes UCR 4865/40–4865/42.

Benoistia umpquaensis Turner, 1938. Squires 1984. NHMLAC CS 350:20, fig. 6m. Llajas Fm., Eocene. Santa Susana quad. (1951, PR 1967) Ventura Co. CSUN 374 [=LACMIP 22312, =LACMIP 7242]. Hypotype UCLA 59274 [=LACMIP 10550]. [Littorinidae].

"*Beringinus*"** arnoldi* (Martin, 1914). [*Argobuccinum*]. Smith 1970. BAP 56(254):520–522, pl. 49, fig. 10. Rio Dell Fm., Pliocene. West of the branching of the Little South Fork of the Elk River, Fortuna quad., Humboldt Co. UCMP A6855. Hypotype UCMP 10585. **Remarks:** Error for *Beringius*. [Buccinidae].

....., pl. 49, fig. 13. From the vicinity of the mouth of Bear River, Humboldt Co. UCMP 1863. Holotype UCMP 12340.

Beringius stantoni (Arnold, 1908). [*Chrysodomus*]. Perry 1988. SCMA, p. 21, fig. 12F. Purisima Fm., Miocene/Pliocene. Capitola beach area, Santa Cruz Co. Hypotype determined here as missing. [Buccinidae].

?*Bittium arnoldi* Bartsch, 1911. Stanton 1966. Jour. Paleo. 40(1):33, pl. 6, fig. 17. Castaic Fm., Miocene. Tributary to Elizabeth Lake Canyon, Los Angeles Co. CIT 279 [=LACMIP 7777]. Hypotype LACMIP 4169]. [Cerithiidae].

Bittium asperum (Gabb, 1866). [*Turbonilla*]. Woodring et al., 1940 [1941]. USGS PP 195:63, pl. 29, fig. 15. Etchegoin Fm. (*Pseudocardium* zone), Pliocene. Arroyo Conchoso area, North Dome, Kettleman Hills, Kings Co. USGS 12524. Hypotype USNM 495797. **Remarks:** In the genus *Lirobittium*, *fide* Squires (2012: p. 77). [Cerithiidae].

Bittium asperum (Gabb, 1866). [*Turbonilla*]. Moore et al. 1952. Invert. Foss., p. 326, fig. 8-40.4. Pliocene. Line drawing, source specimen unknown. [Cerithiidae].

Bittium (*Lirobittium*) *asperum* (Gabb, 1866). [*Turbonilla*]. Adegoke 1969. UCPG 80:162–163, pl. 11, fig. 6. Etchegoin Fm., Pliocene. Coalinga quad., Fresno Co. UCMP B6546. Hypotype UCMP 36812. **Remarks:** In the genus *Lirobittium*, *fide* Squires (2012: p. 77). [Cerithiidae].

Bittium casmaliense Bartsch, 1911. Woodring and Bramlette 1950 [1951]. USGS PP 222:70, pl. 11, fig. 7. Foxen Mudstone, Pliocene. Casmalia Hills, near Shuman, Santa Barbara Co. USGS. 14876. Hypotype USNM 560043. [Cerithiidae].

....., pl. 11, fig. 8. Casmalia Hills, Santa Barbara Co. USGS 14877. Hypotype USNM 560044.

Bittium casmaliense Bartsch, 1911. Durham and Addicott 1965. USGS PP 524-A:A12 pl. 5, fig. 10 (peel cast). Pancho Rico Fm., Miocene/Pliocene. Pancho Rico Creek area, San Ardo quad., Monterey Co. USGS M1929. Hypotype USNM 649108. [Cerithiidae].

....., pl. 5, fig. 15 (peel cast). Top of ridge between Powell Canyon and Cañada Montuosa, Valleton quad., Monterey Co. USGS M1967. Hypotype USNM 649109.

Bittium casmaliense Bartsch, 1911. Addicott 1969. Pr.CAS 37(3):62, 64–65, pl. 1, figs. 9, 14. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM. 650950, 650951. [Cerithiidae].

Bittium casmaliense arnoldi Bartsch, 1911. Woodring and Bramlette 1950 [1951]. USGS PP 222: 70–71, pl. 13, fig. 16. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge near Orcutt, Santa Barbara Co. USGS 14648. Hypotype USNM 560066. [Cerithiidae]. Remarks: The age of this member is Plio/Pleistocene, *fide* Buczek et al. (2020: fig. 3).

Bittium? *dumblei* (Dickerson, 1916). [*Cerithium*]. Squires 1987. NHMLAC CS 388:29–30, fig. 28. Juncal Fm., Eocene.

Whitaker Peak quad. (1958), Los Angeles Co. CSUN 845 [=LACMIP 16137]. Hypotype LACMIP 7456. [Cerithiidae].

Bittium dumblei? (Dickerson, 1916). [*Cerithium*]. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 6. Juncal Fm., Eocene. Whitaker Peak area, Los Angeles Co. CSUN 845 [=LACMIP 16137]. Hypotype LACMIP 7456. [Cerithiidae].

Bittium? *dumblei* (Dickerson, 1916). [*Cerithium*]. Squires 1988c. NHMLAC CS 398:11, fig. 18. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 979 [=LACMIP 16081]. Hypotype LACMIP 7699. [Cerithiidae].

Bittium* (*Semibittium*?) *frankeli Faustman, 1964 (n. sp.). UCPG 41(2):134–135, pl. 3, figs. 10–15. Upper Rio Dell Fm., Pliocene. Ferndale quad., Humboldt Co. UCMP B7952. Holotype UCMP 37830, paratypes UCMP 37831, 37832. [Cerithiidae].

Bittium preussi (M.A. Hanna, 1927). [*Cerithiopsis*]. Givens and Kennedy 1976. Jour. Paleo. 50 (5):963, 965, pl. 2, figs. 1–4. Delmar Fm. [=Santiago Fm.?], Eocene. Near Vista and San Marcos, San Diego Co. UCR 4865. Hypotypes UCR 4865/50–4865/53. [Cerithiidae].

Bittium cf. *B. preussi* (M.A. Hanna, 1927). [*Cerithiopsis*]. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 17. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. CSUN 662 [=LACMIP 23779]. Hypotype LACMIP 11460. [Cerithiidae].

Bittium topangensis (Arnold, 1907). [*Cerithium*]. Addicott 1970. USGS PP 642:52, pl. 3, figs. 4, 5. Upper Olcese Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1600. Hypotype USNM 650071. [Cerithiidae].

....., pl. 3, figs. 6. 7. Bakersfield and Caliente quads. (1914), Kern Co. UCMP B1600. Hypotype UCMP 15423.

....., pl. 3, figs. 13. 14. Rio Bravo Ranch quad. (1954), Kern, Co. USGS M1599. Hypotype USNM 650072.

Bittium topangensis (Arnold, 1907). [*Cerithium*]. Stadum 1973. OCF, p. 27, pl. 4, fig. 8. Topanga Fm., Miocene. Topanga Canyon, Santa Monica Mtns., Los Angeles Co. UCLA 2632 (=LACMIP 22632]. Hypotype UCLA 49517 [=LACMIP 10616]. **Remarks:** *Ex* Grouard collection. [Cerithiidae].

Bittium topangensis (Arnold, 1907) [*Cerithium*]. Susuki 1992, Topanga Story, p. 7, fig. 4. Topanga Fm., Miocene (Cold Creek Member). Topanga Canyon, Santa Monica Mtns., Los Angeles Co. [LACMIP 22632 (=UCLA 2632). Hypotype LACMIP 13076 [=UCLA 57337]. [Cerithiidae].

Bittium cf. *B. vancouverense* Dall and Bartsch, 1910. Cummings et al. 1962:202, ph. 16, fig. 1. Purisima Fm. (Pomponio Member), Pliocene. Vicinity of Purisima Creek, Half Moon Bay quad., San Mateo Co. Locality F701M. Hypotype determined here as missing. [Cerithiidae].

Bittium sp. Yancey 1978. Pr.CAS 41(15):364, 369, figs. 5M, N. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D5920. Hypotypes USNM 251809, 251810. [Cerithiidae].

Boetica hertleini Kanakoff, 1966 (n. sp.). LACM CS 103:3–4, fig. 1. Originally referred to as Pico Fm. (Pliocene) but most likely is Castaic Fm. (Miocene). Mint Canyon quad., Los Angeles Co. LACMIP 291. Holotype LACMIP 1145, unfigured paratypes LACMIP 1146, [2176–2178]. [Littorinidae]

Bonellitia paucivaricata (Gabb, 1864). [*Tritonium*]. Weaver and Kleinpell 1963. UCPG 43:193, pl. 27, fig. 4. Matilija Sandstone, Eocene. Nojoqui Creek area, Lompoc quad., Santa Barbara Co. UCMP B6920. Hypotype SU 9235 [=CASG 70138]. [Cancellariidae].

Bonellitia (*Admetula*) *paucivaricata* (Gabb, 1864). [*Tritonium*]. Squires 1988c. NHMLAC CS 398:16, fig. 37. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 981 [=LACMIP 16142]. Hypotype LACMIP 7717. [Cancellariidae].

Boreotrophon durhami Faustman, 1964 (n. sp.). UCPG 41(2):133, pl. 3, figs. 2, 4. 5, 7. Upper Rio Dell Fm., Pliocene. Near Fleener Creek, Ferndale quad., Humboldt Co. UCMP B7939 (not UCMP B7949 as in text and pl. caption for figs. 4, 5). Holotype UCMP 37824, paratype UCMP 37826. [Muricidae]. **Remarks:** The age of this member is Pliocene/Pleistocene, *fide* Buczek et al. (2020: fig. 3).

....., pl. 3, figs. 3, 6. Ferndale quad., Humboldt Co. UCMP B7950. Paratype UCMP 37825.

Boreotrophon multicostatus (Eschscholtz, 1829), inflated var. [*Trophon*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:76, pl. 15, figs. 22, 24. Careaga Fm. (Cebada Member), Pliocene. Alex Clark locality. Hypotype USNM 560081. [Muricidae].

Boreotrophon stuarti var. ***cierboensis*** Grant and Allen *in* Eaton et al., 1941 (n.var.). AAPG Bull. 25(2):pl. 2, fig. 4. Cierbo Fm., Miocene. Caliente Range, San Luis Obispo Co. UCLA 1856 [=LACMIP 21856]. Holotype UCLA 8935 [=LACMIP 8962]. [Muricidae].

Brachysphingus gabbi Stewart, 1926 [1927]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):168, figs. 62-1, 62-2. Martinez Fm., Eocene [Paleocene]. Contra Costa Co. CASG 27174. Hypotype CASG 5700. **Remarks:** *Brachysphingus sinuatus* Gabb, 1869b, *fide* Squires (1997a: p. 855). [Buccinidae].

Brachysphingus gabbi Stewart, 1926 [1927]. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, figs. 13, 14. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 4573. Hypotype UCR 4573/26. **Remarks:** *Brachysphingus gibbosus* Nelson, 1925, *fide* Squires (1997a: p. 851). [Buccinidae].

Brachysphingus gibbosus Nelson, 1925. Nuttall and Cooper 1973. Bull. BM(NH) 23(3):208–209, pl. 8, figs. 3, 4. Martinez Fm. [=Santa Susana Fm.], Paleocene. [Simi Hills?], Ventura Co. Hypotypes (=NHMUK) BMNH G72721, G12834/1. [Buccinidae].

Brachysphingus gibbosus Nelson, 1925. Squires 1997a. Jour. Paleo. 71(5):851–854, figs. 3.1. 3.2, 3.4. Santa Susana Fm., Paleocene. Meier canyon, south side Simi Valley, Simi Hills, Calabasas quad. (1952, PR 1967), Ventura Co. LACMIP 22330. Hypotypes LACMIP 7924, 7925. [Buccinidae].

....., figs. 3.3, 3.7, 3.8. South side Simi Valley, Simi Hills, Calabasas quad. (1952, PR 1967), Ventura Co. UCMP 3776. Holotype UCMP 30526, paratype UCMP 30527.

....., figs. 3.5, 3.6. Meier Canyon, Calabasas quad. (1952, PR 1967), south side Simi Valley, Ventura Co. CSUN 123c [=LACMIP 17086]. Hypotype LACMIP 7926.

....., figs. 3.9, 3.10. Calabasas quad. (1952, PR 1967), Ventura Co. LACMIP 22702. Hypotype LACMIP 7927.

....., figs. 3.11, 3.12. San Francisquito Fm., Paleocene. East Fork Fish Canyon, Warm Springs Mtn. quad. (1958, PR 1974), Los Angeles Co. LACMIP 21581. Hypotype LACMIP 7928.

....., figs. 3.13, 3.14. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek, south side Lake Nacimiento, Lime Mtn. quad. (1948), San Luis Obispo Co. LACMIP 26526. Hypotype LACMIP 7563.

....., figs. 3.15, 3.16. Santa Susana Fm., Paleocene. Calabasas quad. (1952, PR1967), Ventura Co. LACMIP. 23110. Hypotype LACMIP 7929.

Brachysphingus mammilatus Clark and Woodford, 1927. Hertlein 1951. CDM Bull. 154:191, figs. 2, 11. Martinez Fm., Paleocene. Near Benicia Arsenal, Solano Co. UCMP A4785. [Hypotype UCMP 32298]. [Buccinidae].

Brachysphingus mammilatus Clark and Woodford, 1927. Givens 1974. UCPG 109:84, pl. 10, fig. 3. Juncal Fm., Eocene. Hot Springs Creek, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4662. Hypotype UCR 4662/5. [Buccinidae].

Brachysphingus mammilatus Clark and Woodford, 1927. Squires 1997a. Jour. Paleo. 71(5):856–858, figs. 5.1–5.3. Meganos Fm., Paleocene/Eocene. Deer Valley area, Antioch South quad. (1980), Contra Costa Co. LACMIP 7173. Hypotypes LACMIP 7934, 7935. [Buccinidae].

....., figs. 5.4, 5.5. Antioch South quad. (1980), Contra Costa Co. LACMIP 22387. Hypotype LACMIP 7936.

....., figs. 5.6, 5.7. Lodo Fm., Paleocene. Panoche Creek east of Silver Creek, Tumey Hills quad. (1956, PR 1971), Fresno Co. LACMIP 26456. Hypotype LACMIP 7937.

....., figs. 5.8, 5.9. Meganos Fm., Paleocene/Eocene. Deer Valley area, Antioch South quad. (1980), Contra Costa Co. UCMP 3157. Holotype UCMP 31234.

....., figs. 5.10, 5.11. Brentwood quad. (1978), Contra Costa Co. UCMP 3577 (not UCMP 3159 as in pl. caption). Paratype UCMP 31235.

....., fig. 5.12–5.14. Lodo Fm., Paleocene. Near Silver Creek junction with Panoche Creek, Tumey Hills quad. (1956, PR 1971), Fresno Co. LACMIP 7044. Hypotypes LACMIP 7938, 7939.

Brachysphingus mammilatus Clark and Woodford, 1927. Squires 1999b. NHMLAC CS 479:19, fig. 38. Santa Susana Fm., Eocene. Bulldozer-generated exposure now under houses, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 958 [=LACMIP 40958]. Hypotype LACMIP 12685. [Buccinidae].

Brachysphingus sinuatus Gabb, 1869b. Wenz 1943. Handbh. Palaoz. 6:1228, fig. 3493 (refigured from Stewart, 1926 [1927], pl. 25, fig. 2). Martinez Fm., Paleocene. Martinez, [Contra Costa Co.]. Lectotype (of Stewart 1926 [1927]:392, ANSP 4258), [Paralectotypes (6) ANSP 79503]. [Buccinidae].

Brachysphingus sinuatus Gabb, 1869b. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, figs. 11, 12. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6670. Hypotype UCR 6670/29. [Buccinidae].

Brachysphingus sinuatus Gabb, 1869b. Squires 1997a. Jour. Paleo. 71(5):854–856, figs. 4.1–4.4. Martinez Fm., Paleocene. East of Lower Lake, Copsey Creek area, Lower Lake quad. (1975), Lake Co. UCMP A1523 [=LACMIP 7047]. Hypotypes UCMP 154001, 154002. [Buccinidae].

....., figs. 4.5, 4.6, 4.9, 4.10. East of Lower Lake, Copsey Creek area, Lower Lake quad. (1975), Lake Co. LACMIP 7047 (=LACMIP 7051). Hypotypes LACMIP 7930–7932.

....., figs. 4.7, 4.8. Unknown strata (possibly Vine Hill Sandstone), Paleocene. Pacheco area, near Martinez, Contra Costa Co. Holotype (of *Buccinum liratum* Gabb, 1864) ANSP 4196, unfigured paralectotypes (4) ANSP 79423.

....., figs. 4.11, 4.12. Santa Susana Fm., Paleocene. Simi Hills, Calabasas quad. (1952, PR 1967), Ventura Co. LACMIP 22701. Hypotype LACMIP 7933.

....., figs. 4.13, 4.14. Unknown strata (possibly Vine Hill Sandstone), Paleocene. Pacheco area, near Martinez, Contra Costa Co. Lectotype (of Stewart, 1926 [1927), p. 392), ANSP 4258, paralectotype ANSP 79503.

Brachysphingus n. sp. Saul 1986. SEPM Guidebook 49:29, figs. 52, 53. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6525 [=LACMIP 26526]. Hypotype LACMIP 7563. **Remarks:** *Brachysphingus gibbosus* Nelson, 1925, *fide* Squires (1997a: p. 851). [Buccinidae].

?*Brachysphingus* species. Allmon 1990. BAP 99(335):64, pl. 10, fig. 14. Martinez Fm., Paleocene. Mt.Diablo quad., Contra Costa Co. UCMP A1620. Hypotype UCMP number unknown. **Remarks:** *Brachysphingus sinuatus* Gabb, 1869b, *fide* Squires (1997a: p. 855). [Buccinidae].

Bruclarkia barkeriana (Cooper, 1894). [*Agasoma*]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):174, fig. 63-19. Temblor Fm., Miocene. Hills just north of Kern River, Kern Co. CASG 65. Hypotype CASG 5741. [Buccinidae].

Bruclarkia barkeriana (Cooper, 1894). [*Agasoma*]. Addicott 1965b. USGS PP 525-C:C106, figs. 4a, b. Upper Olcese Sand, Miocene. Bakersfield and Caliente quads. (1914), Kern Co. UCMP B1600. Hypotype UCMP 36555. [Buccinidae].

Bruclarkia barkeriana (Cooper, 1894). [*Agasoma*]. Addicott 1970. USGS PP 642:88–90, pl. 9, fig. 13. Lower Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype UCMP 32774. [Buccinidae].

....., pl. 9, fig. 23. Upper Olcese Sand, Miocene. Bakersfield quad. (1906), Kern Co. UCMP B1587. Hypotype UCMP 32775.

....., pl. 9, fig. 24. North side of Kern River north of Bakersfield, Kern Co. USGS 6890. Hypotype USNM 166584.

....., pl. 9, fig. 25. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 32776.

....., pl. 9, figs. 27, 28. Bakersfield and Caliente quads. (1914), Kern Co. UCMP. B1600. Hypotype UCMP 36555.

....., pl. 10. figs. 3, 7. Lower Olcese Sand, Miocene. Borel Canyon area, Kern Co. UCMP B1646. Hypotype UCMP 32807.

....., pl. 10, fig. 10. Monterey Fm. (Saltos Member), Miocene. Caliente Range, San Luis Obispo Co. USGS M2898. Hypotype USNM 650144.

Bruclarkia barkeriana (Cooper, 1894). [*Agasoma*]. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 13. Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5026. Hypotype USNM 254362. [Buccinidae].

Bruclarkia barkeriana (Cooper, 1894). [*Agasoma*]. Addicott et al. 1980. SEPM Guidebook 6:18, 20, pl. 1, fig. 13 (refigured from Addicott et al., 1978, pl. 1, fig. 13). Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5026. Hypotype USNM 254362. [Buccinidae].

Bruclarkia barkeriana forma *santacruzana* (Arnold, 1908). [*Agasoma*]. Addicott 1965b. USGS PP 525-C:C106, fig. 4c. Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598 (not UCMP B1603 as in fig. caption). Hypotype UCMP 36556. **Remarks:** Junior synonym of *Bruclarkia barkeriana* (Cooper, 1894), *fide* Addicott (1970: p. 88). [Buccinidae].

Bruclarkia barkeriana forma *santacruzana* (Arnold, 1908). [*Agasoma*]. Addicott 1970. USGS PP 642:88–89, pl. 10, figs. 1, 2, 5. Upper Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598 (not UCMP B1603 as in pl. caption). Hypotype UCMP 32806, 36556. **Remarks:** Junior synonym of *Bruclarkia barkeriana* (Cooper, 1894), *fide* Addicott (1970: p. 88). [Buccinidae].

....., pl. 10, fig. 9. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650143.

Bruclarkia barkeriana forma *santacruzana* (Arnold, 1908). [*Agasoma*]. Addicott 1973b. USGS PP 791:7, 21, 22, pl. 9, fig. 3 (refigured from Addicott, 1970, pl. 10, fig. 5). Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP. B1598. Hypotype UCMP 36556. **Remarks:** Junior synonym of *Bruclarkia barkeriana* (Cooper, 1894), *fide* Addicott (1970: p. 88). [Buccinidae].

Bruclarkia columbiana (Anderson and Martin, 1914) [*Agasoma*]. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 12. Temblor Fm. (Salt Creek Shale Member) (of Stinemeyer et al. 1959: pp. 12–14), Miocene. Temblor Range, Kern Co. UCR 1106. Hypotype UCR 1106/1 (not UCR 1106 as in pl. caption). **Remarks:** Junior synonym of *Bruclarkia gravida* (Gabb, 1866), *fide* Vendetti (2009: pp. 40, 44).[Buccinidae].

Bruclarkia columbiana (Anderson and Martin, 1914). [*Agasoma*]. Addicott 1973b. USGS PP 791:7–8, pl. 9, figs. 22, 23. Temblor Fm. (Cymric Shale Member), Oligocene. Kern Co. UCR 1106. Hypotype UCR 1106/1 (not UCR 1106 as in pl. caption). **Remarks:** Junior synonym of *Bruclarkia gravida* (Gabb, 1866), *fide* Vendetti (2009: pp. 40, 44). [Buccinidae].

Bruclarkia columbiana (Anderson and Martin, 1914). [*Agasoma*]. Phillips et al. 1974. SEPM Guidebook, p. 123, pl. 3, fig. 10 (peel). Tumey Fm., Eocene/Oligocene. Monocline Ridge, Fresno Co. UCMP D4272]. Hypotype UCMP 37169. **Remarks:** Junior synonym of *Bruclarkia gravida* (Gabb, 1866), *fide* Vendetti (2009: pp. 40, 44). [Buccinidae].

Bruclarkia columbiana (Anderson and Martin 1914). [*Agasoma*]. Watkins 1974. Paleo.3 15:255, fig. 8G (cast). Kreyenhagen Fm., Oligocene. Monocline RidgeMonocline Ridge quad., Fresno Co. UCMP D4272]. Hypotype UCMP 37169. **Remarks:** Junior synonym of *Bruclarkia gravida* (Gabb, 1866), *fide* Vendetti (2009: pp. 40, 44). [Buccinidae].

Bruclarkia gravida (Gabb, 1866). [*Clavella*]. Wenz 1943. Handbh. Palaoz. 6:1213, fig. 3456 (refigured from Stewart, 1926 [1927], pl. 31, fig. 11. San Ramon Fm., Oligocene. Martinez, Contra Costa Co. Lectotype (of Stewart 1926 [1927]:398) ANSP 4345; refigured by Addicott 1973b, pl. 9, figs 15, 20, 21]. [Buccinidae].

Bruclarkia gravida (Gabb, 1866). [*Clavella*]. Shimer and Shrock 1944. Index Foss. N.A., p. 503, pl. 206, fig. 17 (refigured from Gabb 1866, pl. 1, fig. 6 (as *Clavella gravida*)). San Ramon Fm., Miocene. Martinez, Contra Costa Co. Lectotype (of Stewart, 1926 [1927]:398) ANSP. 4345, unfigured paralectotypes (14) ANSP 79487]. [Buccinidae].

Bruclarkia gravida (Gabb, 1866). [*Clavella*]. Hertlein 1951. CDM Bull. 154:191, fig. 2.6. San Ramon Fm.?, Oligocene. Near Muir Station, Contra Costa Co. UCMP A4661. Hypotype UCMP. 32426]. [Buccinidae].

Bruclarkia gravida (Gabb, 1866). [*Clavella*]. Addicott 1973b. USGS PP 791:7, 21, pl. 9, figs. 15, 20, 21. San Ramon Fm., Miocene. Martinez, Contra Costa Co. Lectotype (of Stewart 1926 [1927]:398) ANSP 4345, hypotype ANSP. 4345a (invalid number, *fide* K. Estes-Smargianni, personal communication, 2019). [Buccinidae].

Bruclarkia oregonensis (Conrad, 1848). [*Fusus*]. Lutz 1951. UCPG 28(13):391, pl. 18, figs. 1, 6. Sobrante Fm., Miocene. Near junction of Norris Creek with Crow Creek, Hayward quad., Alameda Co. UCMP A4565. Hypotypes UCMP 34162, 34163. [Buccinidae].

Bruclarkia oregonensis (Conrad, 1848). [*Fusus*]. Hall 1958. UCPG 34(1):58, pl. 11, figs. 1, 2 (fig. 1 = cast from hypotype SU 8479). Oursan Sandstone, Miocene. Northwest of Pleasanton, Dublin quad. (1943), Alameda Co. SU 3229. Hypotype SU 8479 [=CASG 69956]. [Buccinidae].

Bruclarkia oregonensis (Conrad, 1848). [*Fusus*]. Addicott 1970. USGS PP 642:90, pl. 10, fig. 4. Upper Olcese Sand, Miocene., Bakersfield quad. (1906), Kern Co. UCMP B1593. Hypotype UCMP 32832. **Remarks:** *Bruclarkia* sp. aff. *Bruclarkia barkeriana* (Cooper, 1894), *fide* Vendetti (2009: p. 52), pl. 8, fig. 32. [Buccinidae].

....., pl. 10, fig. 14 (peel). Lower Olcese Sand, Miocene., Woody quad. (1952), Kern Co. USGS M1593. Hypotype USNM 650145.

Bruclarkia oregonensis (Conrad, 1848). [*Fusus*]. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, figs. 14, 15. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al. 1959:8, 13), Miocene. Shale Pt. quad., Temblor Range, Kern Co. USGS M3986. Hypotypes USNM 646804, 646805. [Buccinidae].

Bruclarkia oregonensis (Conrad, 1848). [*Fusus*]. Rugh 2016. Desert Symposium vol.:312, fig. 3. Topanga Fm., Miocene. San Juan Creek area, Orange Co. [Hypotype at CC]. [Buccinidae].

Bruclarkia oregonensis yaquinana (Anderson and Martin, 1914). [*Agasoma*]. Adegoke 1969. UCPG 80:183, pl. 10, figs. 15, 16. Temblor Fm., Miocene. Reef Ridge quad., Kings Co. UCMP D1056. Hypotype UCMP 36871. [Buccinidae].

Bruclarkia seattlensis Durham, 1944. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 8. Temblor Fm. (*Phacoides* Sand member) (of Stinemeyer et al. 1959:12–13), Miocene. Las Yeguas Ranch quad., Temblor Range, Kern Co. USGS M3280. Hypotype USNM 646616. **Remarks:** Junior synonym of *Bruclarkia acuminata* (Anderson and Martin, 1914), *fide* Vendetti (2009: pp. 9, 40). [Buccinidae].

....., pl. 1, fig. 13. Las Yeguas Ranch quad., Temblor Range, Kern Co. USGS M3772. Hypotype USNM 646615.

Bruclarkia seattlensis Durham, 1944. Addicott 1973b. USGS PP 791:7, 21, 22, pl. 9, fig. 1. Temblor Fm. (Wygal Sandstone Member), Miocene. Zemorra Creek area, Carneros Rocks quad., Kern Co. USGS M3979. Hypotype USNM 646613. **Remarks:** Junior synonym of *Bruclarkia acuminata* (Anderson and Martin, 1914), *fide* Vendetti (2009: pp. 9, 40). [Buccinidae].

....., pl. 9, figs. 2, 8, 9 (refigured from Addicott 1972b, pl. 1, fig. 13). Vicinity of Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3772. Hypotypes USNM 646614, 646615. [Buccinidae].

....., pl. 9, fig. 14 (refigured from Addicott 1972b, pl. 1, fig. 8). Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646616.

Bruclarkia seattlensis Durham, 1944. Addicott 1979. SEPM Guidebook 14:47–48, pl. 1, figs. 4, 13. Vaqueros (?) Fm. (lower sandstone member), Oligocene. The Indians, Junipero Serra quad., Santa Lucia Range, Monterey Co. SU 1756. Hypotypes CASG 60365, 60372 determined here as missing. **Remarks:** Junior synonym of *Bruclarkia acuminata* (Anderson and Martin, 1914), *fide* Vendetti (2009: pp. 9, 40). [Buccinidae].

....., pl. 1, figs. 7, 15. Approximately 1 km southeast of Indian Ranger Station, Monterey Co. USGS M6557. Hypotypes USNM 264140, 264142, determined here as missing.

Bruclarkia yaquinana (Anderson and Martin, 1914). [*Agasoma*]. Addicott 1970. USGS PP 642:90–91, pl. 10, figs. 8, 12, 13. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotypes USNM 650149, 650151. **Remarks:** Junior synonym of *Bruclarkia acuminata* (Anderson and Martin, 1914), *fide* Vendetti (2009: pp. 9, 40). [Buccinidae].

Bruclarkia sp. Lutz 1951. UCPG 28(13):391–392, pl. 18, fig. 11. Sobrante Fm., Miocene. Near Pacheco, Contra Costa Co. UCMP A4929. Hypotype UCMP 34164. **Remarks:** *Bruclarkia oregonensis* (Conrad, 1848), *fide* Addicott (1970: p. 90). [Buccinidae].

Bruclarkia sp. Koch et al. 2004. NPS Tech. Rept. 04/01:14, fig. 9 (upper right center specimen). [Topanga Fm., Miocene]. Santa Monica Mtns., Los Angeles Co. Hypotype SAMO 3204. **Remarks:** Determined here as *Bruclarkia barkeriana* (Cooper, 1894). [Buccinidae].

Indeterminate *Bruclarkia* Powell et al. 2019b. *PaleoBios* 36:12–13, fig. 22. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP13004. Hypotype UCMP 412181. [Muricidae].

Buccinidae. Rugh 2014b. Desert Symposium vol.:141, fig. 2–4. Deguynos Fm. (Camels Head Member), Miocene/Pliocene. Fish Creek/Vallecito Creek, San Diego Co. [ABDSP 5081.2. Hypotype ABDSP I 11151]. **Remarks:** Possibly in the genus *Solenosteira*. [Buccinidae].

Indeterminate buccinid. Throckmorton 1988a. USGS OFR 88-59:53, pl. 7, fig. 5 (refigured in Throckmorton 1988b, pl. 1, fig. 25). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8156. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Buccinidae].

Bulla cantuaensis Anderson and Martin, 1914. Addicott 1970. USGS PP 642:138, pl. 20, figs. 34, 35. Lower Round Mtn. Silt, Miocene. Caliente Quad., Kern Co. SU 2121. Hypotype SU/CASG. 9941 determined here as missing. [Bullidae].

Bulla cantuaensis Anderson and Martin, 1914. Addicott et al. 1978. USGS OFR 78-446:58, 72, pl. 4, fig. 3. Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2859. Hypotype USNM 254372. [Bullidae].

Bulla cantuaensis Anderson and Martin, 1914. Addicott et al. 1980. SEPM Guidebook 6:18, 33, pl. 5, fig. 3 (refigured from Addicott et al., 1978, pl. 4, fig. 3). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2859. Hypotype USNM 254372. [Bullidae].

Bulla sp. Redman et al. 2007. *Palaios* 22: :633, fig. 3D. Imperial Fm. (=Latrania Fm.), Miocene/Pliocene. Fossil Canyon, Imperial Co. Hypotype probably at SDSU, current whereabouts unknown. [Bullidae]

Bullia (*Buccinanops*)? *clarki* Wagner and Schilling, 1923. Allmon 1990. BAP 99(335):70, pl. 10, fig. 12. San Emigdio Fm., Oligocene. San Emigdio Grant, Mt. Pinos quad., Kern Co. UCMP 3182. Holotype UCMP 11430. [Nassariidae].

Bullina sp. Addicott 1970. USGS PP 642:137–138, pl. 7, fig. 20. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1612. Hypotype USNM 650336. [Aplustridae].

Calicantharus cf. *C. branneri* (Clark and Arnold, 1923). [*Searlesia*]. Addicott 1973b. USGS PP 791:7, 20, pl. 9, fig. 13. Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Creek area, Carneros Rocks quad., Kern Co. USGS M4471. Hypotype USNM 646622. **Remarks:** In the genus *Lirabuccinum*, *fide* Vermeij (1991: p. 269). [Buccinidae].

Calicantharus dalli (Clark, 1918). [*Searlesia*]. Addicott 1973b. USGS PP 791:7, 20, pl. 9, fig. 24. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3772. Hypotype USNM 646628. **Remarks:** In the genus *Lirabuccinum*, fide Vermeij (1991: p. 269). [Buccinidae].

Calicantharus cf. *C. fortis* (Carpenter, 1866). [*Pisania*]. Durham and Addicott, 1965. USGS PP 524-A:A13, pl. 5, fig. 8 (cast). Pancho Rico Fm., Miocene/Pliocene. Base of bluff on south side of Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M1939. Hypotype USNM 649106. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Calicantharus fortis (Carpenter, 1866 [not 1864 as cited]). [*Pisania*]. Squires 2012. NHMLAC CS 520: 77, 86, fig. 81. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14398. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Calicantharus fortis (Carpenter, 1866 [not 1864 as cited]). [*Pisania*]. Powell 2013. Festivus 45(3):20, pl. 1, figs. 2, 3. Reworked shells, Pliocene. Shells found in a modern-day shrimp trap off San Clemente Is., California Channel Ids. CASG 72573. Hypotype CASG 72573. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Calicantharus fortis var. cf. *angulata* (Arnold, 1907). [*Pisania*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:75, pl. 14, fig. 10. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. CIT 869 [=LACMIP 6108]. Hypotype CIT 4453 [=LACMIP 4194]. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

....., pl. 15, figs. 14, 15. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotype USNM 560079.

Calicantharus cf. *C. fortis angulata* (Arnold, 1907). [*Pisania*]. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 5, fig. 3 (cast). Pancho Rico Fm., Miocene/Pliocene Pancho Rico Creek area, San Ardo quad., Monterey Co. USGS M980. Hypotype USNM 649102. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Calicantharus humerosus (Gabb, 1869a). [*Neptunea*]. Stadum 1973. OCF:p. 31, pl. 6, fig. 4. Towsley Fm., Pliocene. Elsmere Canyon, Los Angeles Co. UCLA 242 [=LACMIP 20242]. Hypotype UCLA 49524 [=LACMIP 10623]. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). *Ex* Grouard collection. [Buccinidae].

Calicantharus humerosus (Gabb, 1869a). [*Neptunea*]. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 2. Niguel Fm., Pliocene. Orange, Co. SDSNH 4080]. **Remarks:** SDSNH hypotype determined here as missing. In the genus *Pusio*, *fide* Vermeij (2001: p. 296).

Calicantharus humerosus (Gabb, 1869a). [*Neptunea*]. Squires 2012. NHMLAC CS 520:77, fig. 80. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14397. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Calicantharus kernensis (Anderson and Martin, 1914). [*Chrysodomus*]. Addicott 1970. USGS PP 642:92–93, pl. 7, fig. 18. Upper Olcese Sand, Miocene. Rio Bravo Ranch quad., Kern Co. LACMIP 463. Hypotype LACMIP 1158. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

....., pl. 10, figs. 18, 19. Caliente quad. (1914), Kern Co. UCMP B1623. Hypotype UCMP 32839.

Calicantharus kettlemanensis (Arnold, 1909 [1910]). [*Thais*]. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 5, figs. 2, 4 (casts). Pancho Rico Fm., Miocene/Pliocene. Pancho Rico Creek area, San Ardo quad., Monterey Co. USGS M1929. Hypotypes USNM 649100, 649101. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Calicantharus cf. *kettlemanensis* (Arnold, 1909 [1910]). [*Thais*]. Addicott 1970. USGS PP 642:94, pl. 11, fig. 30. Lower Round Mtn. Silt, Miocene. North Bank of Kern River, Kern Co. USGS 6063. Hypotype USNM 650162. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Calicantharus kettlemanensis (Arnold 1909, [1910]). [*Thais*]. Addicott 1972b. SEPM Symposium vol., p. 15, pl. 4, fig. 3. Panorama Hills Fm. (of Dibblee 1968), Pliocene. Near Panorama Pt. Panorama Hills quad., Temblor Range, Kern Co. USGS 12876. Hypotype USNM 646813. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

....., pl. 4, fig. 6. Panorama Hills quad., Temblor Range, Kern Co. USGS M1059. Hypotype USNM 646816.

Calicantharus portolaensis (Arnold, 1908). [*Fusus*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:75, pl. 14, figs. 8, 9. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., below brachiopod bed, Santa Barbara Co. USGS 14771. Hypotype USNM 560080. **Remarks:** In the genus *Lirabuccinum*, *fide* Vermeij (1991: p. 269). **Remarks:** Remarks: The age of this member is Pliocene/Pleistocene, *fide* Buczek et al. (2020: fig. 3). [Buccinidae].

Calicantharus rancherianus Addicott, 1970 (n. sp.). USGS PP 642:93, pl. 11, figs. 5, 20, 21. Basal Jewett Sand, MioceneRio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Holotype USNM 650156, hypotypes USNM 650154, 650155. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Calicantharus woodfordi Addicott, 1970 (n. sp.). USGS PP 642:93–94, pl. 10, fig. 6; pl. 11, figs. 17, 18. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650161, paratype USNM 650146. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Californiconus californicus? (Reeve, 1843). Squires, 2012. NHMLAC CS 520:fig. 87. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7757. Hypotype LACMIP 14404. [Conidae].

Califostoma rotundivaricosum Bean and Vermeij, 2016 (n. sp.). Vita Malacologica 15:4–5, pl. 1, figs. 4a–c. San Diego Fm., Pliocene. El Rancho Del Rey, San Diego Co. SDSNH 4411. Holotype SDSNH.137443, paratypes SDSNH.137444, 137445. [Muricidae].

....., pl. 1, figs. 5a–c, 6a–c, 9a. El Rancho Del Rey, San Diego Co. SDSNH 3986. Paratypes SDSNH 137446, 137448.

….., pl. 1, figs. 7a, b. Hidden Vista development, San Diego Co. Paratype SDSNH 23481.

Califostoma turris (Nomland, 1916a). [*Purpura*]. Bean and Vermeij 2016. Vita Malacologica 15:2–3, pl. 1, fig. 1. Etchegoin Fm., Pliocene. West of Coalinga, Fresno Co. UCMP 2110. Holotype UCMP 12049. [Muricidae].

….., pl. 1, fig. 2. Etchegoin Fm., Pliocene. Fresno Co. UCMP 3959. Hypotype UCMP 123094.

….., pl. 1, fig. 3. Chittenden Pass area, Santa Cruz Co. Purisima Fm., Pliocene. UCMP. IP8604. Hypotype UCMP 123235.

Callianax baetica (Carpenter, 1864b). [*Oliva*]. Squires 2012. NHMLAC CS 520: fig. 86. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14403. **Remarks:** Junior synonym of *Calianax alectona* (Duclos, 1835), *fide* Powell et al. (2020: p. 5). [Olividae].

Calliostoma carsoni Addicott, 1970 (n. sp.). USGS PP 642:42–43, pl. 1, figs. 10, 13. Upper Olcese Sand, Miocene. Rio Bravo Ranch quad., Kern Co. UCLA 3456 [=LACMIP 23456]. Holotype UCLA 45763 [=LACMIP 8429]. [Calliostomatidae].

Calliostoma coalingense Arnold, 1909 [1910]. Woodring et al. 1940 [1941]. USGS PP 195:83–84, pl. 11, figs. 2,3. San Joaquin Fm. (*Acila* Zone), Pliocene. Arroyo Vadoso, North Dome, Kettleman Hills, Kings Co. USGS 12330. Hypotype USNM 495710. [Calliostomatidae].

….., pl. 15, figs. 15, 16. San Joaquin Fm. (*Pecten* Zone), Pliocene. Arroyo Torcido area, North Dome, Kettleman Hills, Kings Co. USGS 12334. Hypotype USNM 495768.

Calliostoma coalingense Arnold, 1909 [1910]. Durham and Addicott 1965. USGS PP 524-A: A12, pl. 5, fig. 6 (peel, cast). Pancho Rico Fm., Miocene/Pliocene. Indian Valley, Valleton quad., Monterey Co. USGS M1930. Hypotype USNM 649104. [Calliostomatidae].

….., pl. 5, fig. 7 (peel, cast). South side of Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M979. Hypotype USNM 649105.

Calliostoma coalingense catoteron Woodring *in* Woodring and Bramlette, 1950 [1951] (n. var.). USGS PP 222:69, pl. 13, figs. 5, 6, 10. Careaga Fm. (Cebada Member), Pliocene. North of Shuman, Santa Barbara Co. USGS 4474. Holotype USNM 560061. [Calliostomatidae].

Calliostoma coalingense privum Stewart *in* Woodring et al., 1940 [1941]. Adegoke 1969. UCPG 80:158, pl. 10, figs. 11, 17. Etchegoin Fm., Pliocene, Coalinga quad., Fresno Co. UCMP B6546. Hypotype UCMP 36801. [Calliostomatidae].

Calliostoma gemmulatum Carpenter, 1864b. Vedder and Moore 1976. AAPG Misc. Pub.24:123, 130, pl. 2, figs. 2, 3. Unnamed strata, Pliocene. Near Lemon Tank Reservoir, San Clemente Is., California Channel Is. USGS M6501. Hypotype USNM 235583. [Calliostomatidae].

Calliostoma cf. *C. gemmulatum* Carpenter, 1864b. Woodring et al. 1940 [1941]. USGS PP 195:84, pl. 15, figs. 22, 23. San Joaquin Fm. (*Pecten* Zone), Pliocene. La Lomica, North Dome, Kettleman Hills, Kings Co. USGS 12365a [=USGS 12768). Hypotypes USNM 495774, 495775. [Calliostomatidae].

Calliostoma kerri Arnold, 1909 [1910]. Woodring et al. 1940 [1941]. USGS PP 195:84, pl. 15, fig. 21. San Joaquin Fm. (*Pecten* zone), Pliocene. Vicinity of Arroyo Pequeño and Arroyo Finito, North Dome, Kettleman Hills, Kings Co. USGS 12343. Hypotype USNM 495773. [Calliostomatidae].

Calliostoma olssoni Maury, 1925. Schremp 1981. Jour. Paleo. 55(5):1129, pl. 2, fig. 15. Imperial Fm. [=Latrania Fm.], Pliocene. Vicinity of Whitewater River, San Jacinto quad., Riverside Co. UCMP A1407. Hypotype UCMP 16086. [Calliostomatidae].

….., pl. 2, figs. 18, 19. San Gorgonio Pass, Riverside Co. UCMP A3193. Hypotype UCMP 16086 (not UCMP. 16087 as cited).

Calliostoma platinum Dall, 1890a. Powell 2013. Festivus 45(3):20, pl. 1, fig. 6. Reworked shells, Pliocene. Shells found in a modern-day shrimp trap off San Clemente Is., California Channel Ids. CASG 72574. Hypotype CASG 72574. **Remarks:** In the genus *Akoya*, *fide* Tuskes and McGowan-Tuskes (2019: pp. 21–23). [Calliostomatidae].

Calliostoma sp., aff. *C. grantianum* Berry, 1940. Squires 2012. NHMLAC CS 520:76, figs. 53, 54. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14377. [Calliostomatidae].

Calliostoma sp., cf. *splendens* Carpenter, 1864c. Squires 2012. NHMLAC CS 520:76, figs. 51, 52. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14376. [Calliostomatidae]. **Remarks:** Synonym of *Calliostoma supragranosum*, *fide* Tuskes and McGowan-Tuskes (2019: p. 20). [Calliostomatidae].

Calliostoma sp. A. Addicott 1970. USGS PP 642:43, pl. 1, fig. 11. Lower Jewett Sand, Miocene. Pyramid Hill, Kern Co. CASG 37468. Hypotype CASG 12930. [Calliostomatidae].

Calliostoma sp. B. Addicott, 1970. USGS PP 642:43, pl. 1, fig. 4. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 650335. [Calliostomatidae].

Calliovarica eocensis Vokes, 1939. Knight et al. 1960. Treatise Invert. Paleo. I1:I257, fig. 164-6 (refigured from Vokes 1939, pl. 22, figs. 23, 25). Arroyo Hondo Fm., Eocene. Near where Urruttia Canyon enters Salt Creek, Coalinga quad., Fresno Co. UCMP 1817. Holotype UCMP 15884]. [Chilodontidae].

Calorebama dilleri kirbyi (Clark, 1938). [*Pseudoliva*]. Squires 1989a. Jour. Paleo. 63(1):43, figs. 2.10, 2.11. Tejon Fm., Eocene. Grapevine Canyon, Grapevine quad., Kern Co. UCLA 2340 [=LACMIP 22340]. Hypotype LACMIP 7866 [*ex* UCLA 43896]. **Remarks:** *Sulcobuccinum lineatum*, *fide* Vermeij (1998: p. 81); see Squires (2001: p. 1) for comments about *Calorebama* and *Sulcobuccinum*. [Pseudolividae].

....., fig. 2.12. Markley Fm., Eocene. Vicinity of Putah Creek, Mt Vaca quad., Solano Co. UCMP. A1297. Hypotype UCMP 38211.

Calorebama dilleri lineata (Gabb, 1864). [*Pseudoliva*]. Squires 1989a. Jour. Paleo. 63(1):42–43, figs. 2.7, 2.8. Martinez Fm.?, Eocene. Northeast of Martinez, Contra Costa Co. Lectotype (of Stewart 1926 [1927]:400) ANSP. 4200 (not CASG holotype as in fig. caption), unfigured paralectotypes (9) ANSP 79424]. **Remarks:** *Sulcobuccinum lineatum*, *fide* Vermeij (1998: p. 81); see Squires (2001: p. 10) for comments about *Calorebama* and *Sulcobuccinum*. [Pseudolividae].

....., fig. 2.9. Llajas Fm., Eocene. In Devil Canyon Oat Mtn. quad., Los Angeles Co. CASG 364. Hypotype CASG 364.01.

Calorebama dilleri lineata (Gabb, 1864). [*Pseudoliva*]. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 6. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 674 [=LACMIP 16082]. Hypotype LACMIP 11470. **Remarks:** *Sulcobuccinum lineatum*, *fide* Vermeij (1998: p. 81); see Squires (2001: p. 10) for comments about *Calorebama* and *Sulcobuccinum*. [Pseudolividae].

Calorebama inornata (Dickerson, 1915). [*Pseudoliva*]. Squires 1989a. Jour. Paleo. 63(1):43–44, figs. 2.13, 2.14. Tejon Fm., Eocene. Grapevine Canyon, Grapevine quad., Kern Co. UCMP A971. Hypotype UCMP 38212. **Remarks:** *Sulcobuccinum lineatum*, *fide* Vermeij (1998: p. 81); see Squires (2001: p. 10) for comments about *Calorebama* and *Sulcobuccinum*. [Pseudolividae].

Calorebama inornata (Dickerson, 1915). [*Pseudoliva*]. Squires 1994b. SEPM Guidebook 74:52, pl. 1, fig. 3. Upper Matilija Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 24260. Hypotype LACMIP 11628. **Remarks:** *Sulcobuccinum lineatum*, *fide* Vermeij (1998: p. 81); see Squires (2001: p. 10) for comments about *Calorebama* and *Sulcobuccinum*. [Pseudolividae].

Calorebama inornata (Dickerson, 1915). [*Pseudoliva*]. Squires 2001. NHMLAC CS 489:9–10, fig. 18. Llajas Fm., Eocene. North side of Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 7445. Hypotype LACMIP 12737. **Remarks:** *Sulcobuccinum lineatum*, *fide* Vermeij (1998: p. 81); see Squires (2001: p. 10) for comments about *Calorebama* and *Sulcobuccinum*. [Pseudolividae].

Calorebama volutaeformis (Gabb, 1864). [*Pseudoliva*]. Squires 1989a. Jour. Paleo. 63(1):44–45, figs. 2.15, 2.16. Tejon Fm., Eocene. Grapevine Canyon area, Kern Co. Lectotype (of Stewart 1926[1927]:400) ANSP 4201 (not CASG holotype as in fig. caption). **Remarks:** *Sulcobuccinum lineatum*, *fide* Vermeij (1998: p. 81); see Squires (2001: p. 10) for comments about *Calorebama* and *Sulcobuccinum*. [Pseudolividae].

Calorebama volutaeformis (Gabb, 1864). [*Pseudoliva*]. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 15. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23710. Hypotype LACMIP 11655. [Pseudolividae].

Remarks: *Sulcobuccinum lineatum*, *fide* Vermeij (1998: p. 81); see Squires (2001: p. 10) for comments about *Calorebama* and *Sulcobuccinum*. [Pseudolividae].

Calyptraea coreyi Addicott, 1970 (n. sp.). USGS PP 642:60–61, pl. 4, figs. 1, 4. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Holotype USNM 650085. [Calyptraeidae].

....., pl. 4, fig. 18. Basal Jewett Sand, Miocene. Caliente quad. (1914), Kern Co. UCMP B1665. Paratype UCMP 15452.

Calyptraea coreyi Addicott, 1970. Susuki 1992, Topanga Story, p. 7, fig. 1. Topanga Fm., Miocene (Cold Creek Member). Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP22634 [=UCLA 2634). Hypotype LACMIP 13073 [=UCLA 57622]. [Calyptraeidae].

Calyptraea cf. *costellata* (Conrad, 1857d). [*Trochita*]. Stadum 1973. OCG: pl. 4, fig. 5. Topanga Fm., Miocene. Topanga Canyon, Los Angeles Co. UCLA 2634 [=LACMIP 22634. Hypotype UCLA 49576 [=LACMIP 10615]. [Calyptraeidae].

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Shimer and Shrock 1944. Index Foss. N.A., 487, pl. 199, fig. 37 (refigured from Stewart, 1926 [1927], pl. 27, fig. 15). [Tejon Fm.], Eocene. Vicinity of Ft. Tejon , Kern Co. Lectotype (of Stewart, 1926 [1927]: p. 340, of *Galerus excentricus* Gabb, 1864). ANSP 4235, unfigured paralectotypes (12) ANSP 79473]. [Calyptraeidae].

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Stewart 1946. USGS PP 205-C:93, pl. 11, fig. 5. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14494. Hypotype USNM 498706. [Calyptraeidae].

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Weaver and Kleinpell 1963. UCPG 43:186, pl. 24, fig. 7. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek area, Lompoc quad., Santa Barbara Co. UCMP B6954. Hypotype SU 9195 [=CASG 70140]. [Calyptraeidae].

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Addicott 1973b. USGS PP 791:7, 17, 18, pl. 8, figs. 8, 10. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek area, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646607. [Calyptraeidae].

....., pl. 8, figs. 17, 18. Las Yeguas Ranch quad., Kern Co. USGS M3281. Hypotype USNM 646608.

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, fig. 7. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20776. [Calyptraeidae].

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Squires 1984. NHMLAC CS 350:21, fig. 6q. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6519. [Calyptraeidae].

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Squires 1987. NHMLAC CS 388:32, fig. 34. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 827 [=LACMIP 16153]. Hypotype LACMIP 7461. [Calyptraeidae].

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Squires 1988c. NHMLAC CS 398:11, fig. 19. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 983 [=LACMIP 16110]. Hypotype LACMIP 7700. [Calyptraeidae].

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Squires et al. 1988. SEPM Guidebook 58:185, pl. 1, fig. 3. Goler Fm., Eocene. El Paso Mtns., Inyokern SE quad. (1972), Kern Co. USGS M9067. Hypotype USNM 424891 determined here as missing. **Remarks:** Hypotype never received from authors, *fide* USNM label. [Calyptraeidae].

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 20. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 674 [=LACMIP 16082]. Hypotype LACMIP 11462. [Calyptraeidae].

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Squires 1994b. SEPM Guidebook 74:52, pl. 1, fig. 2. Upper Matilija Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 24260. Hypotype LACMIP 11627. [Calyptraeidae].

....., pl. 2, fig. 8. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23736. Hypotype LACMIP

11648.

Calyptraea diegoana (Conrad, 1855b). [*Trochita*]. Squires 1999b. NHMLAC CS 479:18, fig. 34. Santa Susana Fm., Eocene. North side of Simi Valley, bulldozer-generated exposure now under houses, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 958 [=LACMIP 17190]. Hypotype LACMIP 12682. [Calyptraeidae].

Calyptraea diegoana (Conrad, 1855b). [*Trochita*] Squires 2008. NHMLAC CS 517:5, fig. 18. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13419. [Calyptraeidae].

Calyptraea diegoana' (Conrad, 1855b). Saul and Squires 2008a. Nautilus 122:134, figs. 62–64. Tejon Fm., Eocene. Grapevine Canyon, Tejon quad., Kern Co. LACMIP 22340. Hypotype LACMIP 13458. [Calyptraeidae].

Calyptraea fastigiata Gould, 1846. Cummings et al. 1962. CDMG Bull. 181:208, ph. 19, fig. 3. Purisima Fm. (Lobitos Member), Pliocene. Lobitos Creek area, Half Moon Bay quad., San Mateo Co. locality F692M. Hypotype determined here as missing. [Calyptraeidae].

Calyptraea fastigiata Gould, 1846. Perry 1988. SCMA, p. 20, figs. 11C, D. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. CASG 66087. Hypotype CASG 66087.01. [Calyptraeidae].

Calyptraea cf. *C. filosa* (Gabb, 1866). [*Trochita*]. Woodring et al. 1940 [1941]. USGS PP 195:86 pl. 8, fig. 7. San Joaquin Fm. (Upper *Mya* Zone), Pliocene. Las Alturas, Middle Dome, Kettleman Hills, Kings Co. USGS 12685. Hypotype USNM 495291. **Remarks:** *Calyptraea filosa* (Gabb,1866), *fide* Addicott (1970: p. 60). [Calyptraeidae].

Calyptraea filosa (Gabb, 1866). [*Trochita*]. Hall 1958. UCPG 34(1):56, pl. 9, fig. 4. Briones Fm., Miocene. East of Irvington, La Costa Valley quad. (1943), Alameda Co. SU 3252. Hypotype SU 8468 [=CASG. 69957]. [Calyptraeidae].

Calyptraea filosa (Gabb, 1866). [*Trochita*]. Addicott 1970. USGS PP 642:60, pl. 4, fig. 2. Lower Round Mtn. Silt, Miocene. North of Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1604. Hypotype USNM 650086. [Calyptraeidae].

....., pl. 4, fig. 3. North bank of Kern River, Kern Co. USGS 6623. Hypotype USNM 650087.

....., pl. 4, figs. 8, 9. Caliente quad. (1914), Kern Co. UCMP B1638 (not UCMP B1683 as in pl. caption). Hypotype UCMP 15453.

Calyptraea cf. *C. inornata* (Gabb, 1869a). [*Trochita*]. Woodring et al. 1940 [1941]. USGS PP 195:86, pl. 11, fig. 7. San Joaquin Fm. (*Acila* Zone), Pliocene. North side of Arroyo Hondo, North Dome, , Kettleman Hills, Kings Co. USGS 12340. Hypotype USNM 495714. **Remarks:** *Calyptraea inornata* (Gabb, 1869a), *fide* Adegoke (1969: p. 164). [Calyptraeidae].

....., pl. 15, fig. 10. San Joaquin Fm. (*Pecten* Zone), Pliocene. West of El Portillo, Middle Dome, Kettleman Hills, Kings Co, USGS 12385. Hypotype USNM 495763. **Remarks:** May be a worn specimen of *C.* cf. *C. filosa* (Gabb 1866), *fide* Woodring et al. (1940 [1941]): pl. 15, fig. 10); *Calyptraea inornata* (Gabb 1869a), *fide* Adegoke (1969: p. 164).

....., pl. 20, fig. 6. San Joaquin Fm. (*Neverita* Zone), Pliocene. Arroyo Torcido and Arroyo Hondo area, North Dome, Kettleman Hills, Kings Co. USGS 12513. Hypotype USNM 495324. **Remarks:** *Calyptraea inornata* (Gabb, 1869a), *fide* Adegoke (1969: p. 164).

Calyptraea cf. *martini* Clark, 1915. Richey 1943. UCPG 27(2):34, pl. 3, fig. 2. Orinda Fm., Miocene. Concord quad., Contra Costa Co. UCMP A2569. Hypotype UCMP 30672. [Calyptraeidae].

Calyptraea Fowkes 1982. Coalinga Guidebook, p. 22, unnumbered fig. Avenal Sandstone, Eocene. Tar Canyon, Kings Co. WHC hypotype lost? **Remarks:** Determined here as *Calyptraea diegoana* (Conrad, 1855b). [Calyptraeidae].

Calyptraea sp. Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, fig.13. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 85244 (error) [corrected as SDSNH 136498 in errata, p. 50]. [Calyptraeidae].

?*Calyptraea* (*Trochita*) sp. Squires 2012. NHMLAC CS 520:77, fig. 64. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14384. [Calyptraeidae].

Campanile dilloni (G D. Hanna and Hertlein, 1949). [*Campanilopa*]. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 18. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 668 [=LACMIP 16155]. Hypotype LACMIP 7165. [Campanilidae].

Campanile dilloni (G D. Hanna and Hertlein, 1949). [*Campanilopa*]. Squires 1993a. Veliger 36 (4): 327–329, figs. 6, 7. Santa Susana Fm., Paleocene/Eocene. Bus Canyon, Thousand Oaks quad. (1950, PR 1967), Ventura Co. CSUN 1565 [=LACMIP 16505]. Hypotype LACMIP 12235. [Campanilidae].

....., fig. 8. Llajas Fm., Eocene. Bus Canyon, Thousand Oaks quad. (1950, PR 1967), Ventura Co. CSUN 703 [=LACMIP 16199]. Hypotype LACMIP 12236.

....., figs. 9, 10. Sierra Blanca Limestone, Eocene. Near Oso Canyon, on hillside on north side of Santa Ynez River Santa, San Marcos Pass quad. (1959, PR 1988), Barbara Co. CSUN. 1566 [= LACMIP 16507]. Hypotype LACMIP 12237.

....., fig. 11. Lazaro Canyon, Figueroa Mtn. quad. (1959), Santa Barbara Co. CSUN 955 [=UCMP A2990; [=LACMIP 16506]. Hypotype LACMIP 12238.

Campanile dilloni (G D. Hanna and Hertlein, 1949). [*Campanilopa*]. Squires 1999b. NHMLAC CS 479:17–18, fig. 33. Santa Susana Fm., Eocene. Bus Canyon, Thousand Oaks quad. (1950, PR1967), Ventura Co. CSUN 1565 [=LACMIP 16505]. Hypotype LACMIP 12335. [Campanilidae].

Campanile greenellum G D. Hanna and Hertlein, 1939. Squires 1993a. Veliger 36(4):327, fig. 3. Santa Susana Fm., Paleocene. Trailer Canyon, Santa Monica Mtns., Topanga quad. (1952, PR 1967), Los Angeles Co. LACMIP 24433. Hypotype LACMIP 12232. [Campanilidae].

....., fig. 4. Trailer Canyon, Santa Monica Mtns., Topanga quad. (1952, PR 1967), Los Angeles Co. LACMIP 27023. Hypotype LACMIP 12233.

....., fig. 5. San Francisquito Fm., Paleocene. Liebre Mtn. quad. (1958, PR 1974), northwest San Gabriel Mtns., Los Angeles Co. LACMIP 24716. Hypotype LACMIP 12234.

Campanile greenellum G D. Hanna and Hertlein, 1939. Elder et al. 1998. SEPM Guidebook 84:160, 166 pl. 1, fig. 10. German Rancho Fm., Paleocene. Gualala, Mendocino Co. Wentworth W730 [=UCMP W730]. Hypotype UCMP 39915. [Campanilidae].

Campanile new species? Squires 1987. NHMLAC CS 388:31–32, figs. 32, 33. Juncal Fm., Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 837 [=LACMIP 16156]. Hypotypes LACMIP 7459, 7460. [Campanilidae].

Campanilopa dilloni G D. Hanna and Hertlein, 1949. (n. sp.). Jour. Paleo. 23(4):392–393, pl. 77, figs. 2, 4, text fig. 1. Domengine Fm., Eocene Media Agua Creek, Kern Co. CASG 32388A [=CASG 30677]. Holotype CASG 9425 [=CASG 30667.01], paratypes CASG 9428, 9429, 9429a, b [=CASG 30667.02, 30667.03 (30667.03 unfigured)]. **Remarks:** In the genus *Campanile*, *fide* Squires (1993a: p. 327). [Campanilidae].

Campanilopa dilloni G D. Hanna and Hertlein, 1949. Givens 1974. UCPG 109:69, pl. 7, fig. 10. Juncal Fm., Eocene. Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4668. Hypotype UCR 4668/101. **Remarks:** In the genus *Campanile*, *fide* Squires (1993a: p. 327). [Campanilidae].

Campanilopa dilloni G D. Hanna and Hertlein, 1949. Squires and Advocate 1986. Jour. Paleo. 60 (4):853, 855, fig. 2.1. Maniobra Fm., Eocene. Northeast Orocopia Mtns., Canyon Spring SW quad. (1963), Riverside Co. CSUN 668 [=LACMIP 16155]. Hypotype LACMIP 7165. **Remarks:** In the genus *Campanile, fide* Squires (1993a: p. 327). [Campanilidae].

Cancellaria altispira Gabb, 1869a. Squires, 2012. NHMLAC CS 520:77, fig. 93. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17934. Hypotype LACMIP 14410. [Cancellariidae].

"*Cancellaria*" *arnoldi* Dall, 1909. Woodring and Bramlette 1950 [1951]. USGS PP 222:77, pl. 10, fig. 10. Foxen Mudstone, Pliocene. Santa Barbara Co. USGS 4473. Hypotype USNM 560049. [Cancellariidae].

....., pl. 15, fig. 18. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS

14648. Hypotype USNM 560085.

....., pl. 15, fig. 20. Fugler Pt., Santa Barbara Co. Alex Clark hypotype USNM 560084.

Cancellaria arnoldi Dall, 1909. Addicott 1969. Pr.CAS 37(3):62, 69, pl. 1, figs. 15, 16, 22. Merced(?) Fm., Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM 650955–650957. [Cancellariidae].

Cancellaria arnoldi Dall, 1909. Perry 1977. Foss. Santa Cruz Co., p. 23, center fig. top row. Purisima Fm., Pliocene. Santa Cruz Co. Hypotype determined here as missing. [Cancellariidae].

Cancellaria arnoldi Dall, 1909. Perry 1988. SCMA, p. 20, fig. 11G. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. Hypotype determined here as missing. [Cancellariidae].

Cancellaria barkeri (Anderson *in* G D. Hanna, 1924). [*Fossarus*]. Adegoke 1969. UCPG 80:190, pl. 13, figs. 9, 15. Temblor Fm., Miocene. Garza Creek, Reef Ridge quad., Kings Co. UCMP D1061. Hypotype UCMP 36894. [Cancellariidae].

Cancellaria* (*Narona*) *birchi Addicott, 1970 (n. sp.). USGS PP 642:118–119, pl. 16, figs. 12, 15, 16. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Hypotypes USNM 650215, 650216. [Cancellariidae].

....., pl. 16, figs. 13, 14. Caliente quad. (1914), Kern Co. UCMP B1637. Holotype UCMP 33859.

Cancellaria* (*Euclia*) *circumspinosa Addicott, 1970 (n. sp.). USGS PP 642:110, pl. 14, fig. 1. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. USGS 3886. Hypotype USNM 650186. [Cancellariidae].

....., pl. 14, figs. 6, 7. Round Mtn. Silt, Miocene. Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1608. Holotype USNM 650187.

....., pl. 14, fig. 2. Upper Olcese Sand, Miocene. Bakersfield and Caliente quads. (1914), Kern Co. UCMP B1601. Hypotype UCMP 33480.

....., pl. 14, fig. 16. Caliente quad. (1914), Kern Co. UCMP B1624. Hypotype UCMP 33481.

Cancellaria (*Euclia*) *condoni* Anderson, 1905. Addicott 1970. USGS PP 642:107–108, pl. 13, figs. 1, 2. Lower Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1618. Hypotype UCMP 33019. [Cancellariidae].

....., pl. 13, figs. 3, 4. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650182.

....., pl. 13, figs. 5, 10. Olcese Sand, Miocene. Bakersfield and Caliente quads. (1914), Kern Co. UCMP B1600. Hypotype UCMP 33349.

....., pl. 14, fig. 10. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650190.

Cancellaria cf. *C. condoni* Anderson, 1905. Woodring et al. 1946. USGS PP 207:27, pl. 28, fig. 8 (clay peel). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotype USNM 497076. **Remarks:** *Cancellaria* (*Euclia*) *oregonensis* Conrad, 1849a, *fide* Addicott (1970: p. 111). [Cancellariidae].

Cancellaria condoni Anderson, 1905. Adegoke, 1969. UCPG 80:189. pl. 13, fig. 7. Temblor Fm., Miocene. Domengine quad., Fresno Co. UCMP D1085. Hypotype UCMP 36889. [Cancellariidae].

Cancellaria crassa Waring, 1917. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 29. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR. 6670. Hypotype UCR. 6670/12 [same number as *Acrilla* (*Ferminoscala*) sp. [=*A.* (*F.*) *durhami* Zinsmeister, 1983b] determined here as missing. **Remarks:** *Cancellaria simiana* G D. Hanna, 1924: p. 160, new name for *Cancellaria crassa* Waring, 1917, preocupied. [Cancellariidae].

Cancellaria dalli (Anderson and Martin, 1914). [*Fossarus*]. Addicott 1970. USGS PP 642:117, pl. 15, fig. 11. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650202. **Remarks:** *Cancellaria barkeri* Anderson *in* G D. Hanna, 1924, new name for *Cancellaria dalli* (Anderson and Martin, 1914),

preoccupied. [Cancellariidae].

....., pl. 15, figs. 12, 13. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Hypotype USNM 650203.

....., pl. 15, fig. 23. Rio Bravo Ranch quad. (1954), Kern Co. USGS M2601. Hypotype USNM 650204.

....., pl. 15, fig. 27. Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype UCMP 33803.

Cancellaria dalliana Anderson, 1905. Addicott, 1965b. USGS PP 525-C:C106, fig. 4h. Olcese, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 36558. **Remarks:** In the subgenus *Euclia*, *fide* Addicott (1970: p. 108). [Cancellariidae].

Cancellaria (*Euclia*) *dalliana* Anderson, 1905. Addicott 1970. USGS PP 642:108–110, pl. 13, figs. 7, 14; pl. 14, fig. 11. Upper Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotypes UCMP 33483, 36558, 33476. [Cancellariidae].

....., pl. 13, figs. 9, 12. Bakersfield quad. (1906), Kern Co. UCMP B1587. Hypotype UCMP 33375.

....., pl. 14, fig. 3. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650188.

Cancellaria dalliana Anderson, 1905. Stadum 1973. OCF, p. 27, pl. 4, fig. 6. Topanga Fm., Miocene. Orange Co. Hypotype possibly at SDSNH, current whereabouts unknown. **Remarks:** *Ex* Grouard collection. [Cancellariidae].

Cancellaria galei Addicott, 1970 (n. sp.). USGS PP 642:119–120, pl. 16, figs. 6, 7. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 650212, paratype USNM 650213. [Cancellariidae].

....., pl. 16, figs. 8–10 [fig. 10=cast of external mold]. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1590. Holotype USNM 650214.

Cancellaria hamlini Carson, 1926. Squires 2012. NHMLAC CS 520:77, 86, fig. 96. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP. 17919. Hypotype LACMIP 14413. [Cancellariidae].

"*Cancellaria*" *hemphilli* Dall, 1909. Woodring and Bramlette 1950 [1951]. USGS PP 222:77, pl. 15, figs. 16, 17. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotypes (2) USNM 560086. [Cancellariidae].

Cancellaria hemphilli Dall, 1909. Adegoke 1969. UCPG 80:190, pl. 13, figs. 6, 13. Etchegoin Fm., Pliocene. Domengine Ranch quad., Fresno Co. UCMP B6529. Hypotype UCMP 36896. [Cancellariidae].

Cancellaria hemphilli Dall, 1909. Squires 2012. NHMLAC CS 520:77, fig. 94. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7757. Hypotype LACMIP 14411. [Cancellariidae].

Cancellaria irelaniana Cooper, 1894. Coan 1981 [1982]. Univ. Idaho Press, p. 165, fig. 12.5 (refigured from Cooper, 1894, pl. 1, fig. 5 (as *Narona*)). Capay Fm., Eocene. Marysville Buttes, Sutter Co. CSMB 13738. Holotype CASG 10. [Cancellariidae].

Cancellaria (*Euclia*) *joaquinensis* Anderson, 1905. Addicott 1970. USGS PP 642:113, pl. 14, figs. 22, 23. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1601. Hypotype USNM 650197. [Cancellariidae].

....., pl. 14, fig. 26. Near Kern River, Caliente quad. (1914), Kern Co. UCMP B1622. Hypotype UCMP 33731.

....., pl. 15, fig. 4. Olcese Sand, Miocene. Float collection, Oil Center quad. (1950), Kern Co. UCMP B1597. Hypotype UCMP 33738.

....., pl. 15, fig. 5. Caliente quad. (1914), Kern Co. UCMP B1624. Hypotype UCMP 33760.

Cancellaria keenae Addicott, 1970 (n. sp.). USGS PP 642:119, pl. 16, figs. 1, 2. Lower Round Mtn. Silt, Miocene. Kern River (presumably from the same stratigraphic interval and geographic area as USGS localities M1608, M1612,

and M1613, which are on the south side of Kern River, Rio Bravo Ranch quad.), Kern Co. UCLA AC-2-34 [=LACMIP 16157]. Holotype UCLA 45771 [=LACMIP 8430]. [Cancellariidae].

....., pl. 16, figs. 3, 4. Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype UCMP 33840.

....., pl. 16, figs. 18, 19. North of Kern River, Kern Co. USGS 6065. Hypotype USNM 650209.

Cancellaria* (*Crawfordina*) *kernensis Addicott, 1970 (n. sp.). USGS PP 642:117–118, pl. 15, figs. 18, 19. Lower Round Mtn., Miocene. Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1608. Holotype USNM 650207. [Cancellariidae].

....., pl. 15, figs. 20, 21. Santa Margarita Fm., Miocene. Kern Co. CASG 28790. Hypotype (paratype in CASG online database) CASG 12936 [=CASG 28790].

Cancellaria (*Pyruclia*) *lickana* Anderson and Martin, 1914. Addicott 1970. USGS PP 642:115–116, pl. 15, figs. 1, 2. Upper Olcese Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1599. Hypotype USNM 650198. [Cancellariidae].

....., pl. 15, fig. 3. Caliente quad. (1914), Kern Co. UCMP B1600. Hypotype UCMP 33735.

....., pl. 15, figs. 9, 10. Oil Center quad. (1954), Kern Co. USGS M1602. Hypotype USNM 650199.

Cancellaria lipara Woodring *in* Woodring and Bramlette, 1950 [1951] (n. sp.). USGS PP 222:76, pl. 16, figs. 13, 14. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Holotype USNM. 560082. [Cancellariidae].

Cancellaria nevadensis Anderson and Martin, 1914. Adegoke 1969. UCPG 80:189, pl. 13, fig. 14. Temblor Fm., Miocene. Garza Creek, Reef Ridge quad., Kings Co. UCMP D1056. Hypotype UCMP 36890. [Cancellariidae].

Cancellaria (*Euclia*?) *nevadensis* Anderson and Martin, 1914. Addicott 1970. USGS PP 642:114–115, pl. 15, fig. 6. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. USGS 6641. Hypotype USNM 650200. [Cancellariidae].

....., pl. 15, figs. 7, 8. Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1608. Hypotype USNM 650201.

....., pl. 15, fig. 17. Caliente quad. (1914), Kern Co. UCMP B1611. Hypotype UCMP 33795.

Cancellaria obesa Sowerby, I 1832. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 55, fig. 3.5D. Latrania Fm., Miocene/Pliocene. Coyote Mtn., Imperial Co. SDSNH 2895. Hypotype SDSNH 12142. [Cancellariidae].

Cancellaria* (*Euclia*) *ocoyana Addicott, 1970 (n. sp.). USGS PP 642:110–111, pl. 14, fig. 4 (peel). Lower Olcese Sand, Miocene. Woody quad. (1952), Kern Co. USGS M1593. Hypotype USNM 650189. [Cancellariidae].

....., pl. 14, fig. 5. Lower Round Mtn. Silt, Miocene. Kern River Caliente quad. (1914), Kern Co. UCMP B1618. Holotype UCMP 33484.

....., pl. 14, figs. 8, 9. Upper Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 33485.

....., pl. 16, fig. 20. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650219.

Cancellaria (*Euclia*) *oregonensis* Conrad, 1849a. Moore 1963 [1964]. USGS PP 419:45, pl. 9, figs. 20, 21. Temblor Fm., Miocene. Kern River, Kern Co. CASG 198. Neotype (of Keen and Bentson 1944: p. 138, rejected by Addicott 1970: p. 111, because of nonconfomance with rules of zoological nomenclature, of "*Cancellaria dalliana* Anderson," 1905) CASG 198. [Cancellariidae].

....., pl. 9, fig. 22. Kern River, Kern Co. CASG 65. Holotype CASG 67 [=CASG 65.01]. Holotype (lectotype as per CASG online database) of "*Cancellaria condoni* Anderson" 1905, CASG 65.01.

Cancellaria (Euclia) oregonensis Conrad, 1849a. Addicott, 1970. USGS PP 642:111–112, pl. 14, fig. 12. Upper Olcese Sand, Miocene. Caliente quad. (1914), Kern Co. UCMP B1641. Hypotype UCMP 33577. [Cancellariidae].

Cancellaria cf. *C. pabloensis* Clark, 1915. Hall 1958. UCPG 34(1):59, pl. 11, fig. 6. Briones Fm., Miocene. South of Pleasanton, Niles quad. (1943), Alameda Co. SU 3232. Hypotype SU 8480 [=CASG 69958]. **Remarks:** *Cancellaria pabloensis* Clark, 1915, *fide* Adegoke (1969: p. 190). [Cancellariidae].

Cancellaria (*Euclia*) *pacifica* Anderson, 1905. Addicott, 1970. USGS PP 642:114, pl. 15, figs. 14, 15. Upper Olcese Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1600. Neotype (of Addicott 1970:114) USNM. 650205. [Cancellariidae].

....., pl. 15, fig. 28. Bakersfield quad., Caliente quad. (1914), Kern Co. UCMP B1600. Hypotype UCMP 33804.

....., pl. 15, fig. 29. Near Kern River, Caliente quad. (1914), Kern Co. UCMP. B1622. Hypotype USNM 33805.

....., pl. 15, fig. 16 Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1608. Hypotype USNM 650206.

Cancellaria posunculensis Anderson and Martin, 1914. G D. Hanna and Hertlein 1943. CDM Bull.118 (2):172, fig. 63-5. Temblor Fm., Miocene. Near Kern River, Kern Co. CASG 65. Hypotype CASG 5725. [Cancellariidae].

Cancellaria posunculensis Anderson and Martin, 1914. Lutz 1951. UCMP 28(13):392, pl. 18, fig. 12. Sobrante Fm., Miocene. Crow Canyon Hayward quad., Alameda Co. UCMP A4565. Hypotype UCMP 34168. **Remarks:** Possibly *Antilliophos posunculensis* (Anderson and Martin, 1914), *fide* Addicott (1970: p. 116). [Cancellariidae].

Cancellaria (*Coptostoma*) *posunculensis* Anderson and Martin, 1914. Addicott 1970. USGS PP 642:116–117, pl. 15, fig. 22. Upper Olcese Sand, Miocene. Slump block, Caliente quad. (1914), Kern Co. UCMP B1624. Hypotype UCMP 33811. [Cancellariidae].

....., pl. 15, figs. 24, 25. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650208.

....., pl. 15, fig. 26. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 33829.

Cancellaria posunculensis Anderson and Martin, 1914. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 18. Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2868. Hypotype USNM 254367. [Cancellariidae].

Cancellaria posunculensis Anderson and Martin, 1914. Addicott et al. 1980. SEPM Guidebook 6:18, 20, pl. 1, fig. 18 (refigured from Addicott et all, 1978, pl. 1, fig. 18). Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2868. Hypotype USNM 254367. [Cancellariidae].

Cancellaria rapa Nomland, 1917a. Woodring et al. 1940 [1941]. USGS PP 195:88, pl. 15, figs. 1, 7. San Joaquin Fm. (*Pecten* Zone), Pliocene. Vicinity of Arroyo Vadoso and Arroyo Largo, North Dome, Kettleman Hills, Kings Co. USGS 12331. Hypotype USNM 495755. [Cancellariidae].

"*Cancellaria*" *rapa perrini* Carson, 1926. Woodring and Bramlette 1950 [1951]. USGS PP 222: 77, pl. 17, figs. 1, 2. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14618. Hypotypes USNM 560123, 560124. [Cancellariidae].

....., pl. 18, figs. 2, 3; pl. 19, fig. 10. Graciosa Ridge, near Orcutt, USGS 14621. Hypotypes USNM 560122, 560125.

Cancellaria (*Barkeria*) *sanjosei* Anderson and Martin, 1914. Addicott 1970. USGS PP 642:118, pl. 16, figs. 5, 21, 22. Upper Round Mtn. Silt, Miocene. Cottonwood Creek area, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1605. Hypotypes USNM 650210, 650211. [Cancellariidae].

....., pl. 16, fig. 11. Cottonwood Creek, Caliente quad. (1914), Kern Co. UCMP B1588. Hypotype UCMP 33847.

Cancellaria (*Euclia*) *simplex* Anderson, 1905. Addicott 1970. USGS PP 642:112–113, pl. 14, figs. 13–15. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotypes USNM 650191, 650192. [Cancellariidae].

....., pl. 14, fig. 17. Olcese Sand, Miocene Kern River,, Kern Co. USGS 6890. Hypotype USNM 166593.

....., pl. 14, fig. 18. Slump block Caliente quad. (1914), Kern Co. UCMP B1624. Hypotype UCMP 33711.

....., pl. 14, figs. 24, 25. Kern River, Kern Co. CASG 65. Hypotype CASG 12935.

Cancellaria (*Euclia*) *simplex* Anderson, 1905, strongly sculptured form. Addicott 1970. USGS PP 642:113, pl. 14, figs. 19, 27. Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. Upper Olcese, Miocene. USGS M1602. Hypotypes USNM 650193, 650194. [Cancellariidae].

....., pl. 14, fig. 20. Lower Round Mtn. Silt, Miocene. Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1608. Hypotype USNM 650195.

Cancellaria (*Euclia*) *simplex* Anderson, 1905, weakly sculptured form. Addicott 1970. USGS PP 642:113, pl. 14, fig. 21. Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1602. Hypotype USNM 650196. [Cancellariidae].

"*Cancellaria*" cf. "*C.*" *tritonidea* Gabb, 1866. Woodring and Bramlette 1950 [1951]. USGS PP 222:77, pl. 16, fig. 5. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. USGS 14769. Hypotype USNM 560083. **Remarks:** *Cancellaria tritonidea* Gabb, 1866, *fide* Adegoke (1969: p. 191). [Cancellariidae].

Cancellaria tritonidea Gabb, 1866. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 4, fig. 1. Pancho Rico Fm., Miocene/Pliocene. King City quad., Monterey Co. UCMP B4927 (not UCMP B4926 as in pl. caption). Hypotype UCMP 36470. [Cancellariidae].

Cancellaria tritonidea Gabb, 1866. Natland 1971. Terra 10(2):22, fig. 11 (not fig. 12), (with *Polinices reclusianus*). "Fernando Fm.", Pliocene. Arco Towers excavation, downtown Los Angeles, Los Angeles Co. LACMIP 1219. Hypotypes current whereabouts unknown. [Cancellariidae].

Cancellaria tritonidea Gabb, 1866. Perry 1988. SCMA, p. 21, fig. 12C. Purisima Fm., Miocene/ Pliocene. Capitola, Santa Cruz Co. Hypotype CASG 66147.01. [Cancellariidae].

Cancellaria tritonidea? Gabb, 1866. Squires 2012. NHMLAC CS 520:77, fig. 95. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14412. [Cancellariidae].

Cancellaria tritonidea altispira Gabb, 1869. Weaver 1971. West (LA Times), 18 April, 1971:11, unnumbered fig. (lower left). "Fernando Fm.", Pliocene. Arco Towers excavation, 6th and Flower sts., downtown Los Angeles, Los Angeles Co. LACMIP 1219. Hypotypes (2) current whereabouts unknown. [Cancellariidae].

Cancellaria new species. Addicott 1969. Pr.CAS 37(3):62, 64, 69, pl. 1, figs. 23, 24. Merced(?) Fm., Pliocene. Santa Clara quad., Santa Clara Co. USGS M1715. Hypotype USNM 650960. [Cancellariidae].

Cancellaria sp. Throckmorton 1988a. USGS OFR 88-59:54, pl. 7, fig. 6a (latex peel) (refigured in Throckmorton 1988b, pl. 1, fig. 23). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8156. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Cancellariidae].

Cantharus fortis (Carpenter, 1866). [*Pisania*]. G D. Hanna and Hertlein 1943. CDM Bull. 18(2):174, fig. 64-12. [Careaga Fm.?], Pliocene. Santa Barbara Co. Hypotype CASG 5742 (orig. Cal. St. Min. Bur. 14637). **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Cantharus fortis (Carpenter, 1866). [*Pisania*]. Moore et al. 1952. Invert. Foss., p. 326, fig. 8-40.22. Line drawing, source specimen unknown. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Cantharus aff. *C. shaskyi*? Berry, 1959. Powell 2013. Festivus 45(3):20, pl. 1, figs. 1, 4. Reworked shells, Pliocene. Shells found in a modern-day shrimp trap off San Clemente Is., California Channel Ids. CASG 72573. Hypotype CASG 72575.

Cantharus resembling *Gemophos ringens* (Reeve, 1846). [*Buccinum*]. Rugh 2014b. Desert Symposium vol.:140, fig. 2-2. Deguynos Fm. (Jackson Creek Member), Pliocene. Fish Creek/Vallecito Creek, San Diego Co. ABDSP 5070.1. Hypotype ABDSP I 11115]. [Buccinidae].

Carnivorous gastropod. Natland 1971. Terra 10(2):22–23, fig. 12 [as fig. 11] (as *Cancellaria* [in text] with *Polinices reclusianus*). "Fernando Fm.," Pliocene. Arco Towers excavation, downtown Los Angeles, Los Angeles Co. LACMIP 1219. Hypotype current whereabouts unknown. **Remarks:** Determined here as *Boreotrophon* sp. [Muricidae].

Cassis subtuberosa G D. Hanna, 1926. Abbott 1968:51, pl. 25 (refigured from Schenck, 1926, pl. 12, figs. 2, 3). Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Alverson Canyon, Coyote Mtn., Imperial Co. Holotype UCMP 31275. [Cassidae].

*Cassis subtuberosa** G D. Hanna, 1926. Rugh 2014a. Desert Symposium vol.:134, fig. 1-5 (left fig.). Latrania Fm. (Andrade Member), Miocene. Alverson Canyon, Imperial Co. ABDSP 5008.2. Hypotype ABDSP I 9608]. **Remarks:** Error for *subtuberosus*. [Cassidae].

Cassis (*Coalingodea*) *tuberculata* (Gabb, 1864). [*Morio*]. Abbott 1968:59–60, pl. 34. Domengine Fm., Eocene. Parson's Peak, Coalinga, Fresno Co. Hypotypes (of Vokes 1939, pl. 19, figs. 23, 25, and 27) (upper and lower figs.), [UCMP 11783] (middle fig.) UCMP [15807]. **Remarks:** *Galeodea tuberculiformis* G.D. Hanna, 1924, *fide* (Squires 2019: p. 11). [Cassidae].

Ceratostoma delorae Hall, 1958 (n. sp.). UCPG 34(1):57–58, pl. 10, figs. 1–3 (refigured as line drawing in Tasch 1973, fig. 8.19 Aa). Oursan Sandstone, Miocene. Vicinity of Irvington, La Costa Valley quad. (1943), Alameda Co. SU 3245. Holotype SU 8473 [=CASG 69945]. [Muricidae].

Ceratostoma delorae Hall, 1958. Hall 1959. Jour. Paleo. 33(3):430–431, 434, pl. 63, figs. 8–10. Oursan Sandstone, Miocene. East of Irvington, Alameda Co. SU 3245 [=CASG 69945]. Holotype SU 8473 [=CASG 69945.00]. [Muricidae].

Ceratostoma foliatum (Gmelin, 1791). [*Purpura*]. Durham and Addicott 1965. USGS PP 524-A: A12, pl. 2, figs. 6, 8. Pancho Rico Fm., Miocene/Pliocene. Long Valley, Monterey Co. Hypotype SU 9754 [=CASG 70322]. [Muricidae].

Ceratostoma nannum (Nomland, 1917b). [*Pupura*]. Amano and Vermeij 1998. Venus 57(3):216, figs. 7a, 7b. Santa Margarita Fm., Miocene. North of Coalinga, Domengine Ranch quad., Kings Co. UCMP 2279]. Holotype UCMP 11315. [Muricidae].

Ceratostoma perangulatum (Nomland, 1916b). [*Murex*]. Amano and Vermeij 1998. Venus 57(3): 216, figs. 5a, 5b. Jacalitos Fm., Pliocene [Miocene]. West of Coalinga, Kings Co. UCMP 2649. Holotype UCMP 12057. [Muricidae].

Ceratostoma? aff. *C. perponderosum* (Dall, 1909). [*Purpura*]. Addicott 1970. USGS PP 642:76–77, pl. 7, fig. 19. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 650120. [Muricidae].

Cerithiopsis llajasensis Squires, 1984 (n. sp.). NHMLAC CS 350:20–21, figs. 6n, o. Llajas Fm., Eocene. Devil Canyon area, Santa Susana quad. (section cor. is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Holotype LACMIP 6515, paratype LACMIP 6516 (not LACMIP 6517 and 6518 as in pl. caption). [Cerithiopsidae].

Cerithiopsis aff. *C. llajasensis* Squires, 1984. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 19. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. LACMIP 23779. Hypotype LACMIP 11461. [Cerithiopsidae].

Cerithium cliffensis M.A. Hanna, 1927. Givens 1974. UCPG 109:69, pl. 7, fig. 4. Juncal Fm., Eocene. San Guillermo quad. (1943), Ventura Co. UCR 4703. Hypotype UCR 4703/30. [Cerithiidae].

Cerithium vaderensis (Dickerson, 1915). [*Melania*]. Weaver and Kleinpell 1963. UCPG 43:186, pl. 24, fig. 6. Sacate Fm., Eocene. Cañada del Corral, Los Olivos quad., Santa Barbara Co. UCMP B6951. Hypotype SU 9193 [=CASG 70144]. [Cerithiidae].

Cerithiid? Addicott 1973b. USGS PP 791:7, 17, pl. 8, fig. 5. Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Rocks quad., Kern Co. USGS M3578. Hypotype USNM 646603. [Cerithiidae].

Charonia sp. Albi 2002. Festivus 34(3):39, fig. 10. Miocene/Pliocene, Imperial Fm. [=Latrania Fm.]. Fossil Canyon [=Alverson Canyon], Coyote Mtn.], Imperial Co. LACMIP 17740. Hypotype LACMIP 8188]. [Ranellidae].

Chedevillia saltonensis Squires and Advocate, 1986 (n. sp.). Jour. Paleo. 60(4):855–856, figs. 2.2–2.4. Maniobra Fm., Eocene. Northeastern Orocopia Mtns., Canyon Spring NW quad. (1963), Riverside Co. CSUN 662 [=UCLA 3779 =LACMIP 23779]. Holotype UCLA 28987 [=LACMIP 10564], unfigured paratype UCLA 59725 [=LACMIP 10565]. [Strombidae].

Chedevillia saltonensis Squires and Avocate, 1986. Squires 1987. NHMLAC CS 388:33, fig. 37. Juncal Fm., Eocene.

Whitaker Peak quad. (1958), Los Angeles Co. CSUN 830 [=LACMIP 16166]. Hypotype LACMIP 7464. [Strombidae].

Chedevillia saltonensis Squires and Advocate, 1986. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 22. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. LACMIP 23779 [=CSUN 662). Hypotype UCLA 28987 [=LACMIP 10564]. [Strombidae].

Chedevillia sp. cf. *C. stewarti* Clark, 1942. Crowell and Susuki 1959. GSA Bull. 70:588, pl. 2, figs. 2, 3. Maniobra Fm., Orocopia Mtns., Canyon Spring quad., Riverside Co. UCLA 3779 [=LACMIP 23779]. Hypotype UCLA 28987 [= LACMIP 10564]. **Remarks:** Described as *Chedevillia saltonensis* n. sp., *fide* Squires and Advocate (1986: p. 855). [Strombidae].

Chlorostoma gallina form *multifilosa* Stearns, 1892. Squires 2012. NHMLAC CS 520:77, figs. 55, 56. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7753. Hypotype LACMIP 14378. [Tegulidae]. **Remarks:** Junior synonym of *Tegula gallina*, *fide* Alf (2019: p. 73).

Chlorostoma sp. Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, fig. 9. Saddleback Valley Limestone member, Monterey Fm., Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 93707. **Remarks:** *Tegula* sp. [Tegulidae].

Chrysallida rotundomontana Keen, 1943 (n. sp.). Tr. SDSNH 10(2):43–44, pl. 4, fig. 28. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. CAS 2121 [=CASG 71992]. Holotype SU 7531 [=CASG 71995.00], [unfigured paratype SU 7959 [=CASG. 7959]. **Remarks:** In the genus/subgenus *Odostomia* (*Besla*), *fide* Addicott (1970: p. 143). [Pyramidellidae].

....., SDSNH5422 (*ex* SU 2121). Unfigured paratype SDSNH 610].

Cidarina cidaris (A. Adams *in* Carpenter, 1864b) n. var.? [*Margarites*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:69, pl. 12, fig. 11. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotype USNM. 560062. [Eucyclidae].

Cirsotrema sp. Squires 1984. NHMLAC CS 350:21, fig. 6p. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242 =LACMIP 22312]. Hypotype UCLA. 59275 [=LACMIP 10551]. [Epitoniidae].

Clathrodrillia mercedensis (Martin, 1914). [*Drillia*]. G.D. Hanna and Hertlein 1943. CDM Bull. 118 (2):176, fig. 65-5. Merced Fm. [=Purisima Fm.], Pliocene. Two localities listed: Palo Alto and Stanford quads., Santa Clara Co. CASG 28617. Hypotype CASG 5716. [Drilliidae].

Clathrodrillia mercedensis (Martin, 1914). [*Drillia*]. Moore et al., 1952. Invert. Foss., p. 326, fig. 8-40.21. Pliocene. Line drawing, source specimen unknown. [Drilliidae].

"*Clavatula*" cf. "*C.*" *labiata* (Gab, 1881). [*Clavatula*]. Woodring et al. 1946. USGS PP 207:27, pl. 28, fig. 9 (clay peel). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotype USNM 497080. **Remarks:** *Turricula piercei* (Arnold, 1909 [1910]), *fide* Addicott (1970: p. 130). [Clavatulidae].

Clavilithes sp. cf. *C. tabulatus* (Dickerson, 1913). [*Clavella*]. Crowell and Susuki 1959. GSA Bull. 70:588, pl. 2, figs. 6, 7. Maniobra Fm., Eocene. Shaver Summit area, Orocopia Mtns., Canyon Spring quad., Riverside Co. UCLA 3779 [=LACMIP 23779]. Hypotype UCLA 28989 [=LACMIP 8839]. **Remarks:** *Clavilithes tabulatus* (Dickerson, 1913), *fide* Givens (1974: p. 85); *fide* Squires (1987: p. 41). [Fasciolariidae].

Clavilithes tabulatus (Dickerson, 1913). [*Clavella*]. Givens 1974. UCPG 109:85, pl. 10, fig. 4. Juncal Fm., Eocene. Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4661. Hypotype UCR 4661/5. [Fasciolariidae].

....., pl. 10, fig. 5. Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4658. Hypotype UCR 4658/7.

Clavilithes tabulatus (Dickerson, 1913). [*Clavella*]. Squires 1984. NHMLAC CS 350:31, fig. 8g. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LAMCIP 6538. [Fasciolariidae].

Clavilithes tabulatus (Dickerson, 1913). [*Clavella*]. Squires 1987. NHMLAC CS 388:41, figs. 54, 55. Juncal Fm., Eocene. Los Angeles Co. CSUN 827 [=LACMIP 16153]. Hypotypes LACMIP 7478, 7479. [Fasciolariidae].

Clavilithes tabulatus (Dickerson, 1913). [*Clavella*]. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 14. Juncal Fm., Eocene. Whitaker Peak area, Los Angeles Co. CSUN 827 [=LACMIP 16153]. Hypotype LACMIP 7478. [Fasciolariidae].

Clavilithes tabulatus (Dickerson, 1913). [*Clavella*]. Squires 1988c. NHMLAC CS 398:14–16, fig. 34. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN. 984 [=LACMIP 16178]. Hypotype LACMIP 7714. [Fasciolariidae].

Clavilithes tabulatus (Dickerson, 1913). [*Clavella*]. Squires 1991c. SEPM Guidebook 35:222, pl. 2, fig. 5. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. CSUN 662 [=LACMIP 23779]. Hypotype LACMIP 11469. [Fasciolariidae].

Clavilithes n. sp. Clark and Vokes 1936. Givens and Kennedy 1976. Jour. Paleo. 50(5):969, 973, pl. 4, figs. 9, 12. Delmar Fm. [=Santiago Fm.?], Eocene. Near Vista and San Marcos, San Diego Co. UCR 4865. Hypotype UCR 4865/13. **Remarks:** Clavilithes n. sp. Clark and Vokes 1936, *fide* Squires (1984: p. 31); *Clavilithes tabulatus* (Dickerson, 1913), *fide* Squires (1987: p. 41). [Fasciolariidae].

Clavilithes n. sp. Squires 1983a. Jour. Paleo. 57(2):359, fig. 2H. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 445 [=LACMIP 16176]. Hypotype UCLA 59194 [=LACMIP 10547]. **Remarks:** *Clavilithes* n. sp. B, *fide* Squires 1984: p. 31. [Fasciolariidae].

....., fig. 2I. Las Llajas Canyon, Santa Susana quad. (1951, PR1969), Ventura Co. CSUN 444 [=LACMIP 16203]. Hypotype UCLA 59195 [=LACMIP 10548]. **Remarks:** *Clavilithes* n. sp. B, *fide* Squires (1984: p. 31).

Clavilithes n. sp. A. Clark and Vokes 1936. Squires 1984. NHMLAC CS 350:31, fig. 8h. Llajas Fm., Eocene. Near Bus and Trough canyons, Thousand Oaks quad. (1950, PR 1967), Ventura Co. CSUN 704 [=LACMIP 16177]. Hypotype LACMIP 6539. **Remarks:** *Clavilithes tabulatus* (Dickerson, 1913), *fide* Squires (1987: p. 41). [Fasciolariidae].

Clavilithes n. sp. B. Squires 1983a. Squires, 1984. NHMLAC CS 350:31–33, fig. 8i. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN. 444 [=LACMIP 16203]. Hypotype UCLA 59195 [=LACMIP 10548]. [Fasciolariidae].

Clavocerithium (Clavocerithium) santanum (Loel and Corey, 1932). [*Terebra*]. Squires 1993b. Veliger 36(4):401–403, figs. 2, 8, 9. Vaqueros Fm., Miocene. Hicks Canyon, northern Santa Ana Mtns., El Toro quad. (1968, PR 1982), Orange Co. CSUN 1185 [=LACMIP 16508]. Hypotypes LACMIP 12102, 12104–12105. [Cerithiidae].

....., figs. 3–6. Plano Trabuco, southern end of northern Santa Ana Mtns., Cañada Gobernadora quad. (1968, PR 1988), Orange Co. UCMP 6128. Holotype UCMP 31608.

....., figs. 7, 10, 12. Plano Trabuco, southern end of northern Santa Ana Mtns., Cañada Gobernadora quad. (1968, PR 1988), Orange Co. LACMIP 7700. Hypotypes LACMIP 12103, 12106, 12107.

....., fig. 11. Wiley Canyon, Piru quad. (1952, PR 1969), south side of Santa Clara River, Oak Ridge area, Ventura Co. UCMP A253 (not UCMP A252 as in fig. caption). Hypotype UCMP 31611.

Coalingodea tuberculiformis (G D. Hanna, 1924). [*Galeodea*]. Durham 1942. Jour. Paleo., 16(2):186, pl. 29, figs. 5, 9. Domengine Fm., Eocene. North of Coalinga, Fresno, Co. UCMP. 672. Hypotypes UCMP 11783, 15807. **Remarks:** In the genus *Galeodea*, *fide* Squires (2019: p. 9). [Cassidae].

Coalingodea tuberculiformis (G D. Hanna, 1924). [*Galeodea*]. Givens 1974. UCPG 109:78–79, pl. 8, fig. 7. Juncal Fm., Eocene. San Guillermo quad. (1943), Ventura Co. UCR 4752. Hypotype UCR 4752/1. **Remarks:** In the genus *Galeodea*, *fide* Squires (2019: p. 9). [Cassidae].

?*Cochlespiropsis jenkinsi* Squires, 2001 (n. sp.). NHMLAC CS 489:11, 13, fig. 22. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 22312. Holotype LACMIP 12741. [Paladmetidae].

....., fig. 23. Devil Canyon, 389 m south and 350 m west of NE cor. Santa Susana quad. (1951, PR 1969), Ventura Co.

CSUN 371 [=LACMIP 16654]. Paratype LACMIP 12742.

Cockerella conradiana* (Gabb, 1866). [*Clathurella*]. Squires 2012. NHMLAC CS 520:77, fig. 89. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14406. **Remarks:** Error for *Crockerella*. [Clathurellidae].

Colubraria (*Colubraria*) n. sp. Smith 1975b. SEPM Symposium vol., p. 479, pl. 1, fig. 19. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype SU 10231 [=CASG 61666.21]. [Fasciolariidae].

Columbarium sp. Smith 1975b. SEPM Symposium vol., p. 476, pl. 1, fig. 2. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype SU 10224 [=CASG 61666.19]. [Turbinellidae].

Colus recurvus (Gabb, 1866). [*Neptunea*]. Peck 1960. UCPG 36(4):240, pl. 21, fig. 10. Ohlson Ranch Fm., Pliocene. Carson Creek area, Ft. Ross quad., Sonoma Co. UCMP B2155. Hypotype UCMP 14890. [Buccinidae].

Colwellia antiquata (Gabb, 1864). [*Nassa*]. Nuttall and Cooper 1973. Bull. BM(NH) 23(3):208–209, pl. 7, fig. 11. Domengine Fm., Eocene. Big Tar Canyon area, Cholame quad., Kings Co. UCMP A819. Hypotype UCMP 15939. [Nassariidae].

Colwellia antiquata (Gabb, 1864). [*Nassa*]. Allmon 1990. BAP 99(335):70, pl. 10, fig. 9. [?Domengine Fm., Eocene. Big Tar Canyon, Cholame quad.], Kings Co. UCMP A819. Hypotype UCMP 15939. [Nassariidae].

....., pl. 10, fig. 8. [Tejon Fm., Eocene. Live Oak Canyon, Kern Co. UCMP 7182.] Hypotype UCMP 30750.

Colwellia sp. Nuttall and Cooper 1973. Bull. BM(NH) 23(3):209, pl. 7, fig. 10. Tejon Fm., Eocene. Live Oak Creek, Tejon quad., Kern Co. CASG 244. [Hypotype (of Dickerson 1915, pl. 8, fig. 7) [fig. 6 on pl.] CASG 325. [Nassariidae].

Conomitra aff. *C. washingtoniana* (Weaver, 1912). [*Mitra*]. Givens 1974. UCPG 109:88, pl. 10, fig. 14. Juncal Fm., Eocene. West of Reyes Peak, Reyes Peak quad. (1943), Ventura Co. UCR 4706. Hypotype UCR 4706/26. [Mitridae].

Conus bramkampi G D. Hanna and Strong, 1949 (n. sp.). PCAS 26(9):314, pl. 8, fig. 14. Imperial Fm. [=Latrania Fm.], Pliocene. Carrizo Mtn., Imperial Co. UCMP A1269. Holotype UCMP 34199. **Remarks:** In the genus *Lithoconus*, *fide* Tucker and Tenorio (2009: p. 107). [Conidae].

Conus bramkampi G D. Hanna and Strong, 1949. G D. Hanna, 1963. OPCAS 35:64, pl. 10, fig. 2. Imperial Fm. [=Latrania Fm.], Pliocene. Carrizo Mtn., Imperial Co. UCMP A1269. Holotype UCMP 34199 (not UCMP 34198 as in text). **Remarks:** In the genus *Lithoconus*, *fide* Tucker and Tenorio (2009: p. 107). [Conidae].

Conus bramkampi G D. Hanna and Strong, 1949. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 56, fig. 3.11A. Latrania Fm., Miocene/Pliocene. Alverson Canyon, Imperial Co. SDSNH 2995. Hypotype SDSNH 23257. **Remarks:** In the genus *Lithoconus*, *fide* Tucker and Tenorio (2009: p. 107). [Conidae].

Conus caleocius Vokes, 1939. Squires 1984. NHMLAC CS 350:39, fig. 9m. Llajas Fm., Eocene. Devil Canyon, Oat Mtn. quad. (1952, PR 1969), Los Angeles Co. CSUN. 498 [=LACMIP 16189]. Hypotype LACMIP. 6558. **Remarks:** In the genus *Dalliconus*, *fide* Tucker and Tenorio (2009: p. 141). [Conidae].

Conus caleocius Vokes, 1939. Squires 1987. NHMLAC CS 388:50–51, fig. 79. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 828 [=LACMIP 16141]. Hypotype LACMIP 7498. **Remarks:** In the genus *Dalliconus*, *fide* Tucker and Tenorio (2009: p. 141). [Conidae].

Conus caleocius Vokes, 1939. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 19. Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 498 [=LACMIP 16189]. Hypotype LACMIP 6558. **Remarks:** In the genus *Dalliconus*, *fide* Tucker and Tenorio (2009: p. 141). [Conidae].

Conus caleocius Vokes, 1939. Squires 1988c. NHMLAC CS 398:17, fig. 41. Juncal Fm.?, Eocene., Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 979 [=LACMIP 16081]. Hypotype LACMIP 7721. **Remarks:** In the genus *Dalliconus*, *fide* Tucker and Tenorio (2009: p. 141). [Conidae].

Conus californicus Reeve, 1844. Natland 1971. Terra 10(2):22, fig. 12 (not fig. 11), (middle row, left 2 specimens). "Fernando Fm.", [=Pico Fm.?], Pliocene. Arco Towers excavation, downtown Los Angeles, Los Angeles Co. LACMIP 1219]. Hypotypes current whereabouts unknown. **Remarks:** In the genus *Californiconus*, *fide* Tucker and Tenorio (2009: pp. 155, 156). [Conidae].

Conus durhami G.D. Hanna and Strong, 1949 (n. sp.). PCAS 26(9):306, pl. 5, fig. 16. Imperial Fm. [=Latrania Fm.], Pliocene. Carrizo Mtn., Imperial Co. UCMP A1269. Holotype UCMP 34200. **Remarks:** In the genus *Cylinder*, *fide* Tucker and Tenorio (2009: p. 68). [Conidae].

Conus durhami G D. Hanna and Strong, 1949. G D. Hanna 1963. OPCAS 35:56, pl. 10, fig. 1. Imperial Fm. [=Latrania Fm.], Pliocene. Carrizo Mtn., Imperial Co. UCMP A1269. Holotype UCMP 34200. **Remarks:** In the genus *Cylinder*, *fide* Tucker and Tenorio (2009: p. 68). [Conidae].

Conus durhami G D. Hanna and Strong, 1949. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 56, fig. 3.11B. Latrania Fm., Miocene/Pliocene. Alverson Canyon, Imperial Co. SDSNH 5282. Hypotype SDSNH 103738. **Remarks:** In the genus *Cylinder*, *fide* Tucker and Tenorio (2009: p. 68). [Conidae].

Conus (*Lithoconus*) *hayesi* Arnold, 1909 [1910]. Addicott 1970. USGS PP 642:124, pl. 16, fig. 24. Upper Round Mtn. Silt, Miocene. Near junction of Kern River and Cottonwood Creek, Kern Co. USGS 6611. Hypotype USNM 650220. **Remarks:** In the genus *Pyruconus*, *fide* Tucker and Tenorio (2009: p. 116). [Conidae].

Conus (*Lithoconus*) *hayesi* Arnold, 1909 [1910]. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 4. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH hypotype determined here as missing. **Remarks:** In the genus *Pyruconus*, *fide* Tucker and Tenorio (2009: p. 116). [Conidae].

Conus hornii Gabb, 1864. Givens 1974. UCPG 109:92, pl. 10, fig. 12. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4731. Hypotype UCR 4731/14. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus hornii piruensis Squires, 1987 (n. subsp.). NHMLAC CS 388:51–53, figs. 81, 82. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Holotype LACMIP 7500. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus hornii umpquaensis "Hendon" Turner, 1938. Stewart 1946. USGS PP 205-C:91, pl. 11, fig. 6. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14497a. Hypotype USNM 498707. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus hornii umpquaensis Turner, 1938. Squires 1984. NHMLAC CS 350:39, fig. 9n. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6559. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus hornii umpquaensis Turner, 1938. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 13. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 674 [=LACMIP 16082]. Hypotype LACMIP 11476. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus owenianus Anderson,1905 (not Arnold as cited). G.D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, fig. 63-10. Temblor Fm., Miocene. Kern River area, Kern Co. CASG 65. Hypotype CASG 5708. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus owenianus Anderson, 1905. Woodring et al. 1946. USGS PP 207:27, pl. 28, figs. 14, 15 (clay peels). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotypes USNM. 497077, 497078. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus (*Chelyconus*) *owenianus* Anderson, 1905. Addicott 1970. USGS PP 642:122–124, pl. 17, figs. 1, 8. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1612. Hypotypes USNM 650221, 650224. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

....., pl. 17, fig. 5. Kern River, Kern Co. USGS 6622. Hypotype USNM 650222.

....., pl. 17, figs. 6, 32. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotypes UCMP 36932, 36933.

....., pl. 17, figs. 7, 37. Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1608 (not USGS M1618 as in pl. caption). Hypotypes USNM 650223, 650225.

....., pl. 17, figs. 2–4. Upper Olcese Sand, Miocene. Bakersfield and Caliente quads. (1914), Kern Co. UCMP B1600. Hypotype UCMP 36934.

Conus owenianus Anderson, 1905. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 11. Monterey Fm. (Saltos Shale Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M2862. Hypotype USNM. 254360. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus owenianus Anderson, 1905. Addicott et al. 1980. SEPM Guidebook 6:18, 20, pl. 1, fig. 11 (refigured from Addicott et al., 1978, pl. 1, fig. 11). Monterey Fm. (Saltos Shale Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M2862 (not USGS M2869 as in pl. caption). Hypotype USNM 254360. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus (*Chelyconus*) *owenianus* Anderson, 1905. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 5. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH4312. Hypotype SDSNH 83241]. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus owenianus Anderson, 1905. Koch et al. 2004. NPS Tech. Rept. 04/01:8, fig. 5 (lower center specimen). Topanga Fm., Miocene. Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP2906]. Hypotype LACMIP 8158. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus cf. *owenianus* Anderson, 1905. Cōcke 2015. Foss. Palos Verdes Hills, p. 80, unnumbered fig. on p. 80 (upper). Monterey Fm., Miocene. George F. Canyon, Palos Verdes Hills, Los Angeles Co. Hypotype to be donated to LACMIP. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus remondi Gabb, 1864. Squires 1987. NHMLAC CS 388:51, fig. 80. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 219 [=LACMIP 16100]. Hypotype LACMIP 7499. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus remondi Gabb, 1864. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 20. Matilija Sandstone?, Eocene. Whitaker Peak area, Los Angeles Co. CSUN 219 [=LACMIP 16100]. Hypotype LACMIP 7499. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus remondi Gabb, 1864. Squires 1988c. NHMLAC CS 398:17, fig. 42. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 984 [=LACMIP 16178]. Hypotype LACMIP 7722. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus schencki Weaver and Kleinpell, 1963 (n. sp.). UCPG 43:194, pl. 27, figs. 8, 9. Middle Gaviota Fm., Eocene. Cañada de Santa Anita, Lompoc quad., Santa Barbara Co. UCMP B7013. Holotype SU 9237 [=CASG 70145], paratype SU 9238 (not SU 9500 as in text) [=CASG 70146]. **Remarks:** In the genus *Profundiconus*, *fide* Tucker and Tenorio (2009: p. 150). [Conidae].

Conus spurius Gmelin, 1791. Smith 1989. SEPM Guidebook 63:32, pl. 3, fig. 2. Imperial Fm. (Latraina Sand Member) [=Latrania Fm.], Miocene. Coyote Mtns., Imperial Co. LACMIP 9802. Hypotype LACMIP 8274]. **Remarks:** In the genus *Spuriconus*, *fide* Tucker and Tenorio (2009: pp. 121, 122). [Conidae].

Conus n. sp.? aff. *C. californianus* (Conrad, 1855b). [*Volutatithes**]. Givens 1974. UCPG 109: 92, pl. 11, fig. 1. Juncal Fm., Eocene. West of Reyes Peak, Reyes Peak quad. (1943), Ventura Co. UCR 4706. Hypotype UCR 4706/141. **Remarks:** Error for *Volutilithes*. [Conidae?].

Conus sp. indet. Squires 2008. NHMLAC CS 517:5, fig. 32. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13433. [Conidae].

Cophocara stantoni Stewart, 1926 [1927]. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, fig. 17. Moreno Fm. [=Laguna Seca? Fm.), Paleocene. Chounet Ranch quad., Fresno Co. SU 2245. Hypotype SU 10240 [=CASG 61616.01] determined here as missing. **Remarks:** *Perissitys stewarti* (Zinsmeister, 1983), *fide* Popenoe and Saul (1987: p.

20). [Perissityidae].

....., pl. 2, fig. 18. Chounet Ranch quad., Fresno Co. SU. 460 [=CASG 61616]. Hypotype SU 10241 [=CASG 61616.02]. **Remarks:** *Perissitys stewarti* (Zinsmeister, 1983), *fide* Popenoe and Saul (1987: p. 20).

Cophocara stewarti Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1298, figs. 3J, K. Santa Susana Fm., Paleocene. Meier Canyon, Calabasas quad., Ventura Co. UCR 6670. Holotype UCR 6670/900 (not UCR 6670/9 as in text), paratype UCR 6670/901 [=*Pyropsis fantozzi* n. sp., *fide* Saul (1988b: p. 884)]. **Remarks:** Not a *Pyropsis*, *fide* Squires (2011: p. 1204). [Perissityidae].

Corsania (*Januncia*) *janus* Woods and Saul, 1986. Squires and Saul 2002. Veliger 45(3):181, figs. 9–11. Pozo Fm., Paleocene. Upper part of Well Canyon, Santa Cruz Is. A quad. (1943), Santa Cruz Is., California Channel Ids. LACMIP 23348 (not LACMIP 26720 as in pl. caption). Hypotype LACMIP 12907. [Neritidae].

Corsania* (*Januncia*) *rhoga Saul and Squires, 1997 (n. sp.). Veliger 40(2):142, figs. 25–27. Martinez Fm., Paleocene. Near Lower Lake, Lower Lake quad. (1975), Lake Co. LACMIP 7047. Holotype LACMIP 7889. [Neritidae].

Corsania (*Januncia*) *rhoga* Saul and Squires, 1997. Squires and Saul 2002. Veliger 45(3):179–181, figs. 6–8. Santa Susana Fm., Paleocene. Trailer Canyon, Topanga quad. (1952, PR 1981), Santa Monica Mtns., Los Angeles Co. LACMIP 10508. Hypotype LACMIP 12906. [Neritidae].

Corsania* (*Januncia*) *susana Saul and Squires, 1997 (n. sp.). Veliger 40(2):142–143, figs. 28, 29. Santa Susana Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 969 [=LACMIP 16849]. Holotype LACMIP 7890. [Neritidae].

....., fig. 30. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 973 [=LACMIP 16895]. Paratype LACMIP 7891.

....., North side Simi Valley, Santa Susana quad. (1951 PR 1969), Ventura Co. CSUN 966 [=LACMIP 16893]. Unfigured paratype LACMIP 6441.

Corsania (*Januncia*) *susana* Saul and Squires, 1997. Squires 1999b. NHMLAC CS 479:15, figs. 24, 25. Santa Susana Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 969 (=LACMIP 16894). Holotype LACMIP 7890. [Neritidae].

Crassispira olcesensis Addicott, 1970 (n. sp.). USGS PP 642:134, pl. 19, figs. 20, 21. Lower Round Mtn. Silt, Miocene. Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1608. Holotype USNM 650264. [Pseudomelatomidae].

Crassispira zizyphus (Berry, 1940). [*Clavus*]. Weaver 1971. West (LA Times), 18 April, 1971:11, unnumbered fig. (center). "Fernando Fm.", Pliocene. Arco Towers excavations, 6th and Flower streets, downtown Los Angeles, Los Angeles Co. LACMIP 1219. Hypotypes (7) current whereabouts unknown. [Pseudomelatomidae].

Crassispira sp. Squires 2012. NHMLAC CS 520:77, fig. 91. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14408. [Pseudomelatomidae].

Crawfordina fugleri (Arnold, 1907). [*Cancellaria*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:77, pl. 16, fig. 7. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotype USNM 560087. [Cancellariidae].

Crenilabrum venturaensis (Nelson, 1925). [*Acteon*]. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 30. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6684. Hypotype UCR 6684/27 determined here as missing. [Acteonidae].

Crepidula aculeata (Gmelin, 1791). [*Patella*]. Squires 2012. NHMLAC CS 520:77, figs. 65, 66. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotypes LACMIP 14385, 14386. **Remarks:** Two specimens vertically stacked. [Calyptraeidae].

Crepidula bractea Addicott, 1970 (n. sp.). USGS PP 642:62–63, pl. 4, figs. 5, 6. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650088. [Calyptraeidae].

....., pl. 4, fig. 7. This locality occupies an area nearly a half a mi. square in hills just north of the Kern River, Kern Co. CASG 2064 [=CASG 65]. Paratype CASG 12931 [=CASG 2064.01].

....., pl. 4, figs. 15, 17. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 15455.

Crepidula inornata Dickerson, 1916. Squires 1999c. NHMLAC CS 480:17, figs. 20, 21. Matilija Sandstone, Eocene. Matilija Creek, Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1450 [=LACMIP 16963). Hypotype LACMIP 12453. [Calyptraeidae].

Crepidula nummaria Gould, 1846. Durham and Addicott 1965. USGS PP 524-A:A12, pl. 3, fig. 4 (cast). Pancho Rico Fm., Miocene/Pliocene. Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M1929. Hypotype USNM 649095. [Calyptraeidae].

Crepidula cf. *C. onyx* Sowerby I, 1824. Woodring et al. 1940 [1941]. USGS PP 195:86, pl. 31, fig. 6. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. Los Jinetes, North Dome, Kettleman Hills, Kings Co. USGS 12393. Hypotype USNM 495814. [Calyptraeidae].

Crepidula onyx Sowerby I, 1824. Stadum 1973. OCF, p. 31, pl. 6, fig. 5. Topanga Fm.?, Miocene. Orange Co.? Hypotype possibly at SDSNH, current whereabouts unknown. **Remarks:** *Ex* Grouard collection. [Calyptraeidae].

Crepidula onyx Sowerby I, 1824. Bedrossian 1974. Calif. Geol. 27(8):178, unnumbered fig, left specimen. "Merced" Fm., Pliocene [=Wilson Grove Fm.], Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotype CASG, determined here as missing. [Calyptraeidae].

Crepidula (*Spirocrypta*) *pileum* (Gabb, 1864). [*Crypta (Spirocrypta)*]. Wenz 1940. Handbh. Palaoz. 6:903, figs. 2660a, b (refigured from Stewart, 1926 [1927], pl. 29, figs. 2, 3 (as *Crepidula pileum*)). Tejon Fm., Eocene. Tejon, [Fresno Co.]. Lectotype (of Stewart 1926 [1927]: p. 342) ANSP. 4221]. **Remarks:** In the genus *Spirocrypta*, *fide* Saul and Squires (2008a: p. 131). [Calyptraeidae].

Crepidula pileum (Gabb, 1864). [*Crypta (Spirocrypta)*]. Weaver and Kleinpell 1963. UCPG 43:186–187, pl. 24, fig. 8. Middle Gaviota Fm., Eocene. Near town of Las Cruces, Los Olivos quad., Santa Barbara Co. UCMP B7008. Hypotype SU 9196 [=CASG. 70157]. **Remarks:** In the genus *Spirocrypta*, *fide* Saul and Squires (2008a: p. 131). [Calyptraeidae].

....., pl. 24, figs. 10, 11. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP.B6955. Hypotype SU 9197 [=CASG 70159].

Crepidula (*Spirocrypta*) *pileum* (Gabb, 1864). [*Crypta (Spirocrypta)*]. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 9. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23723. Hypotype LACMIP 11649. **Remarks:** In the genus *Spirocrypta*, *fide* Saul and Squires (2008a: p. 131). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):174, fig. 64-3. [Careaga Fm.?], Pliocene. Santa Barbara Co. Hypotype CASG 5937 (originally CSMB. 14639). **Remarks:** Supplemental description and first illustrated in Conrad (1857b). Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. Woodring and Bramlette 1950 [1951]. USGS PP 222:71–72, pl. 8, fig. 3. Sisquoc Fm. (diatomaceous strata), Miocene Purisima Hills, Santa Barbara Co. USGS 14969. Hypotype USNM 560021. **Remarks:** Supplemental description and first illustrated in Conrad (1857b). Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires 2012: p. 77. [Calyptraeidae].

....., pl. 8, figs. 4, 9. Casmalia Hills, near northwest of Shuman, Santa Barbara Co. USGS 14878. Hypotype USNM 560020.

....., pl. 10, fig. 4; pl. 11, fig. 5. Foxen Mudstone, Pliocene. Casmalia Hills, near Shuman, Santa Barbara Co. USGS 14877. Hypotype USNM 560045.

Crepidula princeps Conrad, 1855b. Moore et al. 1952. Invert. Foss., p. 326, fig. 8-40.20. Pliocene. Line drawing, source specimen unknown. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires, (2012: p. 77). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. Cummings et al. 1962:202, ph. 16, fig. 3. Purisima Fm. (Pomponio Member),

Pliocene. La Honda quad., San Mateo Co. 711. Hypotype determined here as missing. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. Moore 1968. SDSNH Occas. Pap. 15:33, pl. 15, fig. b. [San Diego Fm.], Pliocene. San Diego, San Diego Co. SDSNH 2383. Hypotype SDSNH 4123]. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula cf. *C. princeps* Conrad, 1855b. Addicott 1969. Pr.CAS 37(3):62, 65–66, pl. 2, fig. 10. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650969. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. Addicott 1970. USGS PP 642:63–64, pl. 4, figs. 16, 20. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotypes USNM 650092, 650094. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

....., pl. 4, figs. 19, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1590. Hypotype USNM 650093.

Crepidula princeps Conrad, 1855b. Weaver, 1971. West (LA Times), 18 April, 1971:11, unnumbered fig. (bottom row, center). "Fernando Fm.", Pliocene. Arco Towers excavation, 6th and Flower streets, downtown Los Angeles, Los Angeles Co. LACMIP 1219]. Hypotypes (3) current whereabouts unknown. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. Perry 1977. Foss. Santa Cruz Co., p. 22, lower 2 figs. Purisima Fm., Pliocene. Capitola area, Santa Cruz Co. SCCM1. Hypotypes SCCM 9603.00, 9603.02]. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula aff. *C. princeps* Conrad, 1855b. Yancey 1978. Pr.CAS 41(15):364, 369, fig. 5I. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D3364. Hypotype USNM 251805. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. Squires and White 1983. SEPM Guidebook 35:222, pl. 1, fig. 10. Saugus Fm. [=Pico Fm.], Pliocene. Northern Simi Valley, Ventura Co. CSUN 725 [LACMIP 29227]. Hypotype UCLA 59412 [=LACMIP 8325]. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 22. Niguel Fm., Pliocene. Orange Co. [SDSNH 4080]. SDSNH hypotype determined here as missing. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. Perry 1988. SCMA, p. 20, figs. 11A, B. Purisima Fm., Miocene/Pliocene. Near Escalona Gulch, Santa Cruz Co. CASG66095. Hypotype CASG 66095.02. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. Grant-Mackie 1990. Evol. paleobiol. behav. coevol., p. 399, 403, fig. 334. "Fernando Fm.", Pliocene. Los Angeles, Los Angeles Co. LACMIP 466. Hypotype LACMIP 6619 (not LACMIP 6722 as published). **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. Squires 1997b. Simi Valley Hist. Soc. vol., p. 301, fig. 6b (refigured from Squires and White, 1983, pl. 1, fig. 10). Saugus Fm. [=Pico Fm.], Pliocene. Simi Valley, Ventura Co. CSUN. 725 [=LACMIP 29227]. Hypotype UCLA. 59412 [=LACMIP 8325]. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeidae].

Crepidula princeps Conrad, 1855b. Powell et al. 2019a. USGS SIR 2019-5021:3, 34, pl. 3, fig. 8. Wilson Grove Fm., Miocene. North of Bloomfield, Sonoma Co., CASG 54135, Hypotype CASG 78416. **Remarks:** Supplemental description and first illustrated in Conrad, 1857b. In the genus *Grandicrepidula*, *fide* Squires (2012: p. 77). [Calyptraeaidae].

Crepidula rostralis (Conrad, 1865). [*Crypta*]. Addicott 1970. USGS PP 642:64–65, pl. 4, figs. 10, 11. Upper Olcese Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1600. Hypotype USNM 650089. [Calyptraeidae].

....., pl. 4, fig. 14. Upper Round Mtn. Silt, Miocene. Kern River, Rio Bravo Ranch quad. (1954) Kern Co. USGS M1608. Hypotype USNM 650090.

....., pl. 5, fig. 10. Upper Olcese Sand, Miocene. Bakersfield and Caliente quads. (1914), Kern Co. UCMP B1601. Hypotype UCMP 15458.

....., pl. 5, fig. 16. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 15460.

Crepidula rostralis (Conrad, 1865). [*Crypta*]. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, figs. 6, 9. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al. 1959), Miocene. Shale Pt. quad., Temblor Range, Kern Co. USGS M3986. Hypotype USNM 646798. [Calyptraeidae].

Crepidula cf. *C. ungana* Dall, 1904. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 17. Temblor Fm. (*Phacoides* Sand member) (of Stinemeyer et al. 1959: pp. 12, 13), Miocene. Las Yeguas Ranch quad., Temblor Range, Kern Co. USGS M3280 [M3281 in Addicott 1973]. Hypotype USGS 646606. [Calyptraeidae].

Crepidula cf. *C. ungana* Dall, 1904. Addicott 1973b. USGS PP 791:7, 18, pl. 8, figs. 6, 15. Temblor Fm. (Wygal Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646604. [Calyptraeidae].

....., pl. 8, fig. 7. Zemorra Creek, Carneros Rocks quad., Kern Co. USGS M3979 (as 3979 on pl. caption). Hypotype USNM 646605.

....., pl. 8, figs. 9, 11 (refigured from Addicott 1972b, pl. 1, fig. 17), 16. Las Yeguas Ranch quad., Kern Co. USGS M3281. Hypotype USNM 646606.

Crepidula new species? Squires 1987. NHMLAC CS 388:32, fig. 35. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 219 (not CSUN. 827 as in fig. caption) [=LACMIP 16100]. Hypotype LACMIP 7462. [Calyptraeidae].

Crepidula sp. Squires and Fritsche 1978. SEPM Guidebook 13:14, 22, pl. 4, fig. 6. Santa Margarita Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 305 [=LACMIP 16197]. Hypotype UCLA 58212 [=LACMIP 10572]. [Calyptraeidae].

Crepidula sp. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 2 (pl. 1 in caption), fig. E. Kinton Pt. Fm. [=Vaqueros Fm.], Miocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype SBNMH 60193]. **Remarks:** Determined here as *Crepidula praerupta* Conrad, 1849a. [Calyptraeidae].

Crommium andersoni (Dickerson, 1914c). [*Amauropsis*]. Givens 1974. UCPG 109:75, pl. 8, fig. Juncal Fm., Eocene. Hot Springs Creek, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4659. Hypotype UCR 4659/5. [Naticidae].

Crommium andersoni (Dickerson, 1914c). [*Amauropsis*]. Givens and Kennedy 1976. Jour. Paleo. 50(5):963, 969, pl. 2, figs. 20–23. Delmar Fm. [=Santiago Fm.?], Eocene. Near Vista and San Marcos, San Diego Co. UCR 4865. Hypotypes UCR 4865/80, 4865/81. [Naticidae].

Crommium sp. cf. *C. andersoni* (Dickerson, 1914c). Squires,1999c. NHMLAC CS 480:17, figs. 22, 23. Matilija Sandstone, Eocene. Matilija Creek, Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1450 [=LACMIP 16963]. Hypotype LACMIP 12454. [Naticidae].

Crommium pinyonensis (Dickerson, 1914c). [*Natica*]. Marincovich 1977. BAP 70(294):227–228, pl. 18, fig. 8. Martinez Fm. [=San Francisquito Fm.], Paleocene. Pinyon Ridge, Rock Creek quad., Los Angeles Co. UCMP 2245]. Holotype UCMP 11761. [Naticidae].

....., pl. 18, fig. 9. Domengine Fm., Eocene. On west side of Big Tar Canyon, Cholame Quad., Kings Co. UCMP4170]. Holotype (of *Ampullella schencki* Vokes, 1939) UCMP 15856. **Remarks:** *Ampullella schencki* Vokes, 1939, *fide* Squires (1987: p. 35).

....., pl. 18, figs. 11–13. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Panoche quad., Fresno Co. UCMP A9717. Hypotypes UCMP 14398, 14399, 32707.

....., pl. 18, fig. 10. Domengine Fm., Eocene. Kings Co. UCMP B5047. Hypotype UCMP 14397. **Remarks:** *Ampullella schencki* Vokes, 1939, *fide* Squires (1987: p. 35).

Crommium pinyonensis (Dickerson, 1914b). [*Natica*]. Squires 1987. NHMLAC CS 388:35–36, fig. 42. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 802 [=LACMIP 16144]. Hypotype LACMIP 7467. [Naticidae].

Crucibulum* (*Dispotaea*) *papulum Addicott, 1970 (n. sp.). USGS PP 642:62, pl. 5, figs. 5, 6. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. USGS 6623. Holotype USNM 650098, paratype USNM. 650097. [Calyptraeidae].

....., pl. 5, figs. 8, 9, 13. Center of SW¼ sec. 6, T29S, R30E, Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype UCMP 15457.

Crucibulum cf. *C. scutellatum* (Wood, 1828) [*Patella*]. Addicott 1970. USGS PP 642:62, pl. 5, figs. 11, 12, 15. Upper Round Mtn. Silt, Miocene. Cottonwood Creek, Caliente quad. (1914), Kern Co. UCMP B1588. Hypotype UCMP 15463. [Calyptraeidae].

Crucibulum cf. *scutellatum* (Wood, 1828). [*Patella*]. Rugh 2014b. Desert Symposium vol.:141, fig. 2–5. Deguynos Fm. (Jackson Fork Member), Pliocene. Fish Creek/Vallecito Creek, San Diego Co. ABDSP 5070.4]. Hypotype ABDSP I 11189]. [Calyptraeidae].

Crucibulum sp. Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, fig.14. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 93719 [in errata, p. 50]. [Calyptraeidae].

Cryptochorda (*Cryptochorda*) *californica* (Cooper, 1894). [*Ancilla*]. Squires 1984. NHMLAC CS 350:35, fig. 9c. Llajas Fm., Eocene. Thousand Oaks quad. (1950, PR 1967), Ventura Co. CSUN 703 [=LACMIP 16199]. Hypotype LACMIP 6549. [Volutidae].

Cryptochorda (*Cryptochorda*) *californica* (Cooper, 1894). [*Ancilla*]. Squires 1987. NHMLAC CS 388:45–46, fig. 64. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 361 [=LACMIP 16200]. Hypotype LACMIP 7487. [Volutidae].

Cryptochorda (*Lyrianella*) *lyrata* Nelson, 1925. Wenz 1943. Handbh. Palaoz. 6:1323, fig. 3762 (refigured from Nelson, 1925, pl. 59, figs. 1a, 1b). Martinez Fm., Eocene [=Santa Susana Fm., Paleocene]. Simi Hills, Camulos quad., Ventura Co. UCMP 3808. Holotype UCMP 30543. [Volutidae].

Cryptochorda? n. sp. Saul 1986. SEPM Guidebook 49:30, figs. 59, 60. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6525 [=LACMIP 26525]. Hypotype LACMIP 7565. [Volutidae].

Cryptoconus cooperi (Dickerson, 1916). [*Drillia*]. Squires 1987. NHMLAC CS 388:50, fig. 78. Juncal Fm., Eocene. Whitaker Peak area, Los Angeles Co. CSUN 827 [=LACMIP 16153]. Hypotype LACMIP 7497. **Remarks:** *Cryptoconus injucundus* G D. Hanna, 1924: p. 164, new name for *Cryptoconus cooperi* Dickerson, 1916, preoccupied. [Cryptoconidae].

Cryptoconus cooperi (Dickerson, 1916). [*Drillia*]. Squires 1988c. NHMLAC CS 398:17, fig. 40. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 975 [=LACMIP 16201]. Hypotype LACMIP 7720. **Remarks:** *Cryptoconus injucundus* G D. Hanna, 1924: p. 164, new name for *Cryptoconus cooperi* (Dickerson, 1916), preoccupied. [Cryptoconidae].

Cryptoconus cooperi (Dickerson, 1916). [*Drillia*]. Squires 2008. NHMLAC CS 517:5, fig. 31. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13432. **Remarks:** *Cryptoconus injucundus* G D. Hanna, 1924: p. 164, new name for *Cryptoconus cooperi* (Dickerson, 1916), preoccupied. [Cryptoconidae].

Cryptonatica aleutica (Dall, 1919a). [*Natica*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:72, pl. 10, fig. 1. Foxen Mudstone, Pliocene. Santa Barbara Co. USGS 4473. Hypotype USNM 560046. **Remarks:** Junior synonym

of *Natica* (*Cryptonatica*) *clausa* Broderip and G.B. Sowerby I, 1829, *fide* Marincovich (1977: p. 411). [Naticidae].

Cryptonatica aleutica (Dall, 1919a). [*Natica*]. Addicott 1969. Pr.CAS 37(3):62, 64, pl. 1, fig. 12. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650954. **Remarks:** Junior synonym of *Natica* (*Cryptonatica*) *clausa* Broderip and G.B. Sowerby I, 1829, *fide* Marincovich (1977: p. 411). [Naticidae].

....., pl. 4, fig. 2. Palo Alto quad., Santa Clara Co. USGS M1720. Hypotype USNM 650982.

Cryptonatica clausa (Broderip and Sowerby I, 1829). [*Natica*]. Squires 2012. NHMLAC CS 520:77, fig. 71. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14390. [Naticidae].

Cylichna? loismartinae Keen, 1943 (n. sp.). Tr.SDSNH 10(2):44, pl. 4, figs. 16, 18. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Holotype SU 7532 [=CASG. 71996], [unfigured paratype SU 7966 [=CASG. 7966]. [Cylichnidae].

....., LACMIP 16140 (*ex* SU 2121). Unfigured paratypes LACMIP 9384, 9385.

....., SDSNH5422 (*ex* SU 2121). Unfigured paratype SDSNH 608].

Cylichna? loismartinae Keen, 1943. Addicott 1970. USGS PP 642:139–140, pl. 20, figs. 7, 17, 26. Lower Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotypes UCMP 37104–37106. [Cylichnidae].

Cylichna temblorensis Keen, 1943 (n. sp.). Tr. SDSNH 10(2):44–45, pl. 4, figs. 13,14. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Holotype SU 7533 [=CASG 71997], [unfigured paratypes CASG 7960–7962]. [Cylichnidae].

....., LACMIP16140 (*ex* SU 2121), unfigured paratypes LACMIP 9387–9391.

....., [SDSNH 5422 (*ex* SU. 2121), unfigured paratypes SDSNH 609, 930–932].

Cylichna temblorensis Keen, 1943. Addicott, 1970. USGS PP 642:140, pl. 20, figs. 10, 18. Lower Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotypes UCMP 37107, 37108. [Cylichnidae].

....., pl. 20, fig. 25. Kern River area, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1604, Hypotype USNM 650283. [Cylichnidae].

....., pl. 20, fig. 11. Upper Olcese Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1599. Hypotype USNM 650284. [Cylichnidae].

Cylichnina costata (Gabb, 1864). [*Cylichna*]. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 28. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6871. Hypotype UCR 6871/9. **Remarks:** In the genus/subgenus *Scaphander* (*Mirascapha*), *fide* Squires (1984: p. 40, 1987: p. 53). [Cylichnidae].

Cylichnina tantilla (Anderson and G D. Hanna, 1925). [*Cylichnella*]. Stewart 1946. USGS PP 205-C:91, pl. 11, fig. 11. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14497a. Hypotype USNM 498712. [Cylichnidae].

Cylichnina tantilla (Anderson and G D. Hanna, 1925). [*Cylichnella*]. Squires 1983b. SEPM Guidebook 35:88, fig. 9A. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co. LACMIP 16115]. Hypotype LACMIP 6562. [Cylichnidae].

Cylichnina tantilla (Anderson and G D. Hanna, 1925). [*Cylichnella*]. Squires 1984. NHMLAC CS 350:40, fig. 9p. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6562 (not LACMIP 6561 as in pl. caption). [Cylichnidae].

Cylichnina tantilla (Anderson and G D. Hanna, 1925). [*Cylichnella*]. Squires 1987. NHMLAC CS 388:53, fig. 83. Matilija Sandstone?, Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 219 [=LACMIP 16100]. Hypotype LACMIP 7501. [Cylichnidae].

Cylichnina tantilla (Anderson and G D.Hanna, 1925). [*Cylichnella*]. Squires 1988c. NHMLAC CS 398:17, fig. 43. Juncal

Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 984 [=LACMIP 16178]. Hypotype LACMIP 7723. [Cylichnidae].

Cylichnina tantilla (Anderson and G D. Hanna, 1925). [*Cylichnella*]. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 14. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. LACMIP 23779 [=CSUN 662]. Hypotype LACMIP 11477. [Cylichnidae].

Cylichnina tantilla (Anderson and G D. Hanna, 1925). [*Cylichnella*]. Squires 1999b. NHMLAC CS 479:22, fig. 47. Santa Susana Fm., Eocene. Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 964 [=LACMIP 21551]. Hypotype LACMIP 12691. [Cylichnidae].

....., fig. 48. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 970. Hypotype LACMIP 12692.

Cylichnina tantilla (Anderson and G D. Hanna, 1925). [*Cylichnella*]. Squires 2008. NHMLAC CS 517:5, fig. 33. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13434. [Cylichnidae].

Cymatium (*Reticutriton*) *elsmerense* (English, 1914a). [*Gyrineum*]. Beu 1998. MNHN Mem.178:131, figs. 42h–l. [San Diego Fm.], Pliocene. [Hills south of Tijuana River], San Diego Co. LACMIP 305. [Hypotypes LACMIP 12743–12745]. [Ranellidae].

Cymatium sp., cf. *C*. (*Reticutriton*) *elsmerense* (English, 1914a). [*Gyrineum*]. Squires 2012. NHMLAC CS 520:77, fig. 75. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14394. [Ranellidae].

Cymatium* (*Septa*) *janetae Squires, 1983a (n. sp.). Jour. Paleo. 57(2):355–357, figs. 2A, B. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 444 [=LACMIP 16203]. Holotype UCLA 59191 [=LACMIP 10543]. [Ranellidae].

....., fig. 2C. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 445 [=LACMIP 16176]. Paratype UCLA 59192 [= LACMIP 10544].

....., fig. 2D. Devil Canyon, Santa Susana quad. (1951, PR 1969), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Paratype UCLA 59193 [=LACMIP 10545]. **Remarks:** *Sassia bilineata* (Dickerson, 1916), *fide* Squires (1987: p. 40).

Cymatium (*Septa*) *janetae* Squires, 1983a. Squires 1984. NHMLAC CS 350:27, fig. 7m. Llajas Fm., Eocene. Santa Susana quad. (1951, PR 1969) Ventura Co. CSUN 444 [=LACMIP 16203]. Holotype UCLA 59191 [=LACMIP 10543]. [Ranellidae].

Cymatium (*Septa*) *janetae* Squires, 1983a. Squires 1997b. Simi Valley His. Soc. vol., p. 297, fig. 2f (refigured from Squires, 1984 fig. 7m). Llajas Fm., Eocene. Simi Valley, Ventura Co. [CSUN 444 (=LACMIP 16203). Holotype UCLA 59191 [=LACMIP 10543]. [Ranellidae].

Cymatium n. sp. Addicott 1970. USGS PP 642:72, pl. 6, fig. 12. Upper Olcese Sand, Miocene. This locality is in hills just north of the Kern River, Kern Co. CASG 2064 [=CASG 65]. Hypotype CASG. 12932. [Ranellidae].

Cypraea castacensis Stewart, 1926 [1927]. Ingram 1942. BAP 27(104):103, pl. 8, figs. 5 (refigured from Vokes 1939, pl. 20, fig. 9). Llajas Fm., Eocene. Simi Valley, Ventura Co. UCMP 3296. Hypotype UCMP 33808]. **Remarks:** In the genus *Eocypraea*, *fide* Groves (1992: p. 106). [Ovulidae].

....., pl. 8, fig. 6 (refigured from Vokes 1939, pl. 20, fig. 14). Avenal Sandstone, Eocene]. Cholame quad., Kings Co. UCMP A1282. Hypotype UCMP 15815].

Cypraea castacensis Stewart, 1926 [1927]. Squires 1984. NHMLAC CS 350:23–24, fig. 7b. Llajas Fm., Eocene. Las Llajas Canyon, Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP. 6523. **Remarks:** In the genus *Eocypraea*, *fide* Groves (1992: p. 106). [Ovulidae].

Cypraea fresnoënsis Anderson, 1905. Ingram, 1942. BAP 27(104):103–104, pl. 8, fig. 9. Avenal Sandstone, Eocene. Northwest of Coalinga, Fresno Co. CASG 61713. Holotype CASG. 50 [=CASG 61713.01]. **Remarks:** In the genus *Bernaya*, *fide* Groves (1992: p. 106). [Cypraeidae].

Cypraea fresnoënsis Anderson, 1905. Ingram 1947. BAP 31(120):60, 93, pl. 7, fig. 4 (as *Cypraea fresnoensis* in pl. caption). Avenal Sandstone, Eocene. Northwest of Coalinga, Fresno Co. CASG 61713. Holotype CASG 50 [=CASG 61713.01]. **Remarks:** In the genus *Bernaya*, *fide* Groves (1992: p. 106). [Cypraeidae].

Cypraea kemperae Nelson, 1925. Ingram 1942. BAP 27(104):104, pl. 9, figs. 8, 9. Martinez Fm. [= Santa Susana Fm.], Eocene [=Paleocene]. South of Simi Valley, Ventura Co. UCMP 3764. Syntype [=paratype in UCMP online database] UCMP 30541. **Remarks:** In the genus *Propustularia*, *fide* Groves (1992: p. 106). [Cypraeidae].

Cypraea kemperae Nelson, 1925. Ingram 1947. BAP 31(120):60, 97, pl. 7, figs. 2, 3. Martinez Fm. [=Santa Susana Fm.], Eocene [=Paleocene]. South of Simi Valley, Ventura Co. CASG 391. Holotype CASG 987 [=CASG 391.01]. **Remarks:** In the genus *Propustularia*, *fide* Groves (1992: p. 106). [Cypraeidae].

Cypraea mathewsonii Gabb, 1869b. Ingram, 1942. BAP 27(104):105, pl. 9, fig. 12. Tejon Fm., Eocene. Martinez, Contra Costa Co. Holotype ANSP 4217. **Remarks:** In the genus *Sulcocypraea*, *fide* Squires and Groves (1993: p. 83). [Ovulidae].

Cypraea mathewsonii Gabb, 1869b. Ingram 1947. BAP 31(120):49, 61, pl. 7, fig. 10. [Tejon Fm., Eocene. Martinez, Contra Costa Co. Holotype ANSP 4217]. **Remarks:** In the genus *Sulcocypraea*, *fide* Squires and Groves (1993: p. 83). [Ovulidae].

Cypraea novasumma (Nelson, 1925). [*Ovula*]. Ingram 1942. BAP 27(104):105, pl. 9, fig. 13. Martinez Fm. [= Santa Susana Fm.], Eocene [=Paleocene]. South side of Simi Valley, Ventura Co. UCMP. 3776. Holotype UCMP 30449. **Remarks:** In the genus *Eocypraea*, *fide* Groves (1992: p. 106). [Ovulidae].

Cypraea novasumma (Nelson, 1925). [*Ovula*]. Ingram 1947. BAP 31(120):60, 98, pl. 7, fig. 9. Martinez Fm. [=Santa Susana Fm.], Eocene [=Paleocene]. South side of Simi Valley, Ventura Co. UCMP 3776. Holotype UCMP 30449. **Remarks:** In the genus *Eocypraea*, *fide* Groves (1992: p. 106). [Ovulidae].

Cypraea simiensis Nelson, 1925. Ingram 1942. BAP 27(104):105–106, pl. 9, fig. 18. Martinez Fm. [=Santa Susana Fm.], Eocene [=Paleocene]. South side of Simi Valley, Ventura Co.. UCMP 3818. Holotype UCMP 30498. **Remarks:** In the genus *Propustularia*, *fide* Groves (1992: p. 106). [Cypraeidae].

Cypraea simiensis Nelson, 1925. Ingram 1947. BAP 31(120):60, 101, pl. 6, figs. 18, 19. Martinez Fm. [=Santa Susana Fm.], Eocene [=Paleocene]. South of Simi Valley, Ventura Co. UCMP 3818. Holotype UCMP 30498. **Remarks:** In the genus *Propustularia*, *fide* Groves (1992: p. 106). [Cypraeidae].

Cypraea spadicea Swainson, 1823a. Shimer and Shrock 1944. Index Foss. N.A., p. 500, pl. 205, fig. 4 (refigured from Grant and Gale 1931, pl. 27, fig. 13). [Pico Fm.], Pliocene. [Holser Canyon, Los Angeles Co. SDSNH 217a. Hypotype SDSNH. 270. **Remarks:** In the genus *Neobernaya*, *fide* Groves, (2019: pp. 131–136). [Cypraeidae].

Cypraea sp. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, fig. 10. Lodo Fm., Paleocene. East side of Panoche Pass Rd. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=CASG. 61666]. Hypotype SU 10236 [=CASG 61666.04]. [Ovulidae].

....., pl. 2, fig. 14. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. UCMP A9717. Hypotype UCMP 14208.

Cypraea species indeterminate. Squires 1988c. NHMLAC CS 398:12, fig. 23. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 984 [=LACMIP 16178]. Hypotype LACMIP 7704. [Ovulidae].

Cypraeid. Stadum and Finger 2016. NHMLAC CS 524:38 (as Cypraeidae), 40, 50 fig. 28 [as *Calyptraea* sp. in caption, corrected in errata, p. 50]. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Elevation "Fossil Reef" site, Laguna Hills, Orange Co., El Torro quad. SDSNH 4520. Hypotype SDSNH 98688. [Cypraeidae].

Demondia? Powell et al. 2019b. *PaleoBios* 36:14, fig. 24. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP13003. Hypotypes UCMP 218821, 218822. [Nassariidae].

Dentimitra clementensis (M.A. Hanna, 1927). [*Mitra*]. Cernohorsky 1976. Indo-Pac. Moll. 3(17): 511, pl. 460, figs. 4, 5 (refigured from M.A. Hanna, 1927, pl. 52, figs. 11, 12). La Jolla Fm., Eocene. San Clemente Creek, San Diego Co. UCMP 5051. Holotype UCMP 30991. [Mitridae].

Dentimitra murietta (Anderson and G D. Hanna, 1925). [*Mitra*]. Cernohorsky 1976. Indo-Pac. Moll. 3(17):510, pl. 460, figs. 2, 3 (refigured from Anderson and G D. Hanna 1925, pl. 8, figs. 12, 13). Tejon Fm., Eocene. Grapevine Creek, Kern Co. CASG 245]. Holotype CASG 834, paratype CASG 835. [Mitridae].

Dentrimitra simplicissima (Cooper, 1894). [*Mitra*]. Cernohorsky 1976. Indo-Pac. Moll. 3 (17):510, pl. 460, fig. 1 (refigured from Dickerson, 1915, pl. 11, fig. 12). Domengine Fm. [="Rose Canyon Group"], Eocene. Rose Canyon, San Diego Co. CSMB 13740. Syntype [=Holotype? CASG 14]. [Mitridae].

Deussenia pacificana Squires and Saul, 2000 (n. sp.). Veliger 43(2):123, figs. 10–12. Unnamed strata, latest Cretaceous/earliest Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad. (1948, PR 1979), San Luis Obispo Co. CASG 61598. Holotype CASG 61598.01 (*ex* CASG 30031). [Buccinidae].

Deussenia? n. sp. Saul 1986. SEPM Guidebook 49:29, figs. 54, 55. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. CASG 61598. Hypotype CASG 61598.01. **Remarks:** *Deussenia pacificana* n. sp., *fide* Squires and Saul (2000: p. 123). [Buccinidae].

Diodora arnoldi McLean, 1966. Vedder and Moore 1976. AAPG Misc. Pub. 24:123–130, pl. 2, fig. 6. Unnamed strata, Pliocene. Near Lemon Tank Reservoir, San Clemente Is., California Channel Ids. USGS M6501. Hypotype USNM 235585. [Fissurellidae].

Diodora arnoldi McLean, 1966. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 8. Niguel Fm., Pliocene. Orange Co. SDSNH 4080]. Hypotype SDSNH 75910. [Fissurellidae].

Diodora cf. *D. aspera* (Eschscholtz *in* Rathke, 1833). [*Fissurella*]. Glen 1959.UCPG 36(2):184, pl. 15, fig. 5 (not fig. e). Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene. Vicinity of of San Vicente Creek, San Mateo Co. UCMP B4793. Hypotype UCMP 37680 (not UCMP 30680 as in text). [Fissurellidae].

Diadora aspera* (Eschscholtz *in* Rathke, 1833). [*Fissurella*]. Bedrossian 1974. Calif. Geol. 27(8):177, unnumbered fig., right specimen. "Merced" Fm., Pliocene [=Wilson Grove Fm., Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotype CASG determined here as missing. **Remarks:** Error for *Diodora*. [Fissurellidae].

Diodora cayenensis (Lamarck, 1822). [*Fissurella*]. Schremp 1981. Jour. Paleo. 55(5):1127–1128, pl. 1, figs. 11–14, 16–21. Imperial Fm. [=Latrania Fm.], Pliocene. Whitewater River, San Jacinto quad., Riverside Co. UCMP A1407. Hypotypes UCMP 16080–16083. [Fissurellidae].

Diodora aff. *D. stillwaterensis* (Weaver and Palmer, 1922). [*Fissuridea*]. Squires and Deméré 1991. SEPM Guidebook 68:184, figs. 3A, B. Friars Fm., Eocene. San Diego Co. SDSNH 3278. Hypotype SDSNH 28387. [Fissurellidae].

Diodora n. sp.? aff. *D. inaequalis* (Sowerby I, 1835). [*Fissurella*]. Durham and Addicott 1965.USGS PP 524-A:A12, pl. 5, fig. 5 (peel, cast). Pancho Rico Fm., Miocene/Pliocene. Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M977. Hypotype USNM 649103. [Fissurellidae].

Diodora? n. sp. Addicott 1970. USGS PP 642:40-41, pl. 1, fig. 8. Basal Jewett Sand, Miocene. Woody quad. (1952), Kern Co. UCMP B1605. Hypotype UCMP 11031. [Fissurellidae].

Diodora (*Diodora*) n. sp. Addicott 1970. USGS PP 642:40, pl. 1, figs. 1, 9 (casts), 24. Jewett Sand, Miocene. Float from basal part of the Jewett Sand, Woody quad. (1952), Kern Co. UCMP B1674. Hypotype UCMP 10064. [Fissurellidae].

Diodora sp. Schremp 1981. Jour. Paleo. 55(5):1128, pl. 1, figs. 10, 15. Imperial Fm. [=Latrania Fm.], Pliocene. Willis Palms, San Gorgonio Pass, Riverside Co. UCR 4777. Hypotype UCR 4777/10. [Fissurellidae].

Diodora sp. Squires 2008. NHMLAC CS 517:5, fig. 9. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13413. [Fissurellidae].

Diodora sp. nov.? Squires and Kennedy 1998. Veliger 41(2):161–162, figs. 3–5. Santa Susana Fm., Paleocene. Locality now covered by 2 to 3 m of fill underlying homesites in a gate-guarded housing tract, Santa Monica Mtns., Topanga quad. (1952, PR 1981), Los Angeles Co. LACMIP 16888. Hypotypes LACMIP 7940, 7941. [Fissurellidae].

Domenginella claytonensis (Gabb, 1864). [*Turris*]. Wenz 1943. Handbh. Palaoz. 6:1416, fig. 4002 (refigured from Vokes 1939, pl. 17, fig. 20). Domengine Fm., Eocene. Parson's Peak, Fresno Co.]. UCMP 672. Hypotype UCMP

15776]. [Clathurellidae].

Domenginella claytonensis (Gabb, 1864). [*Turris*]. Powell 1966. BAIM 5:61, 151, pl. 8, figs. 17, 18. [Domengine Fm.], Eocene. Parson's Peak, Coalinga quad., Fresno Co. UCMP 672. Hypotypes (of Vokes, 1939, pl. 17, figs. 18, 20) UCMP 15775, 15776]. [Clathurellidae].

Domenginella claytonensis (Gabb, 1864). [*Turris*]. Squires 1984. NHMLAC CS 350:37–39, fig. 9k. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6556. **Remarks:** *Trypanotoma stocki* (Dickerson, 1916), *fide* Squires (1988c: p. 16). [Clathurellidae].

Domenginella aff. *D. claytonensis* (Gabb, 1864). [*Turris*]. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 12. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. LACMIP 23799 [=CSUN 662). Hypotype LACMIP 11475. [Clathurellidae].

Drillia columbiana Anderson and Martin, 1914. Adegoke 1969. UCPG 80:192, pl. 13, fig. 10. Temblor Fm., Miocene. Garza Creek, Reef Ridge quad., Kings Co. UCMP D1056. Hypotype UCMP 36900. **Remarks:** In the genus *Ptychosyrinx*, *fide* Hickman (1976a: p. 94). [Drilliidae].

"*Drillia*" *graciosana* Arnold, 1907. Woodring and Bramlette 1950 [1951]. USGS PP 222: 79, pl. 17, figs. 3, 4, 6, 10. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge, Santa Barbara Co. USGS 14613. Hypotypes USNM 560130–560133. 62. **Remarks:** In the genus *Ophiodermella*, *fide* Addicott (1969: p. 62). [Drilliidae].

....., pl. 17, fig. 5. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14621. Hypotype USNM 560129.

Echinophoria dalli (Dickerson, 1917)(?). [*Galeodea*]. Weaver and Kleinpell 1963. UCPG 43:190, pl. 25, fig. 10. Gaviota Fm., Eocene. Cañada del Corral, Gaviota quad., Santa Barbara Co. UCMP B6968. Hypotype SU 9215 [=CASG 70162]. [Cassidae].

Echinophoria trituberculata (Weaver, 1912). [*Morio*]. Weaver and Kleinpell 1963. UCPG 43:190, pl. 25, fig. 11. Matilija Fm., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6920. Hypotype SU 9216 [=CASG 70163]. **Remarks:** This specimen cannot be identified as to genus or species, *fide* Squires (2019: p. 14). [Cassidae?]

Echinophoria trituberculata (Weaver, 1912). [*Morio*]. Squires 2019. *PaleoBios* 36:12–14, figs. 4I, J. Tejon Fm., Eocene. Grapevine Canyon, Tehachapi Mtns., Kern Co. LACMIP 22340. Hypotype 14836. [Cassidae].

Ectinochilus (*Cowlitzia*) *canalifer* (Gabb, 1864). [*Rostellaria (Rimella)*]. Weaver and Kleinpell 1963. UCPG 43:189, pl. 25, fig. 6. Matilija Fm., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6920. Hypotype SU 9207 [=CASG 70164]. **Remarks:** Junior synonym of *Rimella supraplicata* (Gabb, 1864), *fide* Squires (2013: p. 835). [Strombidae].

Ectinochilus (*Cowlitzia*) *canalifer* (Gabb, 1864). [*Rostellaria (Rimella)*]. Givens 1974. UCPG 109:72, pl. 7, fig. 11. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4714. Hypotype UCR 4714/30. **Remarks:** Junior synonym of *Rimella supraplicata* (Gabb, 1864), *fide* Squires (2013: p. 835). [Strombidae].

Ectinochilus (*Cowlitzia*) *canalifer supraplicatus* (Gabb, 1864). [?*Neptunea*]. Weaver and Kleinpell 1963. UCPG 43:189, pl. 25, fig. 7. Matilija Fm., Eocene. Cañada de Santa Anita, Lompoc quad., Santa Barbara Co. UCMP B6922. Hypotype SU 9208 [=CASG 70165]. **Remarks:** Junior synonym of *Rimella supraplicata* (Gabb, 1864), *fide* Squires (2013: p. 835). [Strombidae].

Ectinochilus (*Vaderos*) cf. *E.* (*V.*) *elongata* (Weaver, 1912). [*Rimella*]. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 21. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. LACMIP 23779 [=CSUN 662). Hypotype LACMIP 11463. [Strombidae]. **Remarks:** Junior synonym of *Rimella macilenta* White, 1889, *fide* Squires (2013: p. 833). [Strombidae].

Ectinochilus (*Macilentos*) *macilentus* (White, 1889). [*Rimella*]. Wenz 1940. Handbh. Palaoz. 6:932, fig. 2727 (refigured from White, 1889, pl. 3, fig. 11 (as *Rimella macilenta*)). Chico Fm., Cretaceous [=Domengine Fm., Eocene]. New Idria, Fresco [*sic*] Co. USGS 212. Holotype USNM 20114. **Remarks:** In the genus *Rimella*, *fide* Squires (2013: p. 831). [Strombidae].

*Ectinochilus macilentum** (White, 1889). [*Rimella*]. Shimer and Shrock 1944. Index Foss. N.A., p. 497, pl. 203, figs. 20, 21 (refigured from White, 1889, pl. 3, figs. 10, 11). Domengine Fm., Eocene. North of New Idria, Fresno Co. USGS 212. Holotype USNM. 20114 (25 syntypes as per online database), CASG paratype determined here as missing. **Remarks:** Error for *macilentus.* In the genus *Rimella*, *fide* Squires (2013: p. 831). [Strombidae].

Ectinochilus macilentus (White, 1889). [*Rimella*]. Stewart 1946. USGS PP 205-C:91, pl. 11, figs. 12, 15. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS.14500. Hypotypes USNM 498713, 498716. **Remarks:** In the genus *Rimella*, *fide* Squires (2013: p. 831). [Strombidae].

....., pl. 11, figs. 13, 14. Reef Ridge, Reef Ridge quad., USGS 14492. Hypotypes USNM 498714, 498715.

Ectinochilus (*Macilentos*) *macilentus* (White, 1889). [*Rimella*]. Givens 1974. UCPG 109:72, pl. 7, fig. 13. Juncal Fm., Eocene. Thorn Meadows area, Lion Canyon quad. (1943), Ventura Co. UCR 4680. Hypotype UCR 4680/17. **Remarks:** In the genus *Rimella*, *fide* Squires (2013: p. 831). [Strombidae].

....., pl. 7, fig. 16. Near Thorn Meadows, Lion Canyon quad. (1943), Ventura Co. UCR 4679. Hypotype UCR 4679/7. [Strombidae].

Ectinochilus (*Macilentos*) *macilentus* (White, 1889). [*Rimella*]. Squires 1983b. SEPM Guidebook 35:88, fig. 9B. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co. LACMIP 16115]. Hypotype LACMIP 6521. **Remarks:** In the genus *Rimella*, *fide* Squires (2013: p. 831). [Strombidae].

Ectinochilus (*Macilentos*) *macilentus* (White, 1889). [*Rimella*]. Squires 1984. NHMLAC CS 350:21–23, fig. 6s. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6521. **Remarks:** In the genus *Rimella*, *fide* Squires (2013: p. 831). [Strombidae].

Ectinochilus (*Macilentos*) *macilentus* (White 1889). [*Rimella*]. Squires 1987. NHMLAC CS 388:33, fig. 36. Juncal Fm., Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7463. **Remarks:** In the genus *Rimella*, *fide* Squires (2013: p. 831). [Strombidae].

Ectinochilus (*Macilentos*) *macilentus* (White, 1889). [*Rimella*]. Squires 1988c. NHMLAC CS 398:12, fig. 21. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 987 [=LACMIP 16175]. Hypotype LACMIP 7702. **Remarks:** In the genus *Rimella*, *fide* Squires (2013: p. 831). [Strombidae].

Ectinochilus (*Macilentos*) *macilentus* (White, 1889). [*Rimella*]. Squires 2008. NHMLAC CS 517:5, fig. 19. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13420. **Remarks:** In the genus *Rimella*, *fide* Squires (2013: p. 831). [Strombidae].

Ectinochilus (*Cowlitzia*) *supraplicatus* (Gabb, 1864). [*Neptunea*?]. Givens 1974. UCPG 109:72, pl. 7, fig. 12. Juncal Fm., Eocene. San Guillermo quad. (1943), Ventura Co. UCR 4753. Hypotype UCR 4753/131. **Remarks:** In the genus *Rimella*, *fide* Squires (2013: p. 831). [Strombidae].

Elaeocyma sp. Squires, 2012. NHMLAC CS 520: fig. 90. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14407. [Drilliidae].

Eocernina hannibali (Dickerson, 1914c). [*Natica*]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):170, fig. 62-17. Las [*sic*] Llajas Fm., Eocene. Aliso Canyon of Devil Creek, Santa Susana quad., Los Angeles Co. CASG 393. Hypotype CASG 5962. [Naticidae].

Eocernina hannibali (Dickerson, 1914c). [*Natica*]. Marincovich 1977. BAP 70(294):229–231, pl. 19, figs. 1, 2. Llajas Fm., Eocene. Santa Susana quad., Ventura Co. UCMP.7004. Hypotypes UCMP 14401, 14402. [Naticidae].

....., pl. 19, fig. 3. Las Llajas Canyon, Santa Susana quad., Ventura Co. UCMP.7003. Hypotype UCMP 14403.

....., pl. 19, fig. 4. Aliso Canyon, Santa Susana quad.],Ventura Co. UCMP 3296. Hypotype UCMP 14404.

Eocernina hannibali (Dickerson, 1914c). [*Natica*]. Squires, 1983b. SEPM Guidebook 35:88, fig. 9C. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co. LACMIP 7242. Hypotype LACMIP 6524. [Naticidae].

Eocernina hannibali (Dickerson, 1914c). [*Natica*]. Squires 1984. NHMLAC CS 350:24, fig. 7c. Llajas Fm., Eocene. Las

Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6524. [Naticidae].

Eocernina hannibali (Dickerson, 1914c). [*Natica*]. Squires 1987. NHMLAC CS 388:36, fig. 43. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7468. [Naticidae].

Eocernina hannibali (Dickerson, 1914c). [*Natica*]. Squires 1988c. NHMLAC CS 398:12, fig. 24. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 984 [=LACMIP 16178]. Hypotype LACMIP 7705. [Naticidae].

Eocernina hannibali (Dickerson, 1914c). [*Natica*]. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 24. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. LACMIP 23779 [=CSUN 662]. Hypotype LACMIP 11464. [Naticidae].

Eocernina hannibali (Dickerson, 1914c). [*Natica*]. Squires 1997b. Simi Valley Hist. Soc. vol., p. 297, fig. 2e (refigured from Squires, 1984, fig. 7c). Llajas Fm., Eocene. Simi Valley, Ventura Co. [CSUN 374 [=LACMIP 7242). Hypotype LACMIP 6524. [Naticidae].

Eocernina hanniballi (Dickerson, 1914c). [*Natica*]. Elder et al. 1998. SEPM Guidebook 84:160, 167, pl. 1, fig. 4. German Rancho Fm., Eocene. South of Gualala, Mendocino Co. Wentworth W241 [=UCMP W241]. Hypotype UCMP 39916. [Naticidae].

Eocernina hanniballi (Dickerson, 1914c). [*Natica*]. Squires 2008. NHMLAC CS 517:5, fig. 21. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13422. [Naticidae].

Eocernina hespericosta Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1293, figs. 2P, Q. Santa Susana, Paleocene. Simi Hills, Thousand Oaks quad., Ventura Co. UCR 7320. Holotype UCR 7320/4. [Naticidae].

Eocernina n. sp. Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, figs. 12, 13. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 7320. Hypotype UCR 7320/4. **Remarks:** *Eocernina hespericosta* n. sp., *fide* Zinsmeister (1983b: p. 1293). [Naticidae].

Eocithara mutica californiensis (Vokes, 1937b). [*Harpa*]. Rehder 1973. Indo-Pac. Moll. 3(16):225, pl. 193 (refigured from Vokes 1937b, pl. 2, figs. 2, 6). Llajas Fm., Eocene. Aliso Canyon, Santa Susana quad., Ventura Co. UCMP 3296. Holotype UCMP 30438. [Harpidae].

Eocithara mutica californiensis (Vokes, 1939). [*Harpa*]. Squires 1984. NHMLAC CS 350:35, fig. 9b. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in the Oat Mtn. quad.), Los Angeles Co. CSUN 373 [=LACMIP 16211]. Hypotype LACMIP 6548. [Harpidae].

Eocithara clarki Vokes, 1937b. [*Harpa*]. Rehder 1973. Indo-Pac. Moll. 3(16):226–227, pl. 195 (refigured from Vokes, 1937b, pl. 2, figs. 5, 7). Domengine Fm., Eocene. Big Tar Canyon, south of Coalinga, Kings Co.. UCMP A1165. Holotype UCMP 15792. [Harpidae].

Eocypraea? maniobraensis Squires and Advocate, 1986 (n. sp.). Jour. Paleo. 60(4):856–857, figs. 2.5, 2.6. Maniobra Fm., Eocene. Orocopia Mtns., Canyon Spring NW quad. (1963), Riverside Co. CSUN 662 [=UCLA 3779) [=LACMIP 23779]. Holotype UCLA 48431 [=LACMIP 10566]. **Remarks:** In the genus *Eocypraea*, *fide* Groves (1992: p. 106). [Ovulidae].

Eocypraea? *maniobraensis* Squires and Advocate, 1986. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 23. Maniobra Fm., Eocene. Hayfield quad. (1987), Riverside Co. LACMIP 23779 [=CSUN 662]. Holotype UCLA 48431 [=LACMIP 10566]. **Remarks:** In the genus *Eocypraea*, *fide* Groves (1992: p. 106). [Ovulidae].

Eocypraea (*E.*) sp., cf. *Eocypraea* (*E.*) *castacensis* (Stewart, 1926 [1927]). [*Cypraea*]. Squires 2008. NHMLAC CS 517:5, fig. 20. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13421. **Remarks:** In the genus *Eocypraea*, *fide* Groves (1992: p. 106). [Ovulidae].

Eocypraea (*Eocypraea*) sp. cf. *E.* (*E.*) *inflata* (Lamarck, 1802). [*Cypraea*]. Groves 2011. Nautilus 125(2):50, figs. 11, 12. Domengine Fm., Eocene. Cholame quad., Kings Co. UCMP A1282. Hypotype (of Vokes 1939: pl. 20, fig. 14; of

Ingram 1942: pl. 8, fig. 6) UCMP 15815. [Ovulidae].

Eocypraea novasumma (Nelson 1925). [*Ovula*]. Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, figs. 1, 2. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6871. Hypotype UCR 6871/13 (not UCR 3776/1 as in pl. caption). [Ovulidae].

Eocypraea* (*Eocypraea*) *takeosusukii Groves, 2011 (n. sp.). Nautilus 125(2):48–49, figs. 3, 4. "Martinez" Fm., Paleocene Herndon Creek near Lower Lake, Lake Co. LACMIP 7045. Holotype LACMIP 13645. [Ovulidae].

Eopleurotoma whitakerpeakensis Squires, 1987 (n. sp.). NHMLAC CS 388:49–50, figs. 76, 77. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 827 [=LACMIP 16153]. Holotype LACMIP 7496. [Turridae].

Eosurcula aff. *Eosurcula inconstans* (Cooper, 1894). [*Surcula*]. Squires 2001. NHMLAC CS 489:13, 14, figs. 24, 25. Llajas Fm., Eocene Simi Valley, Santa Susana quad. (1903), Ventura Co. LAMCIP 7434. Hypotype LACMIP 12743. [Turridae].

Epitonium* (*Gyroscala*) *barkerianum Addicott, 1970 (n. sp.). USGS PP 642:55, pl. 3, fig. 19. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650077. [Epitoniidae].

Epitonium (*Cirsotrema*) *clallamensis* Durham, 1937. Addicott, 1965b. USGS PP 525-C:C104, fig. 3j. Basal Jewett Sand, Miocene. Caliente quad., Kern Co. UCMP B1665. Hypotype UCMP 36553. [Epitoniidae].

Epitonium (*Cirsotrema*) *clallamense* Durham, 1937. Addicott 1970. USGS PP 642:54, pl. 3, figs. 15, 16, 35, 36. Basal Jewett Sand, Miocene. Caliente quad. (1914), Kern Co. UCMP B1665. Hypotypes UCMP 15428, 36553 (not UCMP 36533 as in pl. caption). [Epitoniidae].

....., pl. 3, fig. 34. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1590. Hypotype USNM 650073.

....., pl. 3, fig. 37. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 650074.

Epitonium (*Cirsostrema*) *clallamensis* Durham, 1937. Moore and Addicott 1987. USGS Bull. 1664A: pl. 3, fig. 11; pl. 4, figs. 7, 10. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad., Kern Co. USGS M1591. Hypotype USNM 388237 determined here as missing. [Epitoniidae].

Epitonium (*Asperiscala*) *hemphilli* (Dall, 1878a). [*Scalaria*]. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 7. Niguel Fm., Pliocene. Orange Co. SDSNH 4080. Hypotype SDSNH 75912]. [Epitoniidae].

Epitonium (*Cirsotrema*) *posoense* Anderson and Martin, 1914. Addicott 1970. USGS PP 642:55, pl. 3, figs. 29, 32. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. UCLA AC-14-34 [=LACMIP 26326]. Hypotype UCLA 45765 [=LACMIP 8431]. [Epitoniidae].

Epitonium* (*Nitidiscala*) *tedfordi Addicott, 1970 (n. sp.). USGS PP 642:55, pl. 3, fig. 17. Upper Olcese, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650075. [Epitoniidae].

....., pl. 3, fig. 18. Oil Center quad. (1954), Kern Co. USGS M1602. Hypotype USNM 650076.

Epitonium (*Nitidiscala*) *tinctum* Carpenter, 1864. Vedder and Moore 1976. AAPG Misc. Pub. 24: 123,130, pl. 2, figs. 4, 5. Unnamed strata, Pliocene. Near Lemon Tank Reservoir, San Clemente Is., California Channel Ids. USGS M6501. Hypotype USNM 235584. [Epitoniidae].

Erato cf. *E. scabriuscula* G. B. Sowerby I, 1832 [not Gray as in pl. caption]. Woodring and Bramlette 1950 [1951]. USGS PP 222:73, pl. 13, fig. 20. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge near Orcutt, Santa Barbara Co. USGS 14648. Hypotype USNM 560074. **Remarks:** Determined here to be *Hespererato columbella* (Menke, 1847). [Eratoidae].

Eulima gabbiana (Anderson and Martin, 1914). [*Eulimella*]. Keen 1943. Tr. SDSNH 10(2):45, pl. 4, fig. 6. Basal Round Mtn. Silt (possibly uppermost Olcese Sand), Miocene. Kern River, Caliente quad., Kern Co. SU 2641. Hypotype SU 7543 [=CASG 72000]. **Remarks:** In the genus *Melanella*, *fide* Hanna (1924: p. 170). [Eulimidae].

Eulima gabbiana (Anderson and Martin, 1914). [*Eulimella*]. Addicott 1970. USGS PP 642:57, pl. 20, fig. 5. Lower

Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotype UCMP 37103. **Remarks:** In the genus *Melanella*, *fide* Hanna (1924: p. 170). [Eulimidae].

....., pl. 20, fig. 6. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650277.

Euspira clementensis (M.A. Hanna, 1927). [*Natica*]. Givens 1974. UCPG 109:77, pl. 7, figs. 15, 17. Juncal Fm., Eocene. Thorn Meadows area, Lion Canyon quad. (1943), Ventura Co. UCR 4688. Hypotype UCR 4688/25. [Naticidae].

Euspira nuciformis (Gabb, 1864). [*Lunatia*]. Stewart 1946. USGS PP 205-C:93, pl. 11, fig. 16. Avenal Sandstone, Eocene. Reef Ridge, Big Tar Canyon, Reef Ridge quad., Kings Co. USGS 14495. Hypotype USNM 498717. [Naticidae].

Euspira nuciformis (Gabb, 1864). [*Lunatia*]. Givens 1974. UCPG 109:77, pl. 7, fig. 14. Cozy Dell Fm., Eocene. Near Pine Mtn. Lodge, Reyes Peak quad. (1943), Ventura Co. UCR 4671. Hypotype UCR 4671/2. **Remarks:** In the genus/subgenus *Polinices* (*Euspira*), *fide* Marincovich (1977: p. 281); *fide* Squires (1987: p. 37). [Naticidae].

Euspira Fowkes 1982. Coalinga Guidebook, p. 22, unnumbered fig. Avenal Sandstone, Eocene. Head of Tar Canyon, near Les Sagaser Ranch, Kings Co. WHC hypotype lost? [Naticidae].

Euspirocrommium hewitti (G D. Hanna and Hertlein, 1949). [*Ampullella*]. Marincovich 1977. BAP 70 (294):237–238, pl. 20, figs. 1, 2. Lodo Fm., Eocene. Media Agua Creek, Kern Co. CASG 61884. Holotype CASG 9430, hypotype CASG 32388. [Naticidae].

....., pl. 20, fig. 3 (refigured from Givens 1974, pl. 8, fig. 13). Juncal Fm., Eocene. Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4668. Hypotype UCR. 4668/21.

Euthriofusus (*Whitneyella*) *sinuatus* (Gabb, 1864). [*Fasciolaria*]. Wenz 1943. Handbh. Palaoz. 6:1246, fig. 3553 (refigured from Stewart, 1926 [1927], pl. 29, fig. 6 (as *Whitneyella sinuata*)). Tejon Fm., Eocene. Tejon, Kern Co. Lectotype (of Stewart 1926 [1927]: p. 402) UCMP 31404]. **Remarks:** Determined here as in the genus *Whitneyella*. [Fasciolariide].

Exilia fausta Anderson and G D. Hanna, 1925. Givens, 1974. UCPG 109:91–92, pl. 11, fig. 2. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4726. Hypotype UCR 4726/19. [Turbinellidae].

Exilia llajasensis Bentson, 1940. Squires 1984. NHMLAC CS 350:39, fig. 9l. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 539 [=LACMIP 16231]. Hypotype LACMIP 6557. [Turbinellidae].

Falsifusus cf. *F. marysvillensis* (Merriam and Turner, 1937). [*Fusinus*]. Givens 1974. UCPG 109:85, pl. 10, fig. 8. Juncal Fm., Eocene. Hot Springs Creek, Topatopa Mtn. quad. (1943), Ventura Co. UCR 4659. Hypotype UCR 4659/9. [Fasciolariidae].

Fasciolariid. Stadum and Finger 2016. NHMLAC CS 524:38 (as Fasciolariidae), 40, 50, figs. 20, 21. Monterey Fm. (Saddleback Valley Limestone member). Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 93739. [Fasciolariidae].

Favartia? sp. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 4. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad., Riverside Co. CSUN 674 [=LACMIP 16082]. Hypotype LACMIP 11468. [Muricidae].

Ferminoscala durhami Keen, 1943 (n. sp.). Tr. SDSNH 10(2):46, pl. 4, fig. 31. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121 [=CASG 71992]. Holotype SU 7534 [=CASG 70249], [unfigured paratype SU 7963 [=CASG 7963]. **Remarks:** In the genus *Scalina*, *fide* Addicott (1970: p. 56). *Ferminoscala* and *Scalina* =*Amaea*, *fide* WoRMS (2020), thus making *Amaea durhami* (Keen, 1954) the senior secondary homonym of *Acrilla durhami* Zinsmeister, 1983b. Comparison of images of both of these species shows that they are definitely not the same genus. In addition, Zinsmeister's specimen is missing its morphologically diagnostic aperture. His species might not even be an epitoniid. [Undetermined].

Ferminoscala whitei Keen, 1943 (n. sp.). Tr. SDSNH 10(2):46, pl. 4, figs. 32, 33. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121 [=CASG 71992]. Holotype SU 7535 [=CASG 72002], [unfigured paratype SU 7983 [=CASG 7983]. **Remarks:** In the genus *Scalina*, *fide* Addicott (1970: p. 57). [Epitoniidae].

....., SDSNH 5422 (*ex* SU 2121). Unfigured paratypes SDSNH. 607, 929].

Ficopsis cooperiana Stewart, 1926 [1927]. Moore 1968, SDSNH Occas. Pap. 15:26, pl. 11, fig. b. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Rose Canyon, San Diego Co. SDSNH4169. Hypotype SDSNH 4147. **Remarks:** In the genus *Priscoficus*, *fide* Squires (2014: p. 8). [Ficidae].

Ficopsis cooperiana Stewart, 1926 [1927]. Givens 1974. UCPG 109:81, pl. 9, fig. 7. Juncal Fm., Eocene. Near Thorn Meadows Lion Canyon quad. (1943), Ventura Co. UCR 4679. Hypotype UCR 4679/111. **Remarks:** In the genus *Priscoficus*, *fide* Squires (2014: p. 8). [Ficidae].

....., pl. 9, fig. 9. Park Canyon area, San Guillermo quad. (1943), Ventura Co. UCR 4703. Hypotype UCR 4703/14.

Ficopsis cooperiana Stewart, 1926 [1927]. Squires 1984. NHMLAC CS 350:29–30, fig. 8a. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype UCLA 59277 [=LACMIP 10553]. **Remarks:** In the genus *Priscoficus*, *fide* Squires (2014: p. 8). [Ficidae].

Ficopsis crescentensis Weaver and Palmer, 1922. Stewart 1946. USGS PP 205-C:91, pl. 11, fig. 17. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14494. Hypotype USNM 498718. **Remarks:** *Ficopsis remondii crescentensis* Weaver and Palmer 1922, *fide* Squires (1984: p. 30). In the genus *Ficus* (as *Ficus remondii* (Gabb)), *fide* Squires (2014: p. 11). [Ficidae].

Ficopsis hornii (Gabb, 1864). [*Fusus* (*Hemifusus*)]. Weaver and Kleinpell 1963. UCPG 43:191, pl. 26, fig. 1. Undifferentiated Sacate/Gaviota fms., Eocene. Lompoc quad., Santa Barbara Co. UCMP B6963. Hypotype SU 9218 [=CASG 70166]. [Ficidae].

Ficopsis hornii (Gabb, 1864). [*Fusus* (*Hemifusus*)]. Givens 1974. UCPG 109:81, pl. 9, fig. 10. Matilija Fm., Eocene. East of confluence of Alamo Creek, Dry Canyon, and Cuyama River valley, Reyes Peak quad. (1943), Ventura Co. UCR. 4741. Hypotype UCR. 4741/201. [Ficidae].

Ficopsis hornii (Gabb, 1864). [*Fusus* (*Hemifusus*)]. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 2. Cozy Dell Shale (Circle B Sandstone member), Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23687. Hypotype LACMIP 11642. [Ficidae].

....., pl. 2, fig. 14. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23723. Hypotype LACMIP 11654.

Ficopsis remondi (Gabb, 1864). [*Fusus* (*Hemifusus*)]. Wenz 1941. Handbh. Palaoz. 6:1081, fig. 3076a (refigured from Stewart 1926 [1927]:376, pl. 30, fig. 2). Tejon, Kern Co. UCMP 148. Hypotype UCMP 31388 determined here as missing]. [Ficidae].

....., fig. 3076b (refigured from Stewart 1926 [1927]:376, pl. 30, fig. 1). "Tejon" Fm., Eocene. south of Mt. Diablo, Contra Costa Co. Lectotype (of Stewart 1926 [1927]: p. 376) ANSP 4184].

Ficopsis remondi (Gabb, 1864). [*Fusus* (*Hemifusus*)]. Shimer and Shrock 1944. Index Foss. N.A., p. 500, pl. 205, figs. 15, 16 (refigured from Gabb 1864, pl. 18, fig. 36 (as *Fusus* (*Hemifusus*) *remondi*)). Tejon Fm., Eocene. [Ft. Tejon, Kern Co.? Lectotype (of Stewart 1926 [1927]: p. 376) ANSP 4184, [unfigured paralectotypes (7) ANSP 79418]. [Ficidae].

Ficopsis remondi (Gabb, 1864). [*Fusus* (*Hemifusus*)]. Weaver and Kleinpell 1963. UCPG 43:191, pl. 26, fig. 2. Matilija Fm., Eocene. Nojoqui Creek area, Lompoc quad., Santa Barbara Co. UCMP B6920. Hypotype SU 9220 [=CASG 70167]. [Ficidae].

Ficopsis remondi (Gabb, 1864). [*Fusus* (*Hemifusus*)]. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, fig. 4. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20723. [Ficidae].

Ficus remondii (Gabb, 1864). [*Fusus* (*Hemifusus*)]. Squires 2014. NHMLA CS 522:11, 13, figs. 29, 30. Ardath Shale, Eocene. Rose Canyon, San Diego Co.. LACMIP 7185. Hypotype LACMIP 14483. [Ficidae].

....., fig. 31. Unnamed Fm., Eocene. Near Martinez, Contra Costa Co. UCMP 337. Holotype (of *Ficopsis angulatus* Weaver, 1905) UCMP 11887.

….., figs. 32, 33. Tejon Fm., Eocene. Kern Co. UCMP 148. Kern Co. Plasto-hypotype UCMP 31388.

….., figs. 34, 36. Llajas Fm., Eocene. Llajas Canyon, Simi Valley, Ventura Co.. LACMIP 40374. Hypotypes LACMIP 14484, 14486.

….., fig. 35. Llajas Fm., Eocene. Devil Canyon, Santa Susana Mtns., Los Angeles Co.. LACMIP 40373. Hypotype LACMIP 14485.

….., fig. 37. Llajas Fm., Eocene. LACMIP 17150. Simi Arroyo, Ventura Co.]. Hypotype LACMIP 14487.

….., fig. 38. Tejon Fm., Liveoak Shale Member, Eocene. Live Oak Creek, Kern Co. LACMIP 3285. Hypotype LACMIP 14488.

Ficopsis remondi crescentensis Weaver and Palmer, 1922. Moore 1968. SDSNH Occas. Pap. 15:26, pl. 11, fig. c. Ardath Shale, Eocene. Rose Canyon, San Diego Co. SDSNH2363. Hypotype SDSNH 4162]. [Ficidae].

Ficopsis remondi crescentensis Weaver and Palmer, 1922. Givens 1974. UCPG 109:82, pl. 9, fig. 11. Juncal Fm., Eocene. Park Canyon area, San Guillermo quad. (1943), Ventura Co. UCR 4703. Hypotype UCR 4703/13. [Ficidae].

Ficopsis remondi crescentensis Weaver and Palmer, 1922. Squires 1984. NHMLAC CS 350:30, fig. 8b. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969) Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6535. [Ficidae].

Ficopsis remondi crescentensis Weaver and Palmer, 1922. Squires 1987. NHMLAC CS 388:41, fig. 53. Juncal, Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 845 [=LACMIP 16137]. Hypotype LACMIP 7477. [Ficidae].

Ficopsis remondi crescentensis Weaver and Palmer, 1922. Squires 1988c. NHMLAC CS 398:14, fig. 33. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 983 [=LACMIP 16110]. Hypotype LACMIP 7713. [Ficidae].

Ficopsis remondi crescentensis? Weaver and Palmer, 1922. Squires 1991c. SEPM Guidebook 68: 222, pl. 2, fig. 3. Maniobra Formatiom, Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. CSUN 662[=LACMIP 23779]. Hypotype LACMIP 11467. [Ficidae].

Ficopsis remondi crescentensis Weaver and Palmer, 1922. Squires 1997b. Simi Valley Hist. Soc. vol., p. 297, fig. 2g (refigured from Squires, 1984, fig. 8b). Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN374 [=LACMIP 7242). Hypotype LACMIP 6535. [Ficidae].

Ficopsis remondi crescentensis Weaver and Palmer, 1922. Squires 2008. NHMLAC CS 517:5, fig. 25. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13426. [Ficidae].

Ficus gesteri Wagner and Schilling 1923. Weaver and Kleinpell, 1963. UCPG 43:191, pl. 26, fig. 5. Upper Gaviota Fm., Eocene. Near Cañada de Santa Anita, Lompoc quad., Santa Barbara Co. UCMP B7020. Hypotype SU 9221 [=CASG 70168]. [Ficidae].

Ficus gesteri Wagner and Schilling, 1923. Squires 2014. NHMLAC CS 522:13–14, figs. 42, 43. San Emigdio Fm., Eocene. San Emigdio Canyon, San Emigdio Mtns., Kern Co. UCMP 3182. Holotype UCMP 11425, paratype UCMP 11426. [Ficidae].

….., figs. 44, 45. Lower Gaviota Fm., Eocene. Santa Ynez Mtns., Santa Barbara Co.. UCMP 7263. UCMP hypotype 14490.

Ficus (*Trophosycon*) *kerniana* (Cooper, 1894). [*Agasoma?*]. Addicott 1970. USGS PP 642:73–76, pl. 6, figs. 14, 16. Basal Jewett Sand, Miocene. Vicinity of Pyramid Hill, Caliente quad., Kern Co. UCMP B1660. Hypotype UCMP 15543. [Ficidae].

....., pl. 7, fig. 3. Upper Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 15546.

....., pl. 7, fig. 4. Lower Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype UCMP 30121.

....., pl. 7, fig. 5. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM

650116.

....., pl. 7, fig. 8. Oil Center quad. (1954). Kern Co. USGS M1601. Hypotype USNM 650115.

....., pl. 7, fig. 14. Float collection, Oil Center quad. (1950), Kern Co. UCMP B1597. Hypotype UCMP 15919.

....., pl. 7, fig. 17. Bakersfield and Caliente quads. (1914), Kern Co. UCMP B1600. Hypotype UCMP 15988.

Ficus (*Trophosycon*) *kerniana* (Cooper, 1894). [*Agasoma*?]. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 2. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH4312. Hypotype SDSNH 83239]. **Remarks:** Determined here as in the genus *Trophosycon*. [Ficidae].

Ficus mamillata Gabb, 1864. Givens 1974. UCPG 109:80–81, pl. 9, fig. 2. Matilija Fm., Eocene. near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4715. Hypotype UCR 4715/9. [Ficidae].

Ficus mamillata Gabb, 1864. Squires 2014. NHMLAC CS 522:13, figs. 39, 40. Tejon Fm., Eocene. Near Fort Tejon, Kern Co. Holotype ANSP 4230. [Ficidae].

….., fig. 41. Tejon Fm., Metralla Sandstone Member, Eocene. Liveoak Canyon, Kern Co. LACMIP 41206. Hypotype LACMIP 14489.

Ficus mamillatus Gabb, 1864. Weaver and Kleinpell 1963. UCPG 43:191, pl. 26, fig. 3. Matilija Fm., Eocene. Nojoqui Creek area, Lompoc quad., Santa Barbara Co. UCMP B6920. Hypotype SU 9222 [=CASG 70169]. [Ficidae].

Ficus modesta (Conrad, 1848). [*Pyrula*]. Hall 1958. UCPG 34(1):56, pl. 11, fig. 3. Oursan Sandstone, Miocene. Northeast of Irvington, La Costa Valley quad. (1943), Alameda Co. SU 3248. Hypotype SU/CASG 8470. [Ficidae].

Ficus cf. *F. modesta* (Conrad, 1848). [*Pyrula*]. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 5. Temblor Fm. (*Phacoides* Sand member) (of Stinemeyer et al. 1959: pp. 12, 13), Miocene. Carneros Rocks quad., Temblor Range, Kern Co. USGS M3578. Hypotype USNM 646625. [Ficidae].

Ficus cf. *F. modesta* (Conrad, 1848). [*Pyrula*]. Addicott 1973b. USGS PP 791:7, pl. 9, fig. 18 (refigured from Addicott 1972b, pl. 1, fig. 5). Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Rocks quad., Kern Co. USGS M3578. Hypotype USNM 646625. [Ficidae].

....., pl. 9, fig. 19. In bed of Temblor Creek, Carneros Rocks quad., Kern Co. USGS M3978. Hypotype USNM 646626.

Ficus (*Trophosycon*) *ocoyana* (Conrad, 1855b). [*Sycotopus*]. Stanton 1966. Jour. Paleo. 40 (1):33, pl. 7, fig. 9 [as *Fiscus*]. Castaic Fm., Miocene. Elizabeth Lake Canyon area, Los Angeles Co. CIT 279 [=LACMIP 7777]. Hypotype LACMIP 4170. [Ficidae].

Ficus (*Trophosycon*) *ocoyanus* (Conrad, 1855b). [*Syctopus*]. Wenz 1941. Handbh. Palaoz. 6:1081, fig. 3074 (refigured from Grant and Gale 1931, pl. 30, figs. 8a, b (as *Ficus* (*Trophosycon*) *ocoyana*)). Temblor Fm., Miocene. Poso Creek, Kern Co. Hypotype (topotype) CAS 648 [=CASG 71566]. [Ficidae].

Ficus (Trophosycon) *ocoyanus* (Conrad, 1855b). [*Sycotopus*]. Lutz 1951. UCPG 28(13):391, pl. 18, figs. 7, 9, 10, 13. Sobrante Fm., Miocene. Near junction of Norris Creek with Crow Creek, Hayward quarangle, Alameda Co. UCMP A4565. Hypotypes UCMP 34159–34161. **Remarks:** *Ficus* (*Trophosycon*) *kerniana* (Cooper, 1894), *fide* Addicott (1970: p. 74). [Ficidae].

....., pl. 7, fig. 10. South edge of Humphreys quad. (1932, PR 1946), Los Angeles Co. CIT 2069 [=LACMIP 2558]. [Hypotype LACMIP 4171].

Ficus sp. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 1 (pl. 2 in caption), fig. G. Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype SBMNH 60197. **Remarks:** Determined here as *Scaphander* cf. *S.* (*Mirascapha*) *costatus* Gabb, 1864. [Scaphandridae].

Fissurella rixfordi Hertlein, 1928a. Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, figs.7, 8. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano

quad. SDSNH 4312. Hypotypes SDSNH 136497, 140187. [Fissurellidae].

Fissurella*? *stantoni Powell and Geiger, 2019 (n. sp.) *PaleoBios* 36:2–4, figs, 2, 5. Topanga Canyon Fm., Miocene. Santa Monica Mtns., Los Angeles Co. LACMIP 31511. Holotype LACMIP 14847. [Fissurellidae].

Forreria bartoni (Arnold, 1909 [1910]). [*Trophon*]. Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, fig. 12. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4521. Hypotype SDSNH 83243. [Muricidae].

Forreria belcheri (Hinds, 1844–1845). [*Chorus*]. G D. Hanna and Hertlein 1943. CDM Bull.118(2):174, fig. 64-8. [Etchegoin Fm.?] *Pecten coalingaensis* Zone, Pliocene. North Dome of Kettleman Hills, Kings Co. CASG 2364. Hypotype CASG 5723. [Muricidae].

Forreria belcheri (Hinds, 1844–1845). [*Chorus*]. Durham and Addicott 1965. USGS PP 524-A:A12, pl. 4, figs. 5, 8; pl. 5, fig. 22. Pancho Rico Fm., Miocene/Pliocene. Wildhorse Canyon, San Lucas quad., Monterey Co. UCMP A4945 [=USGS M1341). Hypotypes UCMP 15177, 15178. [Muricidae].

Forreria belcheri (Hinds, 1844–1845). [*Chorus*]. Addicott 1972b. SEPM Symposium vol., p. 15, pl. 4, fig. 9. Panorama Hills Fm. (of Dibblee 1968), Pliocene. Panorama Hills quad., Temblor Range, Kern Co. USGS M1059. Hypotype USNM 646818. [Muricidae].

Forreria cancellaroides Arnold, 1909 [1910]. Addicott 1970. USGS PP 642:77, pl. 7, figs. 6, 7. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650114. [Muricidae].

....., pl. 7, fig. 10. Lower Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1612. Hypotype UCMP 15544.

Forreria carisaensis (Anderson, 1905). [*Chorus*]. Addicott et al. 1978. USGS OFR 46-778:59, 72, pl. 4, fig. 12. Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2382. Hypotype USNM 254379. [Muricidae].

....., pl. 4, fig. 16. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS 4930. Hypotype USNM 254383.

Forreria carisaensis (Anderson, 1905). [*Chorus*]. Addicott et al. 1980. SEPM Guidebook 6:19, 33, pl. 5, fig. 12 (refigured from Addicott et al., 1978, pl. 4, fig. 12). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2382. Hypotype USNM 254379. [Muricidae].

....., pl. 5, fig. 16 (refigured from Addicott et al. 1978, pl. 4, fig. 16). Shell Creek area, La Panza Range, Sa Luis Obispo Co. USGS 4930. Hypotype USNM 254383.

Forreria cf. *carisaensis* (Anderson, 1905). [*Chorus*]. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 7. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH 4312. Hypotype SDSNH 83243]. [Muricidae].

Forreria carisaensis mirandaensis (Grant and Eaton *in* Eaton et al, 1941). [*Trophon*]. Adegoke 1969. UCPG 80:172, pl. 11, figs. 1, 5. Etchegoin Fm., Pliocene. Domengine Ranch quad., Fresno Co. UCMP B6532. Hypotype UCMP 36834. [Muricidae].

Forreria cf. *F. coalingensis* (Arnold, 1909 [1910]). [*Trophon*]. Durham and Addicott 1965. USGS PP 524-A:A12, pl. 5, fig. 13. Pancho Rico Fm., Miocene/Pliocene. Wildhorse Canyon, King City quad., Monterey Co. UCMP A906. Hypotype UCMP 36472. [Muricidae].

Forreria emersoni Addicott, 1970 (n. sp.). USGS PP 642:78, pl. 7, figs. 9, 12, 13, 16. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Holotype USNM 650118; hypotypes USNM 650117, 650119. [Muricidae].

Forreria magister (Nomland, 1916b). [*Trophon*]. Woodring et al. 1940 [1941]. USGS PP 195:88, pl. 36, fig. 11. Etchegoin Fm. (*Patinopecten* Zone), Pliocene. Vicinity of Arroyo Toreido, North Dome, Kettleman Hills, Kings Co. USGS 12423. Hypotype USNM 495848. [Muricidae].

....., pl. 36, fig. 12. Vicinity of Arroyo Robador, Kettleman Hills, Kings Co. USGS 12435. Hypoytype USNM 495849.

Forreria magister (Nomland, 1916b). [*Trophon*]. Moore et al. 1952. Invert. Foss., p. 326, fig. 8-40.19. Pliocene. Line drawing, source specimen unknown. [Muricidae].

Forreria n. sp.? Addicott et al. 1978. USGS OFR 78-446:72, pl. 4, fig. 8. Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS 4930. Hypotype USNM 254376. [Muricidae].

Forreria n. sp.? Addicott et al. 1980. SEPM Guidebook 6:33, pl. 5, fig. 8 (refigured from Addicott et al., 1978, pl. 4, fig. 8). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS 4930. Hypotype USNM 254376. [Muricidae].

Indeterminate *Forreria* Powell et al. 2019b. *PaleoBios* 36:13, fig. 23. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP13003. Hypotype UCMP 218695. [Buccinidae].

Fulgurofusus darraghi Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1296–1297, fig. 3A. Santa Susana Fm., Paleocene. Vicinity of Meier and Runkle canyons, Calabasas quad., Simi Hills, Ventura Co. UCR 4573. Holotype UCR 4573/900. [Turbinellidae].

....., fig. 3B. Simi Hills, Ventura Co. UCR 6803. Paratype UCR 6803/100.

Fulgurofusus waringi Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1297, figs. 3F, G. Santa Susana Fm., Paleocene. Meier Canyon, Calabasas quad., Simi Hills, Ventura Co. UCR 6671. Holotype UCR 6671/12. [Turbinellidae].

Fulgurofusus n. sp. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 1. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 4573. Hypotype UCR 4573/900 (not UCR 4573/9 as in pl. caption). **Remarks:** *Fulgurofusus darraghi* n. sp., *fide* Zinsmeister (1983b: p. 1296). [Turbinellidae].

....., pl. 4, fig. 2. Simi Hills, Ventura Co. UCR 6803. Hypotype UCR 6803/17. **Remarks:** *Fulgurofusus darraghi* n. sp., *fide* Zinsmeister (1983b: p. 1296).

Fulgurofusus n. sp. B. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, figs. 3, 4. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6671. Hypotype UCR 6671/12 (not 5571/12 as in pl. caption). **Remarks:** *Fulgurofusus waringi* n. sp., *fide* Zinsmeister (1983b: p. 1297). [Turbinellidae].

Fulgoraria (*Psephaea*) ***zinsmeisteri*** Mount, 1976 (n. sp.). Jour. Paleo. 50(1):88–89, pl. 1, figs. 1–5. "Martinez Provincial Stage" [=Santa Susana Fm.], Paleocene. Vicinity of Runkle and Meier canyons, Simi Hills, Calabasas quad. (1967), Ventura Co. UCR 6602. Holotype UCR. 6602/1, paratypes UCR 6602/2, 6602/3. [Volutidae].

....., Vicinity of Meier and Runkle canyons, Simi Hills, Ventura Co. UCR 6885. Unfigured paratype UCR 6885/11.

....., Vicinity of Meier and Runkle canyons, Simi Hills, Ventura Co. UCR 6825. Unfigured paratype UCR 6825/1.

Fulgoraria zinsmeisteri Mount, 1976. Zinsmeister, 1983a. SEPM Guidebook 35:70, pl. 4, figs. 23, 24. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6602. Hypotype UCR 6602/1. [Volutidae].

Fusinus (*Barbarofusus*) *arnoldi* (Cossmann, 1903). [*Fusus*]. Stadum 1984a. NHFOC Mem.1:80, pl. 1, fig. 1. Niguel Fm., Pliocene. Orange Co. SDSNH 4080. Hypotype SDSNH 75914. [Fasciolariidae].

Fusinus teglandae M.A. Hanna, 1927. Givens 1974. UCPG 109:85, pl. 10, fig. 6. Juncal Fm., Eocene. Near Thorn Meadows, Lion Canyon quad. (1943), Ventura Co. UCR 4684. Hypotype UCR 4684/5. [Fasciolariidae].

....., pl. 10, fig. 7. Park Canyon, 2200 ft. south, San Guillermo quad. (1943), Ventura Co. UCR 4700. Hypotype UCR 4700/4.

Fusinus teglandae M.A. Hanna, 1927. Squires 1984. NHMLAC CS 350:33, fig. 8j. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242. Hypotype LAMCIP 6540. [Fasciolariidae].

Fusinus aff. *F. ucalius* Vokes, 1939. Squires 1984. NHMLAC CS 350:33, fig. 8k. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6541. [Fasciolariidae].

Fusinus waringi Nelson, 1925. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 25. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6670. Hypotype UCR 6670/35 determined here as missing. [Fasciolariidae].

Fusitriton oregonensis (Redfield, 1846). [*Triton*]. Smith 1970. BAP 56(254):485–497, pl. 45, fig. 4. "Fernando Fm.," Pliocene. Newport Beach, Orange Co. LACMIP 466. Hypotype LACMIP 5050 (not LACM 41 as in pl. caption). [Ranellidae].

Fusitriton oregonensis (Redfield, 1846). [*Triton*]. Powell 2013. Festivus 45(3):20, pl. 1, fig. 5, 3. Reworked shells, Pliocene. Shells found in a modern-day shrimp trap off San Clemente Is., California Channel Ids. CASG 72573. Hypotype CASG 72576. [Ranellidae].

Fusitriton scotiaensis (Martin, 1914). [*Argobuccinum*]. Smith 1970. BAP 56(254):500–502, pl. 42, figs. 1–3. Wildcat Fm., Pliocene. Ferndale quad., Humboldt Co. UCMPA4556. Hypotypes UCMP 10577, 10578. [Ranellidae].

Fusiturricula (*Crenaturricula*) *crenatospira* (Cooper, 1894). [*Surcula*]. Powell 1966. BAIM 5:149, 164, pl. 2, fig. 14. Domengine Fm., Eocene. Marysville Buttes, Suter Co. UCMP 1853. Hypotype (of Vokes 1939, pl. 17, figs. 4, 5) UCMP 12166. [Drilliidae].

Fusiturricula (*Crenaturricula*) *crenatospira* (Cooper, 1894). [*Surcula*]. Squires 1984. NHMLAC CS 350:36–37, fig. 9h. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242 = LACMIP 22312]. Hypotype UCLA 59278 [=LACMIP 10558]. [Drilliidae].

Fusiturricula (*Crenaturricula*) *crenatospira* (Cooper, 1894). [*Surcula*]. Squires 1987. NHMLAC CS 388:48, fig. 72. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7492. [Drilliidae].

Fusiturricula (*Crenaturricula*) *crenatospira domenginica* Vokes, 1939. Squires 1984. NHMLAC CS 350:37, fig. 9i. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6554. [Drilliidae].

"*Fusus* (*Levifusus*)" cf. "*F.* (*L.*)" *calabasasensis* Nelson, 1925. Saul 1986. SEPM Guidebook 49:30, fig. 56. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. CASG 61599. [Hypotype CASG 61599.01]. [Fasciolariidae].

Fusus sp. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 2 (pl. 1 in caption), fig. K. Unknown strata, float material. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8831 [=SBMNH 60198]. **Remarks:** Determined here as indet. buccinid sp. [Buccinidae].

Galeodea californica Clark, 1942. Squires 2019. PB 36:9, fig. 4A, B. Llajas Fm., Eocene. Las Llajas Canyon, Simi Valley, Ventura Co. LACMIP 7242. Hypotype LACMIP. 6530. [Cassidae].

….., Fig. 4C. Llajas Fm., Las Llajas Canyon, Simi Valley, Ventura Co. LACMIP 22312. Hypotype LACMIP 14834.

Galeodea (*Caliagaleodea*) *californica* Clark, 1942. Squires 1984. NHMLAC CS 350:26, fig. 7j. Llajas Fm., Eocene. "Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6530. **Remarks:** *Galeodea californica* Clark, 1942, *fide* Squires (2019: p. 9). [Cassidae].

Galeodea (*Caliagaleodea*) *californica* Clark, 1942. Squires 1988a. SEPM Guidebook 58:108, pl.1, fig. 12. Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6530. **Remarks:** *Galeodea californica* Clark, 1942, *fide* Squires (2019: p. 9). [Cassidae].

Galeodea (*Caliagaleodea*) *californica* Clark, 1942. Squires 1988c. NHMLAC CS 398:13, fig. 29. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 987 [=LACMIP 16175]. Hypotype LACMIP 7710. **Remarks:** *Galeodea californica* Clark, 1942, *fide* Squires (2019: p. 9). [Cassidae].

Galeodea cf. *G. gallica* Wrigley, 1934. Squires and Advocate 1986. Jour. Paleo. 60(4):857–858, figs. 2.7, 2.8. Maniobra Fm., Eocene. Orocopia Mtns., Canyon Spring NW quad. (1963), Riverside Co. CSUN 662 [=UCLA 3779) =LACMIP 23779]. Hypotype UCLA. 28988 [=LACMIP. 8836]. [Cassidae].

Galeodea louella (Squires and Advocate, 1986). [*Phalium* (*Semicassis*)]. Squires 2019. *Paleobios* 36:8–9, Fig. N.

Maniobra Fm., Eocene. Orocopia Mtns., Riverside Co. LACMIP 16335. Paratype LACMIP 7167. See *Phalium* (*Semicassis*) *louella* Squires and Advocate (1986). [Cassidae].

….., figs. O, P. Maniobra Fm., Eocene. Orocopia Mtns., Riverside Co. LACMIP 23779. Hypotype LACMIP 8836.

Galeodea cf. *G. gallica* Wrigley, 1934. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 1. Maniobra Fm., Eocene. Hayfield quad. (1987), Riverside Co. LACMIP 23779 [=CSUN 662). Hypotype UCLA. 28988 [=LACMIP 8836]. [Cassidae].

Galeodea (*Gomphopages*) *meganosensis* Vokes, 1939. Squires 1987. NHMLAC CS 388:39–40, fig. 49. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 845 [=LACMIP 16137]. Hypotype LACMIP 7474. **Remarks:** *Galeodea meganosensis*, *fide* Squires (2019: p. 4). [Cassidae].

Galeodea (*Gomphopages*) *meganosensis* Vokes, 1939. Squires 1988a. SEPM Guidebook 58: 108, pl. 1, fig. 11. Juncal Fm., Eocene. Whitaker Peak area, Los Angeles Co. CSUN 845 [=LACMIP 16137]. Hypotype LACMIP 7474. **Remarks:** *Galeodea meganosensis*, *fide* Squires (2019: p. 4). [Cassidae].

Galeodea meganosensis Vokes, 1939. Squires 2019. *PaleoBios* 36:4, 7, figs. 3A–D. Lower Juncal Fm., Eocene. Whitaker Peak, Los Angeles Co. LACMIP 40827. Hypotypes LACMIP 14829, 14830. [Cassidae].

Galeodea aff. *G. nodosa carinata* (Deshayes, 1835). [*Cassidaria*]. Squires 1988c. NHMLAC CS 398:13–14, figs. 30, 31. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 983 [=LACMIP 16110]. Hypotype LACMIP 7711. **Remarks:** Junior synonym of *Galeodea meganosensis* Vokes, *fide* Squires (2019: p. 4). [Cassidae].

Galeodea schencki Weaver and Kleinpell, 1963 (n. sp.). UCPG 43:189, pl. 25, figs. 15,16. Undifferentiated Sacate/Gaviota fms., Eocene.Nojoqui Creek, west of hill 1477, Lompoc quad., Santa Barbara Co. UCMP B6893. Holotype SU. 9210 [=CASG 70173], paratype SU. 9211 [=CASG 701740]. **Remarks:** "*Galeodea*" *schencki* is a *nomen dubium*, *fide* Squires (2019: p. 14). [Cassidae].

Galeodea (*Gomphopages*) *susanae* Schenck, 1926. Squires 1984. NHMLAC CS 350:27, fig. 7k. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6531. **Remarks:** Junior synonym of *Galeodea sutterensis* Dickerson, 1916, *fide* Squires (2019: p. 7). [Cassidae].

Galeodea (*Mambrina*) *susanae* Schenck, 1926. Squires 2008. NHMLAC CS 517:5, fig. 24 (as *Galeodea* (*Mamabrina*) in pl. caption). Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13425. **Remarks:** Junior synonym of *Galeodea sutterensis* Dickerson, 1916, *fide* Squires (2019: p. 7). [Cassidae].

Galeodea sutterensis Dickerson 1916. Squires 2019. *PaleoBios* 36:7–8, figs. 3E–J. Llajas Fm., Eocene. Devil Canyon, Simi Valley, Los Angeles Co. LACMIP 40371. Hypotypes LACMIP 14831,14832. [Cassidae].

….., figs. K, M. Tejon Fm., Eocene. Grapevine Canyon, Tehachapi Mtns., Kern Co., LACMIP 7162. Hypotype LACMIP 14833.

Galeodea (*Gomphopages*) *sutterensis* Dickerson, 1916. Durham 1942. Jour. Paleo.,16(2):184, pl. 29, fig. 2. Capay Fm., Eocene. Marysville Buttes, Marysville quad., Sutter Co. UCMP 1853. Holotype UCMP 11782. **Remarks:** *Galeodea sutterensis*, *fide* Squires (2019: p. 7). [Cassidae].

Galeodea sutterensis Dickerson 1916. G D. Hanna and Hertlein, 1943. CDM Bull. 118(2):170, fig. 62-10. [Domengine Fm.?], Eocene. South Butte, Marysville Buttes quad., Sutter Co. CASG 248. Hypotype CASG 5711. [Cassidae].

Galeodea sp. cf. *G. sutterensis* Dickerson, 1916. Crowell and Susuki 1959. GSA Bull. 70:588, pl. 2, figs. 1, 4. Maniobra Fm., Eocene. Orocopia Mtns., Canyon Spring quad., Riverside Co. UCLA 3779 [=LACMIP 23779]. Hypotype UCLA 28988 [=LACMIP 8836]. **Remarks:** *Galeodea* cf. *G. gallica* Wrigley, 1934, *fide* Squires and Advocate (1986: p. 857). [Cassidae].

Galeodea (*Gomphopages*) *sutterensis* Dickerson, 1916. Givens 1974. UCPG 109:78, pl. 8, fig. 4. Juncal Fm., Eocene. Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4658. Hypotype UCR 4658/5. **Remarks:**

Galeodea sutterensis, *fide* Squires (2019: p. 7). [Cassidae].

Galeodea tuberculiformis G D. Hanna, 1924. Squires 2019. *PaleoBios* 36:9, 11, 12, figs. 4D–G. Llajas Fm., Devil Canyon, north side Simi Valley, Los Angeles Co. LACMIP 16115. Hypotype LACMIP 6532. [Cassidae].

….., fig. 4H. Llajas Fm., Devil Canyon, north side Simi Valley, Los Angeles Co. LACMIP 40371. Hypotype LACMIP 14835.

Galeodea sp. (?) Weaver and Kleinpell 1963. UCPG 43:190, pl. 25, fig. 12. Gaviota Fm., Eocene. Vicinity of Cañada del Capitan and Las Yegas Canyon, Gaviota quad., Santa Barbara Co. UCMP B6983. Hypotype SU 9214 [=CASG 70170] [Cassidae].

….., pl. 25, fig. 13. Matilija Sandstone, Eocene. Nojoqui Creek area, Lompoc quad., Santa Barbara Co. UCMP B6920. Hypotype SU 9213 [=CASG 70171].

….., pl. 25, fig. 14. Sacate Fm., Eocene. Cañada del Corral, Los Olivos quad., Santa Barbara Co. UCMP B6951. Hypotype SU 9212 [=CASG 70172].

Galerus Fowkes 1982. Coalinga Guidebook, p. 21, unnumbered fig. (refigured from Arnold, 1909 [1910], pl. 4, fig. 8; refigured from Arnold and Anderson 1910, pl. 25, fig. 8 (both as *Galerus excentricus* Gabb 1864)). Domengine Fm. [as Tejon Fm.], Eocene. West of Coalinga, Fresno Co. Hypotype USNM 165643]. **Remarks:** Determined here as *Calyptraea diegoana* (Conrad, 1855b). [Calyptraeidae].

Gastropod. Adegoke 1967a. Veliger 9(3):300, pl. 40, fig. 5. Santa Maragrita Fm., Miocene. Bank of Domengine Creek, Joaquin Rocks quad., Fresno Co. UCMP A9731. Hypotype UCMP 12158 (Massive bryozoan colony completely encrusting a gastropod shell). **Remarks:** Determined here as possibly a naticid (family Naticidae).

Gemmula sp., aff. *G. diabloensis* Clark and Woodford, 1927. Squires 1999b. NHMLAC CS 479: 21, fig. 41. Santa Susana Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 969 (=LACMIP 16894). Hypotype LACMIP 12687. [Turridae].

Gemmula sp. Throckmorton 1988a. USGS OFR 88-59:54, pl. 6, fig. 2 (refigured in Throckmorton 1988b, pl. 1, fig. 21). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP. D8151. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Turridae].

Gibbula* (*Tumulus*?) *baileyi Addicott, 1970 (n. sp.). USGS PP 642:42, pl. 1, figs. 12, 16, 20. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. USGS 6065. Holotype USNM 650048, paratype USNM 650047, hypotype USNM 650049. [Trochidae].

Gilbertina popenoei Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1301, fig. 3Y. Santa Susana Fm., Paleocene. Calabasas quad., Simi Hills, Ventura Co. UCR 6806. Holotype UCR 6806/4. [Ringiculidae].

Gilbertina n. sp. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 32. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6806. Hypotype UCR. 6806/4. **Remarks:** Described as *Gilbertina popenoei* n. sp., *fide* Zinsmeister (1983b: p. 1301). [Ringiculidae].

….., pl. 4, fig. 33. Simi Hills, Ventura Co. UCR 6825. Hypotype UCR 6825/8.

Gisortia clarki Ingram, 1940. Ingram 1942. BAP 27(104):109, pl. 11, fig. 1. Llajas Fm., Eocene. Simi Valley, Ventura Co. UCMP 4052. Holotype UCMP 14844. [Cypraeidae].

Gisortia clarki Ingram, 1940. Ingram 1947. BAP 31(120):105–106, pl. 7, fig. 1. Llajas Fm., Eocene. Simi Valley, Ventura Co. UCMP 4052. Holotype UCMP 14844. [Cypraeidae].

Gisortia sp. cf. *G. clarki* Ingram, 1940. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, figs. 9, 13. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717 = CASG 61666]. Hypotype SU 10235 [=CASG 61666.06]. **Remarks:** Determined here as *Sphaerocypraea martini* (Dickerson, 1914a). [Ovulidae].

Gisortia clarki Ingram, 1940. Squires 1987. NHMLAC CS 388:35, figs. 39–41 (as *Gisortia* new species? in fig. caption). Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 848 [=LACMIP 16243]. Hypotype

LACMIP 7466. [Cypraeidae].

Gisortia (*Megalocypraea*) *clarki* Ingram, 1940. Groves 1992. Festivus 24(9):101–102, figs. 3a, b. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co. UCMP 4052. Holotype UCMP 14844. [Cypraeidae].

Globularia (*Eocernina*) *hannibali* (Dickerson, 1914c). [*Natica*]. Stewart 1946. USGS 205-C:93, pl. 11, fig. 18. Avenal Sandstone, Eocene. Reef Ridge, just southeast of Big Tar Canyon, Reef Ridge quad., Kings Co. USGS 14495. Hypotype USNM 498719. **Remarks:** In the genus *Eocernina*, *fide* Marincovich (1977: p 229). [Naticidae].

Globularia (*Eocernina*) *hanniballi* (Dickerson, 1914c). [*Natica*]. Givens 1974. UCPG 109:75, pl. 9, fig. 1. Juncal Fm., Eocene. Park Canyon, San Guillermo quad. (1943), Ventura Co. UCR 4699. Hypotype UCR 4699/18. **Remarks:** In the genus *Eocernina*, *fide* Marincovich (1977: p. 229). [Naticidae].

....., pl. 9, fig. 3. East side of Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4658. Hypotype UCR 4658/11.

Globularia Fowkes 1982. Coalinga Guidebook, p. 22, unnumbered fig. Avenal Sandstone, Eocene. Head of Tar Canyon near Les Sagaser Ranch, Kings Co. WHC hypotype lost? [Naticidae].

Glyphostoma carinata Addicott, 1970 (n. sp.). USGS PP 642:136–137, pl. 19, fig. 19. Upper Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 37097. [Clathurellidae].

....., pl. 19, figs. 33–36. Caliente quad. (1914), Kern Co. UCMP B1586. Holotype UCMP 37098, paratype UCMP 37099.

Goniobasis kettlemanensis Arnold, 1909 [1910]. Woodring et al. 1940 [1941]. USGS PP 195:85, pl. 15, fig. 5. San Joaquin Fm. (*Pecten* and *Trachycardium* Zones), Pliocene. Arroyo Pino, North Dome, 1500, Kettleman Hills, Kings Co. USGS 12360. Hypotype USNM 495759. **Remarks:** In the genus *Juga*, *fide* Taylor (1966: p. 119). [Pleuroceridae].

....., pl. 15, figs. 6, 14. West side of Los Morones, South Dome, 20 ft. north, Kettleman Hills, Kings Co. USGS 12780. Hypotypes USNM 495760, 495767.

Goniobasis kettlemanensis Arnold, 1909 [1910]. Adegoke 1969. UCPG 80:162, pl. 10, figs. 1, 2. San Joaquin Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP B6536. Hypotype UCMP 12209. **Remarks:** In the genus *Juga*, *fide* Taylor (1966: p. 119). [Pleuroceridae].

Goniobasis olequaensis (Arnold and Hannibal *in* Hannibal, 1912). [*Ambloxus*]. Squires and Deméré 1991. SEPM Guidebook 68:184, fig. 3C (as *Goiobasas olequahensis*). Friars Fm., Eocene. San Diego Co. SDSNH 3278. Hypotype SDSNH 28379. [Pleuroceridae].

Grandicrepidula princeps (Conrad, 1855b). [*Crepidula*]. Squires 2012. NHMLAC CS 520:77, fig. 67. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17921. Hypotype LACMIP 14387. **Remarks:** Supplemental description and first illustrated in Conrad (1857b). [Calyptraeidae].

Gyrineum judithi Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1294–1295, figs. 3R–U. Santa Susana Fm., Paleocene. Calabasas quad., Simi Hills, Ventura Co. UCR 6893. Holotype UCR. 6893/1 (not UCR 6899/100 as in text and pl. caption), paratype UCR 6893/5 (not UCR 6899/101 as in pl. caption). **Remarks:** Species name emended to *judithae* by Beu (1988: pl. 4, figs. 1–3). [Ranellidae].

Gyrineum judithae Zinsmeister, 1983b. Beu 1988. Saito Ho-on Kai Spec. Rept., p. 79–80, 82, pl. 4, fig. 6. Simi Conglomerate, Paleocene. Simi Hills, Ventura Co. UCR 6893]. Plastoholotype [cast from UCR 6893/1, not UCR 6899/100 as cited in pl. caption], NZGS WM 11835. **Remarks:** Species name emended to *judithae* by Beu (1988: pl. 4, figs. 1–3). [Ranellidae].

Gyrineum lewisii Carson, 1926. Manning and Ogle 1950. CDM Bull. 148:23, pl. 10, fig. B. Falor Fm., Pliocene. Vicinity of Boulder Creek, adjacent to the Wiggins Ranch, Humboldt Co. UCMP A4233. Hypotype UCMP 34175]. **Remarks:** Junior synonym of *Mediargo mediocris* (Dall, 1909), *fide* Smith (1970: p. 504). [Ranellidae].

"*Gyrineum*" *mediocre lewisii* Carson, 1926. Woodring and Bramlette 1950 [1951]. USGS PP 222:73, pl. 12, figs. 13, 15; pl. 13, figs. 23, 24, 26, 27. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotypes (3) USNM 560075. **Remarks:** Junior synonym of *Mediargo mediocris* (Dall, 1909), *fide* Smith

(1970: p. 504). [Ranellidae].

Gyrineum n. sp. Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, figs. 24, 25. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6893. Hypotype UCR 6893/1 (not UCR.7311/9 as cited in pl. caption). **Remarks:** Described as *Gyrineum judithi* n. sp., *fide* Zinsmeister 1983b: p. 1294; species name emended to *judithae* by Beu (1988: pl. 4, figs. 1–3). [Ranellidae].

Gyrodes robustus Waring, 1917. Marincovich 1977. BAP 70(294):243–244, pl. 21, figs. 3–6. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Ventura Co. SU 2697 [=CAS 61667]. Lectotype (of Marincovich, 1977:244) SU.147 [=CAS 61667.09], paralectotype SU 148 [=CAS 61667.10]. [Naticidae].

....., pl. 21, figs. 7–9. North slope of Simi Hills, Ventura Co. UCR6899]. Hypotype UC 6899/2.

Gyrodes robustus Waring, 1917. Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, figs. 3–5. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6899. Hypotype UCR 6899/2. [Naticidae].

Gyrodes (?*Gyrodes*) *robustus* Waring, 1917. Popenoe et al. 1987. Jour. Paleo. 61(1):77–78, figs. 4.2, 4.8. Santa Susana Fm., Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCLA 2582 [=LACMIP 22582]. Hypotype UCLA 59730 [=LACMIP 10041]. [Naticidae].

Haliotis assimilis Dall, 1878b. Lindberg 1992. Abalone of the World, p. 6, fig. 1.1c. [San Diego Fm.], Pliocene. Arroyo Drive quarry, Balboa Park, San Diego, San Diego Co. LACMIP 107. Hypotype LACMIP 14848 determined here as missing]. [Haliotidae].

Haliotis elsmerensis Vokes, 1935b. Howorth 1978. The Abalone Book, p. 8 (unnumbered fig.) (refigured from Hertlein 1937, pl. 42, fig. 1). [Vaqueros Fm., Miocene. Vicinity of Zaca Peak, Lompoc quad., Santa Barbara Co. Holotype CASG 286]. **Remarks:** Determined here as *Haliotis koticki* Hertlein, 1937. [Haliotidae].

Haliotis lasia Woodring, 1932. Shimer and Shrock 1944. Index Foss. N.A., p. 480, pl. 197, figs. 19. 20 (refigured from Woodring 1932, pl. 1, figs. 1, 4b). Santa Margarita Fm., Miocene. Temblor Range, San Luis Obispo Co. USGS 12453. Holotype USNM 371767, paratype USNM 371768]. [Haliotidae].

Haliotis palaea Woodring, 1931. Lindberg 1992. Abalone of the World, p. 6, fig. 1.1b. Modelo Fm., Miocene. Santa Monica Mtns., Los Angeles Co. CIT 52 [=LACMIP 7830]. Holotype LACMIP 4156. [Haliotidae].

Haliotis (*Padollus*) *pourtalesii* Dall, 1881. Schremp 1981. Jour. Paleo. 55(5):1125, pl. 1, fig. 1. Imperial Fm. [=Latrania Fm.], Pliocene. San Gorgonio Pass, Riverside Co. UCMP A3197. Hypotype UCMP 16074. [Haliotidae].

Haliotis pourtalesii Dall, 1881. Lindberg 1992. Abalone of the World, p. 6, fig. 1.1d (refigured from Schremp 1981, pl. 1, fig. 1). Imperial Fm. [=Latrania Fm.], Pliocene. San Gorgonio Pass, Riverside Co. UCMPA3197. Hypotype UCMP 16074. [Haliotidae].

Haliiotis rufescens Swainson, 1822. Geiger and Groves 1999. Jour. Paleo. 73(5):873, fig. 1.1 (refigured in Geiger and Poppe 2000, fig. 4 [upper left]; refigured in Geiger and Owen 2012, fig. 4 [upper left]). Saugus Fm. [= Pico Fm.]), Pliocene. Gillibrand Quarry, Santa Susana Mtns., Ventura Co. LACMIP 29227. Hypotype LACMIP 12660. [Haliotidae].

Haliotis walallensis Stearns, 1899. Geiger and Groves 1999. Jour. Paleo. 73(5):873, fig. 1.4 (refigured in Geiger and Poppe 2000, fig. 4 [lower right]; refigured in Geiger and Owen 2012, fig. 4 [lower right]). San Diego Fm., Pliocene. Hills south of the Tijuana River, San Diego Co. LACMIP 305c [=LACMIP 16817]. Hypotype LACMIP 12658. [Haliotidae].

Haliotis sp. Geiger and Groves 1999. Jour. Paleo. 73(5):873, fig. 1.2 (refigured in Geiger and Poppe, 2000 fig. 4 [upper right]; refigured in Geiger and Owen 2012, fig. 4 [upper right]). Topanga Fm. (as Topanga Canyon Fm.), Miocene. Arroyo Santa Rosa, near Moorpark, Ventura Co. LACMIP 16896. Hypotype LACMIP 12659. [Haliotidae].

Haliotis sp. Squires 2012. NHMLAC CS 520:76, fig. 50. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17921. Hypotype LACMIP 14375. [Haliotidae].

Haminoea virescens (Sowerby I, 1833). [*Bulla*]. Addicott 1970. USGS PP 642:138–139, pl. 20, figs. 27, 28. Upper Olcese Sand, Miocene. Kern River area, Kern Co. CASG 2147. Hypotype CASG 12943. [Haminoeidae].

Hastula gnomon Keen, 1943 (n. sp.). Tr.SDSNH 10(2):47, pl. 4, fig. 11. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121 [=CASG 71992]. Holotype SU 7536 [=CASG 72003], [unfigured paratype SU 7984 [=CASG 7984]. [Terebridae].

....., LACMIP 16140 (*ex* SU 2121). Unfigured paratype LACMIP. 9392 (*ex* UCLA 46034).

....., SDSNH 5422 (*ex* SU 2121). Unfigured paratype SDSNH 606.

Hastula gnomon Keen, 1943. Addicott 1970. USGS PP 642:127, pl. 17, fig. 23. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. USGS 6641. Hypotype USNM 650240. [Terebridae].

....., pl. 17, figs. 24, 25. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Hypotype USNM 650241.

....., pl. 17, fig. 26. Temblor locality 4, Caliente quad., Kern Co. UCMP 2716. Hypotype UCMP 36938.

Hemitoma* (*Montfortia*) *cantonensis Squires, 1987 (n. sp.). NHMLAC CS 388:21, 22, figs. 10, 11. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 358 [=LACMIP 16114]. Holotype LACMIP 7440. **Remarks:** Determined here as in the genus *Montfortia*. [Fissurellidae].

Hemitoma (*Montfortia*) *emarginata* (Blainville, 1825). [*Emarginula*]. Schremp 1981. Jour. Paleo. 55(5):1125–1127, pl. 1, fig. 2. Imperial Fm. [=Latrania Fm.], Pliocene. Whitewater River, San Jacinto quad., Riverside Co. UCMP A1415. Hypotype UCMP 16075 (not 16074 as in pl. caption). **Remarks:** Determined here as in the genus *Montfortia*. [Fissurellidae].

....., pl. 1, figs. 3, 4. San Gorgonio Pass, Riverside Co. UCR 8585 (not UCR 8587 as in text). Hypotype UCR 8585/1.

Heteroterma*(?) *acrita Saul, 1988a (n. sp.). NHMLAC CS 400:14–16, figs. 77–80, 84. Santa Susana Fm., Paleocene. Meier Canyon, Santa Susana quad., Simi Hills, Ventura Co. UCLA 2307 [=LACMIP 22307]. Holotype LACMIP 7598. [Perissityidae].

....., figs. 81, 82. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. CASG 61666. Paratype CASG 61666.03.

....., fig. 83. Lower Santa Susana Fm., Paleocene. Meier Canyon, Santa Susana quad., Ventura Co. UCLA 2330 [=LACMIP 22330]. Paratype LACMIP 7600.

Heteroterma gabbi Stanton, 1896 (not Stewart as cited). Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, figs. 6, 7. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6899. Hypotype UCR 6899/2 (not UCR. 6899/8 as in pl. caption). [Perissityidae].

Heteroterma gabbi Stanton, 1896. Zinsmeister 1983b. Jour. Paleo. 57(6):1299, figs. 3O–Q. Santa Susana Fm., Paleocene. Calabasas quad., Simi Hills, Ventura Co. UCR 6899. Hypotypes UCR 6899/2 (not UCR 6899/8 as in pl. caption). **Remarks:** Hypotype (fig. 3Q) =*Heteroterma acrita* n. sp., *fide* Saul (1988a: p. 14). [Perissityidae].

Heteroterma striata Stanton, 1896. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, fig. 19. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073. Hypotype CASG 10245 [=CASG. 61666.11]. **Remarks:** *Pyropsis judithae* n. sp., *fide* Saul (1988b: p. 886). Not a *Pyropsis*, *fide* Squires (2011: p. 1204). [Perissityidae].

....., pl. 2, fig. 20. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. UCMP A9717. Hypotype UCMP 14209. **Remarks:** *Pyropsis judithae* n. sp., *fide* Saul (1988b: p. 14).

Heteroterma striata Stanton, 1896. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 8. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCLA 3117 [=LACMIP 23117]. Hypotype UCLA 59294 [=LACMIP 10979]. **Remarks:** *Pyropsis judithae* n. sp., *fide* Saul (1988b: p. 14). Not a *Pyropsis*, *fide* Squires (2011: p. 1204). [Perissityidae].

Heteroterma striata Stanton, 1896. Zinsmeister 1983b. Jour. Paleo. 57(6):1299, fig. 3L. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCLA 3117 [=LACMIP 23117]. Hypotype UCLA 59294 [=LACMIP 10979]. **Remarks:** *Pyropsis judithae* n. sp., *fide* Saul (1998b: p. 14). Not a *Pyropsis*, *fide* Squires (2011: p. 1204). [Perissityidae].

....., figs. 3M, N. Simi Hills, Ventura Co. UCLA 3114 [=LACMIP 23114)]. Hypotype UCLA 59295 [=LACMIP 10980]. **Remarks:** *Pyropsis judithae* n. sp., *fide* Saul (1988b: p. 14).

Heteroterma trochoidea Gabb, 1869b. Zinsmeister 1983b. Jour. Paleo. 57(16):1298–1299, fig. 4 (refigured from Gabb, 1969, pl. 26, fig. 30). Martinez Fm., Paleocene. Martinez, Contra Costa Co. Lectotype (of Stewart 1926 [1927]: p. 423) ANSP 4237. [Perissityidae].

Heteroterma trochoidea Gabb, 1869b. Saul 1988a. LACMCS 400:13–14, figs 72, 74. Lower Santa Susana Fm., Paleocene. Meier Canyon, Santa Susana quad., Ventura Co. UCLA 2330 [=LACMIP 22330]. Hypotype LACMIP 7596. [Perissityidae].

....., fig. 73. Simi Hills, Santa Susana quad., Ventura Co. UCMP. 3776. Hypotype UCMP 30573.

....., figs. 75, 76. Meier Canyon, Santa Susana quad., Ventura Co. UCLA 2307 [=LACMIP 22307]. Hypotype LACMIP 7597.

Heteroterma? sp. Saul 1986. SEPM Guidebook 49:30, figs. 50, 51. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6525 [=LACMIP 26525]. Hypotype LACMIP 7562. [Perissityidae].

Hexaplex? *whitneyi* (Gabb, 1864). [*Tritonium*]. Givens 1974. UCPG 109:83, pl. 9, fig. 13. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4715. Hypotype UCR 4715/3. [Muricidae].

Hipponix pristinus Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1292, figs. 2I, J. Santa Susana Fm., Paleocene. Thousand Oaks quad., Simi Hills, Ventura Co. UCR 6887. Holotype UCR 6887/200, paratype UCR 6887/201. [Hipponicidae].

Hipponix n. sp. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, figs. 20, 21. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6887. Hypotype UCR 6887/200 (not UCR 6887/2 as in pl. caption). **Remarks:** Described as *Hipponix pristinus* n. sp, *fide* Zinsmeister (1983b: p. 1292). [Hipponicidae].

Homalopoma (*Leptothyropsis*) *maiquetiana* (Weisbord, 1962). [*Arene*]. Schremp 1981. Jour. Paleo. 55(5):1133, pl. 3, figs. 14–16. Imperial Fm. [=Latrania Fm.], Pliocene. Whitewater River, San Jacinto quad., Riverside Co. UCMP A1415. Hypotype UCMP 16088 (not UCMP 16087 as in pl. caption). [Colloniidae].

Homalopoma cf. *H. paucicostata* (Dall, 1871). [*Leptothyra*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:70, pl. 12, fig 4. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. CIT 869 [=LACMIP. 6108]. Hypotype CIT 4557 [=LACMIP 4166]. [Colloniidae].

Homalopoma umpquaensis Merriam and Turner, 1937. Givens 1974. UCPG 109:61, pl. 5, fig. 3. Juncal Fm., Eocene. Lockwood Valley quad. (1943), Ventura Co. UCR 4676. Hypotype UCR 4676/6. [Colloniidae].

Homalopoma umpquaensis domenginensis Vokes, 1939. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 1. Juncal Fm.?, Eocene. Northern Lockwood Valley area, Ventura Co. CSUN 979 [=LACMIP 16081]. Hypotype LACMIP 7694. [Colloniidae].

Homalopoma umpquaensis domenginensis Vokes, 1939. Squires 1988c. NHMLAC CS 398:10, figs. 12, 13. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 979 [=LACMIP 16081]. Hypotype LACMIP 7694. [Colloniidae].

Homalopoma wattsi (Dickerson, 1916). [*Monodonta*]. Squires 2008. NHMLAC CS 517:5, 10, figs. 14, 15. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13416. [Colloniidae].

Homalopoma aff. *H. wattsi* (Dickerson, 1916). [*Monodonta*]. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 9. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 674 [=LACMIP 16082]. Hypotype LACMIP 11453. [Colloniidae].

*Homoploma** *paucicostatum*? (Dall, 1871). [*Leptothyra*]. Squires 2012. NHMLAC CS 520:77, figs. 57, 58. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14379. **Remarks:** Error for *Homolapoma*. [Colloniidae].

Indeterminate gastropod. Throckmorton 1988a. USGS OFR 88-59:61, pl. 6, fig. 5 (latex peel) (refigured in Throckmorton 1988b, pl. 1, fig. 16). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8151. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002).

Iselica fenestrata (Carpenter, 1864b) var. [*Isapis*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:70, pl. 13, figs. 17, 18. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. CIT 869 [=LACMIP 6108]. Hypotype CIT 4558 [=LACMIP 4214], determined here as missing. [Amathinidae].

Janiopsis sanmarcosensis Givens and Kennedy, 1976 (n. sp.). Jour. Paleo. 50(5):969, 971–972, pl. 4, figs. 1–4. Delmar Fm., Eocene. Near Vista and San Marcos, San Diego Co. UCR. 4865. Holotype UCR 4865/11, paratype UCR 4865/110. [Buccinidae].

Jaton cf. *J. carpenteri* (Dall, 1899a). [*Pteronotus*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:76, pl. 15, figs. 9, 11. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. CIT. 869 [LACMIP 6108]. Hypotype CIT. 4555 [=LACMIP 4198]. [Muricidae].

Jaton cf. *J. festivus* (Hinds, 1844). [*Murex*]. Woodring et al. 1940 [1941]. USGS PP 195:87, pl., 15, fig. 2. San Joaquin Fm. (*Pecten* Zone), Pliocene. Vicinity of Arroyo Finito, North Dome, Kettleman Hills, Kings Co. USGS 12343. Hypotype USNM 495756. **Remarks:** In the genus *Pteropurpura*, *fide* McLean (1978: p. 42). [Muricidae].

Jaton festivus (Hinds, 1844) n. var. [*Murex*]. Woodring et al. 1940 [1941]. USGS PP 195:87, pl. 15, fig. 9. San Joaquin Fm. (*Pecten* Zone), Pliocene. La Lomica, North Dome, Kettleman Hills, Kings Co. USGS 12365 [=USGS 12767]. Hypotype USNM 495762. **Remarks:** In the genus *Pteropurpura*, *fide* McLean (1978: p. 42). [Muricidae].

Kelletia cf. *K. kelleti* (Forbes, 1852). [*Fusus*]. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 3, fig. 5 (cast). Pancho Rico Fm., Miocene/Pliocene. Sarah Canyon area, Wunpost quad., Monterey Co. USGS M1934. Hypotype USNM 649096. **Remarks:** *Kelletia kellettii* (Forbes, 1852), *fide* Addicott (1970: p. 91) [Buccinidae].

Kelletia kettlemanensis (Arnold, 1909 [1910]). [*Thais*]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):176, fig. 65-16. Etchegoin Fm. (Upper *Mulinia* Zone), Pliocene. Kettleman Hills, Kings Co. CASG 27072. Hypotype CASG 5902. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Kelletia lorata Addicott, 1970 (n. sp.). USGS PP 642:91–92, pl. 10, figs. 11, 17. Upper Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598. Holotype UCMP 32834. [Buccinidae].

Kelletia posoensis (Anderson and Martin, 1914). [*Siphonalia*]. Addicott 1970. USGS PP 642:92, pl. 10, figs. 20, 21. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 650152. [Buccinidae].

Kelletia cf. *K. posoensis* (Anderson and Martin, 1914). [*Siphonalia*]. Addicott, 1970. USGS PP 642:92, pl. 11, fig. 29 (cast). Lower Jewett Sand, Miocene. Northwest of Pyramid Hill, 'Vaqueros', Kern Co. UCLA WR163 [=LACMIP 16252]. Hypotype UCLA 45770 [=LACMIP 8435]. [Buccinidae].

Kelletia vladimiri Kanakoff, 1954 (n. sp.). BSCAS 53(2):114–117, pls. 29–31. Originally referred to as Pico Fm. (Pliocene) but most likely is Castaic Fm. (Miocene). Mint Canyon quad., Los Angeles Co. LACMIP 291. Holotype LACMIP 1097, paratypes LACMIP 1098, 1099. [Buccinidae].

….., LACMIP 291. Unfigured paratypes SU 8662 [=CASG 72191].

Kelletia? sp. Addicott 1973b. USGS PP 791:7, 21, pl. 9, fig. 7. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646620. [Buccinidae].

....., pl. 9, figs. 11, 12. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3772. Hypotype USNM 646621.

Kleinacteon moodyi (Dickerson, 1916). [*Acteon*]. Zilch 1959. Handbh. Palaoz. 6(2):6, fig. 6 (refigured from Vokes 1939, pl. 16, fig. 24). Domengine Fm., Eocene. Parson's Peak, Coalinga quad., Fresno Co. UCMP 672. Holotype UCMP 3117]. [Acteonidae].

Knefastia cf. *K. funiculata* (Kiener, 1840, *ex* Valenciennes MS). [*Pleurotoma*]. Woodring et al. 1946. USGS PP 207:27, pl. 28, fig. 13 (clay peel). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon area, Palos Verdes

Hills, Los Angeles. USGS 13127. Hypotype USNM 497079. [Pseudomelatomidae].

Knefastia garcesana Addicott, 1970 (n. sp.). USGS PP 642:131–132, pl. 18, fig. 24 (cast). Upper Round Mtn. Silt, Miocene. Kern River area., Rio Bravo Ranch quad. (1954), Kern Co. USGS M1607. Holotype USNM 650255. [Pseudomelatomidae].

Lacuna carpenteri Anderson and Martin, 1914. Addicott 1970. USGS PP 642:45, pl. 3, figs. 1, 2. Olcese Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1600. Hypotype USNM 650068. [Littorinidae].

....., pl. 3, fig. 22. Bakersfield and Caliente quads. (1914), Kern Co. UCMP B1600. Hypotype UCMP 14994.

Lacunaria striata (Gabb, 1869b). [*Ampullina*]. Marincovich 1977. BAP 70(294):222–224, pl. 17, figs. 12, 13 (not fig. 11). Martinez Fm., Paleocene. Martinez, Contra Costa Co. Lectotype (of Stewart 1926 [1927]:339) ANSP 4241, unfigured paralectotypes (3) ANSP. 79508. [Naticidae].

....., pl. 17, figs. 11, 14 (not fig 13). Lodo Fm., Paleocene. Panoche quad., Fresno Co. SU 422. Hypotype CASG 10275 [=CASG 72659].

....., pl. 18, figs. 1, 2. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Ventura Co. SU2695. Holotype (of *Sinum dickersoni* Waring, 1917) SU 163 [=CASG 69891].

Laevityphis (*Laevityphis*) *antiquus* (Gabb, 1864). [*Typhis*]. Squires 1984. NHMLAC CS 350:30, fig. 8c. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in Oat Mtn.quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP. 6536. [Muricidae].

Lapparia eomagna (Vokes, 1939). Squires 2001. NHMLAC CS 489:10–11, fig. 21. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 22312. Hypotype LACMIP 12740. [Volutidae].

"*Latirus*" cf. *L. buwaldana** (Dickerson, 1914a). [*Tritonium*]. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, figs. 11, 12. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype SU 10239 [=CASG 61666.18]. **Remarks:** Error for *buwaldi*. [Fasciolariidae].

Leiorhinus? reedi Stewart, 1946 (n. sp.). USGS PP 205-C: pl. 11, fig. 22. Avenal Sandstone, Eocene. Reef Ridge, Kettleman Plain quad., Kings Co. USGS 14482a. Holotype USNM 498723. [Strombidae].

Liotia carinata Carpenter, 1857c. [*Liotia*?]. Stanton 1966. Jour. Paleo. 40(1):32, pl. 6, figs. 15, 16. Castaic Fm., Miocene. Humphreys quad. (1932, RP 1946), Los Angeles Co. CIT 1663 [=LACMIP 2555. Hypotype LACMIP 4158, determined here as missing. **Remarks:** *Arene lurida* (Dall, 1913), *fide* J.H. McLean (personal communication, 2005). [Liotiidae].

Lirabuccinum dalli (Clark, 1918). [*Searlesia*]. Amano and Vermeij 2003. Jour. Paleo. 77(5):867–868, pl. 4, figs. 7, 10a, 10b. San Ramon Fm., Miocene. San Pablo Creek, Contra Costa Co. UCMP 2754. UCMP holotype 11215 (not UCMP 12115 as in Keen and Bentson 1944: p. 192), paratype 11214. [Buccinidae].

Lirobittium asperum (Gabb, 1866). [*Turbonilla*]. Squires 2012. NHMLAC CS 520:77, fig. 62. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14382. [Cerithiidae].

Lirofusus ashleyi Arnold, 1908 (n. sp.). Proc. USNM 34(1617):372. San Lorenzo Fm., Miocene. San Lorenzo River, Santa Cruz Co. LACMIP 6109. Unfigured paratype LACMIP 4196 [*ex* CIT 3710]. [Fasciolariidae].

Littorina mariana Arnold, 1909 [1910]. Woodring et al. 1940 [1941]. USGS PP 195:84–85, pl. 8, fig. 1. San Joaquin Fm. (Upper *Mya* Zone), Pliocene. Middle Dome, Las Alturas, Kettleman Hills, Kings Co. USGS 12697. Hypotype USNM 495285. [Littorinidae]. **Remarks:** Junior synonym of *Littorina petricola* Arnold, 1908, *fide* Reid (1996: p. 92).

....., pl. 8, figs. 2–6. South Dome, Las Colinas, Kettleman Hills, Kings Co. USGS 12679. Hypotypes USNM 495286–495290.

....., pl. 29, figs. 8, 9. Etchegoin Fm. (*Littorina* Zone), Pliocene. North Dome area, El Piso on west side of La Cima, Kettleman Hills, Kings Co. USGS 12391. Hypotypes USNM 495790, 495791.

Littorina mariana Arnold, 1909 [1910]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):176, fig. 65-2. Etchegoin

Fm., Pliocene. Kettleman Hills, Kings Co. CASG 26811. Hypotype CASG 5722. **Remarks:** Junior synonym of *Littorina petricola* Arnold, 1908, *fide* Reid (1996: p. 92). [Littorinidae].

Littorina mariana Arnold, 1909 [1910]. Moore et al. 1952. Invert. Foss., p. 326, fig. 8-40.16. Pliocene. Line drawing, source specimen unknown. [Littorinidae]. **Remarks:** Junior synonym of *Littorina petricola* Arnold, 1908, *fide* Reid (1996: p. 92).

Littorina cf. *L. petricola* Dall, 1909. Woodring and Bramlette 1950 [1951]. USGS PP 222:70, pl. 19, fig. 12. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge near Orcutt, Santa Barbara Co. USGS 14619. Hypotype USNM. 560118. [Littorinidae].

Littorina petricola Dall, 1909. Addicott 1969. Pr.CAS 37(3):62, 64–65, p. 1, figs. 2–5. Merced(?) Fm., Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM 650947–650949. [Littorinidae].

Littorina (*Littorina*) *petricola* Arnold, 1908. Reid, 1996 Ray Society 164:92–95, fig. 31A. San Joaquin Fm., Pliocene. Kettleman Hills, Kings Co. USNM 4718. Holotype (of *Littorina mariana* Arnold, 1909 [1910]) USNM 165481. **Remarks:** Arnold, 1909 [1910] originally listed this locality as Etchegoin Fm.

….., fig. 31B. San Joaquin Fm., Pliocene. Kettleman Hills. USNM 4730. USNM 165487. Holotype (of *Littorina mariana* var. *alta* Arnold, 1909 [1910]. USNM 4730. **Remarks:** Arnold, 1909 [1910] originally listed this locality as Etchegoin Fm.

….., fig. 31C. Unknown fm., Pliocene. Bed E, North Dome Kettleman Hills, Kings Co. LACMIP 20697 [=UCLA 697]. Hypotype LACMIP 20697.1 and LACM 14876.

….., fig. 31E-l. Etchegoin Fm., Pliocene. *Littorina* Zone, La Cima quad., Kings Co. UCMP D6369. Hypotypes UCMP 110605–110609.

….., fig. 31J. Merced Fm. [=Purisima Fm.], Pliocene. CASG 61955. Lectotype (of Reid, 1966:92) CASG 61955.01.

Littorina (*Littorina*) *remondii* Gabb, 1866. Reid, 1996. Ray Society 164:61–63, figs. 17A–C. San Pablo Fm., Miocene. Kirker's Pass, Contra Costa Co. Lectotype (of Keen and Bentson, 1944: p. 167) ANSP 4334, paralectotypes (2) ANSP 77549.

….., figs. 17D–G. CASG 61191. Hypotype CASG 61191.01.

….., fig. 17H. UCMP 1482. Lectotype of (Reid, 1996:61) [=holotype in UCMP on-line database] (of *Littorina pittsburgensis* Clark, 1915) UCMP 11649.

….., fig. 171. UCMP 102. Hypotype (of Clark, 1915:484, pl. 65, fig. 13) (of *Littorina pittsburgensis* Clark, 1915) UCMP 11620. **Remarks:** Listed as Neroly Fm. in UCMP on-line database.

Littorina Fowkes 1982. Coalinga Guidebook, p. 33, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 29, fig. 2; refigured from Arnold and Anderson 1910, pl. 51, fig. 2 (both as *Littorina mariana* var. *alta* n.var.)). San Joaquin Fm. [as Etchegoin Fm.], Pliocene. Central Kettleman Hills, Kings Co. Hypotype USNM 165487]. **Remarks:** Determined here as *Littorina mariana* Arnold, 1909 [1910]. [Littorinidae].

Lora turricula (Montagu, 1803). [*Murex*]. Faustman 1964. UCPG 41(2):126, pl. 3, fig. 8. Upper Rio Dell Fm., Pliocene. Ferndale quad., Humboldt Co. UCMP B7950. Hypotype UCMP 37797. **Remarks:** Determined here as in the genus *Propebela*. [Mangeliidae].

?*Lottia asmi* (Middendorff, 1848a). [*Acmaea*]. Lindberg 1990. Veliger 30(4):376, fig. 1c. "Fernando Fm.", [=Pico Fm.?], Pliocene. Southeast corner of Atlantic-Richfield Plaza basement, Los Angeles Co. LACMIP 1219. Hypotype LACMIP 8406. [Lottidae].

Lottia digitalis (Eschscholtz *in* Rathke, 1833). [*Acmaea*]. Lindberg 1988. Malac. Rev. sup. 4:47, fig. 5f. Moonstone Beach Fm., Pliocene/Pleistocene. Vicinity of Moonstone Beach Trinidad quad., Humboldt Co. UCMP B7348. Hypotype determined here as missing. [Lottidae].

Loxotrema turritum Gabb, 1868. Moore 1968. SDSNH Occ. Pap. 15:26, pl. 11, fig. d. Ardath Shale, Eocene. San Clemente

Canyon, San Diego Co. SDSNH2314. Hypotype SDSNH 4181]. [Melanopsidae].

Loxotrema turritum Gabb, 1868. Givens 1974. UCPG 109:70, pl. 6, fig. 17. Matilija Fm., Eocene. Beartrap Creek area, Reyes Peak quad. (1943), Ventura Co. UCR 4747. Hypotype UCR 4747/401. [Melanopsidae].

Loxotrema turritum Gabb, 1868. Givens and Kennedy,1976. Jour. Paleo. 50(5):960, 963, pl. 1, figs. 5–8. Delmar Fm. [=Santiago Fm.?], Eocene. Near Vista and San Marcos, San Diego Co. UCR. 4865. Hypotypes UCR. 4865/200–4865/202. [Melanopsidae].

?*Loxotrema turritum* Gabb, 1868. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 16. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 671 [=LACMIP 16076]. Hypotype LACMIP 11459. **Remarks:** *Loxotrema turritum* Gabb, 1868, *fide* Squires (1998: p. 299). [Melanopsidae].

Loxotrema turritum Gabb, 1868. Squires 1998. Veliger 41(1):298–304, figs. 9, 10. Matilija Sandstone, Eocene. North Fork Matilija Creek, Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1450 [=LACMIP 16963]. Hypotype LACMIP 7162. [Melanopsidae].

....., fig. 11Matilija quad. (1952, PR 1967), Ventura Co. LACMIP 24258. Hypotype LACMIP 6451.

Loxotrema turritum Gabb, 1868. Squires 1999c. NHMLAC CS 480:16–17, fig. 18. Matilija Sandstone, Eocene. North fork of Matilija Creek, Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1450 [=LACMIP 16963]. Hypotype LACMIP 12452. [Melanopsidae].

....., fig. 19. Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1446 [=LACMIP 24258). Hypotype LACMIP 6451.

Loxotrema Fowkes 1982. Coalinga Guidebook, p. 21, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 4, fig. 17; refigured from Arnold and Anderson 1910, pl. 25, fig. 17 (both as *Loxotrema turritum* Gabb, 1868)). Domengine Fm., Eocene [as Tejon Fm.]. West of Coalinga, sec. 26, T20S, R14E, Fresno Co. Hypotype USNM 165649]. **Remarks:** *Loxotrema turritum* Gabb, 1868, *fide* Squires (1999c: p. 299). [Melanopsidae].

Lucunaria striata* (Gabb, 1869). [*Ampullina*]. Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, fig. 19. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6805. Hypotype UCR 6805/5. **Remarks:** Error for *Lacunaria*. [Naticidae].

Lunatia cf. *L. lewisii* (Gould, 1847). [*Natica*]. Woodring et al. 1940 [1941]. USGS PP 195:86, pl. 15, fig. 8. San Joaquin Fm. (*Pecten* Zone), Pliocene. Vicinity of Arroyo Vadoso and Arroyo Largo, North Dome, Kettleman Hills, Kings Co. USGS 12331. Hypotype USNM 495761. **Remarks:** In the genus *Euspira*, *fide* McLean (2007: p. 737). [Naticidae].

....., pl. 31, fig. 5. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. Los Jinetes, North Dome, Kettleman Hills, Kings Co. USGS 12393. Hypotype USNM 495813.

Lunatia cf. *L. lewisii* (Gould, 1847). [*Natica*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:73, pl. 12, fig. 1. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. USGS 14769. Hypotype USNM 560071. **Remarks:** In the genus *Euspira*, *fide* McLean (2007: p. 737). [Naticidae].

Lunatia Fowkes 1982. Coalinga Guidebook, p. 21, unnumbered fig. Domengine Fm., Eocene. West of Coalinga, Fresno Co. WHC hypotype lost? **Remarks:** Because the author figured the same specimen as being from both Eocene and Pliocene localities, the exact locality of *Lunatia* of Fowkes 1982 is unknown. [Naticidae].

....., p. 30, unnumbered fig. Etchegoin/Jacalitos Fm. ("*Glycymeris* Zone"), Miocene/Pliocene. Southwest of Coalinga, Fresno Co. WHC hypotype lost?

Lyria andersoni Waring, 1917 (n. sp.). Pr.CAS 7(4):97. Llajas Fm., Eocene. McCray Wells, Ventura Co. LACMIP 16272. Unfigured paratype LACMIP 4212 [*ex* CIT].

Lyria andersoni Waring, 1917. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):170, fig. 62-21. Llajas Fm., Eocene. Aliso Creek, Los Angeles Co. CASG 364. Hypotype CASG 5712. [Volutidae].

Lyria andersoni Waring, 1917. Squires, 1984. NHMLAC CS 350:35, fig. 9d. Llajas Fm., Eocene. Devil Canyon, Oat Mtn. quad. (1952, PR 1969), Los Angeles Co. CSUN 498 [=LACMIP 16189]. Hypotype LACMIP 6550. [Volutidae].

Lyria andersoni Waring, 1917. Squires 1987. NHMLAC CS 388:47, fig. 69. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 362 [=LACMIP 16273]. Hypotype LACMIP 7490. [Volutidae].

Lyria andersoni Waring, 1917. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 16. Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 498 [=LACMIP 16189]. Hypotype LACMIP 6550. [Volutidae].

Lyria andersoni Waring, 1917. Squires 1988c. NHMLAC CS 398:16, fig. 36. Juncal Fm.?, Eocene. Lockwood Valley, Ventura Co. CSUN 981 [=LACMIP 16142]. Hypotype LACMIP 7716. [Volutidae].

Lyria andersoni Waring, 1917. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 8. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 675 [=LACMIP 16151]. Hypotype LACMIP 11471. [Volutidae].

Lyria andersoni Waring, 1917. Squires 2008. NHMLAC CS 517:5, fig. 28. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13429. [Volutidae].

Lyria hannibali Waring, 1917. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, figs. 16, 17. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCLA 2330 [=LACMIP 22330]. [Hypotype UCLA 59580 [=LACMIP 10981). [Volutidae].

Lyriscapha lajollaensis* (M.A. Hanna, 1927). [*Pejonia*]. Squires 1991c. SEPM Guidebook 68: 222, pl. 2, fig. 9. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 672 [=LACMIP 16274]. Hypotype LACMIP 11472. **Remarks:** Error for *Lyrischapa*. [Volutidae].

Lyrischapa lajollaensis (M.A. Hanna, 1927). [*Pejonia*]. Givens 1979. TSGP 15(4):124–126, pl. 3, figs. 1a, 2b. Ardath Shale, Eocene Torrey Pines State Park, Del Mar quad. (1967), San Diego Co. UCMP 5062 [=UCR 4922]. Holotype UCMP 30911 (missing *fide* Givens 1979: p. 124), neotype (of Givens 1979: p. 124) UCMP 14634. **Remarks:** Holotype figure from photograph in UCMP collection. [Volutidae].

....., pl. 4, fig. 1. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1969), Ventura Co. UCR 7719. Hypotype UCR 7719/4.

....., pl. 4, fig. 2. Probably Las Llajas Canyon, Santa Susana Mtns., Ventura Co. UCR 1838. Hypotype UCR 1838/1.

....., pl. 4, figs. 3a–c. Las Llajas Canyon, Santa Susana quad. (1969), Ventura Co. UCR. 1. Hypotype UCR 1/601.

Lyrischapa lajollaensis (M.A. Hanna, 1927). [*Pejonia*]. Squires 1984. NHMLAC CS 350:36, fig. 9e. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. cor. is in the Oat Mtn. quad.), Ventura Co. CSUN 373 [=LACMIP 16211]. Hypotype LACMIP 6551. [Volutidae].

Lyrischapa lajollaensis (M.A. Hanna, 1927). [*Pejonia*]. Squires 1987. NHMLAC CS 388:47, figs. 70, 71. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 827 [=LACMIP 16153]. Hypotype LACMIP 7491. [Volutidae].

Lyrischapa lajollaensis (M.A. Hanna, 1927). [*Pejonia*]. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 17. Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 373 [=LACMIP 16211]. Hypotype LACMIP 6551. [Volutidae].

Macrarene diegensis McLean, 1964 (n. sp.). Veliger 7(2):131–132, pl. 24, figs. 9–14. San Diego Fm., Pliocene. San Ysidro quad., San Diego Co. LACMIP 305. Holotype LACMIP 1136, paratypes LACMIP 1137, unfigured paratypes LACMIP 1300–1656]. [Liotiidae].

….., Unfigured paratypes (8) CASG 61787.01, 61787.02].

Macron aethiops (Reeve, 1847). [*Buccinum*]. Addicott 1970. USGS PP 642:94, 95, pl. 11, fig. 25. Lower Olcese Sand, Miocene. Woody quad., Kern Co. SU 26854. Hypotype SU 9940, determined here as missing. [Buccinidae].

....., pl. 11, figs. 26, 27. "Top of Py[ramid Hill], Sand, Poso Creek." Matrix and other specimens from this locality suggest the material is from the lower part of the Olcese Sand exposed on the south side of Poso Creek, Woody quad., Kern Co. UCLA MB1400 [=LACMIP 16278]. Hypotype UCLA 45769 [=LACMIP 8436].

Malea ringens (Swainson, 1822). [*Cassis*]. Peska 1992. Bull. SCPS 24(3-4):32, unnumbered fig. p. 34. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Coyote Mtn., Imperial Co. Line drawing, source specimen unknown. [Cassidae].

Malea ringens (Swainson, 1822). [*Cassis*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 46, 53, figs. 3.2, 3.8B. Latrania Fm., Miocene/Pliocene. Alverson Canyon, Imperial Co. SDSNH 345. Hypotype SDSNH 12234. [Cassidae].

....., fig. 3.8A. Gale Canyon, Coyote Mtns., Imperial Co. [SDSNH 3233E]. Hypotype SDSNH 103648.

Mangelia* (*Notocytharella*?) *hartensis Addicott, 1970 (n. sp.). USGS PP 642:136, pl. 19, fig. 22. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650265. [Mangeliidae].

Mangelia (*Agathotoma*) *howei* Anderson and Martin, 1914. Addicott 1970. USGS PP 642:136, pl. 19, fig. 23. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M2480. Hypotype USNM 650266. [Mangeliidae].

Mangelia (*Cacodaphnella*?) *kernensis* (Anderson and Martin, 1914). [*Mangilia*]. Keen 1943. Tr. SDSNH 10(2):47, 48, pl. 4, fig. 21. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Hypotype SU 7537 [=CASG 72005, listed as *Manella* (*Cacodaphnella*?) *kernensis* and as a bivalve in the CASG online database. [Mangeliidae].

Mangelia (*Notocytharella*) *kernensis* (Anderson and Martin, 1914). [*Mangilia*]. Addicott 1970. USGS PP 642:135–136, pl. 19, figs. 24, 25, 30, 31. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotypes USNM 650267–650270. [Mangeliidae].

....., pl. 19, fig. 26. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 37100.

Margarites semiornata Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1289, figs. 2A–D. Santa Susana Fm., Paleocene. Meier Canyon, Calabasas quad., Simi Hills, Ventura Co. UCR 6873. "Holotypes" [= Syntypes?] UCR 6876/800a, 6876/800c (not UCR 6873/81 (as in text) or UCR 6873/800 (as in plate caption), paratype UCR 6876/801 (not UCR 6873/801 as in pl. caption). **Remarks:** An apparent inadvertent illustration of two specimens labeled as the "holotype" by Zinsmeister 1983b: figs. 2A, 2C [UCR 6876/800a and 6876/800c] necessitates referring to these two specimens as syntypes. A measurement of 14 mm noted in the text is meaningless as personal measurements made by author LTG yielded larger sizes for both specimens. [Margaritidae].

Margarites n. sp. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, figs. 27, 28. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6876. Hypotypes UCR 6876/800a, 6876/800c (not UCR 6876/7 as cited in pl. caption). **Remarks:** Described as *Margarites semiornata* n. sp., *fide* Zinsmeister (1983b: p. 1289). [Margaritidae].

Marginella cf. *M. albuminosa* Dall, 1919b. Stanton 1966. Jour. Paleo. 40(1):34, pl. 7, figs. 14, 15. Castaic Fm., Miocene. Humphreys quad. (1932, RP 1946), Los Angeles Co. CIT 2069 [=LACMIP 2558]. Hypotype [=LACMIP 4197]. [Marginellidae].

"*Mayena*" *kewi* (Dickerson, 1915). [*Nyctilochus*]. Smith 1970. BAP 56(254):523–524, pl. 49, fig. 3, 4. Tejon Fm., Eocene. Grapevine Canyon, Kern Co. UCMP 458. Holotype UCMP 11052. **Remarks:** In the genus *Ameranella*, *fide* Beu (1988: p. 82). [Ranellidae].

"*Mayena*" (*Nyctilochus*) *kewi* (Dickerson, 1915). [*Nyctilochus*]. Albi 2002. Festivus 34(3):36, fig 6c (as "*Mayena*" *kewi*). Tejon Fm., Eocene. Grapevine Canyon, Kern Co. LACMIP 22340. Line drawings, source specimen unknown. **Remarks:** In the genus *Ameranella*, *fide* Beu (1988: p. 82). [Ranellidae].

Mediargo dilleri (Anderson and Martin, 1914). [*Argobuccinum*]. Addicott 1970. USGS PP 642: 72, pl. 6, fig. 13. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1602. Hypotype USNM 650109. **Remarks:** In the genus *Fusitriton*, *fide* Smith (1970: p. 502). [Ranellidae].

....., pl. 6, fig. 15; pl. 7, fig. 11. Rio Bravo Ranch quad., Kern Co. LACMIP 463. Hypotype LACMIP 1157.

....., pl. 6, fig. 17. Vicinity of Kern River, Caliente quad. (1914), Kern Co. UCMP. B1622. Hypotype UCMP 37113.

....., pl. 6, fig. 18. This locality occupies an area in hills just north of the Kern River, Kern Co. CASG 65 [=CASG 2064]. Hypotype CASG 12942.

Mediargo mathewsoni (Gabb, 1866). [*Ranella*]. Addicott 1970. USGS PP 642:72–73, pl. 6, fig. 3. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 650108. [Ranellidae].

....., pl. 6, figs. 3, 4. Caliente quad. (1914), Kern Co. UCMP B1665. Hypotype UCMP 15497.

Mediargo mathewsonii (Gabb, 1866). [*Ranella*]. Smith 1970. BAP 56(254):507–512, pl. 48, fig. 12 (refigured from Gabb, 1866, pl. 2, fig. 13). Miocene. South of Martinez, Contra Costa Co. Holotype missing, *fide* Smith (1970: p. 510). [Ranellidae].

..... pl. 48, fig. 13. Jewett Sand, Miocene. Kern Co. USGS M1591. Hypotype USNM 646417.

....., pl. 48, figs. 14, 15. San Pablo Fm., Miocene. Las Trampas Ridge, Contra Costa Co. UCMP1251. Holotype (of *Bursa trampasensis* Clark, 1915) UCMP 11611.

....., pl. 48, fig. 16. Mindego Fm., Miocene. Vicinity of Pescadero Creek, Santa Cruz Mtns., San Mateo Co. SU 2694. Holotype (of *Tritonium newsomi* Arnold, 1908) USNM 165436 (not USNM 16543) as in pl. caption].

Mediargo mediocris (Dall, 1909). [*Gyrineum*]. Terry 1968. Veliger 11(1):43, pl. 4, fig. 2. [Lomita Marl], "Pleistocene" (reworked from Pliocene "Fernando Fm."?). Palos Verdes Hills, Los Angeles Co. [LACMIP 16441]. Hypotype LACMIP 1190 (not LACMIP 2155.96 as cited). [Ranellidae].

....., pl. 4, fig. 4. San Diego Fm., Pliocene. From a well in San Diego, San Diego Co. Hypotype CASG 11689 [=CASG 13146].

....., pl. 4, fig. 6. [Careaga Fm.], Pliocene. Santa Maria District, Santa Barbara Co. CASG 61893. Paratype (of *Gyrineum lewisii* Carson, 1926) SU 138 [=CASG 61893.06].

....., pl. 4, figs. 8, 9. [Etchegoin Fm.], Pliocene. Kettleman Hills, Fresno Co. Hypotype SU 31625 [=CASG 13146].

Mediargo mediocris (Dall, 1909). [*Gyrineum*]. Smith 1970. BAP 56(254):504–507, pl. 47, figs. 1, 7. San Diego Fm., Pliocene. From a well in San Diego, San Diego Co. Hypotype CASG 11689. [Ranellidae].

....., pl. 47, figs. 4, 8. Careaga Fm., Pliocene. Santa Maria District, Santa Barbara Co. CASG 61893. Holotype SU 114 [=CASG 61893.01], paratype SU 138 [=CASG 61893.06] (both of *Gyrineum lewisii* Carson, 1926).

....., pl. 47, fig. 9. Etchegoin Fm., Pliocene. Kettleman Hills, Fresno Co. Hypotype SU 9983 [*ex* SU 31625, [=CASG 70385].

Megasurcula carpenteriana (Gabb, 1865). [*Cryptoconus*]. Moore 1968. SDSNH Occas. Pap. 15: 33–34, pl. 15, figs. d, e. San Diego Fm., Pliocene. Reynard Wy., San Diego, San Diego Co. SDSNH429. Hypotype SDSNH 4169]. [Pseudomelatomidae].

Megasurcula carpenteriana (Gabb, 1865), inflated var. [*Cryptoconus*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:78, pl. 17, fig. 9. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14618. Hypotype USNM 560128. [Pseudomelatomidae].

Megasurcula carpenteriana tryoniana (Gabb, 1866) strongly shouldered form. [*Pseudotoma*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:78–79, pl. 11, fig. 6. Foxen Mudstone, Pliocene. Santa Barbara Co. USGS 4473. Hypotype USNM 560050. [Pseudomelatomidae].

Megasurcula carpenteriana tryoniana (Gabb, 1866). [*Pseudotoma*]. Weaver 1971. West (LA Times), April 18, 1971:11, unnumbered fig. (center row, left). "Fernando Fm." [=Pico Fm.], Pliocene. Arco Towers excavation, 6th and Flower streets, downtown Los Angeles, Los Angeles Co. LACMIP1219]. Hypotypes (3) current whereabouts unknown. [Pseudomelatomidae].

Megasurcula condonana (Anderson and Martin, 1914). [*Bathytoma*]. Addicott 1970. USGS PP 642:132, pl. 19, fig. 8. Basal Jewett Sand, Miocene. Pyramid Hill, Kern Co. CASG 37468. Hypotype CASG 12940. [Pseudomelatomidae].

....., pl. 19, figs. 17, 18. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1590. Hypotype USNM 650263.

Megasurcula howei G D. Hanna and Hertlein, 1938. Addicott 1965b. USGS PP 525-C:C106, fig. 4j. Olcese, Miocene. Float collection, Oil Center quad. (1950), Kern Co. UCMP B1597. Hypotype UCMP 36560. [Pseudomelatomidae].

Megasurcula howei G D. Hanna and Hertlein, 1938. Addicott 1970. USGS PP 642:132–133, pl. 18, fig. 17. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650254. [Pseudomelatomidae].

....., pl. 18, fig. 21. East side of hill 933, Bakersfield quad. (1906), Kern Co. UCMP B1593. Hypotype UCMP 37093.

....., pl. 18, figs. 22, 23. Float collection Oil Center quad. (1950), Kern Co. UCMP B1597. Hypotype UCMP 36560.

Megasurcula keepi (Arnold, 1907). [*Pleurotoma*]. Addicott 1970. USGS PP 642:133, pl. 18, fig. 15. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. CASG 68. Hypotype CASG 12939 [specimen badly affected by efflorescence]. [Pseudomelatomidae].

....., pl. 18, fig. 16. Kern River, Kern Co. USGS 6623. Hypotype USNM 650252.

....., pl. 18, fig. 20. Kern River, Kern Co. USGS 6622. Hypotype USNM 650253.

Megasurcula keepi (Arnold, 1907). [*Pleurotoma*]. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 3. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH. 4312. Hypotype SDSNH. 83240]. [Pseudomelatomidae].

Megasurcula keepi (Arnold, 1907). [*Pleurotoma*]. Stadum and Finger 2016. NHMLAC CS 524: 38, 40, 50, figs. 26, 27. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 83240. [Pseudomelatomidae].

Megasurcula remondi (Gabb, 1866). [*Metula*]. Addicott 1969. Pr.CAS 37(3):62, 68, 70, pl. 3, fig. 10. Merced(?) Fm., Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650978. [Pseudomelatomidae].

Megasurcula remondi (Gabb, 1866). [*Metula*]. Perry 1977. Foss. Santa Cruz Co., p. 23, left fig. middle row. Purisima Fm., Pliocene. Santa Cruz Co. SCCM hypotype determined here as missing. [Pseudomelatomidae].

Megasurcula remondi (Gabb, 1866). [*Metula*]. Perry 1988. SCMA, p. 20, fig. 11H. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. Hypotype CASG 66125.01 determined here as missing. [Pseudomelatomidae].

Megasurcula tryoniana (Gabb, 1866). [*Pleurotoma*]. Adegoke 1969. UCPG 80:194, pl. 13, figs. 3, 4. Etchegoin Fm., Pliocene. Coalinga quad., Fresno Co. UCMP B6546. Hypotype UCMP 36909. [Pseudomelatomidae].

Megasurcula wynoocheensis (Weaver, 1912). [*Turris*]. Addicott 1970. USGS PP 642:133–134, pl. 19, fig. 2. Lower Round Mtn. Silt, Miocene. Kern River, Caliente quad. (1914), Kern Co. UCMP B1618. Hypotype UCMP 37094. [Pseudomelatomidae].

....., pl. 19, fig. 14. Upper Olcese Sand or Round Mtn. Silt, Miocene. Temblor locality 1, Caliente quad., Kern Co. UCMP 2713. Hypotype UCMP 15906.

Megasurcula sp. Bedrossian 1974. Calif. Geol. 27(8):175, unnumbered fig., upper right specimen. "Merced" Fm., Pliocene [=Wilson Grove Fm.], Miocene/Pliocene. Santa Rosa Valley, Sonoma Co. Hypotype CASG determined here as missing. [Pseudomelatomidae].

Megathura sp. Lindberg and Squires 1990. Jour. Paleo. 64(4):581, figs. 4.1, 4.2. Tejon Fm, Eocene. Grapevine Canyon, Kern Co. CASG 245. Hypotype CASG 760. [Fissurellidae].

Megistostoma gabbianum (Stoliczka, 1868). [*Bullaea*]. Moore 1968. SDSNH Occas. Pap. 15:26, pl. 11, fig. e. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Rose Canyon, San Diego Co. SDSNH2367. Hypotype SDSNH 4165. **Remarks:** *Megistostoma striata* Gabb, 1864, see Groves and Squires 2018: p. 103 for the complicated nomenclatural history of this species. [Philinidae].

Megistostoma gabbianum (Stoliczka, 1868). [*Bullaea*]. Squires 1984. NHMLAC CS 350:40, fig. 9r. Llajas Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 458 [=LACMIP 16280]. Hypotype LACMIP 6553. **Remarks:** *Megistostoma striata* Gabb, 1864, see Groves and Squires 2018: p. 103 for the complicated nomenclatural history of this species. [Philinidae].

"*Melanatria*" *markleyensis* (Clark, 1938). [*Thiara*]. Squires 1999c. NHMLAC CS 480:14, 16, figs. 15–17. Matilija Sandstone, Eocene. Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1445 [=LACMIP 24259]. Hypotypes LACMIP 12450, 12451. [Thiaridae].

Mesalia clarki (Dickerson, 1914a). [*Turritella*]. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 13. Santa Susana

Fm., Paleocene. Simi Hills, Ventura Co. UCR 4570. Hypotype UCR 4570/14. **Remarks:** *Mesalia martinezensis* (Gabb, 1869b), *fide* Squires and Saul (2007: p. 8). [Turritellidae].

Mesalia clarki (Dickerson, 1914a). [*Turritella*]. Squires and Saul 2007. Nautilus 121(1):10–12, figs. 24–32. Santa Susana Fm., Paleocene. Trailer canyon, Topanga quad. (1952, PR 1981), Santa Monica Mtns., Los Angeles Co. LACMIP 10508. Hypotypes LACMIP 13405–13411. [Turritellidae].

Mesalia martinezensis (Gabb, 1869b). [*Turritella*]. Shimer and Shrock 1944. Index Foss. N.A., p. 495, pl. 203, fig. 5 (refigured from Stewart, 1926 [1927], pl. 25, fig. 1). Martinez Fm., Paleocene. Martinez, Contra Costa Co. Holotype ANSP. 4344, unfigured paratypes (6) ANSP 79511. [Turritellidae].

Mesalia martinezensis (Gabb, 1869b). [*Turritella*]. Easton 1960. Invert. Paleo., p. 396, fig. 10.17.13 (refigured from Merriam 1941, fig. 19). Paleocene. Line drawing, source specimen unknown. [Turritellidae].

Mesalia martinezensis (Gabb, 1869b). [*Turritella*]. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 14. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6668. Hypotype UCR 6668/3. [Turritellidae].

Mesalia martinezensis (Gabb, 1869b). [*Turritella*]. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 1 (not fig. 2). Las Virgenes Fm., Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCLA 3111 [=LACMIP 23111]. Hypotype UCLA 59360 [=LACMIP 10424]. [Turritellidae].

Mesalia martinezensis (Gabb, 1869b). [*Turritella*]. Squires 1999a. Calif. Geol. 52(4):13, fig. 3 (refigured from Gabb 1869, pl. 28, fig. 51). Martinez Fm., Paleocene. Martinez, Contra Costa Co. Holotype ANSP 4344]. [Turritellidae].

Mesalia martinezensis (Gabb, 1869b). [*Turritella*]. Squires and Saul 2007. Nautilus 121(1):8–10, figs. 16–18, 22. Santa Susana Fm., Paleocene. Temescal Canyon, Topanga quad. (1952, PR 1967), Santa Monica Mtns., Los Angeles Co. LACMIP 26897. Hypotypes LACMIP. 13399, 13403. [Turritellidae].

….., fig. 19. East of Santa Susana, Santa Susana quad. (1951, PR 1969), Simi Hills, Ventura Co. LACMIP 22557. Hypotype LACMIP 13400.

….., fig. 20. Calabasas quad. (1952, PR 1967), Simi Hills, Ventura Co. LACMIP. 21607. Hypotype LACMIP 13401.

….., fig. 21. Calabasas quad. 12,210 ft., Calabasas quad. (1951, PR 1969), Simi Hills, Ventura Co. LACMIP 22698. Hypotype LACMIP 13402.

….., fig. 23. Meier Canyon, Santa Susana quad. (1951, PR 1969), Simi Hills, Ventura Co. LACMIP 22330. Hypotype LACMIP 13404.

Metacerithium packardi Nelson, 1925. Smith 1975b. SEPM Symposium vol., p. 476, pl. 1, fig.1. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU. 2073 [=UCMP A9717]. Hypotype UCMP 14196.

Miopleiona oregonensis Dall, 1907 (not Arnold as in caption) Cummings et al. 1962. CDMG Bull. 181:202, ph. 16, fig. 4. Purisima Fm. (Pomponio Member), Pliocene. Purisima Creek, Half Moon Bay quad., San Mateo Co. Locality F701M. Hypotype determined here as missing. **Remarks:** Determined here as in the genus/subgenus *Musashia* (*Nipponomelon*). [Volutidae].

Mirachelus imperialis Schremp, 1981 (n. sp.). Jour. Paleo. 55(5):1128–1129, pl. 2, figs. 5, 12, 14. Imperial Fm. [=Latrania Fm.], Pliocene. Whitewater River, San Jacinto quad., Riverside Co. UCMP A1415. Holotype UCMP 14659, paratype UCMP 14662, unfigured paratypes UCMP 14660, 14661. [Chilodontidae].

….., East side of Super Creek, Riverside Co. UCR 7477. Unfigured paratypes UCR 7477/1–7477/4.

….., Whitewater area, Riverside Co. UCR 7477. Unfigured paratype CASG 60216.

Mitra* (*Atrimitra*) *andersoni Addicott, 1970 (n. sp.). USGS PP 642:103–104, pl. 13, figs. 11, 13. Lower Round Mtn. Silt, Miocene. North side of Kern River, Kern Co. USGS 6641. Holotype USNM 650183. [Mitridae].

….., pl. 13, figs. 16, 18. Upper Olcese(?) Sand, Miocene. Temblor locality 2, Caliente quad., Kern Co. UCMP 2714.

Hypotype UCMP 33479.

Mitra (*Mitra*) *andersoni* Addicott, 1970. Cernohorsky 1991:10, figs. 6, 7 (refigured from Addicott 1970, pl. 13, figs. 11, 13). Lower Round Mtn. Silt, Miocene Kern River Kern Co. USGS 6641. Holotype USNM 650183]. [Mitridae].

Mitra simplicissima Cooper, 1894. Squires 2001. NHMLAC CS 489:10, figs. 19, 20. Llajas Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 20586. Hypotypes LACMIP 12738, 12739. [Mitridae].

Mitra (*Fusimitra*) *uvasana* Dickerson, 1915. Cernohorsky 1976. Indo-Pacific Moll. 3(17):383–384, pl. 325, fig. 1 (refigured from Anderson and Hanna 1925, pl. 10, fig. 6). Tejon Fm., Eocene. Grapevine Canyon, Kern Co. CASG 711. Hypotype CASG 358. [Mitridae].

Mitra sp. Shapiro, 1998. AAPG Guidebook MP 45:129, pl. 2 (pl. 1 in caption), fig. L. Cañada Fm., Eocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB. [Mitridae].

Mitrella* (*Columbellopsis*) *alta Addicott, 1970 (n. sp.). USGS PP 642:87–88, pl. 9, figs. 8, 16, 17. Upper Olcese sand, MiocenOil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650135, paratype USNM 650134. [Columbellidae].

Mitrella* (*Mitrella*) *anchuela Keen, 1943 (n. sp.). Tr. SDSNH 10(2):48, pl. 4, fig. 12. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Holotype SU 7539 [=CASG 72006], [unfigured paratype SU 7965 [=CASG 7965]. [Columbellidae].

....., LACMIP 16140 (*ex* SU 2121). Unfigured paratypes LACMIP 9393, 9394].

....., SDSNH 5422 (*ex* SU 2121). Unfigured paratype SDSNH 612].

Mitrella anchuela Keen, 1943. Addicott 1970. USGS PP 642:87, pl. 9, fig. 9. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M2601. Hypotype USNM 650136. [Columbellidae].

....., pl. 9, fig. 10. Kern River, Kern Co. USGS 6623. Hypotype USNM 650137.

....., pl. 9, fig. 21. Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype UCMP 32255.

....., pl. 9, fig. 22. Rio Bravo Ranch quad. (1954), Kern Co., USGS M1612. Hypotype USNM 650138.

Mitrella cf. *M. gausapata* (Gould, 1850). [*Columbella*]. Woodring et al., 1940 [1941]. USGS PP 195:88, pl. 11, fig. 5. San Joaquin Fm. (*Acila* Zone), Pliocene. Arroyo Pino, North Dome, Kettleman Hills, Kings Co. USGS 12363. Hypotype USNM 495712. **Remarks:** *Mitrella richthofeni* (Gabb, 1866), *fide* Adegoke (1969: p. 179). [Columbellidae].

Mitrella gausapata (Gould, 1850). [*Columbella*]. Woodring et al. 1940 [1941]. USGS PP 195:88, pl. 20, fig. 7. San Joaquin Fm. (*Neverita* Zone), Pliocene. Arroyo Mellado, North Dome, Kettleman Hills, Kings Co. USGS 12519. Hypotype USNM 495323. [Columbellidae].

Mitrella gausapata (Gould, 1850). [*Columbella*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:77, pl. 15, fig. 7. Careaga Fm. (Cebada Member), Pliocene. Casmalia Hills, northeast of Shuman, Santa Barbara Co. USGS 14608. Hypotype USNM 560089. [Columbellidae].

Mitrella gausapata (Gould, 1850). [*Columbella*]. Adegoke 1969. UCPG 80:179–180, pl. 11, figs. 2, 3. Etchegoin Fm., Pliocene. Near Skunk Hollow, Domengine Ranch quad., Fresno Co. UCMP B6548. Hypotype UCMP 36856. [Columbellidae].

Mitrella gausapata (Gould, 1850). [*Columbella*]. Perry 1988. SCMA, p. 21, fig. 12H. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. Hypotype SCCM determined here as missing. [Columbellidae].

Mitrella gouldii (Carpenter *in* Gould and Carpenter, 1857). [*Nitidella*]. Cummings et al. 1962. CDMG Bull. 181:202, ph. 16, fig. 7. Purisima Fm. (Pomponio Member), Pliocene. Purisima Creek, Half Moon Bay quad., San Mateo Co. Locality F701M. Hypotype determined here as missing. **Remarks:** *Alia carinata* (Hinds, 1844), *fide*, deMaintenon (2019: p. 164, figs. 2A–D). [Columbellidae].

Mitrella cf. *M. gouldii* (Carpenter *in* Gould and Carpenter, 1857). [*Nitidella*]. Addicott 1969. Pr.CAS 37(3):62. 64, 67, 68, pl. 1, fig. 19; pl. 4, fig. 4. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650959. [Columbellidae].

*Mitrella gouldi*i (Carpenter *in* Gould and Carpenter, 1857). [*Nitidella*]. Perry 1977. Foss. Santa Cruz Co., p. 23, bottom row center fig. Purisima, Pliocene. Near Soquel, Santa Cruz Co. SCCM hypotype determined here as missing. **Remarks:** *Alia carinata* (Hinds, 1844), *fide*, deMaintenon (2019: p. 164, figs. 2A–D). [Columbellidae].

Mitrella* (*Bastrophia*) *llajasensis Squires, 2015a (n. sp.). Nautilus 129(2):65–68, figs. 2–6. Llajas Fm., Eocene. Santa Susana quad. (1969 photo revised), south side Simi Valley, Ventura Co. LACMIP 41604. Holotype LACMIP 14514. [Columbellidae].

Mitrella richthofeni (Gabb, 1866). [*Columbella*]. Adegoke 1969. UCPG 80:179, pl. 13, figs. 2, 5. Etchegoin Fm., Pliocene. Coalinga quad., Fresno Co. UCMP B6546. Hypotype UCMP 36858. [Columbellidae].

Mitrella tuberosa (Carpenter, 1864b), var. Woodring and Bramlette 1950 [1951]. USGS PP 222:78, pl. 15, figs. 23, 25. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14648. Hypotypes (2) USNM 560090. [Columbellidae].

Molopophorus? sp., cf. *M.*? *aequicostatus* Vokes, 1939. Squires 2008. NHMLAC CS 517:5, fig. 26. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13427. **Remarks:** In the genus "*Molopophorus*," *fide* Allmon (1990: p. 69). [Nassariidae].

Molopophorus anglonana (Anderson, 1905). [*Bullia*]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):174, fig. 64-14. Temblor Fm., Miocene. Near Kern River, Kern Co. CASG 65. Hypotype CASG 5724. **Remarks:** In the genus "*Molopophorus*," *fide* Allmon (1990: pp. 64–65). [Nassariidae].

Molopophorus anglonana (Anderson, 1905). [*Bullia*]. Moore 1963 [1964]. USGS PP 419:37–38, pl. 3, figs. 1, 4 (as *Molopophorus angloanus*). Temblor Fm., Miocene. Kern River, Kern Co. USGS 6613. Hypotype USNM 563136. **Remarks:** In the genus "*Molopophorus*," *fide* Allmon (1990: pp. 64–65). [Nassariidae].

Molopophorus anglonanus (Anderson, 1905). [*Bullia*]. Addicott 1965b. USGS PP 525-C:C106, fig. 4l. Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 36562. **Remarks:** In the genus "*Molopophorus*," *fide* Allmon (1990: pp. 64–65). [Nassariidae].

Molopophorus anglonanus (Anderson, 1905). [*Bullia*]. Addicott, 1970. USGS PP 642:95–96, pl. 11, figs. 1–3. Upper Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotypes UCMP 32851, 36562. [Nassariidae]. **Remarks:** In the genus "*Molopophorus*," *fide* Allmon (1990: pp. 64–65).

....., pl. 11, fig. 4. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650153.

Molopophorus anglonanus (Anderson, 1905). [*Bullia*]. Moore and Addicott 1987, USGS Bull. 1664A: pl. 1, figs. 2, 3. Temblor Fm., Miocene. Kern River, Kern Co. USGS 6613. Hypotype USNM 563136 (of Moore, 1963 [1964]). **Remarks:** In the genus "*Molopophorus*," *fide* Allmon (1990: pp. 64–65). [Nassariidae].

"*Molopophorus*" *anglonanus* (Anderson, 1905). [*Bullia*]. Allmon 1990. BAP 99(335):64–65, pl. 10, figs. 1a, 1b. Monterey [Temblor?] Fm., Miocene. Kern River, Kern Co. CASG 65.]. Neotype (of Weaver 1942: p. 470) CASG 91. [Nassariidae].

….., pl. 10, fig. 4. UCMP A373. Hypotype UCMP 32018. **Remarks:** Erroneously listed as being from California, *fide* Allmon 1990:pl. 10, fig. caption fig. 4, actually from Grays Harbor Co., Washington.

Molopophorus antiquatus (Gabb, 1864). [*Nassa*]. Givens 1974. UCPG 109:84, pl. 10, fig. 1. Juncal Fm., Eocene. Alamo Creek, San Guillermo quad. (1943), Ventura Co. UCR 4707. Hypotype UCR 4707/301. **Remarks:** In the genus *Colwellia*, *fide* Nuttall and Cooper (1973: p. 209); *fide* Allmon (1990: p. 70). [Nassariidae].

Molopophorus biplicatus (Gabb, 1866). [*Cuma*]. Wenz 1943. Handbh. Palaoz. 6:1228, fig. 3495 [refigured from Stewart, 1926 [1927], pl. 31, fig. 4]. San Ramon Fm., Oligocene. Martinez, Contra Costa Co. Lectotype (of Stewart, 1926 [1927]:389); ANSP 4340, paralectotype ANSP 79478. **Remarks:** In the genus "*Molopophorus*," *fide* Allmon (1990: p. 66). [Nassariidae].

"*Molopophorus*" *biplicatus* (Gabb, 1866). [*Cuma*]. Allmon 1990. BAP 99(335):66, pl. 10, fig. 6. San Ramon Fm., Miocene. Probably south of Martinez, Contra Costa Co. Hypotype MCZ 27846. [Nassariidae].

Molopophorus californicus Clark and Woodford, 1927. Throckmorton 1988a. USGS OFR 88-59:54, pl. 7, fig. 2 (latex peel) (refigured in Throckmorton 1988b, pl. 1, fig. 15). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8156. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). **Remarks:** In the genus "*Molopophorus*," *fide* Allmon (1990: p. 68). [Nassariidae].

Molopophorus cretaceus (Gabb, 1864). [*Nassa*]. Wenz 1943. Handbh. Palaoz. 6:1228, fig. 3496 (refigured from Stewart 1926 [1927], pl. 28, fig. 9). ?Tejon Fm., Eocene. Bulls Head Pt., Martinez, Contra Costa Co. Lectotype (of Stewart 1926 [1927]: p. 391) ANSP. 4197, 13 paralectotypes ANSP. 79432]. **Remarks:** In the genus *Colwellia*, *fide* Nuttall and Cooper (1973: p. 209); *fide* Allmon (1990: p. 70). [Nassariidae].

Molopophorus cretaceus (Gabb, 1864). [*Nassa*]. Squires 1984. NHMLAC CS 350:31, fig. 8f. Llajas Fm., Eocene. El Toro Canyon, Santa Susana quad., Los Angeles Co. CSUN 467 [=LACMIP 16079]. Hypotype LACMIP. 6537. **Remarks:** In the genus *Colwellia*, *fide* Nuttall and Cooper (1973: p. 209)**;** in the genus "*Colwellia*," *fide* Allmon (1990: p. 70). [Nassariidae].

"*Molopophorus*" *dalli* Anderson and Martin, 1914. Allmon 1990. BAP 99(335):66, pl. 10, figs. 2, 3. San Emigdio Fm., Oligocene. San Emigdio region, Kern Co. CASG 165. Holotype CASG 168, paratype CASG 169. [Nassariidae].

Molopophorus striatus (Gabb, 1869b). [*Bullia* (*Molopophorus*)]. Wenz 1943. Handbh. Palaoz. 6:1228, fig. 3494 (refigured from Stewart, 1926 [1927], pl. 29, fig. 14). Tejon Fm., Eocene. Tejon, Kern Co. Lectotype (of Stewart 1926 [1927]:389) ANSP 4249, paralectotypes (3) ANSP 79505. **Remarks:** In the genus "*Molopophorus*," *fide* Allmon (1990: p. 64). [Nassariidae].

Molopophorus striatus (Gabb, 1869b). [*Bullia* (*Molopophorus*)]. Shimer and Shrock 1944. Index Foss. N.A., p. 517, pl. 212, fig. 27 [(refigured from Gabb, 1869, pl. 26, fig. 36). Tejon Fm., Eocene. Ft. Tejon, Kern Co. Lectotype (of Stewart, 1926 [1927]:389) ANSP 4249, unfigured paralectotypes (3) ANSP 79505]. **Remarks:** In the genus "*Molopophorus*," *fide* Allmon (1990: p. 64). [Nassariidae].

Molopophorus striatus (Gabb, 1869b). [*Bullia* (*Molopophorus*)]. Nuttall and Cooper 1973. Bull. BM(NH) 23(3):209, pl. 8, figs. 1a, 1b. Tejon Fm., Eocene. Tejon, Kern Co. Lectotype (of Stewart 1926 [1927]:389) ANSP 4249, paralectotypes (3) ANSP 79505. **Remarks:** In the genus "*Molopophorus*," *fide* Allmon (1990: p. 64). [Nassariidae].

....., pl. 8, fig. 2. [Tejon Fm., Eocene]. Live Oak Canyon, Kern Co., Kern Co. UCMP 7182. [Hypotype UCMP 30750 (hypotype cited as UCMP 7182, which is actually the UCMP locality number).

Molopophorus tejonensis Dickerson, 1915. Givens 1974. UCPG 109:84, pl. 10, fig. 2. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4722. Hypotype UCR 4722/401. **Remarks:** In the genus *Colwellia*, *fide* Allmon (1990: pp. 69–70). [Nassariidae].

Moniliopsis electilis Keen, 1943 (n. sp.). Tr. SDSNH 10(2):49, pl. 4, fig. 15. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Holotype SU 7540 [=CASG 72007]. [Turridae].

Monodonta* (*Incisilabium*?) *piruensis Squires, 1987 (n. sp.). NHMLAC CS 388:22–23, figs. 12, 13. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 833 [=LACMIP 16281]. Holotype LACMIP 7441, unfigured paratype LACMIP 7442.

Morula* (*Morunella*) *granti Addicott, 1970 (n. sp.). USGS PP 642:86, pl. 11, figs. 15, 16. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650160. [Muricidae].

Morula granti Addicott, 1970. Rugh 2016. Desert Symposium vol.:314, fig. 5. Topanga Fm., Miocene. Panorama Heights, Santa Ana Mtns., Orange Co. Hypotype possibly at SDSNH, current whereabouts unknown. **Remarks:** *Ex* Grouard collection. [Muricidae].

Muracypraea Arnold, 1998. The Festivus 30(8):90–92, fig. 1 (top row 2nd through 5th specimens), middle row (1st, 4th and 5th specimens), and bottom row (all specimens)]. Latrania Fm., Miocene. Fossil Canyon, Imperial Co. Hypotypes (12) SDSNH [*ex* SDSU] unnumbered (far left specimen in middle row missing, far right specimen bottom row missing). [Cypraeidae].

....., fig. 1 (middle row 2nd and 3rd specimens from left). LACMIP 16811. Hypotypes LACMIP 11535, 14869.

Muracypraea n. sp. A. Arnold 1998. The Festivus 30(8):90–92, figs. 1 (top row 1st specimen), 3, 5 (p. 92). Latrania Fm., Miocene. Fossil Canyon, Imperial Co. LACMIP 16811. [Hypotype LACMIP 11535]. [Cypraeidae].

....., fig. 2. North Fork, Fish Creek, San Diego Co.. UC 86GSD70 [= LACMIP 42928]. Hypotype LACMIP 14849.

Muracypraea sp. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 52, fig. 3.7A. Latrania Fm., Miocene. Alverson Canyon, Imperial Co. SDSNH 345. Hypotype SDSNH 88085. [Cypraeidae].

....., fig. 3.7B. Imperial Co. SDSNH 4977. Hypotype SDSNH 97227.

Murex (*Ocenebra*) *dalli* Clark, 1915. Hall 1958. UCPG 34(1):56, pl. 9, fig. 2. Cierbo Fm., Miocene. Southeast of Pleasanton, La Costa Valley quad. (1943), Alameda Co. SU 2739. Hypotype SU 8471 [=CASG 69941]. **Remarks:** Determined here as possibly in the genus *Paciocinebrina*. [Muricidae].

....., pl. 9, fig. 3. East of Irvington, La Costa Valley quad. (1943), Alameda Co. SU 3252. Hypotype SU 8472 [=CASG. 69942].

Murex rodeoensis Clark, 1915. Adegoke 1969. UCPG 80:174, pl. 11, fig. 10. Santa Margarita Fm., Miocene. Domengine Ranch quad., Kings Co. UCMP D1103. Hypotype UCMP 36840. [Muricidae].

Murex whitneyi (Gabb, 1864). [*Tritonium*]. Weaver and Kleinpell 1963. UCPG 43:192–193, pl. 26, fig, 11. Matilija Fm., Eocene. Nojoqui Creek area, Lompoc quad., Santa Barbara Co. UCMP B6920. Hypotype SU 9230 [=CASG 70190]. **Remarks:** In the genus *Hexaplex*?, *fide* Givens (1974: p. :83). [Muricidae].

Muricopsis vistaensis Givens and Kennedy, 1976 (n. sp.). Jour. Paleo. 50(5):966, 969–970, pl. 3, figs. 1–6. Delmar Fm. [=Santiago Fm.], Eocene. Near Vista and San Marcos, San Diego Co. UCR 4865. Holotype UCR 4865/9, paratypes UCR 4865/90, 4865/91. [Muricidae].

"*Nassa*" *coalingensis* Arnold, 1909 [1910]. Woodring et al. 1940 [1941]. USGS PP 195:87, pl. 15, fig. 3. San Joaquin Fm. (*Pecten* Zone), Pliocene. Arroyo Degollado, North Dome, Kettleman Hills, Kings Co. USGS 12359. Hypotype USNM 495757. **Remarks:** In the genus/subgenus *Nassarius* (*Caesia*), *fide* Addicott (1965a: p. B9). [Nassariidae].

"*Nassa*" *mendica* Gould, 1850 small var. Woodring and Bramlette 1950 [1951]. USGS PP 222:75, pl. 15, figs. 5, 6. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14648. Hypotypes (2) USNM 560078. **Remarks:** In the genus *Hima*, *fide* McLean (2007: p. 743). [Nassariidae].

"*Nassa*" *moraniana* Martin, 1914. Woodring et al. 1940 [1941]. USGS PP 195:86–87, pl. 34, figs. 5, 6. Etchegoin Fm., Pliocene. North Dome, locality uncertain, Kettleman Hills, Kings Co.

Hypotypes USNM 495834, 495835. **Remarks:** *Nassarius grammatus* (Dall, 1917), *fide* Addicott (1965a: p. B8). [Nassariidae].

"*Nassa*" *moraniana* Martin, 1914. Woodring and Bramlette 1950 [1951]. USGS PP 222:74–75, pl. 14, figs. 13, 14. Careaga Fm. (Cebada Member), Pliocene. Solomon Hills, Santa Barbara Co. USGS 14677. Hypotype USNM 560076. **Remarks:** *Nassarius gramatus* (Dall, 1917), *fide* Addicott (1965a: p. B6). [Nassariidae].

....., pl. 17, figs. 7, 8; pl. 19, fig. 4. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14618. Hypotypes (3) USNM. 560120.

"*Nassa*" *waldorfensis* Arnold, 1907. Woodring and Bramlette 1950 [1951]. USGS PP 222:75, pl. 8, fig. 14. Sisquoc Fm. (diatomaceous strata), Miocene. Casmalia Hills, near Shuman, Santa Barbara Co. USGS 14878. Hypotype USNM 560022. **Remarks:** Junior synonym of *Nassarius californianus* (Conrad, 1857a), *fide* Addicott (1965a: p. B3). [Nassariidae].

....., pl. 10, fig. 9. Foxen Mudstone, Pliocene. Casmalia Hills, near Shuman, Santa Barbara Co. USGS 14876. Hypotype USNM 560048.

....., pl. 15, fig. 4. Careaga Fm. (Cebada Member), Pliocene. Casmalia Hills, near Shuman, Santa Barbara Co. USGS

14608. Hypotype USNM 560077.

....., pl. 19, figs. 3, 5. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14618. Hypotypes (2) USNM 560121.

"Nassa" cf. "*N." waldorfensis* Arnold ,1907. Woodring et al. 1940 [1941]. USGS PP 195:87, pl. 39, fig. 4. San Joaquin Fm. (*Acila* Zone), Pliocene. Arroyo Estrecho, North Dome, Kettleman Hills, Kings Co. USGS 12364. Hypotype USNM 495854. **Remarks:** Junior synonym of *Nassarius* (*Demondia*) *californianus* (Conrad, 1856), *fide* Addicott (1965a: p. B3); *fide* Adegoke (1969: p. 187). [Nassariidae].

"*Nassa*" sp. Woodring and Bramlette 1950 [1951]. USGS PP 222:74, pl. 7, figs. 3, 4. Sisquoc Fm. (Tinaquaic Sandstone Member), Miocene/Pliocene. Foxen Canyon, Santa Barbara Co. USGS 14997. Hypotype USNM 560014. **Remarks:** Probably referable to *Nassarius* (*Demondia*) *grammatus* (Dall, 1917), *fide* Addicott (1965a: p. B6). [Nassariidae].

Nassarius (*Catilon*?) *antiselli* (Anderson and Martin, 1914). [*Nassa*]. Addicott 1965a. USGS PP 503-B:B13, pl. 3, figs. 13, 14. Monterey (Saltos Shale Member) of Hill et al. (1958: pp. 2989–2990), Miocene. Wells Ranch quad., San Luis Obispo Co. USGS M1923. Hypotype USNM 648580. [Nassariidae].

Nassarius (*Catilon*) *arnoldi* (Anderson, 1905). [*Nassa*]. Addicott 1965a. USGS PP 503-B:B12–B13, pl. 3, figs. 1, 2. Round Mtn. Silt of Diepenbrock (1933: pp. 14–16), Miocene. Rio Bravo Ranch quad., Kern Co. USGS M1604. Hypotype USNM 648575. [Nassariidae].

....., pl. 3, figs. 3, 10. Olcese Sand of Diepenbrock (1933: pp. 14–16), Miocene. Oil Center quad., Kern Co. USGS M1597 [=UCMP B1598]. Hypotype (topotype) USNM 648576, neotype (of Addicott (1965a: p. B12) USNM 648577.

Nassarius arnoldi (Anderson, 1905). [*Nassa*]. Addicott 1965b. USGS PP 525-C:C106, fig. 4f. Lower Round Mtn. Silt, Miocene. Vicinity of Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1604. Hypotype USNM 649169. **Remarks:** In the subgenus *Catilon*, *fide* Addicott (1970: p. 98). [Nassariidae].

Nassarius (*Catilon*) *arnoldi* (Anderson, 1905). [*Nassa*]. Addicott 1970. USGS PP 642:98–99, pl. 12, figs. 3, 4. Lower Round Mtn. Silt, Miocene. Vicinity of Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1604. Hypotype USNM 648575. [Nassariidae].

....., pl. 12, fig. 13. Round Mtn. Silt, Miocene. Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1608. Hypotype USNM 650170.

....., pl. 12, fig. 14. Kern River, Kern Co. USGS 3886. Hypotype USNM 650171.

....., pl. 12, figs. 7, 12. Upper Olcese Sand, Miocene. Oil Center quad. [1954], Kern Co. USGS M1597. Hypotype USNM 650172, neotype (of Addicott (1965a: p. B12) USNM 648577.

....., pl. 12, fig. 15. Round Mtn. Silt, Miocene. Oil Center quad. 1950, Kern Co. UCMP B1598. Hypotype UCMP 33016.

Nassarius arnoldi (Anderson, 1905). [*Nassa*]. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, fig. 3. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al. 1959: pp. 8, 13), Miocene. Shale Pt. quad., Temblor Range, Kern Co. USGS M3986. Hypotype USNM 646795. [Nassariidae].

Nassarius sp cf. *arnoldi* (Anderson, 1905). Rugh 2018. Desert Symposium vol. 113, fig. 4. Reata Glen, northeast of San Juan Capistrano, Orange Co. Monterey Fm., Miocene. Hypotype at CC. [Nassariidae].

Nassarius californianus (Conrad, 1857a). [*Schizopyga*]. G D. Hanna and Hertlein 1943. CDM Bull. 118 (2):176, figs. 65-8, 65-9. Etchegoin Fm., Pliocene. Tulare Co. CASG 1397. Hypotypes CASG 5720, 5721. **Remarks:** In the subgenus *Demondia*, *fide* Addicott (1965a: p. B3). [Nassariidae].

Nassarius californianus (Conrad, 1857a). [*Schizopyga*]. Moore et al. 1952. Invert. Foss., p. 326, fig. 8-40.17. Pliocene. Line drawing, source specimen unknown. **Remarks:** In the subgenus *Demondia*, *fide* Addicott (1965a: p. B3). [Nassariidae].

Nassarius (*Demondia*) *californianus* (Conrad, 1857a). [*Schizopyga*]. Addicott 1965a. USGS PP 503-B:B3–B5, pl. 1, fig. 1. Merced Fm., Pliocene [=Wilson Grove Fm.], Miocene/Pliocene. Russian River near Windsor, Sonoma Co.

UCMP 7033. Hypotype UCMP 30809. [Nassariidae].

....., pl. 1, figs. 2, 4–6, 9, 10. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM 648548–648550, 648591, neotype (of Addicott 1965a: p. B4) USNM 648596.

....., pl. 1, fig. 3 (refigured from Conrad 1857c, pl. 2, fig. 1). Merced Fm., Pliocene? Santa Clara Co. Holotype(?) lost, *fide* Addicott (1965a: p. B4).

....., pl. 1, figs. 7, 8. Careaga Fm. (Cebada fine-grained member), Pliocene. Casmalia Hills, Santa Barbara Co. USGS 14608. Hypotypes USNM. 649001, 649002.

....., pl. 1, fig. 31. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1720. Hypotype USNM 648551.

Nassarius californianus (Conrad, 1857a). [*Schizopyga*]. Addicott 1965c. Pr.CAS 33(2):47–54, figs. 2–4. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1720. Hypotypes USNM 648551, 648590. **Remarks:** In the subgenus *Demondia*, *fide* Addicott (1965a: p. B3). [Nassariidae].

....., fig. 5 (refigured from Conrad 1857c, pl. 2, fig. 1). Santa Clara Co. **Remarks:** Holotype(?) lost, *fide* Addicott (1965c: p. 52).

....., figs. 6, 7. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM 648548, 648591.

Nassarius aff. *N. californianus* (Conrad, 1857a). [*Schizopyga*]. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 5, fig. 12 (cast). Pancho Rico Fm., Miocene/Pliocene. Hames Valley quad., Monterey Co. USGS M1676. Hypotype USNM 649112. **Remarks:** In the subgenus *Demondia*, *fide* Addicott (1965a: p. B3). [Nassariidae].

Nassarius (*Demondia*) *californianus* (Conrad, 1857a). [*Schizopyga*]. Addicott 1969. Pr.CAS 37 (3):62, 68, pl. 3, fig. 7. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 648550. [Nassariidae].

Nassarius californianus (Conrad, 1857a). [*Schizopyga*]. Perry 1988. SCMA, p. 21, fig. 12B. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. CASG66180. Hypotype CASG 66180.03. **Remarks:** In the subgenus *Demondia*, *fide* Addicott (1965a: p. B4). [Nassariidae].

Nassarius (*Demondia*) *californianus* (Conrad, 1857a). [*Schizopyga*]. Squires 2012. NHMLAC CS 520:77, fig. 85. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14402. [Nassariidae].

Nassarius (*Caesia*) *coalingensis* (Arnold, 1909 [1910]). [*Nassa*]. Addicott 1965a. USGS PP 503B:B9, pl. 2, figs. 17 (refigured from Arnold 1909 [1910], pl. 27, fig. 7). Etchegoin Fm. (of Arnold 1909 [1910]: pp. 28–45), Pliocene. Kings Co. USGS 4758. Holotype USNM 165508. [Nassariidae].

....., pl. 2, fig. 18 (refigured from Woodring et al. 1940 [1941], pl. 15, fig. 3). San Joaquin Fm. (*Pecten* Zone and *Trachycardium* Zone), Pliocene. Arroyo Degollado, North Dome, Kettleman Hills, Kings Co. USGS 12359. Hypotype USNM 495757.

Nassarius (*Caesia*) *coalingensis* (Arnold, 1909 [1910]). [*Nassa*]. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 5, fig. 21 (cast). Pancho Rico Fm., Miocene/Pliocene. South side of Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M979. Hypotype USNM 649117. [Nassariidae].

Nassarius (*Caesia*) *grammatus* (Dall, 1917). [*Alectrion*]. Addicott 1965a. USGS PP 503-B:B6–B8, pl. 2, figs. 15, 16, 26. Merced Fm.(?), PliocenePalo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM 648569–648571. [Nassariidae].

Nassarius grammatus (Dall, 1917). [*Alectrion*]. Addicott 1965c. Pr.CAS 33(2):51–52, 54, figs. 8–10. Merced Fm.(?), Pliocene. Santa Clara Co. USGS M1715. Hypotypes USNM 648568, 648569, 648592. **Remarks:** In the subgenus *Caesia*, *fide* Addicott (1965a: p. B6). [Nassariidae].

Nassarius (*Caesia*) *grammatus* (Dall, 1917). [*Alectrion*]. Moore 1968. SDSNH Occas. Pap. 15:34, pl. 15, figs. f, h. San Diego Fm., Pliocene. Reynard Wy., San Diego, San Diego Co. SDSNH 2383. Hypotype SDSNH 4170]. **Remarks:** In the subgenus *Caesia*, *fide* Addicott (1965a: p. B6). [Nassariidae].

Nassarius (*Caesia*) *grammatus* (Dall, 1917). [*Alectrion*]. Addicott 1969. Pr.CAS 37(3):62, 64, 68–70, pl. 1, fig. 18; pl. 4, fig. 5. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM 648592, 648570. [Nassariidae].

Nassarius grammatus (Dall, 1917). [*Alectrion*]. Kern et al. 1974. Jour. Paleo. 8(5):979, fig. 1E. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. LACMIP 16248. Hypotype UCLA. 48144 [=paratype of *Helicotaphrichnus commensalis* n. sp. [spionid tube] in *Nassarius grammatus* =LACMIP 9398]. **Remarks:** In the subgenus *Caesia*, *fide* Addicott (1965a: p. B6). [Nassariidae].

Nassarius grammatus (Dall, 1917). [*Alectrion*]. Perry 1977. Foss. Santa Cruz Co., p. 23, center fig. Purisima Fm., Pliocene. Capitola, Santa Cruz Co. SCCM 1. Hypotype SCCM 9605.10. **Remarks:** In the subgenus *Caesia*, *fide* Addicott (1965a: p. B6). [Nassariidae].

Nassarius grammatus (Dall, 1917). [*Alectrion*]. Perry 1988. SCMA, p. 21, fig. 12G. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. CASG. 66178. Hypotype CASG 66178.01. **Remarks:** In the subgenus *Caesia*, *fide* Addicott (1965a: p. B6). [Nassariidae].

Nassarius* (*Caesia*) *grammatus addicotti Adegoke, 1969 (n. subsp.). UCPG 80:186, pl. 12, figs. 1, 5, 8, 10. Etchegoin Fm., PlioceneCoalinga quad., Fresno Co. UCMP B6541. Holotype UCMP 36877, paratype UCMP 36878. [Nassariidae].

Nassarius (*Caesia*) *grammatus* (Dall, 1917) n. subsp.? [*Alectrion*]. Addicott 1965a. USGS PP 503-B:B7, pl. 2, fig. 12. Rio Del Fm. of Ogle (1953: pp. 31–33), Pliocene. Rio Del Fm., Scotia quad. (1951), Humboldt Co. UCMP B7642. Hypotype UCMP 15074. [Nassariidae].

Nassariius (*Catilon*) *hamlini* (Arnold, 1907). [*Nassa*]. Addicott, 1965a. USGS PP 503-B:B15, pl. 3, figs. 20, 21 (casts). Unnamed sandstone [=Niguel Fm.?], Pliocene. Newport Beach quad., Orange Co. USGS M1921. Hypotypes USNM 648583, 648584. [Nassariidae].

Nassarius* (*Phrontis*) *harrellensis Addicott, 1970 (n. sp.). USGS PP 642:100, pl. 12, figs. 5, 6. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. USGS 3886. Holotype USNM 650173. [Nassariidae].

Nassarius harrelensis Addicott, 1970. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, fig. 2. Temblor Fm. (Buttonbed Sand member) of Stinemeyer et al. (1959: pp. 8, 13), Miocene. Shale Pt. quad., Temblor Range, Kern Co. USGS M3986 (not USNM 3986 as in pl. caption). Hypotype USNM 646794. [Nassariidae].

Nassarius hildegardae Kanakoff, 1956 (n. sp.). BSCAS 55(2):112–113, pl. 31. Originally referred to as Pico Fm. (Pliocene) but most likely is Castaic Fm. (Miocene). Mint Canyon quad., Los Angeles Co. LACMIP 291. Holotype LACMIP 1110, unfigured paratypes LACMIP 2097–2151. **Remarks:** In the subgenus *Catilon*, *fide* Addicott (1965a: p. B16). [Nassariidae].

....., CASG61820 [=LACMIP 291]. Unfigured paratypes (4) CASG 61820.02.

....., SDSNH. 4414 [=LACMIP 291). Unfigured paratype SDSNH 341.

Nassarius (*Catilon*) *hildegardae* Kanakoff, 1956. Addicott 1965a. USGS PP 503-B:B16, pl. 3, figs. 11, 12. Originally referred to as Pico Fm. (Pliocene) but most likely is Castaic Fm. (Miocene). Mint Canyon quad.. Los Angeles Co. LACMIP 291. Hypotypes (topotypes) LACMIP 1131, 1132. [Nassariidae].

Nassarius (*Catilon*) *iniquus* (Stewart *in* Woodring et al., 1940 [1941]). [*Nassa*]. Addicott 1965a. USGS PP 503-B:B16, pl. 3, fig. 6. San Joaquin Fm., Pliocene. "*Merriamaster coalingensis* Zone" in La Cima quad., Kings Co. UCMP A3166. Hypotype UCMP 15079. [Nassariidae].

Nassarius moranianus (Martin, 1914). [*Nassa*]. Manning and Ogle 1950. CDM Bull. 148:23, pl. 10, fig. A. Falor Fm., Pliocene. Humboldt Co. UCMP A4233. Hypotype UCMP34173. **Remarks:** In the subgenus *Caesia*, *fide* Addicott (1965a: p. B8). [Nassariidae].

Nassarius moranianus (Martin, 1914). [*Nassa*]. Hertlein 1951:191, fig. 2.9. [Merced Fm? [=Wilson Grove Fm.], Pliocene. Bolinas, Marin Co. CSMB 12688. Hypotype CASG 8481. **Remarks:** In the subgenus *Caesia*, *fide* Addicott (1965a: p. B8). [Nassariidae].

Nassarius (*Caesia*) *moranianus* (Martin, 1914). [*Nassa*]. Addicott 1965a. USGS PP 503-B:B8, pl. 2, figs. 3, 4, 9, 29. Merced Fm., Pliocene. Bolinas, Marin Co. UCMP 1549. Holotype UCMP 12338, hypotypes (topotypes) UCMP 15069–15071. [Nassariidae].

Nassarius moranianus (Martin, 1914). [*Nassa*]. Yancey, 1978. Pr.CAS 41(15):364, 369, fig. 5K. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D3688. Hypotype USNM 251807. **Remarks:** In the subgenus *Caesia*, *fide* Addicott (1965a: p. B8). [Nassariidae].

Nassarius (subgenus?) *ocoyanus* (Anderson and Martin, 1914). [*Nassa*]. Addicott 1965a. USGS PP 503-B:B16–B17, pl. 3, figs. 19, 26–28. Round Mtn. Silt of Diepenbrock (1933:pp. 14–16), Miocene. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotypes UCMP 15080–15082. [Nassariidae].

Nassarius (*Phrontis*) *ocoyanus* (Anderson and Martin, 1914). [*Nassa*]. Addicott 1970. USGS PP 642: 100–101, pl. 12, figs. 17–19. Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotypes UCMP 15081,15082. [Nassariidae].

Nassarius (Catilon) pabloensis (Clark, 1915). [*Nassa*]. Addicott 1965a. USGS PP 503-B:B13–B14, pl. 3, figs. 22–25 (casts). Santa Margarita Fm., Miocene. Arvin quad., Kern Co. USGS M1619. Hypotypes USNM 648585–648588. [Nassariidae].

Nassarius cf. *N. pabloensis* (Clark, 1915). [*Nassa*]. Addicott et al, 1978. USGS OFR 78-446: 59, 72, pl. 4, fig. 15 [peel]. Santa Margarita Fm., Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M3568. Hypotype USNM 254382. **Remarks:** In the subgenus *Catilon*, *fide* Addicott (1965a: p. B13). [Nassariidae].

Nassarius cf. *N. pabloensis* (Clark, 1915). Addicott et al. 1980. SEM Guidebook 6:19, 33, pl. 5, fig. 15 (refigured from Addicott et al. 1978, pl. 4, fig. 15). Santa Margarita Fm., Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M3568.Hypotype USNM 254382. **Remarks:** In the subgenus *Catilon*, *fide* Addicott (1965a: p. B13). [Nassariidae].

Nassarius cf. *N. paroinguis** (Hinds, 1844). [*Nassa*]. Cummings et al. 1962. CDMG 181:202, ph. 16, fig. 2. Purisima Fm. (Pomponio Member), Pliocene. Purisima Creek, Half Moon Bay quad., San Mateo Co. locality F701M. Hypotype determined here as missing. **Remarks:** Error for *perpinguis*. *Nassarius* (*Demondia*) *californianus*, *fide* Addicott (1965a: p. B3). [Nassariidae].

Nassarius* (*Phrontis*?) *posoensis Addicott, 1970 (n. sp.). USGS PP 642:101, pl. 12, fig. 1 (cast) (not fig. 2). Lower Olcese Sand, Miocene. Woody quad. (1952), Kern Co. USGS.M1593. Holotype USNM 650168. [Nassariidae].

Nassarius* (*Catilon*?) *salinasensis Addicott, 1965a (n. sp.). USGS PP 503-B:B15–B16, pl. 3, figs. 30, 31 (casts). Pancho Rico Fm., Pliocene. Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M977. Holotype USNM 648597, hypotype USNM 648598. [Nassariidae].

Nassarius salinasensis Addicott, 1965a. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 5, fig. 20 (cast). Pancho Rico Fm., Miocene/Pliocene. Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M977. Hypotype USNM 648598. **Remarks:** In the subgenus *Catilon*?, *fide* Addicott (1965a: p. B15). [Nassariidae].

Nassarius* (*Catilon*) *smooti Addicott, 1965a (n. sp.). USGS PP 503-B:B13, pl. 3, figs. 7–9. Olcese Sand, of Diepenbrock (1933: pp. 14–16), Miocene. Oil Center quad., Kern Co. USGS M1597. Holotype USNM 648578 (as USNM 648575 in pl. caption), hypotype (topotype) USNM 648579. [Nassariidae].

Nassarius (*Phrontis*) *smooti* Addicott, 1965a. Addicott 1970. USGS PP 642:100, pl. 12, figs. 8–11. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 648578, hypotypes USNM 648579, see also Addicott 1965b, 650174. [Nassariidae].

Nassarius (*Phrontis*) cf. *N.* (*P.*) *smooti* Addicott, 1965a. Addicott, 1970. USGS PP 642:100, pl. 12, fig. 2 (cast). Round Mtn. Silt, Miocene. North side of Kern River, Kern River, Kern Co. USGS 6609. Hypotype USNM 650169. [Nassariidae].

Nassarius cf. *N.* (*Catilon*) *smooti* Addicott, 1970. Stadum 1984a. NHFOC Mem. 1:80, pl.1, fig. 4. Niguel Fm., Pliocene. Orange Co. SDSNH 4080. Hypotype SDSNH 75913. [Nassariidae].

Nassarius stocki Kanakoff, 1956 (n. sp.). BSCAS 55(2):110–112, pl. 30, figs. A–C. Originally referred to as Pico Fm.

(Pliocene) but most likely is Castaic Fm. (Miocene). Mint Canyon quad.. Los Angeles Co. LACMIP 291. Holotype LACMIP 1109, paratype LACMIP 1977, unfigured paratypes LACMIP 1978–2096]. **Remarks:** In the subgenus *Catilon*, *fide* Addicott (1965a: p. B14). [Nassariidae].

....., CASG61820 [=LACMIP 291]. Unfigured paratypes (7) CASG 61820.01 (*ex* SU 8663).

....., SDSNH 4414 [=LACMIP 291]. Unfigured paratype SDSNH 340].

Nassarius (*Catilon*) *stocki* Kanakoff, 1956. Addicott 1965a. USGS PP 503-B:B14, pl. 3, figs. 4, 5. Originally referred to as Pico Fm. (Pliocene) but most likely is Castaic Fm. (Miocene). Mint Canyon quad, Los Angeles Co. CASG 36827 [=LACMIP 291). Hypotypes (topotypes) CASG 12599,12600. [Nassariidae].

Nassarius whitneyi (Trask, 1922). [*Nassa*]. Lutz 1951. UCPG 28(13):392, pl. 18, fig. 8. Sobrante Fm., Miocene. Near Muir station, Contra Costa Co. UCMP A4924. Plastotype UCMP 34167. **Remarks:** In the subgenus *Caesia*, *fide* Addicott (1965a: p. B9). [Nassariidae].

Nassarius (*Caesia*) *whitneyi* (Trask, 1922). [*Nassa*]. Addicott 1965a. USGS PP 503-B:B9–B10, pl. 2, fig. 23 (cast). Briones Fm., Miocene. South of Pacheco, Concord quad., Contra Costa Co. UCMP A4920. Hypotype UCMP 15075. [Nassariidae].

....., pl. 2, fig. 24 (cast). Sobrante Fm., Miocene. Locality subsequently covered by concrete, Concord quad., Contra Costa Co. UCMP A4925. Hypotype UCMP 15076.

....., pl. 2, figs. 25, 27. Briones Fm., Miocene. Lafayette Reservoir below the 1345-foot peak on Layfayette Ridge, Briones quad. (1949), Contra Costa Co. UCMP B4749. Hypotypes UCMP 15077, 15078.

Nassarius sp. Bedrossian 1971. Calif. Geol. 24(12):231, unnumbered fig. specimen c (cast). "Merced" Fm. Pliocene [=Wilson Grove Fm., Miocene/Pliocene]. Sonoma Co. Hypotype CASG determined here as missing. [Nassariidae].

Nassarius sp. Bedrossian 1974. Calif. Geol. 27(8):178, unnumbered fig. "Merced" Fm., Pliocene [= Wilson Grove Fm., Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotype CASG determined here as missing. [Nassariidae].

Natica (*Cryptonatica*) *clausa* Broderip and G.B. Sowerby I, 1829. Marincovich 1977. BAP 70(294):410–418, pl. 41, fig. 10. Etchegoin Fm., Pliocene. Northeast of Coalinga, Fresno Co. UCMP 2091. Holotype (of *Natica convexa* Nomland 1916a) UCMP 12064. **Remarks:** In the genus *Cryptonatica*, *fide* J.H. McLean (personal communication, 1999). [Naticidae].

....., pl. 42, fig. 1. Cierbo Fm., Miocene. Contra Costa Co. Hypotype UCMP 14426, determined here as missing.

Natica clausa Broderip and G.B. Sowerby I, 1829. Perry 1988. SCMA, p. 21, fig. 12E. Purisima Fm., Miocene/Pliocene. Capitola slump block, Santa Cruz Co. CASG 66177. Hypotype CASG 66177.01. **Remarks:** In the genus *Cryptonatica*, *fide* J.H. McLean (personal communication, 1999). [Naticidae].

Natica (*Naticarius*) *domengenica* Vokes, 1939. Marincovich 1977. BAP 70(294):392–393, pl. 39 (not pl. 36), fig. 9. Domengine Fm., Eocene. Parson's Peak, Coalinga quad., Fresno Co. UCMP 672. Holotype UCMP 15843. [Naticidae].

Natica (*Tectonatica*) *gabbi* Clark, 1918. Marincovich 1977. BAP 70(294):408–409, pl. 41, fig. 6. San Ramon Fm., Miocene. Near town of Walnut Creek, Contra Costa Co. UCMP 1311 . Holotype UCMP 11252. [Naticidae].

Natica (*Euspira*) *galianoi* Dall, 1909. [*Polinices* (*Euspira*)] Lutz 1951. UCPG 28(13):391, pl. 18, fig. 3. Sobrante Fm., Miocene. Near junction of Norris Creek with Crow Creek, Hayward quarangle, Alameda Co. UCMP A4565. Hypotype UCMP 34157. [Naticidae].

Natica pabloensis Clark, 1915. Hall 1958. UCPG 34(1):56, pl. 11, figs. 7, 8. Briones Fm.(?) ("Collected by Funkhouser 1948, in the Tesla quad., mapped as Oursan Sandstone by Huey (1948 : pp. 38, 40, pl. 1), here considered Briones Fm."), Miocene. Vicinity of Livermore, Tesla quad., Alameda Co. SU 2740. Hypotype SU 8469 [=CASG 69944]. [Naticidae].

Natica (*Naticarius*?) *posuncula* G D. Hanna and Hertlein, 1938. Addicott 1970. USGS PP 642:66–67, pl. 5, figs. 3, 4. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650096. [Naticidae].

Natica (*Naticarius*) *posuncula* G D. Hanna and Hertlein, 1938. Marincovich 1975. Veliger 18 (2):172–173, fig. 18. Temblor Fm., Miocene. Kern River, Kern Co. CASG65. Holotype CASG. 7084. [Naticidae].

....., fig. 19. Caliente quad., Kern Co. UCMP 2713. Hypotype UCMP 14425.

Natica (*Naticarius*) *posuncula* G D. Hanna and Hertlein, 1938. Marincovich 1977. BAP 70(249): 387–388, pl. 38, fig. 13. Temblor Fm., Miocene. Kern River, Kern Co. CASG 65. Holotype CASG 7084. [Naticidae].

....., pl. 39, fig. 1. Kern Co., Kern Co. UCMP2713. Hypotype UCMP 14425.

Natica (*Carinacca*) *rosensis* M.A. Hanna, 1927. Givens 1974. UCPG 109:77, pl. 8, fig. 12. Juncal Fm., Eocene. Park Canyon, San Guillermo quad. (1943), Ventura Co. UCR 4703. Hypotype UCR 4703/7. [Naticidae].

Natica (*Carinacca*) *rosensis* M.A. Hanna, 1927. Marincovich 1977. BAP 70(294):393–394, pl. 39, figs. 10–12. "La Jolla Group," Eocene. Near La Jolla, San Diego Co. UCMP 3990]. Holotype UCMP 30296, paratype UCMP 30927. [Naticidae].

....., pl. 41, fig. 1. Ardath Shale, Eocene. Near junction of Rose and San Clemente canyons, San Diego Co. UCLA5730 [=LACMIP 25730]. Hypotype UCLA 38778 [=LACMIP 9740].

Natica rosensis M.A.Hanna, 1927. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, fig. 5. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20726. [Naticidae].

Natica (*Tectonatica*) *russa* Gould, 1859. Faustman 1964. UCPG 41(2):136, pl. 3, fig. 23 (operculum). Scotia Bluffs Fm., Pliocene. Vicinity of French Gulch, Fortuna quad., Humboldt Co. UCMP B7908 (not UCMP B7891 as in plate caption). Hypotype UCMP 37836. **Remarks:** Junior synonym of *Natica* (*Cryptonatica*) *clausa* Broderip and G.B. Sowerby I, 1829, *fide* Marincovich (1977: p. 410). [Naticidae].

....., pl. 3, fig. 24. Rio Dell Fm., Pliocene. Vicinity of French Gulch, Fortuna quad., Humboldt Co. UCMP B7891. Hypotype UCMP 37835.

Natica (*Natica*) *teglandae* G D. Hanna and Hertlein, 1938. Addicott 1970. USGS PP 642:65–66, pl. 5, figs. 1, 2. Round Mtn. Silt, Miocene. Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1608. Hypotype USNM 650095. **Remarks:** In the subgenus *Naticarius, fide* Marincovich (1977: p. 388). [Naticidae].

....., pl. 5, fig. 20. Kern River, Caliente quad. (1914), Kern Co. UCMP B1618. Hypotype UCMP. 15456.

Natica (*Naticarius*) *teglandae* G.D. Hanna and Hertlein, 1938. Marincovich 1977. BAP 70(294): 388–390, pl. 39, fig. 4. Round Mtn. Silt, Miocene Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS. M1608. Hypotype (of Addicott 1970, pl. 5, figs. 1, 2) USNM 650095. [Naticidae].

Natica (*Natica*) *uvasana* Gabb, 1864. Weaver and Kleinpell 1963. UCPG 43:187, pl. 24, figs. 12,13. Gaviota Fm., Eocene. West of Cuarta Canyon, Pt. Conception quad., Santa Barbara Co. UCMP B6992. Hypotype SU 9198 [=CASG 70195]. **Remarks:** In the subgenus *Naticarius*, *fide* Marincovich (1977: p. 390). [Naticidae].

Natica (*Natica*) *uvasana* Gabb, 1864. Givens 1974. UCPG 109:77, pl. 7, fig. 18. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4715. Hypotype UCR 4715/4. **Remarks:** In the subgenus *Naticarius*, *fide* Marincovich (1977: p. 390). [Naticidae].

....., pl. 8, fig. 1. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4714. Hypotype UCR 4714/12.

Natica (*Naticarius*) *uvasana* Gabb, 1864. Marincovich 1975. Veliger 18(2):172–173, figs. 20–22. Tejon Fm., Eocene. Near Ft. Tejon, Kern Co. Lectotype (of Stewart 1926 [1927]: p. 322) ANSP 4233, paralectotypes (2) ANSP 79479, *fide* E. Benamy (personal communication, 1996)]. [Naticidae].

Natica (*Naticarius*) *uvasana* Gabb, 1864. Marincovich 1977. BAP 70(294):390–392, pl. 39, figs. 5–7. Tejon Fm., Eocene. Near Ft. Tejon, Kern Co. Lectotype (of Stewart 1926 [1927]: p. 322) ANSP 4233, paralectotypes (2) ANSP 4233 [=ANSP 79479]. [Naticidae].

....., pl. 39, fig. 8. Matilija Fm., Eocene. Lion Canyon quad., Ventura Co. UCR4714. Hypotype UCR 4714/12.

Natica (*Naticarius*) aff. *N.* (*N.*) *uvasana* Gabb, 1864. Squires 1984. NHMLAC CS 350:26, fig. 7i. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (sec. corner is in Oat Mtn. quad.), Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6529. [Naticidae].

Natica (*Naticarius*) *uvasana* Gabb, 1864. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 10. Juncal Fm.?, Eocene. Northern Lockwood Valley area, Ventura Co. CSUN 987 [=LACMIP. 16175]. Hypotype LACMIP 7709. [Naticidae].

Natica (*Naticarius*) *uvasana* Gabb, 1864. Squires 1988c. NHMLAC CS 398:13, fig. 28. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 987 [=LACMIP 16175]. Hypotype LACMIP 7709. [Naticidae].

Natica sp. Addicott 1970. USGS PP 642:66, pl. 5, fig. 14. Round Mtn. Silt, Miocene. Kern River Kern Co. USGS 6065. Hypotype USNM 650100 (not USNM 950100 as in pl. caption). **Remarks:** The figured operculum is "presumably from this species [*Natica* (*Natica*) *teglandae*] or possibly *N. posuncula*," *fide* Addicott (1970: p. 66). [Naticidae].

Natica (*Natica*) n. sp. Addicott 1973b. USGS PP 791:7, 19, pl. 8, figs. 12,13. Temblor Fm. (Wygal Sandstone Member), Miocene Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotypes USNM 646609, 646610. [Naticidae].

Natica? sp. indet. Squires 2008. NHMLAC CS 517:5, fig. 23. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13424. [Naticidae].

Naticid. Watkins 1974. Paleo.3 15:255, fig. 8F (latex cast). Kreyenhagen Fm., Oligocene. Monocline Ridge, Monocline Ridge quad. (1955), Fresno Co. UCMP D6538. Hypotype UCMP 37168. [Naticidae].

Naticid. Stadum and Finger 2016. NHMLAC CS 524:38 (as Naticidae, indeterminate), 40, 50, fig.15. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 140186. [Naticidae].

Naticid gastropod. Phillips et al. 1976. SEPM Symposium vol. p. 147, pl. 4, fig. 5. Gallaway Fm., Oligocene. North of Iverson Pt., Saunders Reef quad., Mendocino Co. UCMP D7149. Hypotype UCMP 14437. [Naticidae].

Indeterminate naticid. Throckmorton 1988a. USGS OFR 88-59:54–55, pl. 8, fig. 4 (refigured in Throckmorton 1988b, pl. 1, fig. 28). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8157. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Naticidae].

Indeterminate Naticidae Powell et al. 2019b. *PaleoBios* 36:14, fig. 25. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP13005. Hypotype UCMP 218737. [Naticide].

Neadmete schwartzi Mount, 1970 (n. sp.). LACMCS 177:3–4, fig. 1. "Fernando Fm.", Pliocene. Under residence, Newport Beach, Orange Co. LACMIP 471. Holotype LACMIP 1779, unfigured paratypes (2) LACMIP 1780, UCLA 47313 [=LACMIP 9811]. [Cancellariidae].

....., Upper Newport Bay, Orange Co. UCR 4915. Unfigured paratype UCR 4915/106].

....., CASG61761 [=LACMIP 471]. Unfigured paratype CASG 13203 [=CASG 61762.01].

Nekewis io (Gabb, 1864). [*?Fasciolaria*]. Givens 1974. UCPG 109:91, pl. 11, fig. 3. Matilija Fm., Eocene. Near junction of Alamo Creek, Dry Canyon, and Cuyama River valley, Reyes Peak quad. (1943), Ventura Co. UCR 4741. Hypotype UCR 4741/11. [Perissityidae].

Nekewis io (Gabb, 1864). [?*Fasciolaria*]. Hickman 1976a. BAP 70(292):52, pl. 3, fig. 2. Tejon Fm., Eocene. Grapevine Canyon area, Kern Co. SU30116, [=CASG 245]. SU hypotype.10207 [=CASG 72820. [Perissityidae].

Nekewis simiensis Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1299–1300, fig. 3X. Santa Susana Fm., Paleocene. Meier Canyon, Calabasas quad., Simi Hills, Ventura Co. UCR 6805/1. Holotype UCR 6805/100. [Perissityidae].

Neptunea andersoni (Martin, 1914). [*Chrysodomus*]. MacNeil 1957. USGS PP 294C: pl. 17, fig. 9. Wildcat Series, of Lawson (1894: pp. 255–263), Pliocene. Eel River near Scotia, Humboldt Co. UCMP 1878. Holotype UCMP 12336.

[Buccinidae].

Neptunea (*Sulcosipho*) *lawsoni* (Martin, 1914). [*Chrysodomus*]. Nelson 1978. Veliger 21(2):206, fig. 11. Rio Dell Fm., Pliocene. Eel River near Scotia, "Scotia quad.," Humboldt, Co. CASG 117. Hypotype CASG 59073. [Buccinidae].

Neptunea (*Neptunea*) *lyrata altispira* Gabb, 1869a. Nelson 1978. Veliger 21(2):209, fig. 7. Rio Dell Fm., Pliocene. Fortuna quad. (1942), Humboldt Co. UCMP B7879. Hypotype UCMP 14532. [Buccinidae].

Neptunea (*Neptunea*) *pribiloffensis* (Dall, 1919a). [*Chrysodomus*]. Faustman 1964. UCPG 41(2):128, pl. 3, fig. 17. Upper Rio Dell Fm., Pliocene. Fleener Creek, Ferndale quad., Humboldt Co. UCMP B7944. Hypotype UCMP 37807. [Buccinidae].

Neptunea (*Colus*) cf. *N.* (*C.*) *recurva* Gabb, 1866. Glen 1959. UCPG 36(2):179, pl. 17, fig. 1 (not fig. a). Pillar Pt. "Merced" Fm. [=Purisima Fm.], Pliocene. Vicinity of San Vicente Creek, San Mateo Co. UCMP B4793. Hypotype UCMP 37661. [Buccinidae].

Neptunea (*Sulcosipho*) *scotiaensis* (Martin, 1914). [*Chrysodomus*]. Faustman 1964. UCPG 41 (2):130, pl. 2, fig. 4. Rio Dell Fm., Pliocene. Eel River area, Scotia quad., Humboldt Co. UCMP B7644. Hypotype UCMP 37812. [Buccinidae].

Neptunea (*Neptunea*) *smirnia* (Dall, 1919b). [*Chrysodomus*]. Faustman 1964. UCPG 41(2):128, pl. 3, fig. 9. Rio Dell Fm., Pliocene. French Gulch area, Fortuna quad., Humboldt Co. UCMP B7891. Hypotype UCMP 37806. [Buccinidae].

Neptunea (*Golikovia*) *smirnia* (Dall, 1919b). [*Chrysodomus*]. Nelson 1978. Veliger 21(2):206, fig. 10. Capistrano Fm., Pliocene. Deep Canyon, Dana Pt. quad. (1949), Orange Co. USGS M2106. Hypotype USNM 250505. [Buccinidae].

Neptunea stantoni (Arnold, 1908). [*Chrysodomus*]. Cummings et al. 1962. CDMG Bull. 181:202, ph. 16, fig. 9. Purisima Fm. (Pomponio Member), Pliocene. Purisima Creek area, Half Moon Bay quad., San Mateo Co. 645-1M. Hypotype determined here as missing. [Buccinidae].

Neptunea (*Sulcosipho*?) *stocki* (Howe, 1922). [*Buccinum*?]. Faustman,1964. UCPG 41(2):129, pl. 3, fig. 1. Rio Dell Fm., Pliocene. Eel River, in vicinity of Scotia and Rio Dell, Humboldt Co. UCMP A4539. Hypotype UCMP 37810. [Buccinidae].

Neptunea (*Sulcosipho*) *tabulata* (Baird, 1863). [*Chrysodomus*]. Faustman 1964. UCPG 41(2):129, pl. 2, fig. 2. Rio Dell Fm., Pliocene. Nanning Creek Scotia quad., Humboldt Co. UCMP B7642. Hypotype UCMP 37808. [Buccinidae].

Neptunea cf. *N. tabulata* (Baird, 1863). [*Chrysodomus*]. Addicott 1969. Pr.CAS 37(3):62, 64, 67, pl. 1, fig. 17. Merced Fm. (?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650958. [Buccinidae].

Neptunea tabulata (Baird, 1863). [*Chrysodomus*]. Weaver 1971. West (LA Times), 18 April, 1971:11, unnumbered fig. (middle row, right). "Fernando Fm.", Pliocene. Arco Towers excavation, 6th and Flower streets, downtown Los Angeles, Los Angeles Co. LACMIP 1219. Hypotypes (2) current whereabouts unknown. [Buccinidae].

Neptunea (*Sulcosipho*) *tabulata* (Baird, 1863). [*Chrysodomus*]. Nelson 1978. Veliger 21(2):206, fig. 13. "Fernando Fm.," Pliocene. Upper Newport Bay, Newport Beach quad., Orange Co. USGS M2753. Hypotype USNM. 250507. [Buccinidae].

Neptunea tabulata (Baird, 1863). [*Chrysodomus*]. Powell 2013. Festivus 45(3):20, pl. 1, fig. 8. Reworked shells, Pliocene. Shells found in a modern-day shrimp trap off San Clemente Is., California Channel Ids. CASG 72573. Hypotype CASG.72577. [Buccinidae].

Nerita beali Loel and Corey, 1932. Avila and Weaver 1969. AAPG/SEPM Guidebook, p. 59, pl. 34, figs. 7a, b. Rincon Fm., Miocene. Lower Cañada Garanon, Santa Rosa Is., California Channel Ids. UCSB SR67-55 [=LACMIP 16427]. Hypotype UCSB M9 [=LACMIP 6318]. **Remarks:** Determined here as *Glossaulax reclusiana* (Deshayes, 1839). [Naticidae].

Nerita cf. *N.* (*Amphinerita*) *eorex* Vokes, 1939. Squires 1984. NHMLAC CS 350:16, fig. 6a. Llajas Fm., Eocene. Bus Canyon, Thousand Oaks quad. (1950, PR 1967), Ventura Co. CSUN 700 [=LACMIP.16289]. Hypotype LACMIP 6508. **Remarks:** *Velates perversus* (Gmelin, 1791), *fide* Saul and Squires (1997: pp. 135, 136). [Neritidae].

Nerita* (*Theliostyla*?) *joaquinensis Addicott, 1970 (n. sp.). USGS PP 642:45, pl. 1, fig. 17. Lower Round Mtn. Silt, Miocene. Piso Creek, Kern River area, Kern Co. USGS M1640. Paratype USNM 650050. [Neritidae].

....., pl. 1, figs. 21, 22. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Holotype USNM 650051.

Nerita* (*Theliostyla*?) *kennedyi Squires and Saul, 2002 (n. sp.). Veliger 45(3):185–187, figs. 31–34. Santiago Fm., Eocene. Vista area, San Marcos quad. (1968, PR 1983), San Diego Co. SDSNH 4105. Holotype SDSNH 67066. [Neritidae].

Nerita quadrangulata Weaver and Kleinpell, 1963 (n. sp.). UCPG 43:183, pl. 23, fig. 1. Undifferentiated Sacate/Gaviota fms., Eocene. Gaviota Pass area, Los Olivos quad., Santa Barbara Co. UCMP B6962 [=66550] Holotype SU 9175 [=CASG 66550.01]. **Remarks:** Junior synonym of *Nerita* (*Theliostyla*) *triangulata* Gabb, 1869b, *fide* Squires (1992: p. 325). [Neritidae].

Nerita scabricosta Lamarck, 1822. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 51, fig. 3.5A. Latrania Fm., Miocene/Pliocene. Alverson Canyon [=Fossil Canyon), Imperial Co. SDSNH 3135]. Hypotype SDSNH 53865. [Neritidae].

Nerita triangulata Gabb, 1869b. Moore 1968. SDSNH Occas. Pap. 15:28, pl. 12, fig. a. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Rose Canyon, San Diego Co. SDSNH1667. Hypotype SDSNH 4160. **Remarks:** In the subgenus *Theliostyla*, *fide* Squires (1992: p. 325). [Neritidae].

Nerita (*Theliostyla*) *triangulata* Gabb, 1869b. Givens 1974. UCPG 109:61, pl. 5, fig. 4. Matilija Fm., Eocene. Beartrap Creek area, Reyes Peak quad. (1943), Ventura Co. UCR 4747. Hypotype UCR. 4747/3. [Neritidae].

Nerita (*Theliostyla*) *triangulata* Gabb, 1869b. Givens and Kennedy 1976. Jour. Paleo. 50(5):960, 963, pl. 1, figs. 1–4. Delmar Fm. [=Santiago Fm.?], Eocene. Near Vista and San Marcos, San Diego Co. UCR 4865. Hypotypes UCR. 4865/100, 4865/101. [Neritidae].

Nerita (*Theliostyla*) *triangulata* Gabb, 1869b. Squires 1987. NHMLAC CS 388:23, fig. 14. Matilija Sandstone?, Eocene. Cobblestone Mtn. quad. (1958), Ventura Co. CSUN 809 [=LACMIP 16291]. Hypotype LACMIP 7443. [Neritidae].

Nerita (*Theliostyla*) *triangulata* Gabb, 1869b. Squires 1992. Veliger 35(4):325–327, figs. 2–9. Delmar, Eocene. Southwest of San Marcos, San Marcos quad. (1968, PR 198]), San Diego Co. SDSNH 3522. Hypotypes SDSNH 43472–43474, 40677, 40678 (not SDSNH 406777, 406787 as in fig. caption). [Neritidae].

....., figs. 13–16. Undifferentiaed Sacate/Gaviota fms., Eocene. Nojoqui Creek area, Santa Barbara Co. CASG 66550. Holotype CASG 9175 [=CASG 66550.01], paratype CASG 9175a [CASG 66550.02] (both of *Nerita quadrangulata* Weaver and Kleinpell, 1963).

Nerita (*Theliostyla*) *triangulata* Gabb, 1869b. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 6. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23720. Hypotype LACMIP 11646. [Neritidae].

Nerita sp. Stanton 1966. Jour. Paleo. 40(1):32, pl. 6, figs. 13, 14. Castaic Fm., Miocene. Castaic Canyon, Los Angeles Co. CIT 2072 [=LACMIP 16190]. [Hypotype LACMIP 4159]. [Neritidae].

Nerita Fowkes 1982. Coalinga Guidebook, p. 21 [as *Nerita triangulata*], unnumbered fig. (refigured from Arnold 1909 [1910], pl. 4, fig. 12; refigured from Arnold and Anderson 1910, pl. 25, fig. 12 (both as *Nerita triangulata* Gabb 1869)). Domengine Fm. [as Tejon Fm.], Eocene. West of San Joaquin Coal mine, west of Coalinga, Fresno Co. Hypotype USNM 165700. **Remarks:** Determined here as *Nerita triangulata* Gabb, 1869. [Neritidae].

Nerita sp. Clark 1938. Squires 1992. Veliger 35(4):327, figs. 17, 18. Markley Fm., Eocene. Pleasant Creek, Solano Co. UCMP A1297. Hypotype UCMP 30490. [Neritidae].

Neverita (*Glossaulax*) *alta* Arnold, 1903. Addicott 1970. USGS PP 642:69–70, pl. 5, figs. 19, 25. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotypes USNM 650104, 650105. **Remarks:** Junior synonym of *Neverita* (*Glossaulax*) *reclusiana* (Deshayes, 1839), *fide* Marincovich (1977: p. 317); valid species in the genus *Glossaulax, fide* McLean (2007: p. 737). [Naticidae].

Neverita (*Glossaulax*) *andersoni* (Clark, 1918). [*Natica*]. Addicott 1965b. USGS PP 525-C:C106, fig. 4d. Olcese Sand,

Miocene. Bakersfield quad. (1906), Kern Co. UCMP B1593. Hypotype UCMP 36557. **Remarks:** In the genus *Glossaulax*, *fide* Majima (1989: p. 58). [Naticidae].

Neverita (*Glossaulax*) *andersoni* (Clark, 1918). [*Natica*]. Addicott 1970. USGS PP 642:67–69, pl. 5, fig. 22. Upper Olcese Sand, Miocene. Bakersfield quad. (1906), Kern Co. UCMP B1593. Hypotype UCMP 36557. **Remarks:** In the genus *Glossaulax*, *fide* Majima (1989: p. 58). [Naticidae].

....., pl. 5, fig. 23. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 15466.

....., pl. 5, fig. 24. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650106.

Neverita (*Glossaulax*) *andersoni* (Clark, 1918). [*Natica*]. Marincovich 1977. BAP 70(294):328–332, pl. 30, fig. 5. San Ramon Fm., Miocene. Walnut Creek, Contra Costa Co. UCMP 1131. Holotype UCMP 11212. **Remarks:** In the genus *Glossaulax*, *fide* Majima (1989: p. 58). [Naticidae].

....., pl. 30, fig. 6. San Pablo Group, Miocene. Concord quad., Contra Costa Co. UCMP 1227. Holotype (of *Natica* (*Neverita*) *pabloensis* Clark 1915) UCMP 11592.

....., pl. 30, fig. 7. Olcese Sand, Miocene. Kern Co. Hypotype SU/CASG 10273. SU hypotype determined here as missing.

....., pl. 30, fig. 8. Topanga Fm., Miocene. Central Santa Monica Mtns., Los Angeles Co. UCMP B7853. Hypotype UCMP 14421.

Neverita andersoni (Clark, 1918). [*Natica*]. Addicott 1979. SEPM Guidebook 14:47–48, pl. 1, fig. 6. Vaqueros (?) Fm. (lower sandstone member), Oligocene. The Indians, Junipero Serra quad., Santa Lucia Range, Monterey Co. SU 1756. Hypotype CASG 60367 determined here as missing. **Remarks:** In the genus *Glossaulax fide* Majima (1989: p. 58). [Naticidae].

Neverita (*Glossaulax*) *globosa* Gabb, 1869b. Givens and Kennedy 1976. Jour. Paleo. 50(5):963, 965–966, pl. 2, figs. 5–14, 16, 18, 19. Delmar Fm. [=Santiago Fm.?], Eocene. Near Vista and San Marcos, San Diego Co. UCR 4865. Hypotypes UCR 4865/60–4865/65. **Remarks:** In the subgenus *Neverita*, *fide* Squires (1999c: p. 17). [Naticidae].

Neverita (*Neverita*) *globosa* Gabb, 1869b. Marincovich 1977. BAP 70(294):312–316, pl. 28, fig. 10. Domengine(?) Fm. [="Tejon"? Fm.], Eocene. West of Griswold's, Priest Valley quad., San Benito Co. [MCZ 1045]. Holotype MCZ 27859 [=MCZ 108518]. [Naticidae].

....., pl. 28, fig. 11. Domengine Fm., Eocene. Big Tar Canyon area, Cholame quad., Kings Co. Holotype (of *Neverita globosa reefensis* Vokes, 1939) UCMP 15855.

Neverita (*Neverita*) *globosa* Gabb, 1869b. Squires 1984. NHMLAC CS 350:25–26, fig. 7g. Llajas Fm., Eocene. Vicinity of Bus and Trough canyons, Thousand Oaks quad. (1950, PR 1967), Ventura Co. CSUN 704 [=LACMIP 16177]. Hypotype LACMIP 6527. [Naticidae].

Neverita (*Neverita*) *globosa* Gabb, 1869b. Squires, 1987. NHMLAC CS 388:37–39, fig. 47. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 827 [=LACMIP 16153]. Hypotype LACMIP 7472. [Naticidae].

Neverita (*Neverita*) *globosa* Gabb, 1869b. Squires 1999c. NHMLAC CS 480:17–18, figs. 24, 25. Matilija Sandstone, Eocene. Matilija Creek, Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1450 [=LACMIP 16963). Hypotype LACMIP 12455. [Naticidae].

Neverita (*Glossaulax*) *jamesae* Moore, 1963 [1964]. Addicott 1970. USGS PP 642:70, pl. 6, fig. 8. Round Mtn. Silt, Miocene. Temblor locality 1, Caliente quad., Kern Co. UCMP 2713. Hypotype UCMP 15498. **Remarks:** In the genus *Glossaulax*, *fide* Majima (1989: p. 58). [Naticidae].

Neverita (*Glossaulax*) *jamesae* Moore, 1963 [1964]. Marincovich 1977. BAP 70(294):332–333, pl. 30, fig. 9; pl. 31, fig. 2. Round Mtn. Silt, Miocene. Caliente quad, Kern Co. UCMP 2713. Hypotypes UCMP 14422, 15498. **Remarks:** In the genus *Glossaulax*, *fide* Majima (1989: p. 58). [Naticidae].

Neverita (*Neverita*) *kirkensis* (Clark, 1915). [*Natica*]. Marincovich 1977. BAP 70 (294):306–307, pl. 28, fig. 1. San Pablo Group, Miocene. Southeast of Oyster Pt., Contra Costa Co. UCMP 467. Holotype UCMP 11591. [Naticidae].

....., pl. 28, fig. 2. Concord quad., Contra Costa Co. UCMP 505. Holotype UCMP 11594 (of *Natica* (*Neverita*) *arnoldi* Clark, 1915) UCMP 11594.

Nevertia reclusiana (Deshayes, 1839). [*Natica*]. Woodring et al. 1940 [1941]. USGS PP 195:86, pl. 15, figs. 11, 19, 20. San Joaquin Fm. (*Trachycardium* Zone), Pliocene. Arroyo Conchoso, North Dome, Kettleman Hills, Kings Co. USGS 12375. Hypotypes USNM. 495764, 495771, 495772. **Remarks:** Hypotype USNM 495771 (fig. 19) [=*Neverita* (*Glossaulax*) *andersoni* (Clark, 1918)], *fide* Addicott (1970: p. 67). In the genus *Glossaulax*, *fide* McLean (2007: p. 737). [Naticidae].

....., pl. 19, fig. a (refigured in Raup and Stanley (1971, p. 21, fig. 1-12); refigured in Raup and Stanley (1978, p. 19, fig. 1-10); refigured in Prothero (2006, p. 236, fig. 7.3). San Joaquin Fm. (*Neverita* Zone), Pliocene. North Dome, Kettleman Hills, Kings Co. USGS 12499. Hypotype USNM (slab with *Olivella* cf. *O. pedroana* [=*Callianax pedroana*], *Anadara trilineata,* and *Volsella* fragments), determined here as missing. [Naticidae].

....., pl. 20, fig. 1. Arroyo Bifido, North Dome, Kettleman Hills, Kings Co. USGS 12494. Hypotype USNM 495318.

....., pl. 20, figs. 2, 3. Middle Dome, Kettleman Hills, Kings Co. USGS 12836. Hypotypes USNM 495319, 495320.

....., pl. 20, fig. 4. Ridge of Arroyo Murado, North Dome, Kettleman Hills, Kings Co. USGS 12510. Hypotype USNM 495321.

....., pl. 20, fig. 5. Arroyo Bifido, North Dome, Kettleman Hills, Kings Co. USGS 12506. Hypotype USNM 495322.

Neverita reclusiana (Deshayes, 1839). [*Natica*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:73, pl. 20, fig. 4. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14622. Hypotype USNM 560119. **Remarks:** In the genus *Glossaulax*, *fide* McLean (2007: p. 737). [Naticidae].

Neverita (Glossaulax) reclusiana (Deshayes, 1839). [*Natica*]. Marincovich 1977. BAP 70 (294):317–328, pl. 29, fig. 4. Tejon Fm., Eocene. "Alizos Creek" [=Live Oak Canyon], near Ft. Tejon, Kern Co. Holotype [=lectotype? of *Neverita secta* Gabb, 1864, ANSP 4212], unfigured paralectotypes (6) ANSP 4212 [=ANSP 79449] missing, *fide* K. Estes-Smargianni (personal communication, 2019). **Remarks:** In the genus *Glossaulax*, *fide* McLean (2007: p. 737). [Naticidae].

....., pl. 29, fig. 5. Kreyenhagen Fm. (Markley Sandstone Member), Eocene. Along Pleasant Creek near Putah Creek, Solano Co. UCMP A1289. Holotype (of *Neverita secta hemisecta* Clark, 1938) UCMP 12482.

....., pl. 29, fig. 12. Tejon Fm., Eocene. Immediately below red beds on Salt Creek, Kern Co. UCMP6135. Hypotype UCMP 14420.

Neverita (*Glossaulax*) *reclusiana* (Deshayes, 1839). [*Natica*]. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 6. Niguel Fm., Pliocene. Orange Co. SDSNH4080. SDSNH hypotype determined here as missing]. **Remarks:** In the genus *Glossaulax*, *fide* McLean (2007: p. 737). [Naticidae].

Neverita (*Glossaulax*) *reclusiana* (Deshayes, 1839). [*Natica*]. Susuki 1992, Topanga Story, p. 7, fig. 12. Topanga Fm., Miocene (Cold Creek Member). Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP22645 [=UCLA 2645). Hypotype LACMIP 13084 [=UCLA 57698]. **Remarks:** In the genus *Glossaulax*, *fide* McLean (2007: p. 737). [Naticidae].

Neverita reclusiana (Deshayes, 1839). [*Natica*]. Squires 2012. NHMLAC CS 520:77, fig. 70. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14389. **Remarks:** In the genus *Glossaulax*, *fide* McLean (2007: p. 737). [Naticidae].

Neverita (*Glossaulax*) cf. *N.* (*G.*) *reclusiana* (Deshayes, 1839). [*Natica*]. Addicott 1969. Pr.CAS 37(3):62, 64, pl. 1, figs. 11, 13. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM 650952, 650953. **Remarks:** In the genus *Glossaulax, fide* McLean (2007: p. 737). [Naticidae].

Neverita reclusiana forma *thomsonae* Hickman, 1969. Addicott 1979. SEPM Guidebook 14:47–48, pl. 1, fig. 8. Vaqueros (?) Fm. (lower sandstone member), Oligocene. The Indians, Junipero Serra quad., Santa Lucia Range, Monterey Co. SU 1756. Hypotype CASG 60368 determined here as missing. **Remarks:** In the genus *Glossaulax*, *fide* McLean (2007: p. 737). [Naticidae].

Neverita reclusianus (Deshayes, 1839). [*Natica*]. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 2 (pl. 1 in caption), figs. G–I. ?Cañada Fm., Eocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotypes UCSB. 8712 [=SBMNH 60195]. **Remarks:** Determined here as fig. G = naticid sp., fig. H =*Ficopsis* sp. (family Ficidae), fig. I = cassid sp. [Naticidae, Ficidae, Cassidae].

Neverita thomsonae Hickman, 1969. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 10. Temblor Fm. (*Phacoides* Sand member) (of Stinemeyer et al.1959: pp. 12, 13), Miocene. Carneros Rocks quad., Temblor Range, Kern Co. USGS M3978. Hypotype USNM 646617. **Remarks:** Determined here as in the genus *Glossaulax*. [Naticidae].

Neverita (*Glossaulax*) *thomsonae* Hickman, 1969. Addicott 1973b. USGS PP 791:7, 19, pl. 9, fig. 4. [refigured from Addicott, 1972b, pl. 1, fig. 10]. Temblor Fm. (Wygal Sandstone Member), Miocene. Temblor Creek, Carneros Rocks quad., Kern Co. USGS M3978. Hypotype USNM 646617, see Addicott (1972b: pl. 1, fig. 10). **Remarks:** Determined here as in the genus *Glossaulax*, . [Naticidae].

Neverita Fowkes 1982. Coalinga Guidebook, p. 33, unnumbered fig. San Joaquin Fm. ("*Neverita* Zone"), Pliocene. North Dome, Kings Co. WHC hypotype missing? [Naticidae].

Neverita (*Glossaulax*) n. sp.? Addicott 1970. USGS PP 642:70, pl. 6, fig. 1. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. USGS 6622. Hypotype USNM 650107. **Remarks:** Most recent label in USNM collection identifies this specimen as *Neverita* (*Glossaulax*) *andersoni* (Clark, 1918); *Polinices* (*Euspira*) *galianoi* Dall, 1909, *fide* Marincovich (1977: p. 265). [Naticidae].

....., pl. 1, fig. 9. Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype UCMP 15492. **Remarks:** Junior synonym of *Polinices* (*Euspira*) *galianoi* Dall, 1909, *fide* Marincovich (1977: p. 265).

Niso antiselli Anderson and Martin, 1914. Addicott 1970. USGS PP 642:58–59, pl. 20, fig. 22. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. USGS 6065. Hypotype USNM 650293. [Eulimidae].

....., pl. 20, fig. 23. Rio Bravo Ranch quad. (1954), Kern Co. USGS M2601. Hypotype USNM 650294.

....., pl. 20, fig. 24. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1612. Hypotype USNM 650295.

Niso cottonwoodensis Addicott, 1970 (n. sp.). USGS PP 642:59, pl. 20, figs. 19, 20. Lower Round Mtn. Silt, Miocene. Kern Co. USGS M1640. Holotype USNM 650291. [Eulimidae].

....., pl. 20, fig. 21. Upper Olcese, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650292.

?*Nucella analoga* (Forbes, 1852). [*Purpura*]. Vermeij and Powell 2004. Pr.CAS 55(9):186–187, figs. 1e, f. Merced Fm., Pliocene. Seven Mile Beach, San Mateo Co. Hypotype CASG determined here as missing. [Muricidae].

Nucella canaliculata (Duclos, 1832). [*Purpura*]. Yancey 1978. Pr.CAS 41(15):354, 369, fig. 5J. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D5765. Hypotype USNM 251806. [Muricidae].

Nucella collomi (Carson, 1926). [*Thais*]. Addicott 1978. USGS OFR 78-446:88–89, pl. 1, fig. 9. Pancho Rico Fm., Miocene/Pliocene. Northeast of San Lucas, Monterey Co. USGS M903. Hypotype USNM 254388. [Muricidae].

Nucella etchegoinensis (Arnold, 1909 [1910]). [*Thais*]. Woodring et al. 1940 [1941]. USGS PP 195:88, pl. 24, fig. 16. San Joaquin Fm. (Cascajo Conglomerate Member), Pliocene. El Arco, South Dome, Kettleman Hills, Kings Co. USGS 12796 [=USGS 12654). Hypotype USNM 495352. [Muricidae].

....., pl. 24, fig. 17. Cascajo Hill area, South Dome, Kettleman Hills, Kings Co. USGS 12801. Hypotype USNM 495353.

....., pl. 24, fig. 18. Cascajo Hill, South Dome, Kettleman Hills, Kings Co. USGS 12645 [=USGS 12802]. Hypotype USNM 495354.

....., pl. 36, figs. 1, 7. Etchegoin Fm. (*Patinopecten* Zone), Pliocene. Vicinity of Arroyo Torcido, North Dome, Kettleman Hills, Kings Co. USGS 12422. Hypotypes USNM 495844, 495845.

Nucella n. sp. aff. *N. etchegoinensis* (Arnold, 1909 [1910]). [*Thais*]. Powell et al. 2019a USGS SIR 2019-5021:3 (as *Nucella* n. sp. cf. *N. etchegoinensis*), 34, pl. 3, figs. 9, 10. Wilson Grove Fm., Miocene. North of Bloomfield, Sonoma

Co., CASG 54135, Hypotype CASG. 784117. [Muricidae].

Nucella megastoma Vermeij and Powell, 2004 (n. sp.). PrCAS 55(9):185–187, figs. 1a, b. Merced Fm., Pliocene. Seven Mile Beach, San Mateo Co. CASG. 69251. Holotype CASG 69251. [Muricidae].

….., figs. 1c, d. Wilson Grove Fm., Pliocene. North side of River Rd., near Trenton, Sonoma Co. CASG 69252, *ex* CASG. 54164. Paratype CASG 69252.

Nucella packi (Clark) var. ***talea*** Stewart, 1946 (n.var.). USGS PP 205-C: pl. 17, fig. 11. Temblor Fm., Miocene. Reef Ridge, near Beltran, Dark Hole quad., Fresno Co. USGS 14390. Holotype USNM 498749. **Remarks:** Junior synonym of *Nucella tokudai* (Yokoyama, 1932), *fide* Amano et al. (1993: p. 240). [Muricidae].

Nucella rankini Grant and Eaton *in* Eaton et al., 1941 (n. sp.). AAPG Bull. 25(2): pl. 2, fig. 5. Cierbo Fm., Miocene. Caliente Range, San Luis Obispo Co. UCLA 1644 [=LACMIP 21644]. Holotype UCLA 8936 [=LACMIP 8963]. [Muricidae].

Ocenebra cierboensis (Grant and Eaton *in* Eaton et al., 1941). [*Boreotrophon*]. Addicott 1978. USGS OFR 78-446:88–89, pl. 1, fig. 1. Pancho Rico Fm., Miocene/Pliocene. Northeast of San Lucas, Monterey Co. USGS M903. Hypotype USNM 254346. **Remarks:** Determined here as possibly in the genus *Paciocinebrina*. [Muricidae].

Ocenebra clarki Addicott, 1970 (n. sp.). USGS PP 642:80, pl. 8, figs. 6, 7. Upper Olcese Sand, Miocene. Kern River, Kern Co. UCLA AC 8-34 [=UCLA 6361 and LACMIP. 26361]. Holotype UCLA 45765 [LACMIP 8432]. **Remarks:** Determined here as possibly in the genus *Paciocinebrina*. [Muricidae].

....., pl. 8, fig. 8. Caliente quad. (1914), Kern Co. UCMP B1599. Hypotype UCMP 30822.

Ocenebra coryphaena (Woodring *in* Woodring et al., 1946). [*Tritonalia*]. Weaver 1971. West (LA Times), 18 April, 1971:11, unnumbered fig. (upper left). "Fernando Fm.," Pliocene. Arco Towers excavation, 6th and Flower streets, downtown Los Angeles, Los Angeles Co. LACMIP 1219. Hypotypes (3) whereabouts unknown. [Muricidae].

Ocenebra gabbiana (Anderson, 1905). [*Trophon*]. Addicott 1970. USGS PP 642:79, pl. 7, figs. 1, 2. Upper Olcese Sand, Miocene. Kern Co. USGS 6624. Hypotype USNM 650113. **Remarks:** Determined here as possibly in the genus *Trophon*. [Muricidae].

Ocenebra gabbiana (Anderson, 1905). [*Trophon*]. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, fig. 16. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al. 1959: pp. 8, 13), Miocene. Shale Pt. quad., Temblor Range, Kern Co. USGS M3986. Hypotype USNM 646806. **Remarks:** Determined here as possibly in the genus *Trophon*. [Muricidae].

Ocenebra interfossa Carpenter, 1864b. Addicott, 1969. Pr.CAS 37(3):62, 64, 66, pl. 1, figs. 20, 21. Merced Fm. (?), Pliocene. Santa Clara Co. CASG 28617. Hypotype CASG 13108. CASG hypotype determined here as missing. **Remarks:** In the genus *Paciocinebrina*, *fide* Houart et al. (2019: p. 209). [Muricidae].

Ocenebra milicentana (Loel and Corey, 1932). [*Purpura*]. Addicott 1970. USGS PP 642:80, pl. 8, figs. 18, 19. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 650130. **Remarks:** Determined here as possibly in the genus *Trophon*. [Muricidae].

Ocenebra topangensis Arnold, 1907. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, 174, fig. 63-15. Topanga Fm., Miocene. South of Calabasas, Los Angeles Co. CASG 567. Hypotype CASG 5719. **Remarks:** Determined here as possibly in the genus *Paciocinebrina*. [Muricidae].

Ocenebra topangensis Arnold, 1907. Addicott 1970. USGS PP 642:81, pl. 8, fig. 3. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 650122. **Remarks:** Determined here as possibly in the genus *Paciocinebrina*. [Muricidae].

Ocenebra topangensis Arnold, 1907. Stadum 1973. OCF, p. 27, pl. 4, fig. 7. Topanga Fm., Miocene. Orange Co. Hypotype possibly at SDSNH, current whereabouts unknown. **Remarks:** *Ex* Grouard collection. **Remarks:** Determined here as possibly in the genus *Paciocinebrina*. [Muricidae].

Ocenebra topangensis Arnold, 1907. Susuki 1992, Topanga Story, p. 7, fig. 8. Topanga Fm., Miocene (Cold Creek

Member). Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP 22644 [=UCLA 2644]. Hypotype LACMIP 13080 [=UCLA 57361]. **Remarks:** Determined here as possibly in the genus *Paciocinebrina*. [Muricidae].

Ocenebra trophonoides (Anderson and Martin, 1914). [*Thais*]. Addicott 1970. USGS PP 642:79–80, pl. 8, figs. 4, 5. Upper Olcese Sand, Miocene. Caliente quad. (1914), Kern Co. UCMP B1621. Hypotype UCMP 15992. **Remarks:** Determined here as possibly in the genus *Paciocinebrina*. [Muricidae].

....., pl. 8, figs. 9, 10. Caliente quad. (1914), Kern Co. UCMP B1599. Hypotype UCMP 15993.

Ocenebra wilkesana (Anderson, 1905). [*Fusus*]. Addicott 1970. USGS PP 642:78–79, pl. 7, fig. 15. Upper Olcese Sand, Miocene. Caliente quad. (1914), Kern Co. UCMP B1599. Hypotype UCMP. 30122. **Remarks:** Determined here as possibly in the genus *Paciocinebrina*. [Muricidae].

....., pl. 8, fig. 11. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1599. Hypotype USNM 650123.

Ocenebra cf. *O. wilkesana* (Anderson, 1905). [*Fusus*]. Addicott 1970. USGS PP 642:78–79, pl. 8, figs. 1, 2. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 650121. **Remarks:** Determined here as in the genus *Paciocinebrina*. [Muricidae].

Ocenebra sp. Addicott 1970. USGS PP 642:81, pl. 8, figs. 20, 21. Basal Jewett Sand, Miocene. Pyramid Hill, Kern Co. CASG 37468. Hypotype CASG 12934 (This is the number on specimen, however label and pl. caption read CASG. 12933 as does online database). **Remarks:** Determined here as in the genus *Paciocinebrina*. [Muricidae].

Ocenebra n. sp. Addicott 1978. USGS OFR 78-446:88–89, pl. 1, figs. 2, 6. Pancho Rico Fm., Miocene/Pliocene. Northeast of San Lucas, Monterey Co. USGS M903. Hypotype USNM 254347. **Remarks:** Equivalent to *Ocenebra* n. sp. A of Durham and Addicott (1965: p. A12). **Remarks:** Determined here as possibly in the genus *Paciocinebrina*. [Muricidae].

Ocinebrina atropurpurea (Carpenter, 1865). [*Ocenebra*]. Squires 2012. NHMLAC CS 520:77, fig. 76. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14395. Remarks: In the genus *Paciocinebrina*, *fide* Houart et al. (2019: p. 209). [Muricidae].

Ocinebrina sp., aff. *O. fraseri* (Oldroyd, 1920). [*Tritonalia*]. Squires 2012. NHMLAC CS 520:77, figs. 77–79. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14396. Remarks: In the genus *Paciocinebrina*, *fide* Houart et al. (2019: p. 209). [Muricidae].

Odostomia (*Evalea*) *andersoni* Bartsch, 1917a. Keen 1943. Tr.SDSNH 10(2):49, pl. 4, figs. 17, 23. Basal Round Mtn. Silt (possibly uppermost Olcese Sand), Miocene. Kern River Caliente quad., Kern Co. SU 2641. Hypotypes SU 7541, 7541a [=CASG 72009]. [Pyramidellidae].

Odostomia (*Evalea*) *andersoni* Bartsch, 1917a. Addicott 1970. USGS PP 642:144, pl. 21, figs.11, 12. Upper Olcese Sand, Miocene. Oil Center quad., Kern Co. USGS M1597. Hypotypes USNM 650304, 650305. [Pyramidellidae].

....., pl. 21, fig. 25. Oil Center quad. (1950), Kern Co. UCMP. B1598. Hypotype UCMP 37111.

....., pl. 21, fig. 21. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1612. Hypotype USNM 650306.

Odostomia (*Evalea*) aff. *O.* (*E.*) *donilla* Dall and Bartsch, 1909. Addicott 1970. USGS PP 642:144, pl. 21, fig. 33. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650319. [Pyramidellidae].

Odostomia* (*Menestho*) *repenningi Addicott, 1970 (n. sp.). USGS PP 642:143–144, pl. 21, figs. 22, 32. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Paratype USNM 650313, holotype USNM 650314. [Pyramidellidae].

Odostomia (*Besla*) *rotundomontana* (Keen, 1943). [*Chrysallida*]. Addicott 1970. USGS PP 642:143, pl. 21, fig. 29. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Hypotype USNM. 650318. [Pyramidellidae].

....., pl. 21, fig. 30. Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype UCMP 37115.

....., pl. 21, fig. 31. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotype UCMP 37116.

Odostomia* (*Chrysallida*?) *sequoiana Addicott, 1970 (n. sp.). USGS PP 642:142–143, pl. 20, fig. 12; pl. 21, figs. 8, 9, 19. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650302, paratypes USNM 650300, 650301, Hypotype USNM 650285. [Pyramidellidae].

Odostomia (*Chrysallida*?) n. sp.? Addicott 1970. USGS PP 642:143, pl. 21, fig. 47. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650328. [Pyramidellidae].

Odostomia (*Evalea*) sp. Addicott 1970. USGS PP 642:144, pl. 21, fig. 28. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650317.

Odostomia (*Evalea*?) n. sp. Addicott 1970. USGS PP 642:144–145, pl. 21, fig. 27. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650316. [Pyramidellidae].

Olequahia domenginica (Vokes, 1939). [*Ranella*]. Givens 1974. UCPG 109:80, pl. 9, fig. 4. Juncal Fm., Eocene. Lockwood Valley quad. (1943), Ventura Co. UCR 4686. Hypotype UCR 4686/8. [Bursidae].

....., pl. 9, fig. 5. Vicinity of Thorn Meadows, Lion Canyon quad. (1943), Ventura Co. UCR 4679. Hypotype UCR 4679/1. [Bursidae].

Olequahia domenginica (Vokes, 1939). [*Ranella*]. Squires 1984. NHMLAC CS 350:29, fig. 7o. Llajas Fm., Eocene. Las Llajas Canyon, 1950 ft., Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6533. [Bursidae].

Olequahia domenginica (Vokes, 1939). [*Ranella*]. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 13. Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6533. [Bursidae].

Olequahia domenginica (Vokes, 1939). [*Ranella*]. Squires 1988c. NHMLAC CS 398:14, fig. 32. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 981 [=LACMIP 16142]. Hypotype LACMIP 7712. [Bursidae].

Olequahia domengenica (Vokes, 1939). [*Ranella*]. Albi 2002. Festivus 34(3):34–36, fig. 6 (upper figs.). Llajas Fm., Eocene. Runckle [*sic*] Ranch, Simi Valley, Ventura Co. Line drawings, source specimen unknown. [Bursidae].

Olequahia hornii (Gabb 1864). [*Tritonium*]. Weaver and Kleinpell 1963. UCPG 43:191, pl. 26, fig. 6. Matilija Fm., Eocene. Cañada de Santa Anita, Lompoc quad., Santa Barbara Co. UCMP B6922. Hypotype SU 9223 [=CASG. 70205]. [Bursidae].

Olequahia lorenzana (Wagner and Schilling, 1923). [*Strepsidura*]. Weaver and Kleinpell 1963. UCPG 43:192, pl. 26, fig. 4. Gaviota Fm., Eocene. SU 30279 (no known locality data). Hypotype SU 9224 [=CASG 70200]. [Bursidae].

....., pl. 26, fig. 7. Middle Gaviota Fm., Eocene. Cuarta Canyon, Lompoc quad., Santa Barbara Co. UCMP B7014. Hypotype SU 9226 [=CASG 70199].

....., pl. 26, fig. 8. Gaviota Fm., Eocene. Above Gaviota Canyon in Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6985B. Hypotype SU 9225 [=CASG 70201].

Olequahia washingtoniana (Weaver, 1912). [*Cassidaria*]. Wenz 1941. Handbh. Palaoz. 6:1075, fig. 3063 (refigured from Dickerson 1915, pl. 7, fig. 9, as *Nyctilochus washingtoniana*). Tejon Fm., Eocene. Tejon quad., Kern Co. CASG 245. Holotype CASG 311 [=CASG 7611]. **Remarks:** *Surcula ioformis* Anderson and G D. Hanna, 1925, *fide* Keen and Bentson (1944: p. 197). [Bursidae].

Oliva californica Anderson, 1905. Addicott 1965b. USGS PP 525-C:C106, fig. 4i. Upper Olcese, Miocene. Caliente quad. (1914), Kern Co. UCMP B1600. Hypotype UCMP 36559. [Olividae].

Oliva (*Oliva*) *californica* Anderson, 1905. Addicott 1970. USGS PP 642:120–121, pl. 16, fig. 17. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS. M1613. Hypotype USNM 650217. [Olividae].

....., pl. 16, fig. 27. Round Mtn. Silt, Miocene. Temblor locality 1, Kern Co. Caliente quad., Kern Co. UCMP 2713. Hypotype

UCMP 36936 (not UCMP 15507 as in pl. caption).

....., pl. 16, fig. 26. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650218.

....., pl. 16, figs. 28–30. Caliente quad. (1914), Kern Co. UCMP B1600. Hypotypes UCMP 36560, 33861.

Oliva spicata (Röding, 1798). [*Porphyria*]. Stanton 1966. Jour. Paleo. 40(1):34, pl. 7, fig. 13. Castaic Fm., Miocene. West of Haskell Canyon, Los Angeles Co. CIT 230 [=LACMIP 10271]. Hypotype LACMIP 4199]. [Olividae].

Oliva spicata (Röding, 1798). [*Porphyria*]. Peska 1992. Bull. SCPS 24(3-4):32, unnumbered fig. p. 34. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Coyote Mtn., Imperial Co. Line drawing, source specimen unknown. [Olividae].

Oliva spicata (Röding 1798). [*Porphyria*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 55, fig. 3.5E. Latrania Fm., Miocene/Pliocene. Painted Gorge, Imperial Co. SDSNH 378. Hypotype SDSNH 12332. [Olividae].

Oliva (*Oliva*) n. sp.? Addicott 1970. USGS PP 642:21, pl. 16, fig. 25. Upper Olcese Sand, Miocene. Bakersfield quad. (1906), Kern Co. UCMP B1587. Hypotype UCMP 33871. [Olividae].

Olivella cf. *O. baetica* Carpenter, 1864b. Woodring and Bramlette 1950 [1951]. USGS PP 222:78, pl. 15, fig. 8. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14648. Hypotype USNM 560093. **Remarks:** Junior synonym of *Callianax alectona* (Duclos, 1835), *fide* Powell et al. (2020: p. 5). [Olividae].

Olivella biplicata (Sowerby I, 1825). [*Oliva*]. G D. Hanna and Hertlein 1943. CDM Bull. 118: 174, fig. 64-7. Merced Fm. [=Wilson Grove Fm.], Pliocene. Vicinity of Russian River, Sonoma Co. CASG 546. Hypotype CASG 5732. **Remarks:** In the genus *Callianax*, *fide* McLean (2007: p. 746.) [Olividae].

Olivella biplicata (Sowerby I, 1825), slender var. [*Oliva*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:78, pl. 19, fig. 7. Careaga Fm. (Graciosa Member), Pliocene. Graciosa Ridge, near USGS 14616. Hypotype USNM 560127. **Remarks:** In the genus *Callianax*, *fide* McLean (2007: p. 746). [Olividae].

....., pl. 19, fig. 11. Graciosa Ridge, near Orcutt, USGS 14619. Hypotype USNM 560126.

Olivella biplicata (Sowerby I, 1825). [*Oliva*]. Moore et al. 1952. Invert. Foss., p. 326, fig. 8-40.14. Pliocene. Line drawing, source specimen unknown. **Remarks:** In the genus *Callianax*, *fide* McLean (2007: p. 746). [Olivlidae].

Olivella biplicata (Sowerby I, 1825). [*Oliva*]. Addicott 1969. Pr.CAS 37(3):62, 68–69, pl. 3, fig. 9. Merced(?) Fm., Santa Clara quad., Santa Clara Co. USGS M1715. Hypotype USNM 650977. **Remarks:** In the genus *Callianax*, *fide* McLean (2007: p. 746). [Olividae].

Olivella biplicata (Sowerby I, 1825). [*Oliva*]. Bedrossian 1974. Calif. Geol. 27(8):175, unnumbered fig. lower left specimen. "Merced" Fm., Pliocene [=Wilson Grove Fm., Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotype CASG determined here as missing. **Remarks:** In the genus *Callianax*, *fide* McLean (2007: p. 746). [Olividae].

Olivella ischnon Keen, 1943 (n. sp.). Tr. SDSNH 10(2):50, pl. 4, figs. 3–4. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121 (not SU 2641 as in text). Holotype SU 7542 [=CASG 72010], unfigured paratype SU 7973 [=CASG 7973]. **Remarks:** Determined here as in the genus *Callianax*. [Olividae].

....., SDSNH 5422 (*ex* SU 2121). Unfigured paratypes SDSNH 613, 937.

Olivella (*Olivella*) *ischnon* Keen, 1943. Addicott 1970. USGS PP 642:121–122, pl. 17, fig. 9. Upper Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP.B1598. Hypotype UCMP 36935. **Remarks:** Determined here as in the genus *Callianax*. [Olividae].

....., pl. 17, fig. 13. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650227.

Olivella aff. *O. mathewsonii* Gabb, 1864. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, figs. 2, 3. Mission Valley, Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20774. [Olividae].

Olivella mathewsonii Gabb, 1864. Squires 1984. NHMLAC CS 350:34, fig. 8o. Llajas Fm., Eocene El Toro Canyon, Santa Susana quad., Los Angeles Co. CSUN 467 [=LACMIP 16079]. Hypotype LACMIP 6545. [Olividae].

Olivella mathewsonii Gabb, 1864. Squires 1987. NHMLAC CS 388:43, fig. 61. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7484. [Olividae].

Olivella mathewsonii Gabb, 1864. Squires 1988c. NHMLAC CS 398:16, fig. 35. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 987 [=LACMIP 16175]. Hypotype LACMIP 7715. [Olividae].

Olivella mathewsonii Gabb, 1864. Squires 2008. NHMLAC CS 517:5, fig. 27. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13428. [Olividae].

Olivella cf. *O. pedroana* (Conrad, 1856b). [*Strephona*]. Woodring et al. 1940 [1941]. USGS PP 195:46, pl. 19, fig. b (refigured in Raup and Stanley (1971, p. 21, fig. 1-12); refigured in Raup and Stanley (1978, p. 19, fig. 1-10); refigured in Prothero (2006, p. 236, fig. 7.3). San Joaquin Fm. (*Neverita* Zone), Pliocene. Butte east of Lower Road, North Dome, Kettleman Hills, Kings Co. USGS 12499. Hypotype USNM (slab with *Neverita reclusiana* (= *Glossaulax reclusiana*), *Anadara trilineata,* and *Volsella* fragments), determined here as missing. **Remarks:** In the genus *Callianax*, *fide* Powell et al. (2020: p. 22). [Olividae].

....., pl. 20, figs. 8, 9. West fork of Arroyo Largo, North Dome, Kettleman Hills, Kings Co. USGS 12498. Hypotypes USNM 495325, 495326.

Olivella pedroana (Conrad, 1855b). [*Strephona*]. Perry 1988. SCMA, p. 21, fig. 12D. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. CASG 66179. Hypotype CASG 66179.01. **Remarks:** In the genus *Callianax*, *fide* Powell et al. (2020: p. 22). [Olividae].

Olivella sp. Addicott 1970. USGS PP 642:122, pl. 17, fig. 10. Basal Jewett Sand, Miocene. Kern Co. USGS M1591. Hypotype USNM 650226. **Remarks:** Determined here as in the genus *Callianax*. [Olividae].

Olivella Fowkes 1982. Coalinga Guidebook, p. 33, unnumbered fig. San Joaquin Fm. ("*Neverita* Zone"), Pliocene. North Dome, Kings Co. WHC hypotype missing? **Remarks:** Determined here as in the genus *Callianax*. [Olividae].

*Olivia** sp. Redman et al., 2007. *Palaios* 22: fig. 3B. Imperial Fm. [=Latrania Fm.], Miocene/ Pliocene. Fossil Canyon, Imperial Co. Hypotype probably at SDSU, current whereabouts unknown. **Remarks:** Error for *Oliva*. [Olividae].

Olivula marysvillensis Dickerson, 1913. Shimer and Shrock 1944. Index Foss. N.A., p. 511, pl. 210, figs. 14, 15 (refigured from Dickerson, 1913, pl. 13, figs. 1a, b). Marysville Fm.?, Eocene. Marysville Buttes, Sutter Co. UCMP 1853. Holotype UCMP 11770. [Olivellidae].

Oniscidia plectata (Waring, 1917). [*Ficus*]. Squires 2018b. Jour. Paleo. 92(5):794–803, figs. 3.1–3.5. Las Virgenes Sandstone, Paleocene. South side Simi Valley, Ventura Co. CASG 61667. Holotype CASG 61667.05. [Harpidae].

....., figs. 3.6–3.10. Lower Santa Susana Fm., Paleocene. Temporary exposure on Mt. Sinai Road, north side Simi Valley, Ventura Co., LACMIP 41691. Hypotype LACMIP 14748.

Opalia anomala Stearns, 1875. DuShane 1979. Veliger 22(2):128, fig. 66. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. Hypotype CASG 11861. **Remarks:** Junior synonym of *Opalia varicostata* Stearns, 1875, *fide* DuShane (1979: p. 128). [Epitoniidae].

Opalia varicostata Stearns, 1875. Woodring et al. 1940 [1941]. USGS PP 195:70, pl. 36, fig. 6. Etchegoin Fm. (*Patinopecten* Zone), Pliocene. North Dome, Kettleman Hills, Kings Co. USGS 12428. Hypotype USNM 495846. [Epitoniidae].

Opalia varicostata Stearns, 1875. Woodring and Bramlette 1950 [1951]. USGS PP 222:74, pl. 10, fig. 2. Foxen Mudstone, Pliocene. Casmalia Hills, near Waldorf, Santa Barbara Co. USGS 14879. Hypotype USNM 560047. [Epitoniidae].

Opalia varicostata Stearns, 1875. Moore et al. 1952. Invert. Foss., p. 326, fig. 8-40.12. Pliocene. Line drawing, source specimen unknown. [Epitoniidae].

Opalia varicostata Stearns, 1875. Moore 1968. SDSNH Occas. Pap. 15:34, pl. 15, fig. a. San Diego Fm., Pliocene. Pacific

Beach, San Diego Co. SDSNH 2452. Hypotype SDSNH 4124]. [Epitoniidae].

Opalia varicostata Stearns, 1875. DuShane 1979. Veliger 22(2):127–128, fig. 65. San Diego Fm., Pliocene. Pacific Beach, San Diego Co. Hypotype CASG 11860. [Epitoniidae].

....., fig. 67. San Diego Fm., Pliocene. Pacific Beach, San Diego, San Diego Co. Lectotype (of DuShane 1979:128) USNM 214040a.

....., fig. 68 [far left specimen]. San Diego Fm., Pliocene. Hills south of Tijuana River, San Diego Co. LACMIP 305. Hypotype LACMIP 6287.

....., fig. 68 [4 right specimens]. San Diego Fm., Pliocene. End of Loring St., San Diego, San Diego Co. LACMIP 122. Hypotypes LACMIP 6288–6291.

Opalia varicostata Stearns, 1875. Groves 1991b. Amer. Conch. 19(4):16, fig. 2.2. Saugus Fm. [=Pico Fm.], Pliocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co. CSUN 1161 [=LACMIP 12600. Hypotype LACMIP 11615]. [Epitoniidae].

Opalia varicostata Stearns, 1875. Vendrasco et al. 2012. NHMLAC CS 520: :17,bfig. 2.5. San Diego Fm., Pliocene. Goat Canyon, near U.S./Mexico border, San Diego Co. LACMIP 305. Hypotype LACMIP 14853 determined here as missing. [Epitoniidae].

Opalia varicostata Stearns, 1875. Powell 2013. Festivus 45(3):20, pl. 1, fig. 7 Reworked shells, Pliocene. Shells found in a modern-day shrimp trap off San Clemente Is., California Channel Ids. CASG 72573. Hypotype CASG.72578. [Epitoniidae].

Opalia (*Rugatiscala*) *williamsoni* (Anderson and Martin, 1914). [*Epitonium*]. Addicott 1970. USGS PP 642:25, 56, pl. 3, fig. 23. Upper Olcese, Miocene. Caliente quad. (1914), Kern Co. UCMP B1599. Hypotype UCMP 15447. [Epitoniidae].

....., pl. 3, figs. 30, 31. Lower Round Mtn., Miocene. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotype UCMP 15448.

Opalia williamsoni (Anderson and Martin, 1914). [*Epitonium*]. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, fig. 8. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al. 1959: pp. 8, 13), Miocene. Shale Pt. quad., Temblor Range, Kern Co. USGS M3986. Hypotype USNM 646800. [Epitoniidae].

Opalia (*Opalia*) *wroblewskyi* (Mörch, 1874). [*Scala*]. Susuki and Stadum 1978. NHMLAC CS 299:6, 20, figs. 22, 23. Unnamed strata, Pliocene. San Clemente Is. Central quad. (1950), San Clemente Is., California Channel Ids. UCLA 6322 [=LACMIP 26322]. Hypotype UCLA 38798 [=LACMIP. 10834]. [Epitoniidae].

Opalia sp. Stadum 1984a. NHFOC Mem. 1:80, pl. 1, fig. 5. Niguel Fm., Pliocene. Orange Co. SDSNH 4080. SDSNH hypotype determined here as missing. [Epitoniidae].

Ophiodermella graciosana (Arnold, 1907). [*Drillia*]. Addicott 1969. Pr.CAS 37(3):62, 68–69, pl. 3, figs. 2, 3. Merced (?) Fm., Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650974. [Borsoniidae].

Ophiodermella graciosana (Arnold, 1907). [*Drillia*]. Yancey 1978. Pr.CAS 41(15):364, 369, fig. 5O. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D3693. Hypotype USNM 251811. [Borsoniidae].

Ophiodermella graciosana (Arnold, 1907). [*Drillia*]. Perry 1988. SCMA, p. 20, fig. 11E. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. CASG hypotype 66145.01 determined here as missing. [Borsoniidae].

Ophiodermella incisa (Carpenter, 1865). [*Drillia*]. Yancey 1978. Pr.CAS 41(15):364, 369, fig. 5Q. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP B4811. Hypotype USNM 251813. [Borsoniidae].

Ophiodermella inermis (Reeve, 1943b). [*Pleurotoma*]. Squires 2012. NHMLAC CS 520:77, fig. 88. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7757. Hypotype LACMIP 14405. [Borsoniidae].

Ophiodermella mercedensis (Martin, 1914). [*Drillia*]. Yancey 1978. Pr.CAS 41(15):364, 369, fig. 5P. Merced Fm., Pliocene/Pleistocene. Twelvemile Creek area, San Mateo Co. UCMP D3364. Hypotype USNM 251812. [Borsoniidae].

Ophiodermella temblorensis (Anderson and Martin, 1914). [*Drillia*]. Addicott 1970. USGS PP 642:134–135, pl. 17, fig. 22; pl. 19, fig. 16. Lower Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1624 (not UCMP B1638 as in pl. 17 caption). Hypotype UCMP 36937. [Borsoniidae].

....., pl. 19, figs. 5–7, 9. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotypes USNM 650259–650262.

....., pl. 19, figs. 10, 11. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 37095.

....., pl. 19, figs. 12, 13. Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype UCMP 37096.

Ornopsis? n. sp. Saul 1986. SEPM Guidebook 49:30, figs. 57, 58. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6525 [=LACMIP 26525]. Hypotype LACMIP 7564. [Fasciolariidae].

Otostoma aethes Squires and Saul, 1993 (n. sp.). Veliger 36(3):261–263, figs. 2–4. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek, at the narrows, south shore of Lake Nacimiento, San Luis Obispo Co. UCMP B2368. Holotype UCMP 398607. [Neritide]

Otostoma bisculptata (M.A. Hanna, 1927). [*Philne**]. Squires 1995. Veliger 38(2):177–179, figs. 2, 3. Ardath Shale or Scripps Fm., Eocene. Rose Canyon, San Diego Co. CASG 826. Holotype CASG 2189 [=CASG 826.01]. **Remarks:** Error for *Philine*. [Neritide].

....., figs. 4–6. Ardath shale, Eocene. Rose Canyon, San Diego Co. LACMIP 26. Hypotype LACMIP 12353.

Pachychilus (*Loxotrema*) *turritum* (Gabb, 1868). [*Loxotrema*]. Wenz 1939. Handbh. Palaoz. 6:686, fig. 1968 (refigured from Stewart, 1926 [1927], pl. 26, fig. 4 (as *Loxotrema turritum*)). Domengine Fm., Eocene. West of Griswold's, Fresno Co.. Lectotype (of Stewart, 1926 [1927]: p. 347, ANSP 4228, paralectotype ANSP 79510]. **Remarks:** In the genus *Loxotrema*, *fide* Squires (1999c: p. 16). [Melanopsidae].

Pachycrommium? *clarki* (Stewart, 1926 [1927]). [*Amaurellina*]. Givens 1974. UCPG 109:73, pl. 8, fig. 6. Juncal Fm., Eocene. San Guillermo quad. (1943), Ventura Co. UCR 4699. Hypotype UCR 4699/101. **Remarks:** In the genus *Pachycrommium*, *fide* Squires (1987: p. 36). [Naticidae].

....., pl. 8, fig. 10. Piru Creek, Lockwood Valley quad. (1943), Ventura Co. UCR 4674. Hypotype UCR 4674/10.

Pachycrommium clarki (Stewart, 1926 [1927]). [*Amaurellina*]. Marincovich 1977. BAP 70(294):238–241, pl. 20, figs. 4, 5. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad., Ventura Co. UCMP 7004. Holotype UCMP 31385, paratype UCMP 31386. [Naticidae].

....., pl. 20, figs. 8, 9. Domengine Fm., Eocene. Priest Valley quad., San Benito Co. UCMP. A1016]. Holotype (of *Amaurellina*(?) *multiangulata* Vokes 1939) UCMP 15866.

....., pl. 20, fig. 10. Llajas Fm., Eocene. Las Llajas Canyon Santa Susana quad., Ventura Co. UCMP 7003. Hypotype UCMP 14410.

Pachycrommium clarki (Stewart, 1926 [1927]). [*Amaurellina*]. Squires 1983b. SEPM Guidebook 35:88, fig. 9D. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co. LACMIP16115. Hypotype LACMIP 6526. [Naticidae].

Pachycrommium clarki (Stewart, 1926 [1927]). [*Amaurellina*]. Squires 1984. NHMLAC CS 350:24–25, fig. 7e. Llajas Fm., Eocene Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6526. [Naticidae].

Pachycrommium clarki (Stewart, 1926 [1927]). [*Amaurellina*]. Squires 1987. NHMLAC CS 388: 36, fig. 44. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 358 [=LACMIP 16114]. Hypotype LACMIP 7469. [Naticidae].

Pachycrommium clarki (Stewart, 1926 [1927]). [*Amaurellina*]. Squires 1988c. NHMLAC CS 398:12, fig. 25. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 987 [=LACMIP 16175]. Hypotype

LACMIP 7706. [Naticidae].

Pachycrommium clarki (Stewart, 1926 [1927]). [*Amaurellina*]. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 25. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 672 [=LACMIP 16274]. Hypotype LACMIP 11465. [Naticidae].

Pachycrommium clarki (Stewart, 1926 [1927]) (not 1917 as in pl caption). [*Amaurellina*]. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 11. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23723. Hypotype LACMIP 11651. [Naticidae].

....., pl. 2, fig. 12. Upper Sespe Creek, Ventura Co. LACMIP 20581. Hypotype LACMIP 11652.

Pachycrommium clarki (Stewart, 1926 [1927]). [*Amaurellina*]. Squires 1999b. NHMLAC CS 479: 18, figs. 35, 36. Santa Susana Fm., Eocene. Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 967 [=LACMIP 12648]. Hypotype LACMIP 12683. [Naticidae].

Pachycromium clarki (Stewart, 1926 [1927]). [*Amaurellina*]. Squires 2008. NHMLAC CS 517:5, fig. 22. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13423. [Naticidae].

Pachycrommium? n. sp. Givens 1974. UCPG 109:73, pl. 8, figs. 9, 11. Juncal Fm., Eocene. East side of Hot Springs Canyon, Topatopa Mts. quad. (1943), Ventura Co. UCR 4668. Hypotype UCR 4668/11. [Naticidae].

Paraseraphs erraticus (Cooper, 1894). [*Tornatina*]. Jung 1974. Pal. Amer. 8(47):41, pl. 12, figs. 8–10. Avenal Fm., Eocene. Domengine [Ranch?], Kings Co. UCMP A976. Plastoholotype (of *Terebellum californicum* Vokes 1939) UCMP 15820 [=NMB H16551]. [Seraphsidae].

....., pl. 12, figs. 11, 12. Llajas Fm., Eocene. Simi Valley, Ventura Co. UCMP 3296. Plastoparatype (of *Terebellum californicum* Vokes, 1939) UCMP 15822 [=NMB H16553].

....., pl. 12, figs. 13, 14. [Domengine Fm.], Eocene. Garza Creek, Kings Co. UCMP A1164. Plastoparatype (of *Terebellum californicum* Vokes, 1939, UCMP 15821[=NMB H16553].

....., pl. 13, figs. 1–3. Cretaceous B [=Eocene]. Rose Canyon, San Diego Co. CASG 66186. Holotype CASG 608 [=CASG 66186.01 and plastotype NMB 16550].

Paraseraphs erraticus (Cooper, 1894). [*Tornatina*]. Squires 1984. NHMLAC CS 350:23, fig. 7a. Llajas Fm., Eocene Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6522. [Seraphsidae].

Paraseraphs erraticus (Cooper, 1894). [*Tornatina*]. Squires 1987. NHMLAC CS 388:33–34, fig. 38. Juncal Fm., Eocene Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 362 [=LACMIP 16273]. Hypotype LACMIP 7465. [Seraphsidae].

Paraseraphs erraticus (Cooper, 1894). [*Tornatina*]. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 8. Juncal Fm., Eocene. Whitaker Peak area, Los Angeles Co. CSUN 362 [=LACMIP 16273]. Hypotype LACMIP 7456. [Seraphsidae].

Paraseraphs erraticus (Cooper, 1894). [*Tornatina*]. Squires 1988c. NHMLAC CS 398:12, fig. 22. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 981 [=LACMIP 16142]. Hypotype LACMIP 7703. [Seraphsidae].

Parasyrinx boundeyi (Waring, 1917). [*Bathytoma*]. Squires 2000. Veliger 43(3):282–284, figs. 1,2. Santa Susana Fm., Paleocene Runkle Canyon, Simi Hills, Calabasas quad. (1952, PR 1967), Ventura Co.. CASG 61919 (not CASG 61901 as published). Holotype CASG 61919.01 (not CASG 61901.01 as in text). [Turridae].

....., figs. 3, 4. Meier Canyon, Simi Hills, Calabasas quad. (1952, PR 1967), Ventura Co.. UCR 4572. Paratype (of *Parasyrinx hickmani* Zinsmeister, 1983b) UCR. 4572/100.

....., figs. 5–8. Concretion from west side of Meier Canyon, Calabasas quad. (1952, PR 1967), Ventura Co.. UCR 6668. Holotype (of *Parasyrinx hickmani* Zinsmeister, 1983b) UCR 6668/36.

Parasyrinx hickmani Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1300, fig. 3W. Santa Susana Fm., Paleocene. Meier Canyon, Calabasas quad., Simi Hills, Ventura Co. UCR 6668. Holotype UCR 6668/36. **Remarks:** Although the species name should have been correctly formed as the genitive noun "*hickmanae*," it is left here as is, for taxonomic stability, as should subsequent authors, in accordance with ICZN Article 32.5.1 (ICZN, 1999). Junior synonym of *Parasyrinx boundeyi* (Waring, 1917), *fide* Squires (2000: p. 282). [Turridae].

....., fig. 3V. Simi Hills, Ventura Co. UCR. 4572. Paratype UCR 4572/100.

Parasyrinx n. sp. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 27. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6668. Hypotype UCR 6668/36. **Remarks:** *Parasyrinx boundeyi* (Waring, 1917), *fide* Squires (2000:p. 282). [Turridae].

Patelloida tejonensis (Gabb, 1869b). [?*Acmaea*]. Lindberg and Squires, 1990. Jour. Paleo. 64(4): 580–582, figs. 3.1, 3.2. Tejon Fm., Eocene. Liveoak Canyon, Kern Co. Lectotype (of Stewart 1926 [1927]: p. 312) ANSP 4229 .

....., fig. 3.3. Edmonston Pumping Plant area, Tejon Fm., Pastoria Creek quad. (1974), Kern Co. CSUN 1201 [=UCMP 10851]. Hypotype UCMP 38520.

....., figs. 3.4, 3.5. Edmonston Pumping Plant area, Tejon Fm., Pastoria Creek quad. (1974), Kern Co. CSUN 1203 [=UCMP 10852]. Hypotypes UCMP 38521, 38522.

Patelloida triquetrus Lindberg and Squires, 1990 (n. sp.). Jour. Paleo. 64(4):582, figs. 5.1–5.7. Tejon Fm., Eocene. Pastoria Creek quad. (1974), Kern Co. CSUN 1203 [=UCMP 10852]. Holotype UCMP 38523, paratypes UCMP 38524a, 38524b, unfigured paratypes UCMP 38524c, USNM 454586].

Patelloida vokesi (Hickman, 1980). [*Acmaea*]. Lindberg and Squires 1990. Jour. Paleo. 64(4):582–584, figs. 6.4–6.6, 6.8. Tejon Fm., Eocene. Edmonston Pumping Plant area, Pastoria Creek quad. (1974), Kern Co. CSUN 1203 [=UCMP 10852]. Hypotypes UCMP 38525, 38526.

Patelloida sp. Lindberg and Squires 1990. Jour. Paleo. 64(4):584, figs. 7.1–7.4. Tejon Fm., Eocene. Edmonston Pumping Plant area, Pastoria Creek quad. (1974), Kern Co. CSUN.1203 [=UCMP 10852]. Hypotypes UCMP 38527, 38528.

....., figs. 7.5, 7.6. Edmonston Pumping Plant area Pastoria Creek quad., Kern Co. USGS M4639. [Hypotype USNM 452886].

Pegocomptus howardi (Dickerson, 1914b). [*Molophorus* (?)]. Zinsmeister 1983b. Jour. Paleo. 57(6):1296, fig. 2R. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6679. Hypotype UCR 6679/110. **Remarks:** In the genus *Sulcobuccinum*, *fide* Vermeij (1998: p. 81). [Pseudolividae].

....., fig. 2S. Simi Hills, Ventura Co. UCR 6840. Hypotype UCR 6840/100. UCR hypotype determined here as missing.

Penion titan (Waring, 1917). [*Trachytriton*]. Zinsmeister 1983b. Jour. Paleo. 57(6):1294, fig. 3H. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCLA 2688 [=LACMIP 22688]. Hypotype UCLA 59253 [=LACMIP 10983]. **Remarks:** In the genus *Saxituberosa* [family Fasciolariidae?], *fide* Squires and Saul (2006: p. 73). [Fasciolariidae].

....., fig. 3I. Simi Hills, Ventura Co. UCLA2701 [=LACMIP 22701]. Hypotype UCLA 59254 [=LACMIP 10982].

*Penion titon** (Waring, 1917). [*Tachytriton*]. Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, fig. 22. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCLA 2701 [=LACMIP 22701]. Hypotype UCLA 59254 (not UCLA 59353 as cited in pl. caption) [=LACMIP 10982]. **Remarks:** Error for *titan*. In the genus *Saxituberosa* [family Fasciolariidae?], *fide* Squires and Saul (2006: p. 73). [Fasciolariidae].

....., pl. 3, fig. 23. Simi Hills, Ventura Co. UCLA2688 [=LACMIP 22688)]. Hypotype UCLA 59253 (not UCLA 59354 as cited in pl. caption) [=LACMIP 10983].

Perissitys stewarti (Zinsmeister, 1983). [*Cophocara*]. Popenoe and Saul, 1987. NHMLAC CS 380:21, fig. 96. Laguna Seca Fm., Paleocene. Ortigalita Creek, Charleston School quad., Merced Co. UCMP. A3262. Hypotype UCMP. 37996. [Perissityidae].

....., figs. 97, 101. South of Chaney Ranch Canyon, Panoche Hills, Chounet Ranch quad., Fresno Co. SU 1068 [=CASG

61617]. Hypotype CASG 61617.01.

...., figs. 98, 103. Between Marca and Chaney Ranch Canyon, Panoche Hills, Chounet Ranch quad., Fresno Co. SU 2245 [=CASG 61619]. Hypotype CASG 61619.01.

....., figs. 99, 100, 102. Panoche Hills, Chounet Ranch quad., Fresno Co. SU 460 [=CASG 61616]. Hypotypes CASG 61616.01, 61616.02.

Perissolax blakei (Conrad, 1855b). [*Busycon*]. Shimer and Shrock 1944. Index Foss. N.A., p. 501, pl. 206, fig. 5 (refigured from Gabb 1864, pl. 21, fig. 110). [Tejon Fm.], Eocene. Near Ft. Tejon, Kern Co. Type [=Holotype?] ANSP 4189 (missing, *fide* K. Estes-Smargianni, personal communication, 2019). **Remarks:** In the genus *Pseudoperissolax* and family Muricidae, *fide* Squires (2015: pp. 578, 581). [Muricidae].

Perissolax blakei (Conrad, 1855b). [*Busycon*]. Anonymous 1952. Min. Info. Serv. 5(6):1, unnumbered fig. (refigured in Ransom 1964, p. 42, fig. 1). Eocene. Line drawing, source specimen unknown. **Remarks:** In the genus *Pseudoperissolax* and family Muricidae, *fide* Squires (2015: pp. 578, 581). [Muricdae].

Persististrombus obliteratus (G D. Hanna, 1926). [*Strombus*]. Powell 2008. USGS SIR 2008-5155:16, fig. 5bb (latex cast) (as *Strombus obliteratus*). Imperial Fm. [=Latrania Fm.], Pliocene. Near Travertine Rock, Imperial Co. (not San Diego Co. as in locality description). USGS M9779 [=USGS M9778]. Hypotype USNM 486909. [Strombidae].

Perse corrugatum Clark, 1918. Wenz 1943. Handbh. Palaoz. 6:1264, fig. 3597 (refigured from Clark, 1918, pl. 23, fig. 2). San Lorenzo Fm., Oligocene. San Pablo Creek, Sobrante Ridge, Contra Costa Co. UCMP 2754. Holotype UCMP 11233]. [Fasciolariidae].

Perse martinez (Gabb, 1864). [*Fusus*]. Givens 1974. UCPG 109:85–86, pl. 10, fig. 9. Juncal Fm., Eocene. Alamo Creek above the mouth of Wagon Rd. Canyon, San Guillermo quad. (1943), Ventura Co. UCR 4707. Hypotype UCR 4707/201. [Fasciolariidae].

Perse sinuata (Gabb, 1864). [*Fasciolaria*]. Givens 1974. UCPG 109:86, pl. 10, fig. 13. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4719. Hypotype UCR 4719/2. [Fasciolariidae].

Phalium* (*Semicassis*) *louella Squires and Advocate, 1986 (n. sp.). Jour. Paleo. 60(4):858–859, figs. 2.11, 2.12. Maniobra Fm., Eocene. Orocopia Mtns., Canyon Spring SW quad. (1963), Riverside Co. CSUN 665 [=LACMIP 16335]. Holotype LACMIP 7166, unfigured paratype LACMIP 7167. **Remarks:** In the genus *Galeodea, fide* Squires (2019: p. 8). [Cassidae].

Phalium (*Semicassis*) *louella* Squires and Advocate, 1986. Squires 1991c. SEPM Guidebook 68: 222, pl. 2, fig. 2. Maniobra Fm., Eocene. Red Canyon quad. (1986), Riverside Co. CSUN 665 [=LACMIP 16335]. Holotype LACMIP 7166. **Remarks:** In the genus *Galeodea*, *fide* Squires (2019: p. 8). [Cassidae].

Phalium (*Semicassis*) *tuberculiformis* (G D. Hanna, 1924). [*Morio*]. Squires 1984. NHMLAC CS 350:27, fig. 7l. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6532. **Remarks:** In the genus *Galeodea*, *fide* Squires (2019: p. 8). [Cassidae].

Phalium (*Semicassis*) *tuberculiformis* (G D. Hanna, 1924). [*Morio*]. Squires 1987. NHMLAC CS 388:40, fig. 50. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 219 [=LACMIP 16100]. Hypotype LACMIP 7475. **Remarks:** In the genus *Galeodea*, *fide* Squires (2019: p. 8). [Cassidae].

?*Phalium* (*Semicassis*) *tuberculiformis* (G D. Hanna, 1924). [*Morio*]. Squires, 1999b. NHMLAC CS 479:19, fig. 37. Santa Susana Fm., Eocene. Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 967 [=LACMIP 12648. Hypotype LACMIP 12684. [Cassidae]. **Remarks:** In the genus *Galeodea*, *fide* Squires (2019: p. 8). [Cassidae].

Philine (*Megistostoma*) *gabbianum* (Stoliczka, 1868). [*Bullaea*]. Zilch 1959. Handbh. Palaoz. 6(2):30, fig. 95 (refigured from Stewart, 1926 [1927], pl. 26, fig. 1 (as *Megistostoma gabbianum*)). "Martinez" Fm., Eocene. Martinez, Contra Costa Co.. Holotype ANSP 4216. **Remarks:** *Megistostoma striata* Gabb, 1864, see Groves and Squires (2018: p. 103) for the complicated nomenclatural history of this species. [Philinidae].

"*Phos*" *dumbleanus* Anderson *in* G D. Hanna, 1924. Woodring et al. 1946. USGS PP 207:27 pl. 28, figs. 5, 6 (clay peels). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, west side of George

F. Canyon, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotypes USNM 497074, 497075. [Buccinidae].

Platyoptera pacifica Squires and Demetrion, 1990. Squires, 2001 NHMLAC CS 489:8, fig. 14. Llajas Fm., Eocene. Simi Arroyo area, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 548 [= LACMIP 15450. Hypotype LACMIP 12734. [Strombidae].

Pleurofusia fresnoensis (Arnold, 1909 [1910]). [*Pleurotoma*]. Givens 1974. UCPG 109:90, pl. 11, fig. 9. Juncal Fm., Eocene. West of Reyes Peak, Reyes Peak quad. (1943), Ventura Co. UCR 4706. Hypotype UCR 4706/231. [Drilliidae].

Pleurofusia sp. aff. *P. fresnoensis* (Arnold, 1909 [1910]). [*Pleurotoma*]. Smith 1975b. SEPM Symposium vol., p. 376, pl. 1, fig. 9. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype UCMP 14199. [Drilliidae].

Pleurofusia fresnoensis (Arnold, 1909 [1910]). [*Pleurotoma*]. Squires 1984. NHMLAC CS 350:36, fig. 9g. Llajas Fm., Eocene Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6553. [Drilliidae].

Pleurofusia fresnoensis (Arnold, 1909 [1910]). [*Pleurotoma*]. Squires 1987. NHMLAC CS 388:49, fig. 75. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 362 [=LACMIP 16273]. Hypotype LACMIP 7495. [Drilliidae].

Pleurofusia fresnoensis (Arnold, 1909 [1910). [*Pleurotoma*]. Squires 1991c. SEPM Guidebook 68: 222, pl. 2, fig. 10. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. CSUN 662 [=LACMIP 23779]. Hypotype LACMIP 11473. [Drilliidae].

Pleurofusia fresnoensis (Arnold, 1909 [1910]). [*Pleurotoma*]. Squires 2008. NHMLAC CS 517:5, fig. 30. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13431. [Drilliidae].

Pleuroploca princeps (Sowerby I, 1825). [*Fasciolaria*]. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 54, fig. 3.10A. Latrania Fm., Miocene/Pliocene. Coyote Mtn., Imperial Co. SDSNH 44. Hypotype SDSNH 12174. **Remarks:** In the genus *Triplofusus*, *fide* Snyder et al. (2012: p. 43). [Fasciolariidae].

….., fig. 3.10B. Coyote Mtn., Imperial Co. SDSNH 2895. Hypotype SDSNH 12183.

"*Pleurotoma*" cf. *P. coalingensis* Arnold, 1909 [1910]. Woodring et al. 1940 [1941]. USGS PP 195:33, pl. 11, fig. 4. San Joaquin Fm. (*Acila* Zone), Pliocene. Arroyo Hondo, North Dome, Kettleman Hills, Kings Co. USGS 12340. Hypotype USNM 495711. [Turridae].

Pleurotomaria vacavillensis Hickman, 1976b (n. sp.). Jour. Paleo. 50(6):1099–1100, pl. 1, fig. 8, pl. 2, figs. 1, 2. Unknown Fm., Upper Cretaceous or lower Eocene. Near Vacaville, Solano Co. UCMP A6294. Holotype UCMP 14237. In the genus *Leptomaria*, *fide* Harasewych et al. (2009: p. 758). [Pleurotomariidae]

Pleurotomaria (*Entemnotrochus*?) n. sp.? Hickman 1976b. Jour. Paleo. 50(6):1100, pl. 1, figs. 3, 10. Capay Fm., Eocene. Putah Creek, Yolo Co. UCMP A3990. Hypotype UCMP 14236. [Pleurotomariidae]

Plicifusus* (*Latifusus*) *indomitus Talmadge, 1971 (n. sp.). Veliger 14(1):42–43, figs. 1, 2. Rio Dell Fm., Wildcat Group (of Ogle 1953:24–26), Pliocene. Eel River, Scotia and Rio Dell, Humboldt Co. [CASG 61763]. Holotype CASG 13651 [=CASG 61763.01]. [Buccinidae].

Polinices (*Euspira*?) *clementensis* (M.A. Hanna, 1927). [*Natica*]. Marincovich 1977. BAP 70(294):290–291, pl. 27, fig. 8. Ardath Shale, Eocene. Rose Creek, Soledad Mtn., La Jolla quad., San Diego Co. UCMP 3990. Holotype UCMP 31003. [Naticidae].

Polinices (*Euspira*) *diabloensis* (Clark, 1915). [*Natica*]. Marincovich 1977. BAP 70(294):267–269, pl. 23, fig. 10. San Pablo Fm., Miocene. Walnut Creek, Contra Costa Co. UCMP 1947]. Holotype UCMP 11595. [Naticidae].

Polinices (*Euspira*) *galianoi* Dall, 1909. Marincovich 1977. BAP 70(294):264–267, pl. 23, fig. 8. Etchegoin Fm., Pliocene. Fresno Co. UCMP 2679. Holotype (of *Natica orbicularis* Nomland 1916b) UCMP 12058. [Naticidae].

Polinices (*Polinices*) *gesteri* (Dickerson, 1916). [*Natica*]. Marincovich 1977. BAP 70(294):251–252, pl. 21, fig. 10. Lodo Fm., Paleocene. Salt Creek area, Coalinga quad., Fresno Co. UCMP. 1817. Holotype UCMP 11829. [Naticidae].

....., pl. 21, fig. 11. Meganos Fm., Paleocene. Northeast of Mt. Diablo, Contra Costa Co. UCMP 3577. Hypotype UCMP 14411.

Polinices hornii (Gabb, 1864). [*Lunatia*]. Givens 1974. UCPG 109:75–76, pl. 8, fig. 2. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4720. Hypotype UCR 4720/2. [Naticidae].

Polinices (*Polinices*) *hornii* (Gabb, 1864). [*Lunatia*]. Marincovich 1977. BAP 70(294):261–262, pl. 21, figs. 12–14. Tejon Fm., Eocene. Alizos Creek [=Live Oak Canyon], near Ft. Tejon, Kern Co. Lectotype (of Stewart, 1926 [1927]: p. 324) ANSP 4214, paralectotypes ANSP. 79445. [Naticidae].

....., pl. 23, fig. 2. Martinez Fm. [=Santa Susana Fm.], Paleocene. Unknown locality, Ventura Co. UCR 7529. Hypotype UCR 7529/1.

Polinices hornii (Gabb, 1864). [*Lunatia*]. Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, figs. 10, 11. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6670. Hypotype UCR 6670/6. [Naticidae].

Polinices (*Neverita*) *inezana* (Conrad, 1857d). [*Natica*]. Weaver and Kleinpell 1963. UCPG 43:187, pl. 24, fig. 14. Gaviota Fm., Eocene. West of Cuarta Canyon, Pt. Conception quad., Santa Barbara Co. UCMP B6992. Hypotype SU 9199 [=CASG 70207]. [Naticidae].

Polinices lewisii (Gould, 1847). [*Natica*]. Perry 1977. Foss. Santa Cruz Co., p. 22, top fig. Purisima Fm., Pliocene. Santa Cruz Co. Hypotype determined here as missing,. **Remarks:** In the genus *Euspira*, *fide* McLean (2007: p. 737). [Naticidae]

Polinices lewisii (Gould, 1847). [*Natica*]. Perry 1988. SCMA, p. 21, fig. 12A. Purisima Fm., Miocene/Pliocene. Capitola, Santa Cruz Co. CASG. 66130. Hypotype CASG 66130.01. **Remarks:** In the genus *Euspira*, *fide* McLean (2007: p. 737). [Naticidae].

Polinices (*Euspira*) *lincolnensis* (Weaver, 1916). [*Natica*]. Marincovich 1977. BAP 70(294):286–289, pl. 27, fig. 6. Round Mtn. Silt, Miocene. Kern Co. Hypotype USNM 339910 determined here as missing. [Naticidae].

Polinices (*Euspira*) *nuciformis* (Gabb, 1864). [*Lunatia*]. Marincovich 1977. BAP 70(294):281–285, pl. 26, fig. 6. Tejon Fm., Eocene. Alizos Creek [=Live Oak Canyon], near Ft. Tejon, Kern Co. Lectotype (of Stewart 1926 [1927]: p. 323) ANSP 4213, unfigured paralectotypes (2) ANSP 79446. [Naticidae].

Polinices (*Euspira*) *nuciformis* (Gabb, 1864). [*Lunatia*]. Squires 1984. NHMLAC CS 350:25, fig. 7f. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype UCLA 59276 [=LACMIP 10552]. [Naticidae].

Polinices (*Euspira*) *nuciformis* (Gabb, 1864) (not 1869 as in fig. caption). [*Lunatia*]. Squires 1987. NHMLAC CS 388:37, fig. 46. Matilija Sandstone?, Eocene. Sharps Canyon, Los Angeles Co. CSUN 219 [=LACMIP 16100]. Hypotype LACMIP 7471. [Naticidae].

Polinices (*Euspira*) *nuciformis* (Gabb, 1864). [*Lunatia*]. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 13. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 20581. Hypotype LACMIP 11653. [Naticidae].

"*Polinices*" sp.cf. "*P.*" *pinyonensis* Dickerson, 1914b. [*Natica*]. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, fig. 22. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. UCMP A9717. Hypotype UCMP 14210. **Remarks:** *Crommium pinyonensis* (Dickerson, 1914), *fide* Squires (1987: p. 35). [Naticidae].

....., pl. 2, fig. 23. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073. Hypotype SU 10243 [=CASG 61666.12]. **Remarks:** *Crommium pinyonensis* (Dickerson, 1914), *fide* Marincovich (1977: p. 227).

Polinices (*Euspira*) *ramonensis* (Clark, 1918). [*Natica* (*Euspira*)]. Marincovich 1977. BAP 70 (294):269–270, pl. 26, fig. 1. San Ramon Fm., Oligocene/Miocene. Southwest of Walnut Creek, Contra Costa Co. [UCMP 1131]. Holotype UCMP 11257. [Naticidae].

Polinices reclusianus (Deshayes, 1839). [*Natica*]. Natland 1971. Terra 10(2):22, fig. 11 (not fig. 12) (with *Cancellaria tritonidea*), fig. 12 (as fig. 11) (upper row [with *Boreotrophon* sp. (not *Cancellaria*)] and middle row [right 6 specimens]). "Fernando Fm.," [=Pico Fm.], Pliocene. Arco Towers excavation, downtown Los Angeles, Los Angeles Co. LACMIP 1219]. Hypotypes current whereabouts unknown. **Remarks:** In the genus *Glossaulax*, *fide* McLean (2007: p. 737). [Naticidae].

Polinices (*Neverita*) *reclusiana* var. *andersoni* Clark, 1918.). [*Natica* (*Neverita*)]. Lutz 1951. UCPG 28(13):391, pl. 18, fig. 4. Sobrante Fm., Miocene. Contra Costa Co. UCMP A4928. Hypotype UCMP 34158. **Remarks:** *Neverita* (*Glossaulax*) *andersoni* (Clark, 1918), *fide* Addicott (1970: p. 67); *fide* Marincovich (1977: p. 328). In the genus *Glossaulax*, *fide* Majima (1989: p. 58). [Naticidae].

Polinices (*Neverita*) *secta* (Gabb, 1864). [*Neverita*]. Weaver and Kleinpell 1963. UCPG 43:188, pl. 24, fig. 15. Gaviota Fm., Eocene El Jaro Creek Lompoc quad., Santa Barbara Co. UCMP B7016. Hypotype SU 9200 [=CASG 70245]. **Remarks:** Junior synonym of *Neverita* (*Glossaulax*) *reclusiana* (Deshayes, 1839), *fide* Marincovich (1977: p. 318). Determined here as in the genus *Glossaulax*. [Naticidae].

Polinices (*Euspira*) *simiensis* Nelson, 1925. Marincovich 1977. BAP 70(294):289–290, pl. 27, fig. 7. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Calabasas quad., Ventura Co. [UCMP 3776]. Holotype UCMP 30710. [Naticidae].

Polinices simiensis Nelson, 1925. Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, fig. 18. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 4571. Hypotype UCR 4571/7. [Naticidae].

Polinices susanaensis Nelson, 1925. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, fig. 21. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype SU/CASG 10242. [Naticidae].

Polinices (*Polinices*) *susanaensis* Nelson, 1925. Marincovich 1977. BAP 70(294):263–264, pl. 23, fig. 3. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Camulos quad., Ventura Co. UCMP 4009. Holotype UCMP 30711. [Naticidae].

....., pl. 23, figs. 4, 6. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad.], Fresno Co. UCMPA9717]. Hypotypes UCMP 14413, 14414.

....., pl. 23, fig. 5. [Panoche quad.], Fresno Co. SU 2073. Hypotype SU 10276 [=CASG 72666].

Polinices victoriana Clark and Arnold, 1923. Addicott 1970. USGS PP 642:67, pl. 5, figs. 17–18, 21. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotypes USNM 650101–650103. **Remarks:** *Polinices* (*Euspira*) *lincolnensis* (Weaver, 1916), *fide* Marincovich (1977: p. 286). [Naticidae].

Polinices n. sp.? Addicott 1973b. USGS PP 791:7, 19, pl. 9, fig. 10. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM 646619. [Naticidae].

Polinices (*Euspira*) n. sp. Saul 1986. SEPM Guidebook 49:29, figs. 48, 49. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6526 [=LACMIP 26526]. Hypotype LACMIP 7561. [Naticidae].

Polinices sp. Bedrossian 1971. Calif. Geol. 24(12):231, unnumbered fig., left specimen. "Merced" Fm., Pliocene [=Wilson Grove Fm.], Mio-Pliocene. Sonoma Co. CASG hypotype determined here as missing. [Naticidae].

Polinices sp. Bedrossian 1974. Calif. Geol. 27(8):175, unnumbered fig., center specimen; back cover, lower left specimen. "Merced" Fm., Pliocene [=Wilson Grove Fm.], Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. CASG hypotype determined here as missing. [Naticidae].

cf. *Polinices* sp. Cōcke 2015. Foss. Palos Verdes Hills, p. 78, unnumbered fig. (upper). Monterey Fm., Miocene. George F. Canyon, Palos Verdes Hills, Los Angeles Co. Hypotype to be donated to LACMIP [Naticidae].

Polinices steinkern. Walker 1992. Jour. Paleo. 66(4):549, figs. 8.1–8.4. (with impressions of encrusting barnacles and bryozoans). Pancho Rico Fm., Pliocene. Priest Valley quad., San Benito Co. UCMP A3293. Hypotype UCMP 39687. [Naticidae].

Polystira englishi Addicott, 1970. (n. sp.). USGS PP 642:127–128, pl. 17, figs. 28, 29, 38, 39. Upper Olcese Sand, Miocene. This locality occupies an area in the hills just north of the Kern River, Kern Co. CASG 2064 [=CASG 65). Holotype CASG 12937 [=CASG 2064.02), paratype CASG 12938 [=CASG 2064.03). [Turridae].

....., pl. 17, fig. 36. Lower Round Mtn. Silt, Kern Co. Temblor locality 4, Caliente quad., Kern Co. UCMP 2716. Hypotype UCMP 36939.

Polytropa funkeana Adegoke, 1969 (n. sp.). UCPG 80:177, pl. 12, figs. 2, 3. Etchegoin Fm., Pliocene. *Anadara* bed Reef Ridge quad., Kings Co. UCMP D1205. Holotype UCMP. 36847. [Muricidae].

....., pl. 12, figs. 4, 7, 12, 13. Reef Ridge quad., Kings Co. UCMP D1127. Paratypes UCMP 36848, 36849.

Pomaulax gradata Grant and Gale, 1931. Squires 2012. NHMLAC CS 520:77, figs. 59, 60. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14380. **Remarks:** Determined here as in the genus *Megastraea* [Turbinidae].

Operculum of ?*Pomaulax gradata* Grant and Gale, 1931. Squires 2012. NHMLAC CS 520:77, fig. 61. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14381. **Remarks:** Determined here as in the genus *Megastraea*. [Turbinidae].

Popenoeum maritimus Squires et al., 1989 (n. sp.). Jour. Paleo. 63(2):214–215, unfigured paratype. San Francisquito Fm., Paleocene. Warm Springs Mtn., Fish Canyon, Warm Springs Mtn. quad. (1958), Los Angeles Co. LACMIP 21579 [*ex* UCLA 1579]. Unfigured paratype LACMIP 7956. **Remarks:** In the genus *Sulcobuccinum*, *fide* Vermeij (1998: pp. 81, 82). [Pseudolividae].

....., Redrock Mtn. quad. (1936), Los Angeles Co. LACMIP 21579A [*ex* UCLA 1579A]. Unfigured paratype LACMIP 7957.

....., North of Warm Springs Mtn., Warm Springs Mtn. quad. (1958), Los Angeles Co. LACMIP. 21587 [*ex* UCLA 1587]. Unfigured paratype LACMIP 7958.

Potamides* (*Potamidopsis*) *californica Squires, 1991d (n. sp.). Veliger 34(4):356–358, figs. 2–5. Matilija Sandstone, Eocene. Reyes Peak quad. (1943), in the vicinity of Beartrap Creek, Ventura Co. LACMIP 7226. Holotype LACMIP 11300, paratypes LACMIP. 11301, 11302. [Potamididae]. **Remarks**: In the genus *Potamidopsis*, *fide* Reid et al. (2008: table 4 on p. 691).

Potamides (*Potamidopsis*) *californica* Squires, 1991d. Squires 1999c. NHMLAC CS 480:10, 12, figs. 4, 5. Matilija Sandstone, Eocene. Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1453 [= LACMIP 16962]. Hypotype LACMIP 12440, 12441. [Potamididae]. **Remarks**: In the genus *Potamidopsis*, *fide* Reid et al. (2008: table 4 on p. 691).

Potamides carbonicola Cooper, 1894. Coan 1981 [1982]. Univ. Idaho Press, p. 160, figs. 12.14–12.19 (refigured from Cooper, 1894, pl. 1, figs. 14–19 (as *Cerithidea carbonicola*)). "Cretaceous B" [=Domengine Fm.], Eocene. Head wall of coal mine, Huron, Fresno Co. Syntypes CASG 16 (fig. 18), 16a (fig. 16), 16b (fig. 14), 16c (fig. 15), 16d (fig. 17) [*ex* CSMB 13737]. Cooper's fig. 19 specimen determined here as missing. [Potamididae].

Potamides (*Potamides*?) *carbonicola* Cooper, 1894. Givens and Kennedy 1976. Jour. Paleo. 50 (5):960, 963–964, pl. 1, figs. 9–13. Delmar Fm. [=Santiago Fm.?], Eocene. Near Vista and San Marcos, San Diego Co. UCR 4865. Hypotypes UCR 4865/30–4865/34. [Potamididae].

"*Potamides*?" *davisiana* Cooper, 1894. Coan 1981 [1982]. Univ. Idaho Press, p. 161, fig. 12.13 [refigured from Cooper, 1894, pl. 1, fig. 13]. Capay Fm., Eocene. Marysville Buttes, Sutter Co. CSMB 13739. Holotype CASG 13 [*ex* CSMB 13739]. **Remarks:** *Surculites mathewsonii davisiana* Cooper, 1894, *fide* Vokes (1939: p. 123). [Potamididae].

Potamides sespeensis Loel and Corey, 1932. Squires and Fritsche 1978. SEPM Guidebook 13:14, 16, pl. 1, fig. 1. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 401 [=LACMIP 16342]. Hypotype UCLA 58223 [=LACMIP 10571]. [Potamididae].

Potamides Fowkes 1982. Coalinga Guidebook, p. 21, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 4, fig. 2; refigured from Arnold and Anderson, 1910, pl. 25, fig. 2 (both as *Potamides carbonicola* Cooper, 1894)). Domengine Fm. [as Tejon Fm.], Eocene. West of Coalinga, Fresno Co. Hypotype USNM 165651. **Remarks:** Determined here as *Potamides carbonicola* Cooper, 1894. [Potamididae].

Indeterminate potamidid. Throckmorton 1988a. USGS OFR 88-59:55, pl. 5, figs. 2, 4 (latex peels) (fig. 4 refigured in Throckmorton 1988b, pl. 1, fig. 17). Tesla Fm., latest Cretaceous/ earliest Paleocene. Midway quad., Alameda Co. UCMP D8152. UCMP unnumbered hypotypes lost, *fide* C. Throckmorton (personal communication, 2002). [Potamididae].

Pricoficus caudatus* (Gabb, 1869b). [*Uroscya*]. Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, figs. 20, 21. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCLA2330 [=LACMIP 23330)]. Hypotype UCLA 59252 [=LACMIP 10978]. **Remarks:** Error for *Priscoficus.* [Ficidae].

Priscoficus caudatus (Gabb, 1869b). [*Uroscya*]. Shimer and Shrock 1944. Index Foss. N.A., p. 500, pl. 205, fig. 12 [refigured from Stewart, 1926 [1927], pl. 25, fig. 7]. Martinez Fm., Paleocene. Martinez, Contra Costa Co. Lectotype (of Stewart 1926 [1927]: p. 379) ANSP 4208, unfigured paralectotypes (4) ANSP 79507. [Ficidae].

Priscoficus caudatus (Gabb, 1869b). [*Urosyca*]. Zinsmeister 1983b. Jour. Paleo. 57(6):1293–1294, figs. 3C–E. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCLA 2330 [=LACMIP 22330]. Hypotype UCLA 59252 [=LACMIP 10978]. [Ficidae].

Priscoficus cooperiana (Stewart, 1926 [1927]). [*Fusus* (*Hemifusus*)]. Squires 2014. NHMLA CS 522:8, fig. 17. Ardath Shale, Eocene. San Diego Co. UCMP 2226. Holotype UCMP 11691. [Ficidae].

….., fig. 19. Llajas Fm., Las Llajas Canyon, Ventura Co. LACMIP 22312 [=CSUN 374]. Hypotype LACMIP 14476.

….., figs. 20, 21. Tejon Fm., Live Oak Shale Member. Eocene. Grapvine Canyon, Kern Co.. LACMIP 22340. Hypotype LACMIP 14477.

….., figs. 22. Tejon Fm., Live Oak Shale Member. Eocene. Grapvine Canyon, Kern Co. LACMIP 22340. Hypotype LACMIP 14478.

….., fig. 23. Tejon Fm., Liveoak Shale Member. Eocene. Grapvine Canyon, Kern Co. LACMIP 7155. Hypotype LACMIP 14479.

Priscoficus hornii (Gabb, 1864). [*Fusus* (*Hemifusus*)]. Squires 2014. NHMLAC CS 522:8–10, figs. 20–22. Tejon Fm., Liveoak Shale Member? Eocene. Kern Co..LACMIP 22340. Hypotypes LACMIP 14477, 14478. [Ficidae].

….., fig. 23. Tejon Fm., Liveoak Shale Member, Eocene. Kern Co.. LACMIP 7155. Hypotype LACMIP 14479.

Priscofusus geniculus (Conrad, 1849a). [*Fusus*]. Wenz 1943. Handbh. Palaoz. 6:1391, fig. 3930 (refigured from Arnold 1908, pl. 33, fig. 8 (as *Fusus hecoxi* n. sp.)). San Lorenzo Shale, Oligocene. Boulder Creek, Santa Cruz Co. (not Santa Barbara Co. as in text). USGS 100. Holotype USNM 165446. **Remarks:** The original spelling of this species is *Fusus hecoxi*, and it was named for Miss Laura J. F. Hecox. Keen and Bentson (1944: p. 162) noted, however, that it should be amended to *hecoxae*. Both names are correct.[Fasciolariidae].

Priscofusus geniculus (Conrad, 1849a). [*Fusus*]. Addicott 1970. USGS PP 642:101–102, pl. 12, figs. 21, 22. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotypes USNM 650178, 650179. [Fasciolariidae].

Priscofusus cf. *geniculus* (Conrad, 1849a). [*Fusus*]. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 10. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH4312. Hypotype SDSNH 83245]. [Fasciolariidae].

Priscofusus geniculus (Conrad, 1849a) axial ribbed form [*Fusus*]. Addicott 1970. USGS PP 642:101–102, pl. 12, figs. 26, 28. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotypes USNM 650180, 650181. [Fasciolariidae].

Priscofusus geniculus (Conrad, 1849a) [*Fusus*]. Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, fig. 25. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 83245. [Fasciolariidae].

Priscofusus hecoxae (Arnold, 1908). [*Fusus*]. Moore 1963 [1964]. USGS PP 419:42, pl. 6, fig. 14. San Lorenzo Fm., Oligocene. San Lorenzo River, Santa Cruz Co. USGS 100. Holotype USNM 165446. [Fasciolariidae].

Priscofusus medialis (Conrad, 1849a). [*Cerithium*]. Addicott 1970. USGS PP 642:102–103, pl. 12, figs. 20, 27. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotypes USNM 650175, 650177. [Fasciolariidae].

....., pl. 12, fig. 23. Jewett Sand, Miocene. Caliente quad. (1914), Kern Co. UCMP B1665. Hypotype UCMP 33017.

....., pl. 12, fig. 24. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1590. Hypotype USNM 650176.

....., pl. 12, fig. 25. Freeman-Jewett Silt (of Matthews 1955:11–14), Miocene. Shell Oil Co. "Edison" 2-1, depth 4385 ft., Kern Co. UCR 1306. Hypotype UCR 1306/1 (not UCR.1306 as in pl. caption).

Priscofusus sp. Addicott 1979. SEPM Guidebook 14:47–48, pl. 1, fig. 12. Vaqueros (?) Fm. (lower sandstone member), Oligocene. Near Indian Ranger Station, Santa Lucia Range, Monterey Co. USGS M6557. Hypotype USNM 264141. [Fasciolariidae].

Progabbia sp. Woodring et al. 1940 [1941]. USGS PP 195:88, pl. 15, fig. 4. San Joaquin Fm. (*Pecten* zone), Pliocene. North Dome, Kettleman Hills, Kings Co. USGS 12335. Hypotype USNM 495758. [Cancellariidae].

*Propustularia kempera** (Nelson, 1925). [*Cypraea*]. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, figs. 22–24. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 4573. Hypotype UCR 4573/20. **Remarks:** Error for *kemperae*. [Cypraeidae].

Propustularia simiensis (Nelson, 1925). [*Cypraea*]. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, figs. 25, 26. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 4573. Hypotype UCR 4573/21. [Cypraeidae].

Protobusycon judithae Saul, 1988b (n. sp.). Jour. Paleo. 62(6):886–887, figs. 4.1–4.3, 4.6 Lodo Fm., Paleocene. Silver Creek area, Tumey Hills quad., Tumey Hills, Fresno Co. UCLA 6456 [=LACMIP 26456]. Holotype LACMIP 7621 (not LACMIP 7612 as in text), paratype LACMIP 7622. [Melongenidae].

....., figs. 4.4, 4.5, 4.7. Silver Creek area Tumey Hills quad., Fresno Co. LACMIP 7044. Paratypes LACMIP 7623, 7624.

?Provannid gastropod. Schwartz et al. 2003. Geo-Mar Lett. 23:344, fig. 5g. Moreno Fm. (Dos Palos Member), Paleocene. Right Angle Canyon, Panoche Hills, Chounet Ranch quad., Fresno Co. Hypotype current whereabouts unknown. **Remarks:** Aporrhaid sp., *fide* L.R. Saul (personal communication, 2005). [Aporrhaidae].

Proximitra? *cretacea* (Gabb, 1864). [*Mitra*]. Squires 1984. NHMLAC CS 350:34, fig. 8p. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6546. [Volutomitridae].

Proximitra? *cretacea* (Gabb, 1864). [*Mitra*]. Squires 1987. NHMLAC CS 388:43–45, fig. 62. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7485. [Volutomitridae].

Psephaea (*Miopleiona*) cf. *P.* (*M*)*. indurata* (Conrad, 1849a). [*Rostellaria*]. Addicott 1970. USGS PP 642:105, pl. 13, fig. 6 (cast). Monterey Group (of Wagner and Schilling 1923: pp. 249–251), Miocene. Mt. Pinos quad., Kern Co. UCMP 3229. Hypotype UCMP 12136. [Volutidae].

....., pl. 13, fig. 8 (cast). Freeman-Jewett Sand, Miocene (of Matthews 1955:11–14), Miocene. Shell Oil Co. "Edison" 2-1, depth 4657 ft., Kern Co. UCR 1305. Hypotype UCR 1305/1 (not UCR 1305 as in pl. caption). [Volutidae].

Psephaea oregonensis (Dall, 1907). [*Miopleiona*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:78, pl. 14, figs. 1, 2; pl, 15, figs. 19, 21. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotypes USNM 560091, 560092. **Remarks:** Determined here as in the genus/subgenus *Musashia* (*Nipponomelon*). [Volutidae].

....., pl. 14, figs. 4, 5. Fugler Pt., Santa Barbara Co. CIT 869 [=LACMIP 6108]. CIT 869 [=LACMIP 6108]. Hypotype CIT 4554 [=LACMIP 4213].

Psephaea (*Miopleiona*) *weaveri* (Tegland, 1933). [*Miopleiona*]. Addicott 1970. USGS PP 642:104–105, pl. 13, figs. 15, 17. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 650184. [Volutidae].

Psephaea (*Miopleiona*) cf. *P.* (*M.*) *weaveri* (Tegland, 1933). [*Miopleiona*]. Addicott 1970. USGS PP 642:104–105, pl. 13, fig. 19. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 650185. [Volutidae].

Pseudoliva dilleri Dickerson, 1914c. Squires 1987. NHMLAC CS 388:42, fig. 58. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad., Los Angeles Co. CSUN 359 [=LACMIP 16101]. Hypotype LACMIP 7481. **Remarks:** *Calorebama dilleri lineata* (Gabb, 1864), *fide* Squires (1989a: p. 42); in the genus *Sulcobuccinum*, *fide* Vermeij (1998: p. 8). See Squires (2001: p. 10) for comments about *Calorebama* versus *Sulcobuccinum*. [Pseudolividae].

Pseudoliva n. gen. *howardi* (Dickerson, 1914b). [*Molopophorus* (?)]. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 9. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6679. Hypotype UCR 6679/110 (not UCR 6679/11 as in pl. caption). **Remarks:** In the genus *Pegocomptus*, *fide* Zinsmeister (1983b: p. 1296); in the genus *Sulcobuccinum*, *fide* Vermeij (1998: p. 81). [Pseudolividae].

Pseudoliva inornata Dickerson, 1915. Givens 1974. UCPG 109:86, pl. 9, fig. 6. Juncal Fm., Eocene. Alamo Creek, San Guillermo quad. (1943), Ventura Co. UCR 4707. Hypotype UCR 4707/31. **Remarks:** In the genus *Calorebama*, *fide* Squires (1989a: p. 43); in the genus *Sulcobuccinum*, *fide* Vermeij (1998: p. 81). See Squires (2001: p. 10) for comments about *Calorebama* versus *Sulcobuccinum*. [Pseudolividae].

Pseudoliva lineata Gabb, 1864. Squires, 1984. NHMLAC CS 350:33, fig. 8l. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6542. **Remarks:** In the genus *Calorebama*, *fide* Squires (1989a: p. 41); in the genus *Sulcobuccinum*, *fide* Vermeij (1998: p. 81). See Squires (2001: p. 10) for comments about *Calorebama* versus *Sulcobuccinum*. [Pseudolividae].

Pseudoliva volutaeformis Gabb, 1864. Givens, 1974. UCPG 109:86, pl. 9, fig. 14. Juncal Fm., Eocene. West of Reyes Peak, Reyes Peak quad. (1943.), Ventura Co. UCR 4706. Hypotype UCR 4706/151. **Remarks:** *Calorebama dilleri kirbyi* (Clark, 1938), *fide* Squires (1989a:p. 44); in the genus *Sulcobuccinum*, *fide* Vermeij (1998: p. 81). See Squires (2001: p. 10) for comments about *Calorebama* versus *Sulcobuccinum*. [Pseudolividae].

Pseudoliva sp. Smith 1975b. SEPM Symposium vol., p. 376, pl. 1, fig. 14. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=CASG 61666 = UCMP. A9717]. Hypotype SU 10299 [=CASG 61666.02]. **Remarks:** *Brachysphingus mammilatus* Clark and Woodford, 1927, *fide* Squires (1997a: p. 856).

....., pl. 1, fig. 15. Near junction of Panoche and Silver creeksTumey Hills quad., Fresno Co. UCMP A9717. Hypotype UCMP 14202. **Remarks:** *Brachysphingus mammilatus* Clark and Woodford 1927, *fide* Squires (1997a: p. 856).

Pseudomelatoma fleenerensis (Martin, 1914). [*Drillia*]. Faustman 1964. UCPG 41(2):127, pl. 3, fig. 18. Upper Rio Dell Fm., Pliocene. Fleener Creek, Ferndale quad., Humboldt Co. UCMP B7939. Hypotype UCMP 37801. [Pseudomelatomidae].

Pseudoperissolax blakei (Conrad, 1855b) (not Gabb as in pl. caption). [*Busycon*]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):170, fig. 62-11. Tejon Fm., Eocene. Grapevine Creek, Kern Co. CASG. 711. Hypotype CASG 5934. **Remarks:** Family Muricidae, *fide* Squires (2015: p. 578). [Muricidae].

Pseudoperissolax blakei (Conrad, 1855b). [*Busycon*]. Givens 1974. UCPG 109:88, pl. 10, fig. 17. Type Tejon Fm., Eocene. [Ft. Tejon], Kern Co. UCR 1807. Hypotype UCR 1807/15. **Remarks:** Family Muricidae, *fide* Squires (2015: p. 578). [Muricidae].

Pseudoperissolax blakei (Conrad, 1855b). [*Busycon*]. Saul 1988b. Jour. Paleo. 62(6):885, figs. 3.31–3.32. Tejon Fm., Eocene. Grapevine Canyon, Kern Co. UCLA 2340 [=LACMIP 22340]. Hypotypes LACMIP 7647, 7648. **Remarks:** Family Muricidae, *fide* Squires (2015: p. 578). [Muricidae].

Pseudoperissolax blakei (Conrad, 1855b). [*Busycon*?]. Squires 2015b. Jour. Paleo. 89(4):581–585, fig. 3.12. Tejon Fm., Liveoak Shale Member?, Eocene. Live Oak Canyon, Kern Co. UCMP 7200. Hypotype UCMP 15850. **Remarks:** Family Muricidae, *fide* Squires (2015: p. 578). [Muricidae].

....., figs. 3.13, 3.16, 4.3, 4.4, 4.7–4.17. Tejon Fm., Liveoak Shale Member?, Eocene. Grapevine Canyon, Kern Co. LACMIP 22340. Hypotypes LACMIP.7647, 14498, 14500–14508.

....., figs. 4.1, 4.2, 4.5, 4.6. Tejon Fm., Eocene. Grapevine Creek, Kern Co. CASG 711. Hypotypes CASG 847, 848.

Pseudoperissolax blakei praeblakei Vokes, 1939. Moore 1968. SDSNH Occas. Pap. 15:28, pl. 12, fig. b. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Rose Canyon, San Diego Co. SDSNH 1667. Hypotype SDSNH 4148]. **Remarks:** Junior synonym of *P. blakei* and in family Muricidae, *fide* Squires (2015: p. 578). [Muricidae].

Pseudoperissolax blakei praeblakei Vokes, 1939. Givens, 1974. UCPG 109:88, pl. 10, fig. 15. Juncal Fm., Eocene. Near Thorn Meadows, Lockwood Valley quad. (1943), Ventura Co. UCR 4682. Hypotype UCR 4682/7. **Remarks:** Junior synonym of *P. blakei* and in family Muricidae, *fide* Squires (2015: p. 578). [Muricidae].

....., pl. 10, fig. 16. Near Thorn Meadows, Lockwood Valley quad. (1943), Ventura Co. UCR 4685. Hypotype UCR 4685/121.

Pseudoperissolax blakei subsp. *praeblakei* Vokes, 1939. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, fig. 16. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU.2073 [=UCMP A9717]. Hypotype SU 10238 [=CASG 61666.22]. **Remarks:** Junior synonym of *P. blakei* and in family Muricidae, *fide* Squires (2015: pp. 578, 583). [Muricidae].

Pseudoperissolax blakei praeblakei Vokes, 1939. Squires 1984. NHMLAC CS 350:34–35, fig. 9a. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6547 **Remarks:** Junior synonym of *P. blakei* and in family Muricidae, *fide* Squires (2015: pp. 578, 583). [Muricidae].

Pseudoperissolax blakei praeblakei Vokes, 1939. Squires 1987. NHMLAC CS 388:45, fig. 63. Matilija Sandstone?, Eocene. Piru Creek, Cobblestone Mtn. quad. (1958), Ventura Co. CSUN 808 [=LACMIP 16344]. Hypotype LACMIP 7486. **Remarks:** Junior synonym of *P. blakei* and in family Muricidae, *fide* Squires (2015: pp. 578, 583). [Muricidae].

Pseudoperissolax merriami Clark, 1918. Javidpour 1973. Veliger 15(3):201, fig. 4. Kirker Tuff, Oligocene/Miocene. Sobrante Ridge, Contra Costa Co. UCMP 3055. Paratype UCMP 11286. **Remarks:** *Aforia clallamensis* (Weaver, 1916) (family Turridae), *fide* Javidpour (1973: p. 201). [Turridae].

Pseudoperissolax tricarinatus (Weaver, 1905). [*Perissolax*]. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 5. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 4569. Hypotype UCR 4569/26, determined here as missing. **Remarks:** Family Muricidae, *fide* Squires (2015: p. 578). [Muricidae].

Pseudoperissolax tricarinatus (Weaver, 1905). [*Perissolax*]. Squires 2015. Jour. Paleo. 89(4):576–581, figs. 3.1, 3.2. Santa Susana Fm., Paleocene. Santa Ynez Canyon, Los Angeles Co. LACMIP 16888. Hypotype LACMIP 14492. **Remarks:** Family Muricidae, *fide* Squires (2015: p. 578). [Muricidae].

……, figs. 3.3.–3.5, 3.8, 9.11. Santa Susana Fm., Paleocene. Santa Ynez Canyon, Los Angeles Co. LACMIP 16869. Hypotypes LACMIP 14493, 14494, 11496, 11497.

….., fig. 3–6. Lower Vine Hill Sandstone, Paleocene. Benicia-Martinez area, Contra Costa Co. UCMP 353. Holotype UCMP 11882.

….., fig. 3–7. Silverado Fm., Paleocene. Coalmine Canyon area, Santa Ana Mtns., Orange Co. LACMIP 10460. Hypotype LACMIP 14495.

?*Pseudovertagus* (*Pseudoaluco*) sp. Squires 1987. NHMLAC CS 388:30, fig. 29. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 360 [=LACMIP 16109]. Hypotype LACMIP 7457. [Cerithiidae].

Pteropod. Phillips, et al. 1976. SEPM Symposium vol. p. 147, pl. 4, fig. 3. Gallaway Fm., Oligocene. Saunders Reef quad., Mendocino Co. UCMP D7149. Hypotype 14435. [Limacinidae].

Pteropurpura Weaver, 1971. West (LA Times), 18 April, 1971:11, unnumbered fig. (upper row, center). "Fernando Fm.", Pliocene. Arco Towers excavation, 6th and Flower streets, downtown Los Angeles, Los Angeles Co. [LACMIP 1219]. Hypotype current whereabouts unknown. [Muricidae].

Pterynotus (*Pterynotus*) cf. *Pterynotus* (*Pterynotus*) *washingtonicus* Squires and Goedert, 1995. Squires 2001. NHMLAC CS 489:9, figs. 16, 17. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. LACMIP 16654. Hypotype LACMIP 12736. [Muricidae].

Puncturella cooperi aphales Woodring *in* Woodring and Bramlette, 1950 [1951] (n. var.). USGS PP 222:69, pl. 12,

figs. 2, 3. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14648. Holotype USNM 560060. [Fissurellidae].

Puncturella cucullata (Gould, 1846). [*Rimula*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:68, pl. 10, figs. 5, 6. Foxen Mudstone, Pliocene. Santa Barbara Co. USGS 4473. Hypotype USNM 560042. [Fissurellidae].

Purpura milicentana Loel and Corey, 1932. Avila and Weaver 1969. AAPG/SEPM Guidebook, p. 59, pl. 33, fig. 9. Vaqueros Fm., Miocene. North coast Santa Rosa Is., California Channel Ids. UCSB SR67-79 [=LACMIP 16432]. Hypotype UCSB M21 [=LACMIP 6310]. [Muricidae].

Purpura turris Nomland, 1916a. Amano and Vermeij 1998. Venus 57(3):217, figs. 6a, 6b. Etchegoin Fm., Pliocene. West of Coalinga, Fresno Co. UCMP 2110. Holotype UCMP 12049. **Remarks:** In the genus *Califostoma, fide* Bean and Vermeij (2016: p. 2). [Muricidae].

Purpura sp. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 2 (pl. 1 in caption), fig. M. Strata unknown, float material. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8815 [=SBMNH 60196]. **Remarks:** Determined here as indet. muricid sp. [Muricidae].

Pyramidella (*Longchaeus*) *cooperi* Anderson and Martin, 1914. Addicott, 1970. USGS PP 642:142, pl. 21, figs. 1, 2. Lower Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype UCMP 37109. [Pyramidellidae].

....., pl. 21, fig. 3. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1612. Hypotype USNM 650296.

Pyramidella (*Syrnola*) *ochsneri* (Anderson and Martin, 1914). [*Eulimella*]. Addicott, 1970. USGS PP 642:142, pl. 21, fig. 4. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS. M1602. Hypotype USNM 650297. [Pyramidellidae].

....., pl. 21, fig. 5. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650298.

....., pl. 21, fig. 6. Lower Round Mtn., Miocene. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotype UCMP 37110.

?*Pyramidella preblei* M.A. Hanna, 1927. Squires 1987. NHMLAC CS 388:54, fig. 85. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7503. [Pyramidellidae].

Pyrgulifera (*Pyrgulifera*) *lajollaensis* (M.A. Hanna, 1927). [*Trichotropis*]. Squires 1999c. NHMLAC CS 480:13–14, fig. 14. Matilija Sandstone, Eocene. Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1445 (=LACMIP 24259). Hypotype LACMIP 12449. [Thiaridae].

Pyropsis fantozzii Saul, 1988b (n. sp.). Jour. Paleo. 62(6):884–885, figs. 3.9, 3.12, 3.17. Santa Susana Fm., Paleocene. Meier Canyon, Simi Hills, Calabasas quad., Ventura Co. UCR 6670. Paratype UCR 6670/901. **Remarks:** Not a *Pyropsis*, *fide* Squires (2011: p. 1204). [Turbinellidae].

....., figs. 3.11, 3.13. Meier Canyon, Santa Susana quad., Simi Hills, Ventura Co. UCLA 2330 [=LACMIP 22330]. Holotype LACMIP 7615, unfigured paratype LACMIP 7617.

....., figs. 3.14, 3.15, 3.18. Simi Hills, Ventura Co. UCMP 3760. Paratype UCMP 30574.

....., figs. 3.16, 3.19, 3.21. Las Virgenes Fm., Paleocene. Las Virgenes Canyon, Simi Hills, Calabasas quad., Ventura Co. UCLA 3111 [=LACMIP 23111]. Paratype LACMIP 7616.

....., fig. 3.20. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCMP 3776. Paratype UCMP 30575.

?*Pyropsis gabbi* (Stanton, 1896). [*Heteroterma*]. Saul 1988b. Jour. Paleo. 62(6):885–886, figs. 3.26, 3.28, 3.29. "Martinez" Fm., Paleocene. Herndon Creek near Lower Lake, Lake Co. LACMIP 7051. Hypotype LACMIP 7620. **Remarks:** Not a *Pyropsis*, *fide* Squires (2011: p. 1204). [Turbinellidae].

....., figs. 3.27, 3.30, 3.33, 3.34. Santa Susana Fm., Paleocene. Meier Canyon, Simi Hills, Calabasas quad., Ventura Co. UCLA 2307 [=LACMIP 22307]. Hypotype LACMIP 7599.

Pyropsis striata (Stanton, 1896). [*Heteroterma*]. Saul 1988b. Jour. Paleo. 62(6):885, figs. 3.22, 3.25. Vine Hill Fm., Paleocene. Pacheco syncline area, Contra Costa Co. LACMIP 10488 (*ex* UW 2080). Hypotypes LACMIP 7618, 7619. **Remarks:** Not a *Pyropsis*, *fide* Squires (2011: p. 1204). [Turbinellidae].

Pyruconus cf. *P. hayesi* (Arnold, 1909 [1910]). Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, fig. 24. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 140190. [Conidae].

Pyruconus cf. *P. owenianus* (Anderson, 1095). Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, fig. 23. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 83241. [Conidae].

"*Ranella*" *californica* (Gabb, 1866). [*Tritonium*]. Smith 1970. BAP 56(254):522–523, pl. 49, figs. 1, 2. Markley Fm., Eocene. Pleasant Creek Co. UCMP A1297. Hypotype (of Clark 1938, pl. 2, fig. 32, of *Gyrineum kewi* (Dickerson, 1915)) UCMP 30878. [Ranellidae].

....., pl. 49, figs. 8 (refigured from Gabb, 1869b, pl. 26, fig. 33), 11. Tejon Fm., Eocene. Tejon Pass, Kern Co. Holotype (lectotype, *fide* Smith (1970: p. 522)) ANSP 4205.

...., pl. 49, fig. 14. [Tejon Fm.], Eocene. Grapevine Canyon, Kern Co. UCMP. 458]. Hypotype (of Dickerson 1915, pl. 7, fig, 7) UCMP 11688.

Ranella katherineae Squires, 1983a (n. sp.). Jour. Paleo. 57(2):358–359, figs. 2E–G. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. UCLA 2312 [=CSUN 374, =LACMIP 7242]. Holotype UCLA 45969 [=LACMIP 10546]. [Ranellidae].

Ranella katherineae Squires, 1983a. Squires 1984. NHMLAC CS 350:29, fig. 7n. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Holotype UCLA 45969 [=LACMIP 10546]. [Ranellidae].

Ranella louella Beu, 1988 (n. sp.). Saito Ho-on Kai Spec. Rept., p. 78–79, pl. 4, figs. 1–3. Lodo Fm., Paleocene. Near junction of Panoche Creek and Silver Creek, Tumey Hills, Fresno Co. UCLA 6456 [=LACMIP 26456]. Holotype LACMIP 7689. [Ranellidae].

Ranella pilsbryi Stewart, 1926 [1927]. Givens 1974. UCPG 109:80, pl. 9, fig. 12. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4721. Hypotype UCR 4721/112. [Ranellidae].

Ranella pilsbryi Stewart, 1926 [1927]. Squires 1984. NHMLAC CS 350:29, fig. 7p. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6534. [Ranellidae].

Rapana vaquerosensis (Arnold, 1907). [*Purpura*]. Squires and Fritsche 1978. SEPM Guidebook 13:15, 16, pl. 1, fig. 2. Vaqueros Fm., Miocene. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 384 [=LACMIP 16351. Hypotype UCLA 58218 [=LACMIP 10575]. [Muricidae].

....., p. 15, 16, pl. 1, fig. 3. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 391 [=LACMIP 16352]. Hypotype UCLA 58219 [=LACMIP 10576].

....., p. 15, 16, pl. 1, fig. 4. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 392 [=LACMIP 16139]. Hypotype UCLA 58221 [=LACMIP 10577].

....., p. 15, 16, pl. 1, figs. 5, 6. Sespe Creek area, Topatopa Mtns., Ventura Co. CSUN 51 [=LACMIP 16350]. Hypotypes UCLA 58200,58201 [=LACMIP 10573,10574].

Rapana vaquerosensis imperialis Hertlein and Jordan, 1927. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):176, fig. 64-18. Vaqueros Fm., Miocene. Santa Rosa Is., California Channel Ids. Hypotype CASG 2841 (*ex* CSMB 12322) determined here as missing. [Muricidae].

Rapana vaquerosensis (Arnold, 1907) *imperialis* Hertlein and Jordan, 1927. Avila and Weaver 1969. AAPG/SEPM Guidebook, p. 59, pl. 34, figs. 1a, b. Rincon Fm., Miocene. East of Ford Pt., Santa Rosa Is., California Channel Ids. UCSB. SR64-12 [=LACMIP 16433]. Hypotype UCSB M22 [=LACMIP 6312]. [Muricidae].

Rapana vaquerosensis (Arnold, 1907) *imperialis* Hertlein and Jordan, 1927. Stadum 1973. OCF, p. 25, pl. 3, fig. 10. Vaqueros Fm., Miocene. Santa Ana Mtns., Orange Co. UCMP 6128 [=LACMIP 16443]. Hypotype LACMIP10612. [Muricidae].

Rapana vaquerosensis imperialis Hertlein and Jordan, 1927. Squires and Filewicz (eds.) 1983. SEPM Guidebook 35:172, unnumbered fig. Vaqueros, Miocene. Big Mtn. Oil Field, Ventura Co. LACMIP 17097. Hypotype LACMIP 12720]. [Muricidae].

Rapana vaquerosensis imperialis Hertlein and Jordan, 1927. Squires 1997b. Simi Valley Hist. Soc. vol., p. 301, fig. 4a (refigured from Squires and Filewicz (eds.) 1983, unnumbered fig., p. 172). Vaqueros Fm., Miocene. Big Mtn. Oil Field Area, north side Simi Valley, Ventura Co. LACMIP 17097. Hypotype LACMIP 1272]. [Muricidae].

Ravinella lipmanorum Squires and Lipman, 2018 (n. sp.). Nautilus 132(8):54–56, figs. 2–14. Lower part of Santa Susana Fm., Paleocene. Temporary locality now covered by landscaping and sprinklers, north side of Simi Valley, Ventura Co. LACMIP 41691. Holotype LACMIP 14724, paratypes LACMIP 14725–14728. [Acteonidae].

Retipirula crassitesta (Gabb, 1869b). [*Turbinella*]. G D. Hanna and Hertlein 1943. CDM Bull. 118 (2):170, figs. 62-23, 62-24. Martinez Fm., Eocene [Paleocene]. Santa Susana Mtns., Los Angeles Co. CASG. 396. Hypotypes CASG 5915, 5915A. **Remarks:** In the genus/subgenus *Volutocorbis* (*Retipirula*), *fide* Zinsmeister (1977: p. 178). [Volutidae].

Retipirula crassitesta (Gabb, 1869b). [*Turbinella*]. Saul and Squires 2008b. Jour. Paleo. 82(2):234, figs. 11.11, 11.12. Santa Susana Fm., Paleocene. Santa Susana quad., NW slope of Simi Hills, Ventira Co. LACMIP 22307. Hypotype LACMIP 13221. [Volutidae].

Retipirula pinguis Saul and Squires, 2008b (n. sp.). Jour. Paleo 82(2):234–235, figs. 11.13, 11.14. Santa Susana Fm., Paleocene. Calabasas quad., Ventura Co. LACMIP 22701. Holotype LACMIP 13222, paratypes LACMIP 13223, 13224. [Volutidae].

….., Near Santa Susana, Ventura Co., LACMIP. 22574. Unfigfured paratype LACMIP 13225.

Rictaxis painei grandior Grant and Gale, 1931. Squires 2012. NHMLAC CS 520:77, fig. 98. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14415. **Remarks:** Junior synonym of *Rictaxis painei* (Dall 1903c), *fide* Valdés (2019: p. 246). [Acteonidae].

Rimella macilenta White, 1889. [*Rimella*]. Squires 2013. Jour. Paleo. 87(5):831, 833–834, figs. 4.1–4.6. Llajas Fm., Eocene. Devil Canyon, Santa Susana Mtns., Los Angeles Co., LACMIP 40371 [=CSUN 371]. Hypotypes LACMIP 14445, 14453. [Strombidae].

…., fig. 4.7, Juncal Fm.?, Eocene. Lockwood Valley, Ventura Co, LACMIP 16856. Hypotype LACMIP. 14455.

…., fig. 4.8, Llajas Fm., Eocene. Devil Canyon, Santa Susana Mtns., Los Angeles Co. LACMIP 40373 [=CSUN 373]. Hypotype LACMIP 14456.

…., fig. 4.9, Llajas Fm., Eocene. Devil Canyon, Santa Susana Mtns., Los Angeles Co. LACMIP 7413. Hypotype LACMIP 14459.

…., fig. 4.10, Llajas Fm., Eocene. Chivo Canyon, Santa Susana Mtns., Ventura Co. LACMIP 21136. Hypotype LACMIP 14458.

…., fig. 4.11, Llajas Fm., Eocene. Chivo Canyon, Santa Susana Mtns., Ventura Co. LACMIP 7411. Hypotype LACMIP 14459.

…., fig. 4.12, Tejon Fm. (Uvas Conglomerate Member), Eocene. Kern Co.] LACMIP 12491. Hypotype 14460.

Rimella supraplicata (Gabb, 1864). [?*Neptunea*]. Squires 2013. Jour. Paleo. 87(5):835–836, figs. 4.19, 20. Tejon Fm. (Metralla Sandstone Member), Eocene. Tehachapi Mtns., Kern Co, most likely LACMIP 7155. Lectotype (of Stewart 1926 [1927]: p. 366) ANSP 4231, of *Ectinochilus* (*Cowlitzia*) *canalifer* (Gabb, 1864), paralectotypes (8) ANSP 79467. **Remarks:** Plastolectotype figured. [Strombidae].

…., figs. 4.21, 4.22, Tejon Fm. (Metralla Sandstone Member), Eocene. Tehachapi Mtns., Kern Co., LACMIP 7155 (not

771 as in plate caption). Hypotype LACMIP 14462.

...., figs. 4.31, 4.32. Llajas Fm, Eocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co., LACMIP 7445. Hypotype LACMIP 14466.

...., figs. 4.33–4.35. Ardath Shale?, Eocene. Sea cliff near La Jolla, San Diego Co., UCMP 5062. Holotype (of *Cowlitzia problematica* M.A. Hanna, 1927) UCMP 31144.

...., figs. 4.36–4.38. Ardath Shale?, Eocene. Rose Canyon, San Diego Co. LACMIP. 7185. Hypotype LACMIP 14467.

Rimula cancellata Schremp, 1981 (n. sp.). Jour. Paleo. 55(5):1127, pl. 1, figs. 5–9. Imperial Fm. [=Latrania Fm.], Pliocene. Whitewater River, San Jacinto quad., Riverside Co. UCMP A1407. Holotype UCMP 16076, paratype UCMP 16077, unfigured paratype UCMP 16078.

....., San Gorgonio Pass, Riverside Co. UCMP A1415. Unfigured paratype UCMP 16079.

....., East side of Super Creek, Riverside Co. UCR 7477. Unfigured paratypes UCR 7477/22, 7477/23.

....., San Gorgonio Pass, Riverside Co. UCMP. A1407. Unfigured paratype CASG. 60568.

....., San Gorgonio Pass, Riverside Co. UCMP A1407. Unfigured paratype PRI 30020.

Ringicula (*Ringicula*) *pinguis* (Gabb, 1864). [*Cinulia*]. Squires 1999b. NHMLAC CS 479:22, figs. 45, 46. Santa Susana Fm., Eocene. South side of Simi Valley, Calabasas quad. (1952, PR 1967), Ventura Co. CSUN 1344 [=LACMIP 17192]. Hypotype LACMIP 12690. [Ringiculidae].

Sassia bilineata (Dickerson, 1916). [*Fasciolaria*]. Givens 1974. UCPG 109:79–80, pl. 11, figs. 8, 10. Juncal Fm., Eocene. Alamo Creek, San Guillermo quad. (1943), Ventura Co. UCR 4707. Hypotype UCR 4707/23. [Ranellide].

Sassia bilineata (Dickerson, 1916). [*Fasciolaria*]. Squires 1987. NHMLAC CS 388:40, figs. 51, 52. Juncal, Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 802 [=LACMIP 16144]. Hypotype LACMIP 7476. [Ranellidae].

Saxituberosa fons Squires and Saul, 2006 (n. sp.). Nautilus 120(2):72–73, figs. 8, 9. Lower San Francisquito Fm., Paleocene (*Turritella peninsularis qualeyi* zone of Saul, 1983:30–33). Towards Warm Springs Summit, Los Angeles Co. LACMIP 21581 (not LACMIP 1588 as in text). Holotype LACMIP 13354. [Fasciolariidae].

....., fig. 10. East Fork of Fish Canyon, Warm Springs quad. (1958), Los Angeles Co. LACMIP 21580A. Paratype LACMIP 13355.

....., figs. 11, 21. Warm Springs Canyon, Warm Springs Mtn., Warm Springs Mtn. quad. (1958) Los Angeles Co. LACMIP 21588 (not LACMIP 1588 as in pl. caption). Paratype LACMIP 13356.

Saxituberosa titan (Waring, 1917). [*Trachytriton*]. Squires and Saul 2006. Nautilus 120(2):73–74, figs. 12, 13. Santa Susana Fm., Paleocene. Simi Hills, Calabasas quad. (1952, PR 1967), Ventura Co. LACMIP 22688. Hypotype LACMIP 10983 [*ex* UCLA 59253]. [Fasciolariidae].

..... figs. 14, 15 (not fig. 16 as in text), 22. LACMIP 22701. Hypotype LACMIP.10982 [*ex* UCLA 59254].

Scalina durhami (Keen, 1943). [*Ferminoscala*]. Addicott 1970. USGS PP 642:56, pl. 3, fig. 21. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Hypotype USNM 650082. [Epitoniidae].

....., pl. 3, fig. 24. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1611. Hypotype USNM 650083.

Scalina whitei (Keen, 1943). [*Ferminoscala*]. Addicott 1970. USGS PP 642:57, pl. 3, figs. 20, 26. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Hypotypes USNM 650078, 650079. [Epitoniidae].

....., pl. 3, fig. 25. Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype USNM 15430.

....., pl. 3, figs. 27, 28. Rio Bravo quad. (1954), Kern Co. USGS M1612. Hypotypes USNM 650080, 650081.

Scaphander (*Mirascapha*) *costatus* (Gabb, 1864). [*Cylichna*]. Zilch 1959. Handbh. Palaoz. 6(2):29, fig. 87 (refigured from Stewart 1926 [1927], pl. 27, fig. 5 (as *Scaphander costatus*)). "Martinez" Fm., Eocene. Martinez, Contra Costa Co. Lectotype (of Stewart 1926 [1927]: p. 437) ANSP 4338, paralectotypes (8) ANSP 79477]. [Cylichnidae].

Scaphander (*Mirascapha*) *costatus* (Gabb, 1864). [*Cylichna*]. Moore 1968. SDSNH Occas. Pap. 15:28, pl. 12, fig. c. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Rose Canyon, San Diego Co. SDSNH2366. Hypotype SDSNH 4163]. [Cylichnidae].

Scaphander (*Mirascapha*) *costatus* (Gabb, 1864). [*Cylichna*]. Squires 1984. NHMLAC CS 350:40, fig. 9q. Llajas Fm., Eocene. Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 493 [=LACMIP 16198]. Hypotype LACMIP 6561 (not LACMIP 6562 as in pl. caption). [Cylichnidae].

Scaphander (*Mirascapha*) *costatus* (Gabb, 1864). [*Cylichna*]. Squires 1987. NHMLAC CS 388:53–54, fig. 84. Matilija Sandstone?, Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 219 (not CSUN 291 as in fig. caption) [=LACMIP 16100]. Hypotype LACMIP 7502. [Cylichnidae].

Scaphander jugularis (Conrad, 1855b). [*Bulla*]. Addicott 1966b. Jour. Paleo. 40(3):642–643, pl. 77, fig. 12. Olcese Sand (of Diepenbrock, 1933: pp. 14–16), Miocene. Bakersfield quad. (1906), Kern Co. UCMP B1626. Hypotype UCMP 15179. [Cylichnidae].

Scaphander jugularis (Conrad, 1855b) [*Bulla*]. Addicott, 1970. USGS PP 642:139, pl. 20, fig. 8. Upper Olcese, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650278. [Cylichnidae].

....., pl. 20, figs. 29, 30. Oil Center quad. (1954), Kern Co. USGS M1693. Hypotype USNM 650279.

....., pl. 20, figs. 31, 36, 37. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1600. Hypotypes USNM 650280, 650281.

Scaphander jugularis (Conrad, 1855b). [*Bulla*]. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 8. Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5026. Hypotype USNM 254357. [Cylichnidae].

Scaphander jugularis (Conrad, 1855b). [*Bulla*]. Addicott et al. 1980. SEPM Guidebook 6:18,20, pl. 1, fig. 8 (refigured from Addicott et al., 1978, pl. 1, fig. 8). Monterey Fm. (Saltos Shale member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M5026. Hypotype USNM 254357. [Cylichnidae].

Scaphander cf. *stewarti* Durham, 1944. Watkins 1974. Paleo.3 15:255, fig. 8H (latex cast). Kreyenhagen Fm., Oligocene. Monocline Ridge, Monocline Ridge quad. (1955), Fresno Co. UCMP D6532]. Hypotype UCMP 37170. [Cylichnidae].

Scelidotoma aldersoni Powell and Geiger, 2019 (n. sp.). *PaleoBios* 36:4–5, figs. 1, 3, 4. Topanga Canyon Fm., Miocene. Old Topanga [Canyon] Rd., Los Angeles Co. LACMIP 30503. Holotype LACMIP 14846, paratype SMBNH 634129. [Fissurellidae].

Scobinella claytonensis (Gabb, 1864). [*Turris*]. Shimer and Shrock 1944. Index Foss. N.A., p. 513, pl. 210, figs. 33, 34 (refigured from Stewart 1926 [1927], pl. 27, figs. 11, 12). "Tejon Fm.", Eocene. Near Clayton, Contra Costa Co. Lectotype (of Stewart 1926 [1927]: p. 417) ANSP 4190, paralectotype ANSP 4190a (=ANSP 79429]. [Clathurellidae].

Searlesia portolaensis (Arnold, 1908). [*Fusus*]. Adegoke 1969. UCPG 80:184, pl. 10, figs. 10, 14. Etchegoin Fm., Pliocene. Coalinga quad., Fresno Co. UCMP B6545. Hypotype UCMP 36873. **Remarks:** In the genus *Lirabuccinum*, *fide* Vermeij (1991: p. 269). [Buccinidae].

Searlesia portolaensis (Arnold, 1908). [*Fusus*]. Perry 1988. SCMA, p. 20, fig. 11F. Purisima Fm., Miocene/Pliocene. Capitola, Soquel quad. Santa Cruz Co. SCCM 40. Hypotype SCCM 21015. **Remarks:** In the genus *Lirabuccinum*, *fide* Vermeij (1991: p. 269). [Buccinidae].

?*Serpulorbis llajasensis* Squires, 1990a (n. sp.). Veliger 33(3):290, 291, figs. 9, 10. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. UCLA 2313 [=LACMIP 22313]. Holotype LACMIP 8091, paratype LACMIP. 8092. [Vermetidae].

Serratocerithium usanium Compton, 1944 (n. sp.). Jour. Paleo. 18(5): 466–468, pl. 78, figs. 3, 5, 6. Martinez Fm. [=Santa Susana Fm.], Paleocene. Ridge east of Santa Ynez Canyon, Santa Monica Mtns., Los Angeles Co. SU 2691.

Holotype SU 7756 [=CASG 72063], paratype SU 7757 (not SU 7758 as in pl. caption) [=CASG 72064]. [Cerithiidae]

Sinum obliquum (Gabb, 1864). [*Naticina*]. Moore 1968. SDSNH Occas. Pap. 15:28, pl. 12, fig. d. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. Rose Canyon, San Diego Co. SDSNH 1667. Hypotype SDSNH 4159]. [Naticidae].

Sinum obliquum (Gabb, 1864). [*Naticina*]. Marincovich 1977. BAP 70(294):347–350, pl. 33, figs. 1–3. Tejon Fm., Eocene. Ft. Tejon, Kern Co. Lectotype (of Stewart 1926 [1927]:327) ASNP 4215, unfigured paralectotypes (7) ANSP 79450. [Naticidae].

....., pl. 33, figs. 4–6. Live Oak Canyon, Kern Co. CASG 244. Holotype (of *Sinum coryliforme* Anderson and G D.Hanna, 1915) CASG 851.

Sinum obliquum (Gabb, 1864). [*Naticina*]. Squires 1984. NHMLAC CS 350:26, fig. 7h. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6528. [Naticidae].

Sinum obliquum (Gabb, 1864). [*Naticina*]. Squires 1987. NHMLAC CS 388:39, fig. 48. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7473. [Naticidae].

Sinum obliquum (Gabb, 1864). [*Naticina*]. Squires 1988c. NHMLAC CS 398:13, fig. 27. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 983 [=LAMCIP 16110]. Hypotype LACMIP 7708. [Naticidae].

?*Sinum perrini* (Arnold, 1907). [*Sigaretus*]. Marincovich 1977. BAP 70(294):358, pl. 35, fig. 8. Topanga Fm., Miocene. Head of Topanga Canyon, south of Calabasas, Camulos quad., Los Angeles Co. USGS 4402. Holotype USNM 164979.

Sinum scopulosum (Conrad, 1849a). [*Sigaretus*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:73, pl. 12, fig. 5. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality. Hypotype USNM 560072. [Naticidae].

Sinum scopulosum (Conrad, 1849a). [*Sigaretus*]. Moore 1968. SDSNH Occas. Pap. 15:34, pl. 15, fig. g. [San Diego Fm.], Pliocene. Reynard Wy., San Diego, San Diego Co. SDSNH 2383. Hypotype SDSNH 4172]. [Naticidae].

Sinum scopulosum (Conrad, 1849a). [*Sigaretus*]. Addicott 1970. USGS PP 642:70–72, pl. 6, fig. 2. Round Mtn. Silt, Miocene. Kern River, Kern Co. USGS 6622. Hypotype USNM 650110. [Naticidae].

....., pl. 6, fig. 6. Kern River, Kern Co. USGS 6623. Hypotype USNM 650111.

....., pl. 6, figs. 7, 11. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1602. Hypotype USNM 650112.

Sinum cf. *S. scopulosum* (Conrad, 1849a). [*Sigaretus*]. Addicott 1973b. USGS PP 791:7, 19, pl. 9, figs. 16, 17. Temblor Fm. (Wygal Sandstone Member), Miocene. Carneros Rocks quad., Kern Co. USGS M3578. Hypotypes USNM 646623, 646624. [Naticidae].

Sinum scopulosum (Conrad, 1849a). [*Sigaretus*]. Marincovich 1977. BAP 70(294):350–354, pl. 33, fig. 14. Pico Fm., Pliocene. San Fernando, Los Angeles Co. Lectotype (of Stewart 1926 [1927]:328) ANSP 4326 (of *Sinum planicostum* Gabb, 1869a), unfigured paralectotype ANSP 79494. [Naticidae].

....., pl. 34, fig. 1. Briones Sandstone, Miocene. Near San Pablo Bay, Mare Is. quad., Solano Co. UCMP 3576. Holotype (of *Sinum* (*Sigaretus*) *trigenarium* Trask, 1922. UCMP 12386.

Sinum scopulosum (Conrad, 1849a). [*Sigaretus*]. Squires 2012. NHMLAC CS 520:77, fig. 72. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7757. Hypotype LACMIP 14391. [Naticidae].

Sinum cf. *S. scopulosum* (Conrad, 1849a). [*Sigaretus*]. Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, fig.16. Monterey Fm. (Saddleback Valley Limestone member). Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 93721. [Naticidae].

Siphonalia (*Eosiphonalia*) *andersoni* Wagner and Schilling 1923. Ruth 1942. UCPG 26(3):290, pl. 47, fig. 2. Pleito Fm., Oligocene. North of Devil's Kitchen, San Emigdio Mtns., Kern Co. UCMP 3200. Holotype UCMP 11431. [Buccinidae].

Siphonalia (*Nassicola*) *bicarinata crooki* Clark, 1938. Ruth 1942. UCPG 26(3):294–295, pl. 47, figs. 17, 24, 25. Markley Fm., Eocene. North of Vacaville, Solano Co. UCMP A1297. Holotype UCMP 30899, paratype UCMP 12462, hypotype UCMP 30427. [Buccinidae].

Siphonalia (*Nassicola*) *bicarinata wheatlandensis* Clark and Anderson, 1938. Ruth 1942. UCPG 26(3):294, pl. 47, fig. 27; pl. 48, figs. 1, 4, 11–13. Wheatland Fm., Eocene. Northeast of Wheatland, Yuba Co.. UCMP. A1889. Holotype UCMP 30421, paratype UCMP.11271, hypotypes UCMP 30421, 30422, 30424, 30425, 30433. [Buccinidae].

Siphonalia (*Eosiphonalia*) *californica* (Arnold, 1908). [*Strepsidura*]. Ruth 1942. UCPG 26(3):289, pl. 47, fig. 13 (refigured from Arnold, 1908, pl. 33, fig. 12). San Lorenzo Fm., Oligocene. Near Wadell Creek, Santa Cruz quad., Santa Cruz Co. UCMP 108. Holotype USNM 165450. [Buccinidae].

Siphonalia cf. *S. humerosa* (Gabb, 1869a). [*Neptunea*]. Woodring et al. 1940 [1941]. USGS PP 195:87, pl. 11, fig. 9. San Joaquin Fm. (*Acila* Zone), Pliocene. Arroyo Hondo, North Dome, Kettleman Hills, Kings Co. USGS 12337. Hypotype USNM 495716. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Siphonalia kettlemanensis (Arnold, 1909 [1910]). [*Thais*]. Woodring et al. 1940 [1941]. USGS PP 195:87, pl. 31, fig. 1. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. La Aleta, North Dome, Kettleman Hills, Kings Co. USGS 12712. Hypotype USNM 495807. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

....., pl. 31, fig. 7. Arroyo Estrecho, North Dome, Kettleman Hills, Kings Co. USGS.12812. Hypotype USNM 495808.

Siphonalia kettlemanensis (Arnold, 1909 [1910]). [*Thais*]. Adegoke 1969. UCPG 80:181–182, pl. 12, figs. 6, 11. Etchegoin Fm., Pliocene. Coalinga quad., Fresno Co. UCMP B6544. Hypotype UCMP 36866. **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Siphonalia (*Kelletia*) *merriami* Wagner and Schilling, 1923. Ruth 1942. UCPG 26(3):297, pl. 48, fig. 3. San Emigdio Fm., Oligocene. San Emigdio Canyon, Kern Co. UCMP 3177. Holotype UCMP 11427. [Buccinidae].

....., pl. 48, fig. 10. San Emigdio Creek, Kern Co. UCMP 3182. Paratype UCMP 11428.

Siphonalia merriami Wagner and Schilling, 1923. Weaver and Kleinpell 1963. UCPG 43:192, pl. 26, fig. 9. Gaviota Fm., Eocene. Near Gaviota Pass, Santa Ynez Mtns., Lompoc quad., Santa Barbara Co. UCMP B6964. Hypotype SU/CASG 9503 determined here as missing. **Remarks:** Label with CASG. 9229 [=*Siphonalia* sp.] in text, p. 192, credits pl. 26, fig. 9 as 9229 rather than CASG 9503. [Buccinidae].

....., pl. 26, fig. 10. Vicinity of Las Yeguas Canyon and Cañana del Capitan, Goleta quad., Santa Barbara Co. UCMP B6980. Hypotype SU 9228 [=CASG 70231].

Siphonalia (*Kelletia*) *posoënsis* Anderson and Martin, 1914. Ruth 1942. UCPG 26(3):297–298, pl. 48, fig. 6 (refigured from Anderson and Martin 1914, pl. 4, fig. 2). Temblor Fm.?, Miocene. San Luis Obispo Co. CASG 126. Holotype CASG 174. **Remarks:** In the genus *Kelletia*, *fide* Addicott (1970: p. 92). [Buccinidae].

Siphonalia sopenahensis (Weaver, 1912). [*Hemifusus*]. Givens,1974. UCPG 109:83, pl. 9, fig. 8. Matilija Fm., Eocene. Northeast of Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4719. Hypotype UCR 4719/16. [Buccinidae].

Siphonalia (*Nassicola*) *sutterensis* Dickerson, 1913. Ruth 1942. UCPG 26(3):292–293, pl. 47, fig. 4. Marysville Fm., Eocene. West Butte, Marysville Buttes, Sutter Co. UCMP 1853. Holotype UCMP 11764. [Buccinidae].

Siphonalia sutterensis Dickerson, 1913. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, fig. 62-26. Eocene. West of South Butte, Marysville Buttes quad., Sutter Co. CASG 248. Hypotype CASG. 5710. [Buccinidae].

Siphonalia (*Nassicola*) *tularensis* Anderson and G D. Hanna, 1925. Ruth 1942. UCPG 26(3):293, pl. 48, fig. 9 (refigured from Anderson and G D. Hanna, 1925, pl. 11, fig. 7). Tejon Fm., Eocene. Grapevine Creek, Kern Co. CASG 245. Holotype CASG 854. [Buccinidae].

Siphonalia (*Nassicola*) *thunani* (Dickerson 1916). [*Nyctilochus*]. Ruth 1942. UCPG 26(3):292, pl. 47, fig. 9. Sutter Fm. (*Siphonalia sutterensis* Zone), Eocene. North of Oroville, Butte Co. UCMP 2225. Holotype UCMP 12262. [Buccinidae].

Siphonalia vistaensis Givens and Kennedy, 1976 (n. sp.). Jour. Paleo. 50(5):969, 972–973, pl. 4, figs. 5–8. Delmar Fm. [=Santiago Fm.?], Eocene. Near Vista and San Marcos, San Diego Co. UCR 4865. Holotype UCR 4865/120, paratype UCR 4865/121. [Buccinidae].

Siphonalia Fowkes 1982. Coalinga Guidebook, p. 31, unnumbered fig. Etchegoin/Jacalitos Fm., Miocene/Pliocene. Kettleman Hills, Kings Co. WHC hypotype missing? **Remarks:** In the genus *Pusio*, *fide* Vermeij (2001: p. 296). [Buccinidae].

Siphonalia? sp. Addicott 1973b. USGS PP 791:7, 21, pl. 9, figs. 5, 6. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3280. Hypotype USNM. 646618. [Buccinidae].

Solariella crenulata (Gabb, 1864). [*Margaritella*]. Givens 1974. UCPG 109:60, pl. 5, figs. 1, 2. Juncal Fm., Eocene. Near Thorn Meadows, Lockwood Valley quad. (1943), Ventura Co. UCR 4681. Hypotype UCR 4681/201. [Solariellidae].

Solariella walkeri Squires, 2008 (n. sp.). NHMLAC CS 517:5, 9, figs. 10–13. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Holotype LACMIP 13414, paratype LACMIP 13415. [Solariellidae].

Solariella n. sp.? Woodring and Bramlette 1950 [1951]. USGS PP 222:69, pl. 13, figs. 7, 11. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14648. Hypotype USNM 560064. [Solariellidae].

?*Solenosteira* sp. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 46, 54, figs. 3.3, 3.9. Deguynos Fm. (Camels Head Member), Pliocene. Fish Creek/Vallecito Creek, San Diego Co. ABDSP 2553. Hypotypes ABDSP I 326, I 327. **Remarks:** Fig. 3.3 =*Cymia* sp., *fide* S. Rugh (personal communication, 2019), fig. 3.9 =*Calicantharus* sp., *fide* L. Gilbert (personnel communication, 2019). [Buccinidae].

Spinigeropsis calafia Squires and Saul, 2001 (n. sp.). Veliger 44(3):329–330, figs. 2, 7, 8. Santa Susana Fm., Paleocene. Santa Ynez Canyon area, Santa Susana Mtns., Topanga quad. (1952, PR 1981), Los Angeles Co. LACMIP 16869. Holotype LACMIP 12873. [Strombidae].

Spirocrypta pileum (Gabb, 1864). [*Crypta* (*Spirocrypta*)]. Saul and Squires 2008b. Nautilus 122(3):131, figs. 59–61. Tejon Fm., Metralla Sandstone Member, Eocene. Live Oak Canyon, Pastoria Creek quad. (1958, PR 1974), Kern Co. LACMIP 22386. Hypotype LACMIP 13395. [Calyptraeidae].

Sthenorytis stearnsii (Dall, 1892). [*Scala* (*Stenorytis*)]. DuShane 1979, Veliger 22(2):120, fig. 64 [as *Scala* in pl. caption]. San Diego Fm., Pliocene. Pacific Beach, San Diego, San Diego Co. Holotype USNM 106904. [Epitoniidae].

Strepsidura (Whitneya) ficus (Gabb, 1864). [*Whitneya*]. Wenz 1943. Handbh. Palaoz. 6:1270, fig. 3612 (refigured from Dickerson 1915, pl. 9, fig. 5c (as *Whitneya ficus*)). Tejon Fm., Eocene. Tejon quad., Kern Co. CASG 245. [=CASG 66189]. Hypotype CASG 332 [=CASG 66189.02]. [Fasciolariidae].

Strepsidura ficus (Gabb, 1864). [*Whitneya*]. Shimer and Shrock 1944. Index Foss. N.A., p. 501, pl. 205, fig. 21 (refigured from Stewart, 1926 [1927], pl. 29, fig. 11). Tejon Fm., Eocene. Ft. Tejon, Kern Co. Lectotype (of Stewart 1926 [1927]: p. 404) ANSP 4331, unfigured paralectotypes (8) ANSP 79515. [Fasciolariidae].

Strepsidura ficus (Gabb, 1864). [*Whitneya*]. Weaver and Kleinpell 1963. UCPG 43:193, pl. 27, figs. 1–3. Undifferentiated Sacate/Gaviota fms., Eocene. Nojoqui CreekLompoc quad., Santa Barbara Co. UCMP B6933. Hypotypes SU 9233, 9234 [=CASG 70250, 70251]. [Fasciolariidae].

Strepsidura ficus (Gabb, 1864). [*Whitneya*]. Givens 1974. UCPG 109:87, pl. 10, fig. 10. Matilija Fm., Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4721. Hypotype UCR 4721/131. [Fasciolariidae].

Strepsidura ficus (Gabb, 1864). [*Whitneya*]. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, fig. 1. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20773. [Fasciolariidae].

Strepsidura ficus (Gabb,1864). [*Whitneya*]. Squires 1984. NHMLAC CS 350:33–34, fig. 8m. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 452 [=LACMIP 16364]. Hypotype LACMIP. 6543. [Fasciolariidae].

Strepsidura ficus (Gabb, 1864). [*Whitneya*]. Squires 1987. NHMLAC CS 388:42–43, fig. 59. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 360 [=LACMIP 16109]. Hypotype LAMCIP 7482. [Fasciolariidae].

Strepsidura ficus (Gabb, 1864). [*Whitneya*]. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 15. Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 452 [=LACMIP 16364]. Hypotype LACMIP 6543. [Fasciolariidae].

Strepsidura ficus (Gabb, 1864). [*Whitneya*]. Givens and Garvie 1994. Jour. Paleo. 68(2):277, figs. 1.7–1.10. Tejon Fm., Eocene. Grapevine Creek, Kern Co. CASG 245. Hypotypes CASG 66189.01, 66189.02, 66190.01. [Fasciolariidae].

Streptochetus californiana Squires, 1987 (n. sp.). NHMLAC CS 388:41–42, figs. 56, 57. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 845 [=LACMIP 16137]. Holotype LACMIP 7480. [Fasciolariidae].

Strictispira (*Crassispira*) *zizyphus* (Berry, 1940). Vendrasco et al. 2012. NHMLAC CS 520:17, fig. 2.3. San Diego Fm., Pliocene. Goat Canyon, near U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotype LACMIP 14855. [Strictispiridae].

Strioterebrum martini (English, 1914a). [*Terebra*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:80, pl. 16, fig. 21. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. USGS 14768. Hypotype USNM 560094. [Terebridae].

Strombina sp. Addicott 1970. USGS PP 642:86–87, pl. 9, figs. 20, 26. Upper Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1605. Hypotype USNM. 650142. [Columbellidae].

Strombus galeatus Swainson, 1823b. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 52, fig. 3.6C. Latrania Fm., Miocene/Pliocene. Coyote Mtn., Imperial Co. SDSNH 2895. Hypotype SDSNH 12148. **Remarks:** In the genus *Lobatus*, *fide* Liverani (2013: p. 26). [Strombidae].

Strombus galeatus Swainson, 1823b. Powell 2008. USGS SIR 2008-5155:16, fig. 5z. Imperial Fm. [=Latrania Fm.], Pliocene. Oasis quad., Imperial Co. (not San Diego Co. as in locality description). UCMP A1708. Hypotype UCMP 29878. **Remarks:** In the genus *Lobatus*, *fide* Liverani (2013: p. 26). [Strombidae].

Strombus cf. *S. gatunensis* Toula, 1909. Woodring et al. 1946. USGS PP 207:27, pl. 28, figs. 3, 4 (peels). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotypes USNM 497071, 497072. [Strombidae].

Strombus obliteratus G D. Hanna, 1926. Gastil et al. 1999. Rev. Mex. Cien. Geol. 16(1):22, fig. 15c. Imperial Fm. [=Latrania Fm.], Miocene. Alverson Canyon area, southern Coyote Mtns., Imperial Co. UCR. 7267. Hypotype UCR 7267/9. **Remarks:** In the genus *Persististrombus*, *fide* Kronenberg and Lee (2007: p. 257). [Strombidae].

Strombus obliteratus G D. Hanna, 1926. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 52, figs. 3.6A, B. Latrania Fm., Miocene/Pliocene. [Coyote Mtn., Imperial Co. SDSNH 2895]. Hypotype SDSNH 12155. **Remarks:** In the genus *Persististrombus*, *fide* Kronenberg and Lee (2007: p. 257). [Strombidae].

Strombus sp. Redman et al. 2007. Palaios 22: fig. 3C. Imperial Fm. [=Latrania Fm.], Miocene/ Pliocene. Fossil Canyon, Imperial Co. Hypotype probably at SDSU, current whereabouts unknown.

Sulcoretusa*? *israelskyi Addicott, 1970 (n. sp.). USGS PP 642:140–141, pl. 20, figs. 14–16, 33. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650290, paratypes USNM 650287, 650288, hypotype USNM 650289. [Acteonidae].

Surcula crenatospira Cooper, 1894. Coan 1981 [1982]. Univ. Idaho Press, p. 161, fig. 12.2–12.4 [refigured from Cooper 1894, pl. 1, figs. 2–4]. Capay Fm., Eocene. Marysville Butte, Sutter Co. Syntypes CASG 9 (fig. 2) [*ex* CSMB 1705], 9a (fig. 3), 9b (fig. 4) [*ex* CSMB 13733]. **Remarks:** In the genus/subgenus *Fusiturricula* (*Crenaturricula*), *fide* Vokes (1939: p. 115). [Clavatulidae].

Surculites mathewsonii (Gabb, 1864). [*Fusus*]. Givens 1974. UCPG 109:90, pl. 11, fig. 5. Juncal Fm., Eocene. Near Thorn Meadows, Lion Canyon quad. (1943), Ventura Co. UCR 4679. Hypotype UCR 4679/4. [Fasciolariidae].

....., pl. 11, fig. 7. Near Thorn Meadows Campground, Lockwood Valley quad. (1943), Ventura Co. UCR 4682. Hypotype UCR 4682/2. [Fasciolariidae].

"*Surculites*" *mathewsonii* (Gabb, 1864). [*Fusus*]. Smith 1975b. SEPM Symposium vol., p. 479, pl. 2, fig. 15. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype SU 10237 [=CASG 61666.13]. **Remarks:** In the genus *Surculites*, *fide* Squires (1987: p. 48.) [Fasciolariidae].

Surculites mathewsonii (Gabb, 1864). [*Fusus*]. Hickman 1976a. BAP 70(292):50–51, text fig. 10a, pl. 2, fig. 15. "La Jolla Fm.," Eocene. San Clemente Canyon., San Diego Co. SU 30628, [=CASG 72184]. SU hypotype 10206 [=CASG 72814]. [Fasciolariidae].

Surculites cf. *S. mathewsonii* (Gabb, 1864). [*Fusus*]. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 20. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6670. Hypotype UCR 6670/14. [Fasciolariidae].

Surculites mathewsonii (Gabb, 1864). [*Fusus*]. Squires 1984. NHMLAC CS 350:37, fig. 9j. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6555. [Fasciolariidae].

Surculites mathewsonii (Gabb, 1864). [*Fusus*]. Squires 1987. NHMLAC CS 388:48, fig. 73. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 358 [=LACMIP 16114]. Hypotype LACMIP 7493. [Fasciolariidae].

Surculites mathewsonii (Gabb, 1864). [*Fusus*]. Squires 1991c. SEPM Guidebook 68:222, pl. 2, fig. 11. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 671 [=LACMIP 16076]. Hypotype LACMIP 11474. [Fasciolariidae].

Surculites sinuatus (Gabb, 1864). [*Conus*]. Shimer and Shrock 1944. Index Foss. N.A., p. 514, pl. 211, figs. 13–15 (refigured from Dickerson 1915, pl. 10, figs. 2a–c (as *Surcula* (*Surculites*) *sinuata*)). Tejon Fm., Eocene. Ft. Tejon area, Kern Co. UCMP 458. Hypotype UCMP 15916], Dickerson (1915) figs. 2b, c missing [=Shimer and Shrock figs. 14, 15], *fide* Keen and Bentson, (1944: p. 197). [Fasciolariidae].

?*Symmetrocapulus* sp. Squires 1989c. Veliger 32(4):407–408, figs. 1–3. Tejon Fm., Eocene. East of Grapevine, Kern Co. CSUN 1201 [=LACMIP 12022]. Hypotype LACMIP 8048. [Symmetrocapulidae].

Syrnola scandix Keen, 1943 (n. sp.). Tr. SDSNH 10(2):50–51, pl. 4, figs. 24, 29, 30. Lowermost Round Mtn. Silt, Miocene. Kern Co. SU 2121. Holotype SU 7544 and paratypes SU 7544a, b [=CASG 72011]. **Remarks:** Junior synonym of *Pyramidella* (*Syrnola*) *ochsneri* (Anderson and Martin 1914), *fide* Addicott (1970: p. 142). [Pyramidellidae].

Taranis strongi (Arnold, 1903). [*Mangilia*]. Faustman 1964. UCPG 41(2):127, pl. 3, fig. 16. Upper Rio Dell Faustman, Pliocene. Fleener Creek area, Ferndale quad., Humboldt Co. UCMP B7939. Hypotype UCMP 37802. [Borsoniidae].

Tegula (*Chlorostoma*) *dalli* Arnold, 1907. Susuki 1992, Topanga Story, p. 7, fig. 5. Topanga Fm., Miocene (Cold Creek Member). Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP 22643 [=UCLA 2643]. Hypotype LACMIP 13077 [=UCLA 57650]. [Tegulidae].

Tegula* (*Omphalius*) *dalli arnoldi Addicott, 1970 (n. subsp.). USGS PP 642:41, pl. 1, figs. 14, 15. Upper Olcese Sand, Miocene. Caliente quad. (1914), Kern Co. UCMP B1599. Paratype UCMP 11062. [Tegulidae].

....., pl. 1, figs. 18, 19. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1599. Holotype USNM 650045.

....., pl. 1, fig. 23. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1600. Hypotype USNM 650046.

Tegula hemphilli Oldroyd, 1921 (n. sp.). Nautilus 34(4):115, pl. 5, figs. 11, 11a. [San Diego Fm., Pliocene]. Pacific Beach area, San Diego Co. UCMP 12661. Holotype UCMP 31208. **Remarks:** Pliocene age based on specimen preservation, which is distinctly different from Pleistocene preservation at this locality, *fide* G.L. Kennedy (personal communication, 2005). [Tegulidae].

Tegula* (*Omphalius*) *laevis Addicott, 1970 (n. sp.). USGS PP 642:41, 42, pl. 1, fig. 2. Upper Olcese Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1598. Paratype USNM 650042. [Tegulidae].

.....pl. 1, figs. 3, 5–7. Oil Center quad. (1954), Kern Co. USGS M1602. Holotype USNM 650043, hypotype USNM 650044.

Tegula varistriata Nomland, 1917b. Addicott et al. 1978. USGS OFR 78-446:59, 72, pl. 4, fig. 5. Santa Margarita Fm.,

Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2878. Hypotype USNM 254374. [Tegulidae].

Tegula varistriata Nomland, 1917b. Addicott et al. 1980. SEPM Guidebook 6:19, 33, pl. 5, fig. 5 (refigured from Addicott et al., 1978, pl. 4, fig. 5). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2878. Hypotype USNM 254374. [Tegulidae].

Tegula n. sp. Addicott 1973b. USGS PP 791:7, 17, pl. 8, fig. 2. Temblor Fm. (Wygal Sandstone Member), Miocene. Kern Co. UCR 1235. Hypotype UCR 1235/1 (not UCR 1235 as in pl. caption). [Tegulidae].

....., pl. 8, fig. 4. Carneros Rocks quad., Kern Co. USGS M3578. Hypotype USNM 646602 determined here as lost.

Teinostoma* (*Teinostoma*?) *lens Keen, 1943 (n. sp.). Tr. SDSNH 10(2):51, pl. 4, figs. 7–9. Lowermost Round Mtn. Silt, Miocene. Kern Co. SU locality 2121. Holotype SU 7545 [=CASG 72012], unfigured paratype SU 7964 [=CASG 7964]. **Remarks:** In the genus/subgenus *Vitrinella* (*Vitrinellopsis*)*, fide* Addicott (1970: p. 46). [Vitrinellidae].

Tejonia lajollaensis (Stewart, 1926 [1927]). [*Amaurellina*]. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, fig. 62-30. Las [*sic*] Llajas Fm., Eocene. In Aliso Canyon of Devil Creek, Santa Susana quad., Los Angeles Co. CASG 393. Hypotype CASG 5666. **Remarks:** *Tejonia moragai* (Stewart, 1926 [1927]), *fide* Marincovich (1977: p. 233). [Naticidae].

Tejonia lajollaensis (Stewart, 1926 [1927]). [*Amaurellina*]. Givens 1974, UCPG 109:74, pl. 8, fig. 5. Juncal Fm., Eocene. Park Canyon, San Guillermo quad. (1943), Ventura Co. UCR 4703. Hypotype UCR 4703/151. **Remarks:** *Tejonia moragai* (Stewart, 1926 [1927]), *fide* Marincovich (1977: p. 233). [Naticidae].

Tejonia moragai (Stewart, 1926 [1927]). [*Natica*]. Givens 1974. UCPG 109:74, pl. 8, fig. 8. Juncal Fm., Eocene. Reyes Peak area, Reyes Peak quad. (1943), Ventura Co. UCR 4706. Hypotype UCR 4706/101. [Naticidae].

Tejonia moragai (Stewart, 1926 [1927]). [*Amaurellina*]. Marincovich 1977. BAP 70(294):233–236, pl. 19, fig. 6. Tejon Fm., Eocene. Live Oak Canyon, Kern Co. UCMP 7200. Holotype UCMP 31387. [Naticidae].

....., pl. 19, fig. 7. Ardath Shale, Eocene. Vicinity of Rose Canyon, San Diego Co. UCMP 3976. Holotype (of *Amaurellina moragai lajollaensis* Stewart, 1926 [1927]) UCMP 31401.

....., pl. 19, fig. 9. Domengine Fm., Eocene. Near Somersville, Contra Costa Co. UCMP A1307]. Hypotype UCMP 14405.

....., pl. 19, fig. 11. Tejon Fm., Eocene. Grapevine, Tejon quad., Kern Co. UCMP A971]. Hypotype UCMP 14407.

....., pl. 19, fig. 12. Ardath Shale, Eocene. Near Rose Canyon, La Jolla quad., San Diego Co. UCMP 3991. Hypotype UCMP 14408.

Tejonia moragai (Stewart, 1926 [1927]). [*Natica*]. Squires 1984. NHMLAC CS 350:24, fig. 7d. Llajas Fm., Eocene. El Toro Canyon, Santa Susana quad., Los Angeles Co. CSUN 467 [=LACMIP 16079]. Hypotype LACMIP 6525. [Naticidae].

Tenagodus californiensis Squires, 1990a (n. sp.). Veliger 33(3):288–290, fig. 2. Santa Susana Fm., Paleocene. Bus Canyon, Simi Hills, Thousand Oaks quad. (1950, PR 1967), Ventura Co. CSUN 1290 [=LACMIP 16370]. Holotype LACMIP 8086. [Siliquariidae].

....., figs. 3–5. Coal Canyon Fm. [=Santa Susana Fm.], Paleocene. Garapito Creek Santa Monica Mtns., Topanga quad. (1952, PR 1967), Los Angeles Co. UCLA 7108 [=CSUN 354, =LACMIP 27108]. Paratypes LACMIP 8087, 8088.

Terebellum (*Terebellum*) *erraticum* (Cooper, 1894). [*Tornatina*]. Weaver and Kleinpell 1963. UCPG 43:189, pl. 25, figs. 8, 9. Matilija Fm., Eocene. Cañada de Santa Anita, Lompoc quad., Santa Barbara Co. UCMP B6922. Hypotype SU 9209 [=CASG 70246]. **Remarks:** In the genus *Paraseraphs* (family Seraphsidae), *fide* Squires (1984: p. 23; 1987: p. 33). [Seraphsidae].

Terebra* (*Fusoterebra*?) *adelaidana Addicott, 1970 (n. sp.). USGS PP 642:126, pl. 17, figs. 16, 17. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650232. [Terebridae].

Terebra californica Gabb, 1869b. Squires 1984. NHMLAC CS 350:39, fig. 9o. Llajas Fm. Eocene. El Toro Canyon, Santa Susana quad., Los Angeles Co. CSUN 467 [=LACMIP 16079]. Hypotype LACMIP 6560. [Terebridae].

Terebra (*Terebra*) *cooperi* Anderson, 1905. Addicott 1970. USGS PP 642:124–125, pl. 17, figs. 21, 27, 31, 33, 34. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotypes USNM 650235–650238. [Terebridae].

....., pl. 17, fig. 35. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1600. Hypotype USNM 650239.

Terebra cooperi Anderson, 1905. Rugh 2016. Desert Symposium vol.:314, fig. 5. Topanga Fm., Miocene. Panorama Heights, Santa Ana Mtns., Orange Co. Hypotype possibly at SDSNH, current whereabouts unknown. **Remarks:** *Ex* Grouard collection. [Terebridae].

Terebra gausapata Brown and Pilsbry, 1911. Rugh 2014a. Desert Symposium vol.:135, fig. 1-7. Latrania Fm., Miocene. Coyote Mtn., Imperial Co. ABDSP 5155.1. [Hypotype ABDSP I 12525. [Terebridae].

Terebra (*Strioterebrum*) *martini* English, 1914a. Moore 1968. SDSNH Occas. Pap. 15:36, pl. 15, fig. c. San Diego Fm., Pliocene. Reynard Wy., San Diego, San Diego Co. SDSNH2383. Hypotype SDSNH 4143]. [Terebridae].

Terebra (*Strioterebrum*) *martini* English, 1914a. Squires 2012. NHMLAC CS 520:77, fig. 92. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14409. [Terebridae].

Terebra* (*Strioterebrum*) *stirtoni Addicott, 1970 (n. sp.). USGS PP 642:126, pl. 17, figs. 11, 12. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650228, 650229. [Terebridae].

....., pl. 17, fig. 20. R30E, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Holotype USNM. 650330.

Terebra wattsiana Cooper, 1894. Coan 1981 [1982]. Univ. Idaho Press, p. 175, fig. 12.1 (refigured from Cooper 1894, pl. 1, fig. 1). Capay Fm., Eocene. Marysville Buttes, Sutter Co. Holotype missing, *fide* Keen and Bentson (1944: p. 200). [Terebridae].

Terebra (*Strioterebrum*) n. sp.? Addicott 1970. USGS PP 642:127, pl. 17, figs. 14, 15. Upper Olcese Sand, Miocene. Oil Center quad., Kern Co. USGS M1597. Hypotypes USNM. 650230, 650231. [Terebridae].

Terebra (*Terebra*) n. sp. Addicott 1970. USGS PP 642:125, pl. 17, figs. 18, 19, 30. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotypes USNM 650233, 650234. [Terebridae].

Terebralia susana Squires and Kennedy, 1998 (n. sp.). Veliger 41(2):163, figs. 6–10. Santa Susana Fm., Paleocene. Quarry Canyon, Santa Monica Mtns., Topanga quad. (1952, PR 1981), Los Angeles Co. LACMIP 26814. Holotype LACMIP 7942. [Potamididae]. **Remarks:** Does not conform to the definition of *Terebralia* as used by Reid et al. (2008), *fide* Reid et al. (2008: p. 692), but they gave no indication as to what genus it is.

Thais (*Thaisella*) *blakei* Anderson and Martin, 1914. Addicott,1970. USGS PP 642:85, pl. 9, figs. 6, 7. Upper Olcese Sand, Miocene. Locality occupies an area nearly half a mi. square in hills just north of the Kern River, Kern Co. CASG 65. Hypotype CASG 12934. [Muricidae].

Thais collomi Carson, 1926. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 4, figs. 6, 7. Pancho Rico Fm., Miocene/Pliocene. Priest Valley quad., Monterey Co. UCMP A4946. Hypotype UCMP 36471. **Remarks:** In the genus *Nucella*, *fide* Addicott (1978: p. 88). [Muricidae].

Thais (*Thaisella*) *edmondi* (Arnold, 1907). Addicott 1970. USGS PP 642:85, pl. 9, fig. 14. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1601. Hypotype USNM 650141. [Muricidae].

....., pl. 9, fig. 15. Lower Round Mtn. Silt, Miocene. Kern River, Kern Co. UCLA AC-13-34 [=LACMIP 16380]. Hypotype UCLA 45767 [=LACMIP 8434].

Thais etchegoinensis Arnold, 1909 [1910]. Durham and Addicott 1965. USGS PP 524-A:A13, pl. 3, fig. 6. Pancho Rico Fm., Miocene/Pliocene. Vicinity of San Lucas, Monterey Co. SU C1001. Hypotype SU 9755 [=CASG 70325]. [Muricidae].

Thais imperialis (Dall, 1909). [*Chrysodomus*]. Hall 1958. UCPG 34(1):58, pl. 9, figs. 5, 6. Briones Fm., Miocene. East of Irvington, La Costa Valley quad. (1943), Alameda Co. SU 3252. Hypotype SU 8475 [=CASG 69927]. [Muricidae].

Thais (*Nucella*) *lamellosa* (Gmelin, 1791). [*Buccinum*]. Glen 1959. UCPG 36(2):181–182, pl. 17, fig. 11 (not fig. h). Pillar Point "Merced" Fm. [=Purisima Fm.], Pliocene. North of San Vicente Creek, San Mateo Co. UCMP B4794. Hypotype UCMP 37669. **Remarks:** In the genus *Nucella*, *fide* Abbott (1974: p. 182. [Muricidae].

Thais lima (Gmelin, 1791). [*Murex*]. Hall 1958. UCPG 34(1):58, pl. 9, figs. 7, 10. Cierbo Fm., Miocene. Southeast of Pleasanton, La Costa Valley quad. (1943), Alameda Co. SU 2739. Hypotype SU 8474 [=CASG 69981]. **Remarks:** *Nucella tokudai* (Yokoyama, 1932), *fide* Amano et al. (1993: p. 240). [Muricidae].

Thais (*Nucella*) cf. *T.* (*N.*) *lima* (Gmelin, 1791 [not Martyn, 1788 as cited]). [*Murex*]. Glen, 1959. UCPG 36(2):182, pl. 17, fig. 8 (not fig. h). Pillar Point "Merced" Fm. [=Purisima Fm.], Pliocene. Near San Vicente Creek, San Mateo Co. UCMP B4794. Hypotype UCMP 37670. **Remarks:** In the genus *Nucella*, *fide* Abbott (1974: p. 182). [Muricidae].

Thais (*Nucella*) cf. *T.* (*N.*) *lima* (Gmelin, 1791). [*Murex*]. Addicott 1969. Pr.CAS 37(3):62, 67, 70, pl. 4, figs. 10. 11. Merced Fm.(?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotype USNM 650986. **Remarks:** In the genus *Nucella*, *fide* Abbott (1974: p. 182). [Muricidae].

Thais packi Clark, 1918. Addicott, 1965b. USGS PP 525-C:C104, fig. 3h. Basal Jewett, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotype USNM 649167. **Remarks:** *Nucella tokudai* (Yokoyama, 1932), *fide* Amano et al. (1993: p. 240). [Muricidae].

Thais (*Nucella*) *packi* Clark, 1918. Addicott 1970. USGS PP 642:84–85, pl. 9, figs. 1, 4, 19. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Hypotypes USNM 649167, 650131, 650132. **Remarks:** *Nucella tokudai* (Yokoyama, 1932), *fide* Amano et al. (1993: p. 240). [Muricidae].

....., pl. 9, figs. 2, 3. Caliente quad. (1914), Kern Co. UCMP B1665. Hypotype UCMP 32127.

"*Thais*" (*Nucella*) *packi* Clark, 1918. Marko and Vermeij 1999. Mol. Phylo. Evol. 13(2):282, 284, figs. 5.1, 5.2, 5.7. [San Lorenzo Series], Oligocene. Northeast of Muir Station, Contra Costa Co. UCMP 1309. Holotype UCMP 11246. **Remarks:** In the genus *Nucella*, *fide* Stewart (1946: p. 102). [Muricidae].

Thais (*Nucella*) *trancosana* Arnold, 1908. Addicott 1969. Pr.CAS 37(3):62, 64, 66, 68, pl. 1, figs. 1, 6–8, 10 (as *Thais (Nucella) transcosana*); pl. 3, fig. 5. Merced Fm. (?), Pliocene. Palo Alto quad., Santa Clara Co. USGS M1715. Hypotypes USNM 650942–650946, 650976. **Remarks:** Determined here as in the genus *Nucella*. [Muricidae].

Thais n. sp. Lutz 1951. UCPG 28(13):392, pl. 18, fig. 2. Sobrante Fm., Miocene. Vicinity of Lawson Hill and Oursan Ridge, Contra Costa Co. UCMP A4931. Hypotype UCMP 34165. **Remarks:** *Thais* (*Nucella*) *packi* Clark, 1918, *fide* Addicott 1970:84; *Nucella tokudai* (Yokoyama, 1932), *fide* Amano et al. (1993: p. 240). [Muricidae].

....., pl. 18, fig. 5. Near Pacheco, Contra Costa Co. UCMP A4929. Plastoholotype UCMP 34166. **Remarks:** *Thais* (*Nucella*) *packi* Clark 1918, *fide* Addicott (1970: p. 84); *Nucella tokudai* (Yokoyama, 1932), *fide* Amano et al. (1993: p. 240).

Thais cf. *T.* n. sp. Lutz 1951. Hall, 1958. UCPG 34(1):58, pl. 9, figs. 8, 9. Oursan Sandstone, Miocene. Near Irvington, La Costa Valley quad. (1943), Alameda Co. SU 3248. Hypotype SU 8476 [=CASG 69982]. **Remarks:** *Thais* (*Nucella*) *packi* Clark 1918, *fide* Addicott (1970: p. 84); determined here as in the genus *Nucella*. [Muricidae].

"*Thesbia*" *ocoyana* (Anderson and Martin, 1914). [*Drillia*]. Addicott 1965b. USGS PP 525-C:C106, fig. 4g. Olcese, Miocene. Oil Center quad. (1954), Kern Co. USGS M1602. Hypotype USNM 649170. **Remarks:** In the genus *Battillaria*, *fide* Addicott (1970: p. 53). [Battilariidae].

Tornatella pinguis (Gabb, 1864). [*Cinulia*]. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 31. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6884. Hypotype UCR 6684/10 UCR determined here as missing. **Remarks:** In the genus *Ringicula*, *fide* Squires (1999b: p. 22). [Ringiculidae].

Trichotropis* (?) *durhami Weaver and Kleinpell, 1963 (n. sp.). UCPG 43:188–189, pl. 25, fig. 3. Middle Gaviota Fm., Eocene. Near Las Cruces, Los Olivos quad., Santa Barbara Co. UCMP B6999. Paratype SU 9206 [=CASG 70241]. [Capulidae].

....., pl. 25, fig. 4. Gaviota Fm., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6985B. Holotype SU 9204 [=CASG 70201].

....., pl. 25, fig. 5. Middle Gaviota Fm., Eocene. Gaviota Creek Canyon, Lompoc quad., Santa Barbara Co. UCMP B7001. Paratype SU 9205 [=CASG 70240].

"*Trichotropis*" *lajollaensis* M.A.Hanna, 1927. Givens 1974. UCPG 109:70, pl. 6, fig. 18. Matilija Fm., Eocene. Beartrap Creek area, Reyes Peak quad. (1943), Ventura Co. UCR 4747. Hypotype UCR 4747/501. **Remarks:** In the genus *Pyrgulifera*, *fide* Squires (1999c: p. 13). [Capulidae].

Trichotropis tricarinata Addicott, 1970 (n. sp.). USGS PP 642:59, pl. 4, figs. 12, 13. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1590. Holotype USNM 650091. [Capulidae].

Trichotropis sp. Addicott 1970. USGS PP 642:59, pl. 3, fig. 33. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Fresno Co. USGS M1590. Hypotype USNM 650084. [Capulidae].

Trichotropis sp. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 2 (pl. 1 in caption), fig. N. Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8715 [=SBMNH 60192]. **Remarks:** Determined here as turrid sp. [Turridae].

Tritonalia cf. *T. lurida* (Middendorff, 1848b). [*Tritonium*]. Woodring et al. 1940 [1941]. USGS PP 195:88, pl. 15, fig. 12. San Joaquin Fm. (*Trachycardium* Zone), Pliocene. La Porteria, Middle Dome, Kettleman Hills, Kings Co. USGS 14126. Hypotype USNM 495765. **Remarks:** In the genus *Paciocinebrina*, *fide* Houart et al. (2019: p. 209). [Muricidae].

Tritonalia lurida (Middendorff, 1848b). [*Tritonium*]. Adegoke 1969. UCPG 80:179, pl. 11, figs. 11, 13. San Joaquin Fm., Pliocene. Reef Ridge quad., Kings Co. UCMP D1201. Hypotype UCMP 36857. **Remarks:** In the genus *Paciocinebrina*, *fide* Houart et al. (2019: p. 209). [Muricidae].

Tritonalia topangensis (Arnold, 1907). [*Ocinebra*]. Moore et al. 1952. Invert. Foss., p. 324, fig. 8-39.17. Miocene. Line drawing, source specimen unknown. **Remarks:** Determined here as in the genus *Ocenebra*. [Muricidae].

Tritonidea kreyenhageni Arnold, 1909 [1910]. Fowkes, 1982. Coalinga Guidebook, p. 21, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 4, fig. 4; refigured from Arnold and Anderson 1910, pl. 25, fig. 4 (both as *Tritonium californicum* Gabb, 1869b)). Domengine Fm. (as Tejon Fm.), Eocene. North of Coalinga, Fresno Co. Hypotype USNM 165644]. [Buccinidae].

Triumphis? n. sp. Addicott 1970. USGS PP 642:95, pl. 11, figs. 23, 24. Lower Olcese Sand, Miocene. "Top of Py[ramid Hill], Sand, Poso Creek." Matrix and other specimens from this locality suggest the material is from the lower part of the Olcese Sand exposed on the south side of Poso Creek, Woody quad., Kern Co. UCLA MB1400 [=LACMIP 16278]. Hypotype UCLA 45768 [=LACMIP. 8437]. [Buccinidae].

Trivia cf. *T. sanguinea* (Gray *in* G.B. Sowerby I, 1832) [not Gray, 1832, as cited]. . [*Cypraea*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:73, pl. 13, figs. 21, 22. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14648. Hypotype USNM 560073. **Remarks:** Determined here to be *Pusula californiana* (Gray, 1827). [Triviidae].

Trochita cf. *T. diabloensis* (Clark, 1915) [*Calyptraea*]. Powell et al. 2019a. USGS SIR 2019-5021:3, 34, pl. 3, fig. 11. Wilson Grove Fm., Miocene. North of Bloomfield, Sonoma Co., CASG 54135, Hypotype CASG 78417. [Calyptraeidae].

Trochita filosa Gabb, 1866. G D. Hanna and Hertlein, 1943. CDM Bull. 118(2):172, fig. 63-12. Temblor Fm., Miocene. North of Kern River, Kern Co. CASG 65. Hypotype CASG. 5731. **Remarks:** Determined here as in the genus *Calyptraea*. [Calyptraeidae].

Trochita radians (Lamarck, 1816), small var. [*Trochus*]. Woodring and Bramlette 1950 [1951]. USGS PP 222:72, pl. 13, fig. 19. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. USGS 14769. Hypotype USNM 560070. **Remarks:** Junior synonym of *Trochita trochiformis* (Born, 1778), *fide* Pastorino and Urteaga, 2012: pp. 68–69. [Calyptraeidae].

Trochita cf. *T. spirata* Forbes, 1852. Addicott, 1979. SEPM Guidebook 14:47–48, pl. 1, fig. 5. Vaqueros (?) Fm. (lower sandstone member), Oligocene. The Indians, Junipero Serra quad., Santa Lucia Range, Monterey Co. SU 1756. Hypotype CASG 60366 determined here as missing. **Remarks:** Junior synonym of *Trochita trochiformis* (Born, 1778), *fide* Pastorino and Urteaga, 2012: pp. 68– 69. [Calyptraeidae].

Trochita cf. *T. trochiformis* (Born, 1778). [*Patella*]. Stanton 1966. Jour. Paleo. 40(1):33, pl. 7, fig. 8. Castaic Fm., Miocene. Humphreys quad. (1932, PR 1946), Los Angeles Co. CIT 1663 [=LACMIP 2555]. Hypotype LACMIP 4168. [Calyptraeidae].

Trochita sp. Powell 2015. WSM Ann. Rept. 45:59, 62, figs. 21–23. Monterey Fm., Miocene. Along Arroyo Seco, west of Greenfield, Monterey Co. CASG 101093. Hypotypes CASG 101101–101103].

Trophon cf. *bartoni* Arnold, 1909 [1910]. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 11. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. Hypotype SDNSNH determined here as missing. [Muricidae].

Trophon carisaensis var. ***mirandaensis*** Grant and Eaton *in* Eaton et al., 1941 (n. var.). AAPG Bull. 25(2):pl. 2, fig. 8. Neroly Fm., Miocene. Caliente Range, San Luis Obispo Co. UCLA 1777A [=LACMIP. 21777]. Holotype UCLA 8939 [=LACMIP 8966]. [Muricidae].

Trophon clarki var. ***cuyamanus*** Grant and Eaton *in* Eaton et al., 1941 (n. var.). AAPG Bull. 25(2): pl. 2, fig. 7. Neroly Fm., Miocene. Caliente Range, San Luis Obispo Co. UCLA 1725 [=LACMIP 21725]. Holotype UCLA 8938 [=LACMIP 8965]. [Muricidae].

Trophon dickersoni Clark, 1915. Adegoke 1969. UCPG 80:174, pl. 10, figs. 8, 9. Santa Margarita Fm., Miocene. Domengine Ranch quad., Fresno Co. UCMP D1090. Hypotype UCMP 36841. [Muricidae].

Trophon dickersoni nomlandi Adegoke, 1969 (n. subsp.). UCPG 80:174–175, pl. 10, figs. 7, 12. Santa Margarita Fm., Miocene.,Domengine Ranch quad., Fresno Co. UCMP D702. Holotype UCMP 36842. [Muricidae].

Trophon gillulyi Grant and Eaton *in* Eaton et al., 1941 (n. sp.). AAPG Bull. 25(2):pl. 2, fig. 6. Cierbo Fm., Miocene. Caliente Range, San Luis Obispo Co. UCLA 1849 [=LACMIP 21849]. Holotype UCLA 8937 [=LACMIP 8964]. [Muricidae].

Trophon kernensis Anderson, 1905. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):174, fig. 63-17. Temblor Fm., Miocene. San Luis Obispo Co. CASG 126. Hypotype CASG. 5718. **Remarks:** In the subgenus *Austrotrophon*, *fide* Addicott (1970: p. 81). [Muricidae].

Trophon kernensis Anderson, 1905. Addicott, 1965b. USGS PP 525-C:C106, figs. 4k, n. Upper Olcese, Miocene. Caliente quad. (1914), Kern Co. UCMP B1600. Hypotype UCMP 36561. **Remarks:** In the subgenus *Austrotrophon*, *fide* Addicott (1970: p. 81). [Muricidae].

Trophon (*Austrotrophon*) *kernensis* Anderson, 1905. Addicott 1970. USGS PP 642:81–82, pl. 8, figs. 12, 13. Upper Olcese Sand, Miocene. Rio Bravo Ranch quad. (1954 Kern Co. USGS M1599. Hypotype USNM 650124. [Muricidae].

....., pl. 8, fig. 22. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650125.

....., pl. 8, figs. 24, 25. Caliente quad. (1914), Kern Co. UCMP B1600. Hypotype UCMP 36561.

....., pl. 8, fig. 23. Lower Round Mtn. Silt, Miocene. North bank of Kern River, Caliente quad. (1914), Kern Co. UCMP B1619. Hypotype UCMP 30823.

....., pl. 8, figs. 26, 27. Kern River area, Kern Co. USGS 6621. Hypotype USNM 650126.

Trophon kernensis Anderson, 1905. Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, fig. 17. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 93835. **Remarks:** In the subgenus *Austrotrophon*, *fide* Addicott (1970: p. 81). [Muricidae].

Trophon* (*Austrotrophon*) *kernensis medialis Addicott, 1970 (n.subsp.). USGS PP 642:83, pl. 8, figs 14–16. Basal Jewett Sand, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1591. Holotype USGS 650127, hypotype USNM 650128. [Muricidae].

Trophon Fowkes 1982. Coalinga Guidebook, p. 25, unnumbered fig. Temblor Fm., Miocene. "Button" bed, north of Coalinga, Fresno Co. WHC hypotype missing? [Muricidae].

....., p. 30, unnumbered fig. Etchegoin/Jacalitos Fm., Miocene/Pliocene. Upper Jacalitos Creek area, Fresno Co. WHC hypotype missing?

Trophosycon kernianum (Cooper, 1894). [*Agasoma*?]. G D. Hanna and Hertlein 1943. CDM Bull. 118 (2):174, fig. 63-21. Temblor Fm., Miocene. Kern River, Kern Co. CASG 64. Hypotype CASG 5717. [Ficidae].

Trophosycon kernianum (Cooper, 1894). [*Agasoma*?]. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 7. Monterey Fm. (Saltos Shale Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M2862. Hypotype USNM 254356. [Ficidae].

....., pl. 4, fig. 13. Santa Margarita Fm., Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M3568. Hypotype USNM 254380.

Trophosycon kernianum (Cooper, 1894). [*Agasoma*?]. Addicott et al. 1980. SEPM Guidebook 6:18, 20, pl. 1, fig. 7 (refigured from Addicott et al. 1978, pl. 1, fig. 7). Monterey Fm. (Saltos Shale Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M2862. Hypotype USNM 254356. [Ficidae].

....., pl. 5, fig. 13 (refigured from Addicott et al. 1978, pl. 4, fig. 13). Santa Margarita Fm., Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M3568. Hypotype USNM 254380.

Trophosycon ocoyanum (Conrad, 1855b). [*Sycotypus*]. Shimer and Shrock 1944. Index Foss. N.A., 500, pl. 205, figs. 9, 10 (refigured from Grant and Gale 1931, pl. 30, figs. 8a, b). Temblor Fm., Miocene. Poso Creek, Kern Co. Hypotype SU 648, [=CASG 71566]. **Remarks:** *Ficus* (*Trophosycon*) *kerniana* (Cooper, 1894), *fide* Addicott (1970: p. 74). [Ficidae].

....., fig. 11 (refigured from Grant and Gale 1931, pl. 30, fig. 3). [Fm. unknown], Miocene. Vicinity of New Idria, Monterey Co. Hypotype SU 645 [=CASG 71568]. **Remarks:** *Ficus* (*Trophosycon*) *kerniana* (Cooper, 1894), *fide* Addicott (1970: p. 74). [Ficidae].

Trophosycon sp. Stadum and Finger 2016. NHMLAC CS 524:40, 50, fig.18. Monterey Fm. (Saddleback Valley Limestone member), Miocene. "Fossil Reef" site, Laguna Hills, Orange Co., El Torro quad. SDSNH. 4521 (error in errata as SDSNH 4520, p. 50). Hypotype SDSNH 98691. [Ficidae].

....., fig. 19. Elevation 275 ft., Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 83239.

Trophosycon sp. Powell et al. 2019b. *PaleoBios* 36:14, 15, fig. 26. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP13004. Hypotype UCMP 411945. [Ficidae].

Trypanotoma stocki (Dickerson, 1916). [*Turris*]. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 18. Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 371 [=LACMIP 16115]. Hypotype LACMIP 6556. [Turridae].

Trypanotoma stocki (Dickerson, 1916). [*Turris*]. Squires 1988c. NHMLAC CS 398:16–17, fig. 39. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 975 [=LACMIP 16201]. Hypotype LACMIP 7719. [Turridae].

Tudicla (*Pseudoperissolax*) *blakei* (Conrad, 1855b). [*Busycon*]. Wenz 1943. Handbh. Palaoz. 6:1305, fig. 3720 (refigured from Anderson and G D. Hanna, 1925, pl. 12, fig. 6 (as *Pseudoperissolax blakei*)). Tejon Fm., Eocene. Grapevine Creek, Kern Co. [CASG 711]. [Hypotype CASG 847]. **Remarks:** In the genus *Pseudoperissolax* and family Muricidae, *fide* Squires (2015b: p. 583). [Muricidae]

Turbo* (*Senectus*) *mounti Schremp, 1981 (n. sp.). Jour. Paleo. 55(5):1131–1133, pl. 3, figs. 6, 7. Imperial Fm. [=Latrania Fm.], Pliocene. Whitewater area, San Gorgonio Pass, Riverside Co. UCR 5032. Holotype UCR 5032/28. [Turbinidae].

....., pl. 3, fig. 5. San Gorgonio Pass, Riverside Co. Hypotype PRI 30018.

....., pl. 3, fig. 3, 9, 10 (operculum), East side of Super Creek, Riverside Co. UCR 7477. Hypotypes UCR 7477/7–7477/9.

....., Whitewater, Riverside Co. UCR 5032. Unfigured paratypes UCR 5032/29, 5032/32, 5032/34.

....., Whitewater, Riverside Co. UCR 5034. Unfigured paratype UCR 5034/32.

....., Whitewater area, Riverside Co. CASG 27. Unfigured paratype CASG 60217.

....., Siltstone bluffs, Willis Palms, Edom quad., Riverside Co., UCMP A1262. Unfigured paratypes UCMP 14667, 14668.

Turbonilla* (*Pyrgiscus*) *bravoensis Keen, 1943 (n. sp.). Tr.SDSNH 10(2):51–52, pl. 4, figs. 20, 26, 27. Lowermost Round Mtn. Silt, MioceneCaliente quad., Kern Co. SU 2121. Holotype SU 7546 and paratypes SU. 7546a, b [=CASG 72014], unfigured paratypes SU 7972, 7972a, [=CASG 7972]. [Pyramidellidae].

....., SDSNH 5422 (*ex* SU 2121). Unfigured paratypes SDSNH 614, 934.

Turbonilla (*Pyrgiscus*) *bravoensis* Keen, 1943. Addicott, 1970. USGS PP 642:146, pl. 21, fig. 34. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS. M1612. Hypotype USNM 650320. [Pyramidellidae].

....., pl. 21, figs. 35, 36. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotypes UCMP 37117, 37118.

Turbonilla* (*Ptycheulimella*) *edisonensis Addicott, 1970 (n. sp.). USGS PP 642:147, pl. 21, fig. 6. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Holotype USNM 650299. [Pyramidellidae].

Turbonilla* (*Tragula*) *greenhornensis Addicott, 1970 (n. sp.). USGS PP 642:147, pl. 21, figs. 45, 46. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650326, paratype USNM 650327. [Pyramidellidae].

Turbonilla* (*Chemnitzia*) *hannai Addicott, 1970 (n. sp.). USGS PP 642:145, pl. 21, figs. 38, 40. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650324, hypotype USNM 650323. [Pyramidellidae].

....., pl. 21, fig. 39. Oil Center quad. (1950), Kern Co. UCMP B1598. Paratype UCMP 32140.

Turbonilla* (*Pyrgiscus*) *hormigacuesta Addicott, 1970 (n. sp.). USGS PP 642:146, pl. 21, figs. 37, 43. Upper Olcese Sand, MioceneOil Center quad. (1954), Kern Co. USGS M1597. Holotype USNM 650322, paratype USNM 650321. [Pyramidellidae].

Turbonilla* (*Pyrgolampros*) *mariposa Keen, 1943 (n. sp.). Tr.SDSNH 10(2):52, pl. 4, figs. 19, 25. Lowermost Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Holotype SU 7547 and paratype SU 7547a [=CASG 72015], unfigured paratypes (2) SU 7971, 7971a [=CASG 7971]. [Pyramidellidae].

....., SDSNH 5422 (*ex* SU 2121). Unfigured paratypes (2) SDSNH 615, 935.

Turbonilla (*Pyrgolampros*) *mariposa* Keen, 1943. Addicott 1970. USGS PP 642:146–147, pl. 21, fig. 17. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650310. [Pyramidellidae].

....., pl. 21, figs. 26, 41, 42. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1612. Hypotypes USNM 650332–650334.

Turbonilla cf. *T. mariposa* Keen, 1943. Addicott 1970. USGS PP 642:147, pl. 21, fig. 20. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650312. [Pyramidellidae].

Turbonilla (*Chemnitzia*) n. sp. Addicott 1970. USGS PP 642:145, pl. 21, fig. 44. Upper Olcese Sand, Miocene. In Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650325. [Pyramidellidae].

Turbonilla (*Chemnitzia*?) n. sp. Addicott 1970. USGS PP 642:145, pl. 21, fig. 18. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650311. [Pyramidellidae].

Turbonilla (*Pyrgiscus*) n. sp. Addicott 1970. USGS PP 642:146, pl. 21, figs. 23, 24. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650315. [Pyramidellidae].

Turbonilla sp. Squires 2012. NHMLAC CS 520:77, fig. 97. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17918. Hypotype LACMIP 14414. [Pyramidellidae].

Turcica imperialis brevis Stewart *in* Woodring et al., 1940 [1941]. Woodring and Bramlette 1950 [1951]. USGS PP 222:69, pl. 12, figs. 9, 10. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. Alex Clark locality Hypotype USNM 560063. [Eucyclidae].

....., pl. 12, figs. 12, 14. Fugler Pt., Santa Barbara Co. CIT. 869 [=LACMIP 6108]. Hypotype CIT 4556 [=LACMIP 4160].

Turcicula santacruzana Arnold, 1908 (n. sp.). Pr.USNM 34:373. San Lorenzo, Oligocene. San Lorenzo River, Santa Cruz Co. LACMIP 6109. Unfigured paratype 4161. [Eucyclidae].

Turricula sp., aff. *T. burroensis* (Nelson, 1925). [*Turris*]. Squires 1999b. NHMLAC CS 479:21, fig. 42. Santa Susana Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 961 [=LACMIP 17191]. Hypotype LACMIP 12688. [Clavatulidae].

Turricula? *buwaldana* (Anderson and Martin, 1914). [*Drillia*]. Addicott 1970. USGS PP 642:130–131, pl. 18, fig. 10; pl. 19, fig. 4. Lower Round Mtn. Silt, Miocene. Bluffs of Kern River, Kern Co. USGS 3886. Hypotypes USNM 650248, 650258. [Clavatulidae].

....., pl. 18, fig. 18. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Hypotype USNM 650249.

....., pl 18, fig. 19. Kern River, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1608. Hypotype USNM 650250.

....., pl. 18, fig. 11. Oil Center quad. (1954), Kern Co. USGS M1602. Hypotype USNM 650251.

Turricula? cf. *T. buwaldana* (Anderson and Martin, 1914). [*Drillia*]. Addicott 1970. USGS PP 642:130, 131, pl. 18, fig. 14. Edison Shale, Miocene (of Cushman and Goudkoff 1938: pp. 1, 2). Superior Oil Co., 4949–5957 ft. depth, Kern Co. CASG 28909. Hypotype CASG 12941. [Clavatulidae].

Turricula cohni (Dickerson, 1915). [*Surcula*]. Givens 1974. UCPG 109:89, pl. 11, fig. 6. Matilija Fm., Eocene. Near junction of Alamo Creek, Dry Canyon, and Cuyama River valley, Reyes Peak quad. (1943), Ventura Co. UCR 4741. Hypotype UCR 4741/251. [Clavatulidae].

Turricula (*Crenaturricula*) *crenatospira* (Cooper, 1894). [*Surcula*]. Wenz 1943. Handbh.Palaoz. 6:1387, fig. 3920 (refigured from Vokes, 1939, pl. 17, fig. 5 (as *Fusiturricula* (*Crenaturricula*) *crenatospira*)). Arroyo Hondo Fm., Eocene. Marysville Buttes, Sutter Co. UCMP 1853. Hypotype (topotype) UCMP 12166. [Clavatulidae].

Turricula ochsneri (Anderson and Martin, 1914). [*Drillia*]. Addicott 1970. USGS PP 642:12–130, pl. 18, figs. 1–3. Lower Round Mtn. Silt, Miocene. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Hypotypes USNM 650242–650244. [Clavatulidae].

....., pl. 18, fig. 6. Kern River, Kern Co. USGS 6641. Hypotype USNM 650245.

....., pl. 18, figs. 12, 13. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotype UCMP 36940.

Turricula piercei (Arnold, 1909 [1910]). [*Pleurotoma* (*Bathytoma*)]. Addicott 1970. USGS PP 642:130, pl. 18, figs. 4, 5. Upper Olcese Sand, Miocene. Caliente quad. (1914), Kern Co. UCMP B1586. Hypotype UCMP 37091. [Clavatulidae].

....., pl. 18, fig. 7. Lower Round Mtn. Silt, Miocene Kern Co. USGS 6624. Hypotype USNM 650246.

....., pl. 18, fig. 8. Kern River, Kern Co. USGS 6063. Hypotype USNM 650247.

....., pl. 18, fig. 9. Caliente quad. (1914), Kern Co. UCMP B1638. Hypotype UCMP 37092.

Turricula piercei (Arnold, 1909 [1910]). [*Pleurotoma* (*Bathytoma*)]. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, fig. 5. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al. 1959:8, 13), Miocene. Shale Pt. quad., Temblor Range, Kern Co. USGS M3986. Hypotype USNM 646797. [Clavatulidae].

Turricula piercei (Arnold, 1909 [1910]). [*Pleurotoma* (*Bathytoma*)]. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 4. Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2862. Hypotype USNM 254353. [Clavatulidae].

....., pl. 1, fig. 6. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2869. Hypotype USNM 254355.

Turricula piercei (Arnold, 1909 [1910]). [*Pleurotoma* (*Bathytoma*)]. Addicott et al. 1980. SEPM Guidebook 6: 18, 20, pl. 1, fig. 4 (refigured from Addicott et al., 1978, pl. 1, fig. 4). Monterey Fm. (Saltos Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2862 (not USGS M2861 as in pl. caption). Hypotype USNM. 254353. [Clavatulidae].

Turricula piercei babykingensis Adegoke, 1969. (n. subsp.). UCPG 80:193, pl. 13, figs. 1, 12. Temblor Fm., Miocene. Vicinity of Baby King Canyon, Reef Ridge quad., Kings Co. UCMP B6513. Holotype UCMP 36904, unfigured paratype UCMP 36905. [Clavatulidae].

Turricula praeattenuata (Gabb, 1869b). [*Surcula*]. Givens 1974. UCPG 109:89–90, pl. 11, fig. 2. Juncal Fm., Eocene. Lockwood Valley quad. (1943), Ventura Co. UCR 4676. Hypotype UCR 4676/4.

....., pl. 11, fig. 11. Lockwood Valley quad. (1943), Ventura Co. UCR 4686. Hypotype UCR 4686/6. [Clavatulidae].

"*Turricula*" *waringi* Nelson, 1925. Smith 1975b. SEM Symposium vol., p. 376, pl. 1, fig. 10. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717). Hypotype UCMP 14200. [Clavatulidae].

Turricula? waringi Nelson, 1925. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 26. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 4569. Hypotype UCR 4569/27 determined here as missing. [Clavatulidae].

Turricula wilsoni (Anderson and Martin 1914). [*Drillia*]. Adegoke 1969. UCPG 80:192, pl. 11, fig. 7. Temblor Fm., Miocene. *Anadara* bed, Reef Ridge quad., Kings Co. UCMP D1064. Hypotype UCMP 36902. [Clavatulidae].

Turricula wilsoni (Anderson and Martin, 1914). [*Drillia*]. Addicott et al. 1978. USGS OFR 78-446:58 (as *Turricula piercei*), 60, pl. 1, fig. 12. Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2869. Hypotype USNM 254361. [Clavatulidae].

Turricula wilsoni (Anderson and Martin, 1914). [*Drillia*]. Addicott et al. 1980. SEPM Guidebook 6:18 (as *Turricula piercei* (Arnold, 1909 [1910])) 20, pl. 1, fig. 12 (refigured from Addicott et al., 1978, pl. 1, fig. 12). Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS. M2869. Hypotype USNM 254361. [Clavatulidae].

Turricula sp. Smith 1975b. SEPM Symposium vol., p. 376, pl. 1, fig. 7. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073. Hypotype SU 10227 [=CASG 61666.23]. [Clavatulidae].

....., pl. 1, fig. 8. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. UCMP A9717. Hypotype UCMP 14198. [Clavatulidae].

Turricula sp. Squires 2008. NHMLAC CS 517:5, fig. 29. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17850. Hypotype LACMIP 13430. [Clavatulidae].

Indeterminate turrid. Throckmorton 1988a. USGS OFR 88-59:55, pl. 6, fig. 1 (latex peel) (refigured in Throckmorton 1988b, pl. 1, fig. 22). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8151. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Turridae?].

Turritella andersoni Dickerson, 1916. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):170, figs. 62-6, 62-7, 62-16. Domengine Fm., Eocene. Salt Creek, Fresno Co. CASG 316. Hypotypes CASG 5621, 5622, 7737. [Turritellidae].

Turritella andersoni Dickerson, 1916. Givens 1974. UCPG 109:62, pl. 5, figs. 7–9. Juncal Fm., Eocene. Hot Springs Creek, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4659. Hypotypes UCR 4659/201–4659/203. [Turritellidae].

....., pl. 5, fig. 10. Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4667. Hypotype UCR 4667/201.

Turritella andersoni Dickerson, 1916. Squires 1984. NHMLAC CS 350:18, fig. 6e. Llajas Fm., Eocene. Chivo Canyon area, Santa Susana quad. (1951, PR 1960), Ventura Co. CSUN 469d [=LACMIP 16389]. Hypotype LACMIP 6510. [Turritellidae].

Turritella andersoni Dickerson, 1916. Squires 1987. NHMLAC CS 388:24, 25, fig. 20. Juncal Fm., Eocene. Canton Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 362 [=LACMIP 16273]. Hypotype LACMIP 7448. [Turritellidae].

....., fig. 21. Whitaker Peak quad. (1958), Los Angeles, Co. CSUN 843 [=LACMIP 16356]. Hypotype LACMIP 7449.

Turritella andersoni Dickerson, 1916. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 2. Juncal Fm.?, Eocene. Northern Lockwood Valley area, Ventura Co. CSUN 979 [= LACMIP 16081]. Hypotype LACMIP 7695. [Turritellidae].

Turritella andersoni Dickerson, 1916. Squires 1988b. SEPM Guidebook 58:205, fig. 2. Lodo Fm., Eocene. Near the junction of Urruttia Canyon and Salt Creek, Coalinga quad. (1902) [=Joaquin Rocks quad. (1969)], Fresno Co. UCMP 1817. Neotype (of Squires 1988b: p. 205) UCMP 38193. [Turritellidae].

Turritella andersoni Dickerson, 1916. Squires 1988c. NHMLAC CS 398:10, fig. 14. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943) Ventura Co. CSUN 979 [=LACMIP 16081]. Hypotype LACMIP 7695. [Turritellidae].

Turritella andersoni Dickerson, 1916. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 12. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 676 [=LACMIP 16192]. Hypotype LACMIP 11455. [Turritellidae].

Turritella andersoni Dickerson, 1916. Squires 2008. NHMLAC CS 517:5, fig. 16. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP 17848. Hypotype LACMIP 13417. [Turritellidae].

Turritella andersoni (n. subsp.) Saul 1983b. SEPM Guidebook 35:74, pl. 1, figs. 15–18. Santa Susana Fm., Eocene. "Oil Seep Canyon" [=Chivo Canyon], Santa Susana quad., Ventura Co. LACMIP 16388. Hypotypes UCLA 59364–59367 [=LACMIP 10429–10432]. **Remarks:** *Turritella andersoni susanae* Merriam, 1941, *fide* Squires (1999b: p. 16). [Turritellidae].

Turritella andersoni Dickerson n. var. Crowell and Susuki 1959. GSA Bull. 70:588, pl. 2, fig. 5. Maniobra Fm., Eocene. Orocopia Mtns., Canyon Spring quad., Riverside Co. UCLA. 3780 [=LACMIP 23780]. Hypotype UCLA. 28983 [=LACMIP 8838]. [Turritellidae].

Turritella andersoni lawsoni Dickerson, 1916. Crowell and Susuki 1959. GAS Bull. 70:588, pl. 2, fig.12. Maniobra Fm., Eocene. Orocopia Mtns., Canyon Spring quad., Riverside Co. UCLA 3780 [=LACMIP 23780]. Hypotype UCLA 28984 [=LACMIP 8844]. [Turritellidae].

Turritella andersoni lawsoni Dickerson, 1916. Givens 1974. UCPG 109:62–63, pl. 5, fig. 11. Juncal Fm., Eocene Wagon Rd. Canyon, San Guillermo quad. (1943), Ventura Co. UCR 4701. Hypotype UCR 4701/11. [Turritellidae].

....., pl. 5, fig. 12. Park Canyon, San Guillermo quad. (1943), Ventura Co. UCR 4700. Hypotype UCR 4700/10.

....., pl. 5, fig. 14. Between the Piru Creek and Alamo Creek watersheds, San Guillermo quad. (1943), Ventura Co. UCR 4694. Hypotype UCR 4694/10.

Turritella andersoni lawsoni Dickerson, 1916. Saul 1983b. SEPM Guidebook 35:76, pl. 2, figs. 10,11. Llajas Fm., Eocene. Simi Arroyo, Santa Susana quad., Ventura Co. UCLA 5837 [=LACMIP 25837]. Hypotypes UCLA 59379, 59397 [=LACMIP 10440, 10441]. [Turritellidae].

Turritella andersoni lawsoni Dickerson, 1916. Squires 1983b. SEPM Guidebook 35:88, fig. 9E. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co. [LACMIP 7242]. Hypotype LACMIP 6511. [Turritellidae].

Turritella andersoni lawsoni Dickerson, 1916. Squires 1984. NHMLAC CS 350:18, figs. 6f, g. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotypes LACMIP 6511, 6512. [Turritellidae].

Turritella andersoni lawsoni Dickerson, 1916. Squires 1997b. Simi Valley Hist. Soc. vol., p. 297, fig. 2d (refigured from Squires, 1984, fig. 6f). Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6511. [Turritellidae].

Turritella andersoni lawsoni Dickerson, 1916. Elder et al. 1998. SEPM Guidebook 84:160, 162 (as *Turritella* sp. cf.

T. andersoni lawsoni), pl. 1, fig. 5. German Rancho Fm., Eocene. Near Gualala, Mendocino Co., Wentworth locality W200 [=UCMP W200]. Hypotype UCMP 39917. [Turritellidae].

Turritella andersoni lawsoni forma *secondaria* Merriam, 1941. Crowell and Susuki 1959. GSA Bull. 70:588, pl. 2, figs. 9, 11 [in part]. Maniobra Fm., Eocene. Orocopia Mtns., Canyon Spring quad., Riverside Co. UCLA 3780 [=LACMIP 23780]. Hypotypes UCLA 28981, 28982 [=LACMIP 8841, 8842]. **Remarks:** Figure 11 is *Turritella andersoni lawsoni* Dickerson, 1916, *fide* Squires (1984: p. 18). [Turritellidae].

Turritella andersoni lawsoni forma *secondaria* Merriam, 1941. Saul 1983b. SEPM Guidebook 35:76, pl. 2, fig. 12. Llajas Fm., Eocene. Simi Arroyo, Santa Susana quad., Ventura Co. UCLA 5837 [=LACMIP 25837]. Hypotype UCLA 59380 [=LACMIP 10442]. **Remarks:** *Turritella andersoni lawsoni* Dickerson, 1916, *fide* Squires (1984: p. 18). [Turritellidae].

Turritella andersoni susanae Merriam, 1941. Saul 1983b. SEPM Guidebook 35:76, pl. 2, fig. 5. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad., Ventura Co. UCMP A993. Hypotype UCMP 15295. **Remarks:** *Turritella andersoni* Dickerson, 1916, *fide* Squires (1987: p. 24). [Turritellidae].

Turritella andersoni susanae Merriam, 1941. Squires 1999b. NHMLAC CS 479:16, fig. 27. Santa Susana Fm., Eocene. Chivo Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 969 [=LACMIP 16894]. Hypotype LACMIP 12677. [Turritellidae].

Turritella applinae M.A. Hanna, 1927. Kelley 1943. BAAPG 27(1):12, pl. 1, fig. 2. "Matilija Fm.," Eocene. El Jaro Creek drainage, Cañada de Santa Ana, Lompoc quad., Santa Barbara Co. SU 2105. Hypotype SU 7413 [=CASG 72021]. [Turritellidae].

Turritella buwaldana Dickerson, 1916. Stewart 1946. USGS PP 205-C:93, pl. 11, fig. 24. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14495. Hypotype USNM 498725. [Turritellidae].

Turritella buwaldana Dickerson n. var. Crowell and Susuki 1959. GSA Bull. 70:588, pl. 2, fig. 8. Maniobra Fm., Eocene. Orocopia Mtns., Canyon Spring quad., Riverside Co. UCLA 3779 [=LACMIP 23779]. Hypotype UCLA 28985 [=LACMIP 8840]. [Turritellidae].

Turritella buwaldana Dickerson, 1916. Easton 1960. Invert. Paleo., p. 386, fig. 10.10.6 (refigured from Merriam, 1941, fig. 2d). Eocene. Line drawing, source specimen unknown. [Turritellidae].

Turritella buwaldana Dickerson ss, 1916. Givens 1974. UCPG 109:63, pl. 5, fig 15. Juncal Fm., Eocene. Alamo Creek area, San Guillermo quad. (1943), Ventura Co. UCR 4705. Hypotype UCR 4705/201. [Turritellidae].

Turritella buwaldana Dickerson, 1916. Fowkes 1982. Coalinga Guidebook, p. 230, unnumbered fig. (refigured in Fowkes 1983, p. 32). Avenal Sandstone, Eocene. Kings Co. WHC hypotype lost? [Turritellidae].

Turritella buwaldana Dickerson, 1916. Saul 1983b. SEPM Guidebook 35:76, pl. 2, fig. 13 (typical form). Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. UCLA 2777 [=LACMIP 22777]. Hypotype UCLA 59374 [=LACMIP 10443]. [Turritellidae].

....., p. 77, pl. 2, figs. 14 (round-whorled form), 15 (slender form). Chivo Canyon, Santa Susana quad., Ventura Co. UCLA 586 [=LACMIP 20586]. Hypotypes UCLA 59375, 59376 [=LACMIP 10444, 10445].

Turritella buwaldana Dickerson, 1916. Squires 1983b. SEPM Guidebook 35:88, fig. 9F. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co. LACMIP 16211. Hypotype LACMIP 6513. [Turritellidae].

Turritella buwaldana Dickerson, 1916. Squires 1984. NHMLAC CS 350:18, fig. 6h. Llajas Fm., Eocene. Devil Canyon, 450 ft. Santa Susana quad., Los Angeles Co. CSUN 373 [=LACMIP 16211]. Hypotype LACMIP 6513. [Turritellidae].

Turritella buwaldana Dickerson, 1916. Squires 1987. NHMLAC CS 388:27, fig. 24. Juncal Fm., Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 237 [=LACMIP 16080]. Hypotype LACMIP 7452. [Turritellidae].

Turritella buwaldana Dickerson, 1916. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 3. Juncal Fm.?, Eocene. Northern Lockwood Valley area, Ventura Co. CSUN 981 [=LACMIP 16142]. Hypotype LACMIP 7696. [Turritellidae].

Turritella buwaldana Dickerson, 1916. Throckmorton 1988a. USGS OFR 88-59:55–56, pl. 6, fig. 3 (latex peel) (refigured in Throckmorton 1988b, pl. 1, fig. 10). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8151. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Turritellidae].

Turritella buwaldana Dickerson, 1916. Squires 1988c. NHMLAC CS 398:10–11, fig. 15. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 981 [=LACMIP 16142]. Hypotype LACMIP 7696. [Turritellidae].

Turritella buwaldana Dickerson, 1916. Squires et al. 1988. SEPM Guidebook 58:185, pl. 1, fig. 1 (latex pull). Goler Fm., Eocene. El Paso Mtns., Inyokern SE quad. (1972), Kern Co. USGS M9176. Hypotype USNM 424889. [Turritellidae].

Turritella buwaldana Dickerson, 1916. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 14. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 674 [=LACMIP 16082]. Hypotype LACMIP 11457. [Turritellidae].

Turritella buwaldana Dickerson, 1916. Squires 1999b. NHMLAC CS 479:16–17, fig. 28. Santa Susana Fm., Eocene. Santa Susana quad. (1959, PR 1961), Ventura Co. LACMIP 26615. Hypotype LACMIP 10434 [=UCLA hypotype 59372]. [Turritellidae].

....., fig. 29. Santa Susana Fm., Paleocene/Eocene. Calabasas quad. (1952, PR 1967), Ventura Co. CSUN 1343 [=LACMIP 17186]. LACMIP hypotype 12678.

Turritella buwldana? Dickerson, 1916. Squires 2008. NHMLAC CS 517:5, fig. 17. Juncal Fm., Eocene. Elsmere Canyon, San Fernando quad. (1995), Los Angeles Co. LACMIP. 17848. Hypotype LACMIP 13418. [Turritellidae].

Turritella buwaldana subsp. *coosensis?* (Merriam, unpubl.). Throckmorton 1988a. USGS OFR 88-59:55–56, pl. 6, fig. 4 (peel) (refigured in Throckmorton 1988b, pl. 1, fig. 11). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8151. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Turritellidae].

Turritella buwaldana crooki Merriam and Turner, 1937. Givens 1974. UCPG 109:64, pl. 5, figs. 16, 17. Juncal Fm., Eocene. Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4656. Hypotypes UCR 4656/201, 4656/202. [Turritellidae].

Turritella buwaldana crooki Merriam and Turner, 1937. Saul 1983b. SEPM Guidebook 35:76, pl. 2, figs. 2, 3. Llajas Fm., Eocene. Chivo Canyon, Santa Susana quad., Ventura Co. UCLA 6615 [=LACMIP 26615]. Hypotypes UCLA 59372, 59373 [=LACMIP 10434, 10435]. **Remarks:** Junior synonym of *Turritella buwaldana* Dickerson, 1916, *fide* Squires (1999b: p. 16). [Turritellidae].

Turritella? *buwaldana subuvasana* Nelson, 1925. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 11. Santa Susana Fm., Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCLA 3172 [=LACMIP 23172]. Hypotype UCLA 59361 [=LACMIP 10427]. **Remarks:** Junior synonym of *Turritella buwaldana* Dickerson, 1916, *fide* Squires (1999b: p. 16). [Turritellidae].

*Turritella carisaensis** Anderson and Martin, 1914. Eaton, et al. 1941. AAPG Bull. 25(2): pl. 1, figs. 10, 10a. Neroly Fm., Miocene. [East side Newsome Canyon, Cuyama Valley, San Luis Obispo Co.] UCLA 1832 [=LACMIP 21832]. Hypotypes UCLA 8961, 8962 [=LACMIP 8947, 8948]. **Remarks:** Error for *carrisaensis*. [Turritellidae].

Turritella carrisaensis Anderson and Martin, 1914. Addicott et al. 1978. USGS OFR 78-446:59, 72, pl. 4, fig. 14. Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2834. Hypotype USNM 254381. [Turritellidae].

Turritella carrisaensis Anderson and Martin, 1914. Addicott et al. 1980. SEPM Guidebook 6:33, pl. 5, fig. 14 (as *Turritella carisaensis*) (refigured from Addicott et al. 1978, pl. 4, fig. 14). Santa Margarita Fm., Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2834. Hypotype USNM 254381. [Turritellidae].

Turritella carisaensis* var. ***padronesensis*** Grant and Eaton *in* Eaton et al., 1941 (n. var.). AAPG Bull. 25(2):221, pl. 1, figs. 9, 9a. Monterey Fm., Miocene. Northeast flank Caliente Range, San Luis Obispo Co. UCLA 472 [=LACMIP 20472]. Holotype UCLA 7352A [=LACMIP 8944], paratype UCLA 7352B [=LACMIP 8945], unfigured paratype UCLA 7532C [=LACMIP 8946]. **Remarks:** Error for *carrisaensis*. [Turritellidae].

Turritella cooperi Carpenter, 1864b. Moore et al. 1952. Invert. Foss., p. 326, fig. 8-40.18. Pliocene. Line drawing, source specimen unknown. [Turritellidae].

Turritella cooperi Carpenter, 1864b. Easton 1960. Invert. Paleo., p. 386, fig. 10.10.8 (refigured from Merriam, 1941, fig. 2c). Pliocene. Line drawing, source specimen unknown. [Turritellidae].

Turritella cooperi Carpenter, 1864b. Durham and Addicott 1965. USGS PP 524-A:A12, pl. 5, fig. 9 (cast). Pancho Rico Fm., Miocene/Pliocene. Pancho Rico Creek, San Ardo quad., Monterey Co. USGS M1929. Hypotype USNM 649107. [Turritellidae].

Turritella cooperi Carpenter, 1864b. Stanton 1966. Jour. Paleo. 40(1):32, pl. 7, figs. 1–5. Castaic Fm., Miocene. Near junction of Reynier and Sand canyons, Los Angeles Co. CIT 1849 [=LACMIP 2557]. Hypotypes LACMIP 4176–4180]. [Turritellidae].

Turritella cooperi Carpenter, 1864b. Weaver 1971. West (LA Times), 18 April, 1971:11, unnumbered fig. (upper right). "Fernando Fm.", Pliocene. Arco Towers excavation, 6th and Flower streets, downtown Los Angeles, Los Angeles Co. LACMIP1219]. Hypotypes (3) current whereabouts unknown. [Turritellidae].

Turritella cooperi Carpenter, 1864b. Addicott 1972b. SEPM Symposium vol., p. 15, pl. 4, fig. 10. Panorama Hills Fm. (of Dibblee 1968), Pliocene. Panorama Hills quad., Temblor Range, Kern Co. USGS M1059. Hypotype USNM 646819. [Turritellidae].

Turritella cooperi Carpenter, 1864b. Stadum 1973. OCF, p. 31, pl. 6, fig. 7. Pliocene. ?Orange Co. Locality unknown. Hypotype determined here as missing. [Turritellidae].

Turritella cooperi Carpenter, 1864b. Squires and White 1983. SEPM Guidebook 35:222, pl. 1, fig. 9. Saugus Fm. [=Pico Fm.], Pliocene. Northern Simi Valley, Ventura Co. CSUN 725 [=LACMIP 29227]. Hypotype UCLA 59411 [=LACMIP 8324]. [Turritellidae].

Turritella cooperi Carpenter, 1864b. Stadum 1984a. HNFOC Mem. 1:80, pl. 1, fig. 3. Niguel Fm., Pliocene. Orange Co. SDSNH 4080. Hypotype SDSNH 75911]. [Turritellidae].

Turritella cooperi Carpenter, 1864b. Squires 1997b. Simi Valley Hist. Soc. vol., p. 301, fig. 6a (refigured from Squires and White 1983, pl. 1, fig. 9). Saugus Fm. [=Pico Fm.], Pliocene. North side Simi Valley, Ventura Co. CSUN725 [=LACMIP 29227). Hypotype UCLA 59411 [=LACMIP 8324)]. [Turritellidae].

Turritella cooperi Carpenter, 1864b. Squires 2012. NHMLAC CS 520:77, fig. 63. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 17917. Hypotype LACMIP 14383. [Turritellidae].

Turritella cooperi forma *nova* Nomland, 1916b. Durham and Addicott 1965. USGS PP 524-A:A12, pl. 4, fig. 3. Pancho Rico Fm., Miocene/Pliocene. Salinas River, Hames Valley quad., Monterey Co. USGS. M1676. Hypotype USNM 649098. [Turritellidae].

Turritella cooperi Carpenter 1864b, strongly sculptured var. Woodring and Bramlette, 1950 [1951]. USGS PP 222:71, pl. 13, fig. 12. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. USGS 14769. Hypotype USNM 560068. [Turritellidae].

....., pl. 13, figs. 14, 15. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14648. Hypotype USNM 560067. [Turritellidae].

Turritella coreyi Merriam, 1941. Weaver and Kleinpell 1963. UCPG 43:183–184, pl. 23, figs. 2, 4. "Coldwater" Sandstone, Eocene. Along Camino Cielo near Sacate-"Coldwater" contact, San Rafael Mtn. quad., Santa Barbara Co. UCMP B6940. Hypotypes SU 9178, 9179 [=CASG 70270, 70271]. [Turritellidae].

....., pl. 23, fig. 3. Tecolote Canyon, Goleta quad., Santa Barbara Co. UCMP B6938. Hypotype SU. 9177 [=CASG 70269].

Turritella cornuatus Zinsmeister, 1983b (n. sp.). Jour. Paleo. 57(6):1289–1291, figs. 2E, F. Santa Susana Fm., Paleocene. Calabasas quad., Simi Hills, Ventura Co. UCR 6825. Holotype UCR 6825/100 (not UCR 6825/1 (as in text) or UCR 6835/100 (as in pl. caption)), paratype UCR 6825/101. [Turritellidae].

Turritella aff. *T. freya* Nomland, 1917b. Stanton 1966. Jour. Paleo. 40(1):32–33, pl. 7, figs. 6, 7. Castaic Fm., Miocene. Near junction of Reynier and Sand canyons, Los Angeles Co. CIT 1849 [=LACMIP. 2557]. Hypotypes LACMIP 4181, 4182. [Turritellidae].

Turritella gonostoma hemphilli Applin *in* Merriam, 1941. Woodring and Bramlette 1950 [1951]. USGS PP 222:71, pl. 13, fig. 13. Careaga Fm. (Cebada Member), Pliocene. Fugler Pt., Santa Barbara Co. 14770. Hypotype USNM 560069. [Turritellidae].

Turritella gonostoma hemphilli Applin *in* Merriam, 1941. Durham and Addicott 1965. USGS PP 524-A:A12, pl. 5, figs. 18, 19 (casts). Pancho Rico Fm., Miocene/Pliocene. Wunpost quad., Monterey Co. USGS M982. Hypotypes USNM 649115, 649116. [Turritellidae].

Turritella hannai Nelson, 1925. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 15. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 4573. Hypotype UCR 4573/13 (not UCR 4571/22 as in pl. caption). [Turritellidae].

Turritella imperialis G D. Hanna, 1926. Durham 1950. GSA Mem. 43:31, pl. 28, figs. 5, 11. Imperial Fm. [=Latrania Fm.], Pliocene. Imperial Co. UCMP. 12107. Hypotypes UCMP 32817 (not UCMP 32187 as in pl. caption), 32819. [Turritellidae].

Turritella imperialis G D. Hanna, 1926. Smith 1989. SEPM Guidebook 63:34, pl. 4, fig. 3. Imperial Fm. (Latrania Sand Member) [=Latrania Fm.], Miocene. Base of Coyote Mtn. Carrizo Mtn. quad., Imperial Co. UCMP 738. Hypotype USNM 418205. [Turritellidae].

Turritella imperialis G D. Hanna, 1926. Smith 1991b. AAPG Mem. 47:646, fig. 4d. Imperial Fm. [=Latrania Fm.], Miocene/Pliocene. Base of Coyote Mtn., Carrizo Mtn. quad., Imperial Co. UCMP 738. Hypotype USNM 418205. [Turritellidae].

Turritella imperialis G D. Hanna, 1926. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 31, fig. 2.2. Deguynos Fm., Pliocene. Carrizo Badlands, Imperial Co. Hypotypes in outcrop were not collected. [Turritellidae].

….. p. 51, fig. 3.5C. Latrania Fm., Miocene/Pliocene. Coyote Mtn., Imperial Co. SDSNH 5448]. Hypotype SDSNH 97265.

Turritella inezana Conrad, 1857d. Eaton et al. 1941. AAPG Bull. 25(2): pl. 1, fig. 5. Vaqueros Fm., Miocene. Caliente Mtn., San Luis Obispo Co. UCLA 485 (not UCLA 574 as in pl. caption) [= LACMIP 20485]. Hypotype UCLA. 8844 (not UCLA 8840 as in pl. caption) [=LACMIP 8937]. [Turritellidae].

....., pl. 1, fig. 5a. Caliente Mtns., San Luis Obispo Co. UCLA 574 (not UCLA 485 as in pl. caption) [=LACMIP 20574]. Hypotype UCLA 8840 (not UCLA 8844 as in pl. caption) [=LACMIP 8936].

Turritella inezana Conrad, 1857d. Woodring 1942. Jour. Paleo. 16(1):81–82, pl. 13, figs. 3, 4; pl. 14, fig. 3. Vaqueros Fm., Miocene. Cajon Pass, Hesperia quad., San Bernardino Co. CIT 568 [=LACMIP 7673]. Hypotypes CIT 3896–3898 [=LACMIP 4183–4185]. [Turritellidae].

....., pl. 13, fig. 5. Near Cajon, Hesperia quad., San Bernardino Co. USGS 12856. Hypotype USNM 498961.

Turritella inezana Conrad, 1857d. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):174, fig. 63-24. Vaqueros Fm., Miocene. San Augustine Canyon, Santa Rosa Is., California Channel Ids. CASG 1153. Hypotype CASG 5543. [Turritellidae].

Turritella inezana Conrad, 1857d. Shimer and Shrock 1944. Index Foss. N.A., p. 493, pl. 202, fig. 18 (refigured from Arnold and Anderson 1907, pl. 16, fig. 3). Vaqueros Fm., Miocene. West of Santa Ynez, Santa Barbara Co. USGS 4514. Hypotype USNM 165321]. [Turritellidae].

Turritella inezana Conrad, 1857d. Avila and Weaver 1969. AAPG/SEPM Guidebook, p. 59, pl. 34, fig. 2. Rincon Fm., Miocene. Santa Rosa Is., California Channel Ids. UCSB SR64-14 [=LACMIP 16436]. Hypotype UCSB M25 [=LACMIP 6313]. [Turritellidae].

Turritella inezana Conrad, 1857d. Addicott 1972b. SEPM Symposium vol., p. 10, pl. 2, fig. 2. Temblor Fm. (Carneros Sand Member) (of Stinemeyer et al. 1959: pp. 9, 13), Miocene. Temblor Range, Kern Co. USGS 4941. Hypotype USNM 165748. [Turritellidae].

....., pl. 2, fig. 4. Packwood Creek quad., Temblor Range, Kern Co. USGS M2633. Hypotype USNM 646788.

Turritella inezana var. *altacorona* Loel and Corey, 1932. Eaton et al. 1941. AAPG Bull. 25(2): pl. 1, figs. 6, 6a. Vaqueros Fm., Miocene. Ernest's Canyon, Caliente Mtns., San Luis Obispo Co. UCLA 535 [=LACMIP 20535]. Hypotypes UCLA 8946, 8947 [=LACMIP 8938, 8939]. [Turritellidae].

Turritella inezana var. *bicarinata* Loel and Corey, 1932. Eaton et al. 1941. AAPG Bull. 25(2):pl. 1, fig. 2. Vaqueros Fm., Miocene. Simi Valley, Ventura Co. LACMIP 16391. Hypotype UCLA 1704 [=LACMIP 8931]. [Turritellidae].

....., pl. 1, fig. 2a. Upper Sespe Creek, Ventura Co. CIT 572 [=LACMIP 7571]. Hypotype CIT 1086 [=UCLA 59271 = LACMIP 8932]. [Turritellidae].

Turritella inezana var. *hoffmanni* Gabb, 1866. Eaton et al. 1941. AAPG Bull. 25(2):pl. 1, fig. 1. Vaqueros Fm., Miocene. Cuyama Valley, San Luis Obispo Co. UCLA 548 [=LACMIP 20548]. Hypotype UCLA 3926 [=LACMIP 8930]. [Turritellidae].

Turritella inezana forma *hoffmanni* Gabb, 1866. Addicott 1967. USGS Bull. 1254-C:C9, fig. 4E. Basal Skooner Gulch Fm., Miocene. South of Pt. Arena, Mendocino Co. USGS M2638. Hypotype USNM 649594. [Turritellidae].

....., fig. 4F. South of Pt. Arena, Mendocino Co. USGS M2494. Hypotype USNM 650329.

Turritella (*Torcula*) *inezana pervulgata* Merriam, 1941. Addicott 1970. USGS PP 642:48–49, pl. 2, fig. 18. Upper Vedder Sand, Miocene. Shell Oil Co. "Edison" 2-1, 5138 ft. depth, Kern Co. UCR 1301. Hypotype UCR 1301/1 (not UCR 1301 as in fig. caption). [Turritellidae].

Turritella inezana var. *santana* Loel and Corey, 1932. Eaton et al. 1941. AAPG Bull. 25(2):259, pl. 1, fig. 4. "Vaqueros" Fm.. Miocene. Santa Ana Mtns., Orange Co. UCMP 6128 [=LACMIP 16392]. Paratype UCLA 2302 [=LACMIP 8935]. [Turritellidae].

Turritella inezana santana Loel and Corey, 1932. Stadum 1973. OCF, p. 25, pl. 3, fig. 4. Vaqueros Fm., Miocene. Plano Trabuco, Santa Ana Mtns., Orange Co. LACMIP 16392. Hypotype LACMIP 8935. [Turritellidae].

Turritella inezana var. *sespeensis* Arnold, 1907. Eaton et al. 1941. AAPG Bull. 25(2): pl. 1, fig. 3. Vaqueros Fm., Miocene. Piru Creek, Ventura Co. LACMIP 16394. Hypotype UCLA 3925 [=LACMIP 8934]. [Turritellidae].

....., pl. 1, fig. 3a. Vedder Sand, Miocene. Well core, Poso Oil Field, Kern Co. LACMIP 16393. Hypotype UCLA 2305 [=LACMIP 8933].

Turritella infragranulata Gabb, 1864. Smith 1975b. SEPM Symposium vol., p. 476, pl. 1, fig. 4. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype SU 10225 [=CASG 61666.14]. [Turritellidae].

Turritella infragranulata Gabb, 1864. Saul 1983a. UCPG 125:99–102, pl. 7, fig. 4. Coal Canyon Fm. [=Santa Susana Fm.], Paleocene. Quarry Canyon, Topanga quad., Santa Monica Mtns., Los Angeles Co. UCLA 6574 [=LACMIP 26574]. Hypotype UCLA 57963 [=LACMIP 10319]. [Turritellidae].

....., text fig. 21, A5; pl. 7, figs. 5, 7, 8, 12. Garapito Creek, Topanga quad., Santa Monica Mtns., Los Angeles Co. UCLA 6572 [=LACMIP 26572]. Hypotypes UCLA 58930, 58931, 58940, 58941 [=LACMIP 10322, 10323, 10324,10325].

....., pl. 7, figs. 6, 9, 11. South fork Garapito Creek, Topanga quad., Santa Monica Mtns., Los Angeles Co. UCLA 6571 [=LACMIP 26571]. Hypotypes UCLA. 58928, 58929, 59033 [=LACMIP 10320, 10321, 10326].

....., pl. 7, fig. 10. Quarry Canyon, Topanga quad., Santa Monica Mtns., Los Angeles Co. UCLA 665 [=LACMIP 20665]. Hypotype UCLA 39736 [=LACMIP 10318].

....., pl. 7, fig. 13. Martinez Fm., Paleocene. Near, Martinez, Contra Costa Co. Holotype ANSP 4234.

Turritella infragranulata Gabb, 1864. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 9. Coal Canyon Fm. [=Santa Susana Fm.], Paleocene. Garapito Creek, Santa Monica Mtns., Los Angeles Co. UCLA 6572 [=LACMIP 26572]. Hypotype UCLA 58931 [=LACMIP 10323]. [Turritellidae].

Turritella infragranulata Gabb, 1864. Specimen illustrated on the front cover of the present paper. Santa Susana Fm., Garapito Creek, Santa Monica Mtns., Los Angeles Co. LACMIP 40354. Hypotype LACMIP 14781. [Turritellidae].

Turritella infragranulata pachecoensis Stanton, 1896. Saul 1983a. UCPG 125:95–99, text fig. 21, A4; pl. 7, fig. 1. Coal Canyon Fm. [=Santa Susana Fm.], Paleocene. Quarry Canyon, Topanga quad., Santa Monica Mtns., Los Angeles Co. UCLA 6574 [=LACMIP 26574]. Hypotype UCLA 58921 [=LACMIP 10317]. [Turritellidae].

....., pl. 7, fig. 2. Santa Susana Fm. ("Martinez marine member"), Paleocene. South of Meier Canyon Calabasas quad., Simi Hills, Ventura Co. UCLA 3121 [=LACMIP 23121]. Hypotype UCLA 58915 [=LACMIP 10313].

....., pl. 7, fig. 3. Coal Canyon Fm. [=Santa Susana Fm.], Paleocene. Vicinity of Encino Reservoir, Santa Monica Mtns., Canoga Park quad., Los Angeles Co. UCLA 6583 [=LACMIP 26583]. Hypotype UCLA 58920 [=LACMIP 10316].

....., text fig. 21, A2. Santa Susana Fm. ("Martinez marine member"), Paleocene. Southwest of Runkle Canyon, Calabasas quad. (1929), Simi Hills, Ventura Co. UCLA 3163 [=LACMIP 23163]. Hypotype UCLA 59039 [=LACMIP 10314].

....., text fig. 21, A3. Pozo Fm., Paleocene. Cañada Poso area, Santa Cruz Island A quad. (1943), Santa Cruz Is., California Channel Ids. UCLA 3348 [=LACMIP 23348]. Hypotype UCLA 59038 [=LACMIP 10315].

Turritella infragranulata pachecoensis Stanton, 1896. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 10. Coal Canyon Fm. [=Santa Susana Fm.], Paleocene. Vicinity of Encino Reservoir, Santa Monica Mtns., Los Angeles Co. UCLA 6583 [=LACMIP 26583]. Hypotype UCLA 58920 [=LACMIP 10316]. [Turritellidae].

Turritella infragranulata pachecoensis Stanton, 1896. Elder et al. 1998. SEPM Guidebook 84:160, 166 (as *Turritella pachecoensis*), pl. 1, fig. 9. German Rancho Fm., Paleocene. South of Gualala, Mendocino Co. Wentworth locality W730 [=UCMP W730]. Hypotype UCMP 39914. [Turritellidae].

Turritella infragranulata pachecoensis Stanon, 1896. Koch et al. 2004. NPS Tech. Rept. 04/01:8 (as *T. pachecoensis*), fig. 5 (center specimen). Coal Canyon Fm. [=Santa Susana Fm.], Paleocene. Vicinity of Encino Reservoir, Santa Monica Mtns., Los Angeles Co. LACMIP 26853. Hypotype LACMIP 10316. [Turritellidae].

Turritella infragranulata pachecoensis Stanton, 1896. Brabb et al. 2008. USGS OFR 2008-1228: front cover, figs. 1A, B. Unnamed Sandstone [=Martinez Fm.?], Paleocene. Near Fairfield, Solano Co. USGS locality? Hypotype UCMP? [Turritellidae].

Turritella kernensis Addicott, 1970 (n. sp.). USGS PP 642:47–48, pl. 2, figs. 16, 24, 25. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotypes USNM 650058, 650060, 650061. [Turritellidae].

....., pl. 2, fig. 17. Caliente quad. (1914), Kern Co. UCMP B1614. Hypotype UCMP 12548.

....., pl. 2, fig. 23. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1598. Hypotype USNM. 650059.

Turritella lawsoni Dickerson, 1916. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):170, fig. 62-15. Las [*sic*] Llajas Fm., Eocene. West of Aliso Canyon, Los Angeles Co. CASG 549. Hypotype CASG 5916. **Remarks:** *Turritella andersoni lawsoni* Dickerson, 1916, *fide* Squires (1984: p. 18). [Turritellidae].

Turritella lawsoni Dickerson, 1916. Stewart 1946. USGS PP 205-C:91, pl. 11, figs. 27, 29. Avenal Sandstone, Eocene. Reef Ridge, Kettleman Plain quad., Kings Co. USGS 14482. Hypotypes USNM 498728, 498730. **Remarks:** *Turritella andersoni lawsoni* Dickerson, 1916, *fide* Squires (1984: p. 18). [Turritellidae].

....., pl. 11, fig. 28. Reef Ridge, Kettleman Plain quad., USGS 14482b. Hypotype USNM 498729.

Turritella lawsoni Dickerson, 1916. Fowkes 1982. Coalinga Guidebook, p. 22, unnumbered fig. Avenal Sandstone, Eocene. Kings Co. WHC hypotype lost? **Remarks:** *Turritella andersoni lawsoni* Dickerson, 1916, *fide* Squires (1984: p. 18). [Turritellidae].

Turritella lorenzana Wagner and Schilling, 1923. Kelley 1943. BAAPG 27(1):12, pl. 1, fig. 4. Pleito Fm.? (probably San Emigdio Fm.), Oligocene. Pleito Creek, Mt. Pinos quad., Kern Co. UCMP 3217. Holotype UCMP 11424. **Remarks:** *Turritella variata lorenzana*, *fide* Merriam (1941: p. 99). [Turritellidae].

Turritella meganosensis Clark and Woodford, 1927. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 13. Santa Susana Fm., Paleocene [Eocene]. Las Llajas Canyon, Santa Susana quad., Ventura Co. UCMP 7000. Hypotype UCMP. 37430. [Turritellidae].

Turritella meganosensis Clark and Woodford, 1927. Squires 1999b. NHMLAC CS 479:15–16, fig. 26. Santa Susana Fm., Eocene. Las Llajas Canyon, Santa Susana quad., Ventura Co. UCMP 7000. Hypotype UCMP 37430. [Turritellidae].

Turritella meganosensis protumescens Merriam and Turner, 1937. Saul 1983b. SEPM Guidebook 35:76, pl. 2, fig. 1. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad., Ventura Co. UCLA 6616 [=LACMIP 26616]. Hypotype UCLA 59371 [=LACMIP 10433]. [Turritellidae].

Turritella meganosensis protumescens Merriam and Turner 1937. Squires 1983b. SEPM Guidebook 35:86, fig. 6C. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co. LACMIP 16395]. Hypotype LACMIP 6509. [Turritellidae].

Turritella meganosensis protumescens Merriam and Turner, 1937. Squires 1984. NHMLAC CS 350:17, fig. 6d. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969) Ventura Co. CSUN 454 [=LACMIP 16395]. Hypotype LACMIP 6509. [Turritellidae].

Turritella meganosensis protumescens Merriam and Turner, 1937. Squires 1987. NHMLAC CS 388:25, fig. 22. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 846 [=LACMIP 16396]. Hypotype LACMIP 7450. [Turritellidae].

Turritella meganosensis protumescens Merriam and Turner, 1937. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 13. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 671 [=LACMIP 16076]. Hypotype LACMIP 11456. [Turritellidae].

Turritella merriami Dickerson, 1913. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):170, fig. 62-25. [Capay Fm.?], Eocene. Buttes Well 4 at a depth of about 2800 ft., north of Sutter City, Sutter Co. CASG 29138. Hypotype CASG. 5709. [Turritellidae].

Turritella merriami Dickerson, 1913. Squires 1987. NHMLAC CS 388:25–27, fig. 23. Juncal Fm., Eocene. Canton Canyon, , Whitaker Peak quad. (1958), Los Angeles Co. CSUN 358 [=LACMIP 16114]. Hypotype LACMIP 7451. [Turritellidae].

Turritella merriami Dickerson, 1913. Throckmorton 1988a. USGS OFR 88-59:56, pl. 8, figs. 1–3 (figs. 2, 3 latex peels) (fig. 2 refigured in Throckmorton 1988b, pl. 1, fig. 12). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8157. UCMP unnumbered hypotypes lost, *fide* C. Throckmorton (personal communication, 2002). [Turritellidae].

Turritella moodyi Merriam, 1941. Addicott 1970. USGS PP 642:46–47, pl. 2, fig. 11. Lower Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1637. Hypotype UCMP 12150. [Turritellidae].

....., pl. 2, figs. 12, 13. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1604. Hypotypes USNM 650054, 650055.

....., pl. 2, fig. 14. Rio Bravo Ranch quad. (1954), Kern Co. USGS M1609. Hypotype USNM 650056.

Turritella ocoyana Conrad, 1855b. Eaton et al. 1941. AAPG Bull. 25(2): pl. 1, fig. 7. Vaqueros Fm., Miocene. Cuyama Valley, San Luis Obispo Co. UCLA 540 [=LACMIP 20540]. Hypotype UCLA 8950 (not UCLA. 8850 as in pl. caption) [=LACMIP 8940]. [Turritellidae].

....., pl. 1, fig. 7a. Temblor Fm., Miocene. Caliente Mtn., San Luis Obispo Co. UCLA 564 [=LACMIP 20564]. Hypotype UCLA 8951 (not UCLA 8851 as in pl. caption) [=LACMIP 11303].

....., pl. 1, fig. 7b. Caliente Mtn., San Luis Obispo Co. UCLA 474 [=LACMIP 20474]. Hypotype UCLA 8952 (not UCLA 8852 as in pl. caption) [=LACMIP 11304].

Turritella ocoyana Conrad, 1855b. G D. Hanna and Hertlein,1943. CDM Bull. 118(2):172, fig. 63-6. Temblor Fm., Miocene. Vicinity of Cottonwood, Kern Co. CASG 66. Hypotype CASG 5963. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Shimer and Shrock 1944. Index Foss. N.A., p. 495, pl. 202, fig. 16 (refigured from

Arnold and Anderson 1910, pl. 30, fig. 1). Vaqueros Fm., Miocene. Coalinga District, Fresno Co. USGS 4631. Hypotype USNM 165593]. [Turritellidae].

Turritella ocoyana Conrad 1855b. Stewart 1946. USGS PP 205-C: pl. 17, fig. 10. Temblor Fm., Miocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14402. Hypotype USNM 498748. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Woodring et al. 1946. USGS PP 207:27, pl. 28, figs. 1, 2 (peels). Monterey Fm. (Altamira Shale Member), Miocene. George F. Canyon-Miraleste Canyon area, George F. Canyon, Palos Verdes Hills, Los Angeles Co. USGS 13127. Hypotypes USNM 497069, 497070. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Anonymous 1952. Min. Info. Serv. 5(6):1, unnumbered fig. (refigured in Ransom 1964, p. 42, fig. 4). Miocene. Line drawing, source specimen unknown. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Addicott 1965b. USGS PP 525-C:C106, fig. 4o. Round Mtn. Silt, Miocene. Cottonwood Creek area, Caliente quad. (1914), Kern Co. UCMP B1588. Hypotype UCMP 36563. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Addicott 1970. USGS PP 642:49–51, pl. 2, fig. 20. Upper Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP. B1598. Hypotype UCMP 12550. [Turritellidae].

....., pl. 2, figs. 21, 22, 28. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotypes USNM 650062, 650063, 650065.

....., pl. 2, fig. 26. Cottonwood Creek area, Caliente quad. (1914), Kern Co. UCMP B1588. Hypotype UCMP 14980.

....., pl. 2, fig. 27. 350 ft. south of bridge across Poso Crek, Woody quad. (1952), Kern Co. USGS M1698 (not USGS M1689 as in pl. caption). Hypotype (topotype) USNM 650064.

Turritella ocoyana Conrad, 1855b. Addicott 1972b. SEPM Symposium vol., p. 12, pl. 3, fig. 19. Temblor Fm. (Buttonbed Sand Member) (of Stinemeyer et al. 1959:8, 13), Miocene Shale Pt. quad., Temblor Range, Kern Co. USGS M3986. Hypotype USNM 646808. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Stadum 1973. OCF, p. 25, pl. 3, fig. 1. Topanga Fm., Miocene. Orange Co.? Hypotype possibly at SDSNH, current whereabouts unknown. **Remarks:** *Ex* Grouard collection. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 17. Monterey Fm. (Saltos Shale Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M3814. Hypotype USNM 254366. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Addicott et al. 1980. SEPM Guidebook 6:18, 20, pl. 1, fig. 17 [refigured from Addicott et al., 1978, pl. 1, fig. 17]. Monterey Fm. (Saltos Shale Member), Miocene. Indian Creek area, La Panza Range, San Luis Obispo Co. USGS M3814. Hypotype USNM 254366. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Fowkes 1982. Coalinga Guidebook, p. 25, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 8, fig. 1; refigured from Arnold and Anderson 1910, pl. 30, fig. 1). Temblor Fm., Miocene. Northeast of Oil City, Fresno Co. Hypotype USNM 165593]. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 8. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. SDSNH 4312. Hypotype SDSNH 83244. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Susuki 1992, Topanga Story, p. 7, fig. 9. Topanga Fm., Miocene (Cold Creek Member). Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP 22635 [=UCLA 2635]. Hypotype LACMIP 13081 [=UCLA 57741]. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 2 (pl. 1 in caption), figs. B, C. ?Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotypes UCSB 6516, 8771 [=SBMNH 60188, 60189]. **Remarks:** Determined here as *Turritella* sp. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Walker 1998. Ichnos 6:112, figs. 8a, (with *Entobia* epibiont), fig. 8c (with *Caulostrepis* trace fossil). Round Mtn. Silt (not Temblor Fm. as in pl. caption), Miocene. Cottonwood Creek, Kern Co. LACMIP 7907. Hypotypes LACMIP 12425, 12427. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, figs. 3, 8. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 140188. [Turritellidae].

Turritella ocoyana Conrad, 1855b. Rugh 2016. Desert Symposium vol.:313, fig. 4. Topanga Fm., Miocene. East of Orange, northern Santa Ana Mtns., Orange Co. Hypotype possibly at SDSNH, current whereabouts unknown. **Remarks:** *Ex* Grouard collection. [Turritellidae].

Turritella ocoyana var. *bösei* Hertlein and Jordan, 1927. Eaton et al. 1941. AAPG Bull. 25(2):pl. 1, fig. 8. Vaqueros Fm., Miocene. Ernest's Canyon, Cuyama Valley, San Luis Obispo Co. UCLA 537 [=LACMIP. 20537]. Hypotype UCLA. 8955 (not UCLA 8855 as in pl. caption) [=LACMIP 8941]. **Remarks:** Junior synonym of *Turritella ocoyana* Conrad, 1855b, *fide* Addicott (1970: p. 50). [Turritellidae].

....., pl. 1, fig. 8a. Vaqueros/Temblor formations transition, Miocene. Ernest's Canyon, Cuyama Valley, San Luis Obispo Co. UCLA 535 [=LACMIP 20535]. Hypotype UCLA 8956 (not UCLA 8856 as in pl. caption) [=LACMIP 8942].

....., pl. 1, fig. 8b. Temblor Fm., Miocene. Caliente Mtn., San Luis Obispo Co. UCLA 565 [=LACMIP 20565. Hypotype UCLA 8957 (not UCLA 8857 as in pl. caption) [=LACMIP 8943].

Turritella ocoyana bösei Hertlein and Jordan, 1927. G D. Hanna and Hertlein 1943. CDM Bull. 118 (2):174, fig. 63-22. Temblor Fm., Miocene. San Juan River area, San Luis Obispo Co. CASG 146. Hypotype CASG 5702. **Remarks:** *Turritella ocoyana* forma *topangensis* Merriam, 1941, *fide* Addicott (1970: p. 50). [Turritellidae].

....., fig. 63-23. Garzas Creek, Kings Co. CASG 1929. Hypotype CASG 5669. **Remarks:** Junior synonym of *Turritella ocoyana* Conrad, 1855b, *fide* Addicott (1970: p. 50).

Turritella ocoyana (Conrad) *bosei* Hertlein and Jordan, 1927. Avila and Weaver 1969. AAPG/SEPM Guidebook, p. 59, pl. 34, fig. 3. Rincon Fm., Miocene. East of Ford Pt., Santa Rosa Is., California Channel Ids. UCSB SR64-12 [=LACMIP 16433]. Hypotype UCSB M26 [=LACMIP 6314]. **Remarks:** Junior synonym of *Turritella ocoyana* Conrad, 1855b *fide* Addicott 1970: p. 50. [Turritellidae].

Turritella ocoyana forma *topangensis* Merriam, 1941. Addicott 1970. USGS PP 642:51–52, pl. 2, fig. 29. Upper Round Mtn. Silt, Miocene. *Turritella* bed west of Cottonwood Creek, Rio Bravo Ranch quad. (1954), Kern Co. USGS M1605. Hypotype USNM 650066. [Turritellidae].

....., pl. 2, fig. 30. Upper Olcese, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 14993.

....., pl. 2, fig. 31. Round Mtn. area, Kern Co. USGS 6628. Hypotype USNM 650067.

Turritella ocoyana topangensis Merriam, 1941. Stadum 1973. OCF, p. 25, pl. 3, fig. 2. Topanga Fm., Miocene. Orange Co. Hypotype possibly at SDSNH, current whereabouts unknown. **Remarks:** *Ex* Grouard collection. [Turritellidae].

Turritella pachecoensis Stanton, 1896. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, fig. 62-33. Martinez Fm., Eocene [Paleocene]. Santa Cruz Is., California Channel Ids. CASG 28645. Hypotype CASG 5670. **Remarks:** *Turritella infragranulata pachecoensis*, *fide* Saul (1983a: p. 95). [Turritellidae].

Turritella (*Haustator*) *pacheoensis** Stanton, 1896. Shimer and Shrock 1944. Index Foss. N.A., p. 493, pl. 202, fig. 13-14 (refigured from Stanton 1896, pl. 66, figs. 1, 2). Martinez, Paleocene. Vicinity of Pacheco, Contra Costa Co. USGS 4189. Holotype USNM 157843-22, paratype USNM 157843-21]. **Remarks:** Error for *pachecoensis*. [Turritellidae].

Turritella pachecoensis Stanton, 1896. Doerner 1969. AAPG/SEPM Guidebook, p. 27, pl. 32, figs. 1, 2. Pozo Fm., Paleocene. Well Canyon, Santa Cruz Is., California Channel Ids. UCSB DWW-1 [=LACMIP 16437]. Hypotypes UCSB M30, M31 [=LACMIP 6292, 6293]. **Remarks:** *Turritella infragranulata pachecoensis*, *fide* Saul (1983a: p. 95). [Turritellidae].

Turritella pachecoensis Stanton, 1896. Stadum 1973. OCF, p. 25, pl. 3, fig. 5. Santa Susana Fm., Paleocene. Simi Hills, Los Angeles Co. UCLA2687 [=LACMIP 22687]. Hypotype LACMIP 10308] determined here as missing. [Turritellidae].

Turritella pachecoensis Stanton, 1896, Smith 1975b. SEPM Symposium vol., p. 476, pl. 1, fig. 2. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073. Hypotype SU 10244 [=CASG

1666.17]. **Remarks:** *Turritella infragranulata pachecoensis*, *fide* Saul (1983a: p. 95). [Turritellidae].

....., pl. 1, fig. 6. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. UCMP A9717. Hypotype UCMP 14197. **Remarks:** *Turritella infragranulata pachecoensis*, *fide* Saul (1983a: p. 95).

Turritella pachecoensis Stanton, 1896. Fowkes 1982. Coalinga Guidebook, p. 18, unnumbered fig. (refigured from Arnold 1909 [1910], pl. 4, fig. 14; refigured from Arnold and Anderson 1910, pl. 27, fig. 14). Tejon Fm. [=Lodo Fm. (basal Cerros Sandstone Member)], Eocene [=Paleocene]. Exact locality unknown On southwest flank of Reef Ridge north of McLure Valley, Fresno Co. Hypotype USNM 165636. [Turritellidae].

Turritella pachecoensis Stanton, 1896. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 16. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6833. Hypotype UCR 6833/1 determined here as missing. [Turritellidae].

....., pl. 2, fig. 18 [as *T. pacheocensis**]. Simi Hills, Ventura Co. UCR 6821. Hypotype UCR 6821/1 determined here as missing.. **Remarks:** Error for *pachecoensis*.

Turritella pachecoensis Stanton, 1896. Boles and Weigand 1997. San Diego Assoc. Geologists Ann. Field Trip, p. 19, fig. 3-1. Pozo Fm.. Well Canyon, Santa Cruz Is., California Cahnnel Ids. Hypotype current whereabouts unknown. **Remarks:** *Turritella infragranulata pachecoensis*, *fide* Saul (1983a: p. 95). [Turritellidae].

Turritella pachecoensis Stanton, 1896. Boles and Weigand 2001. GSA and Pac. Sect-AAPG Cordilleran Sect. Guidebook, p. 162, fig. 14 (refigured in Boles and Weigand 2002). Pozo Fm., upper Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype current whereabouts unknown. **Remarks:** *Turritella infragranulata pachecoensis*, *fide* Saul (1983a: p. 95). [Turritellidae].

Turritella pachecoensis Stanton, 1896. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 2 (pl. 1 in caption), fig. A. Pozo Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotypes SBMNH 60190, 60200]. **Remarks:** *Turritella infragranulata pachecoensis*, *fide* Saul (1983a: p. 95). [Turritellidae].

*Turritella pachewen's** Stanton, 1896. Shapiro 1997. Santa Cruz Is. Geol. Guide., p. 39, unnumbered fig. p. 43. Pozo Fm., Paleocene. Santa Cruz Is., California Channel Ids. Line drawing possibly drawn from specimen figured by Shapiro, 1998 (pl. 2, fig. A). **Remarks:** *Turritella infragranulata pachecoensis*, *fide* Saul (1983a: p. 95). Error for *pachecoensis*. [Turritellidae].

Turritella (*Torcula*?) cf. *T.* (*T.*?) *padronesensis* Eaton et al., 1941. Addicott 1970. USGS PP 642: 49, pl. 2, fig. 19. Upper Olcese, Miocene. Caliente quad. (1914), Kern Co. UCMP B1616. Hypotype UCMP 12549. **Remarks:** Determined here as *Turritella carriasaensis padronesensis*. [Turritellidae].

Turritella peninsularis Anderson and G D. Hanna, 1935. Saul 1983a. UCPG 125:92–95, text fig. 21, B4; pl. 6, figs. 17, 21. Santa Susana Fm. ("Martinez marine member"), Paleocene. Calabasas quad., Simi Hills, Ventura Co. UCMP 3777. Holotype UCMP 15315 (not UCMP 15314 as in pl. caption), paratype UCMP 15314 (both of *T. peninsularis renodata* Merriam, 1941). [Turritellidae].

....., pl. 6, fig. 18. Lower Vine Hill Fm., Paleocene. Carquniez quad., Contra Costa Co. UCLA 6606 [=LACMIP 26606]. Hypotype UCLA 58900 [=LACMIP 10311].

....., text fig. 21, B3; pl. 6, fig. 19. San Francisquito Fm., Paleocene. Pinyon Ridge, northeast side of Rock Creek, Valyermo quad., San Gabriel Mtns., Los Angeles Co. UCLA. 2333 [=LACMIP 22333]. Hypotype UCLA. 58907 [=LACMIP 10312].

....., text fig. 21, B5; pl. 6, fig. 22. Santa Susana Fm. ("Martinez marine member"), Paleocene. Southeast of Runkle Canyon, Calabasas quad., Simi Hills, Ventura Co. UCLA 3133 [=LACMIP 23133]. Hypotype UCLA 58903 [=LACMIP 10309].

....., pl. 6, fig. 23. Simi Hills, Calabasas quad. (1929), Ventura Co. UCLA 2687 [=LACMIP 22687]. Hypotype UCLA 49512 [=LACMIP 10308].

....., text fig. 21, B2. Calabasas quad., south of Runkle Canyon, Simi Hills, Ventura Co. UCLA 3107 [= LACMIP 23107]. Hypotype UCLA 59037 [=LACMIP 10310].

Turritella peninsularis Anderson and G D. Hanna, 1935. Saul 1983b. SEPM Guidebook 35:74 pl. 1, fig. 5 (not fig. 3).

San Francisquito Fm., Paleocene. Pinyon Ridge, Valyermo quad., Los Angeles Co. UCLA 2333 [=LACMIP 22333]. Hypotype UCLA 58907 [=LACMIP 10312]. [Turritellidae].

....., pl. 1, fig. 6 (not fig. 4). Santa Susana Fm., Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCLA. 2687 [=LACMIP 22687]. Hypotype UCLA 49512 [=LACMIP 10308].

Turritella peninsularis Anderson and G.D. Hanna, 1935. Boles and Weigand *in* Gordon et al. *in* Dunne and Cooper 2001. SEPM Guidebook 89:162, fig. 14. Pozo Fm., Paleocene. Cañada Posa, Christi Anticline area, Santa Cruz Is., California Channel Ids. Hypotypes, which are mostly cross-sections of weathered uncollected specimens, are determined here as *Turritella infragranulata pachecoensis*. [Turritellidae].

Turritella peninsularis adelaidana Merriam, 1941. Saul 1983a. UCPG 125:86–88, pl. 5, fig. 19; pl. 6, figs. 1, 2. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Machesna Mtn., La Panza quad., San Luis Obispo Co. USGS M3086. Hypotypes USNM 307685, 307686. [Turritellidae].

Turritella peninsularis adelaidana Merriam, 1941. Saul 1986. SEPM Guidebook 49:29, fig. 44. Unnamed strata, uppermost Cretaceous/lowermost Paleocene. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6526 [=LACMIP 26526]. Hypotype UCLA 58849 [=LACMIP 10281]. [Turritellidae].

....., fig. 45. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6527 [=LACMIP 26527]. Hypotype UCLA 58855 [=LACMIP. 10285].

....., fig. 46. Dip Creek area, Lake Nacimiento, Lime Mtn. quad., San Luis Obispo Co. UCLA 6525 [=LACMIP 26525]. Hypotype UCLA 58846 [=LACMIP 10279].

Turritella peninsularis quaylei Saul, 1983a (n.subsp.). UCPG 125:89–90, text fig. 21, C2; pl. 6, figs. 5–7. San Francisquito Fm., Paleocene. Warm Springs Mtn., Warm Springs Mtn. quad., Los Angeles Co. UCLA 1595 [=LACMIP 21595]. Paratypes UCLA 58869–58872 [=LACMIP 10292–10295], unfigured paratypes UCLA 58873 [=LACMIP 11164–11167]. [Turritellidae].

....., text fig. 21, C5; pl. 6, fig. 8. Warm Springs Mtn., Warm Springs Mtn. quad., Los Angeles Co. UCLA 1589 [=LACMIP 21589]. Holotype UCLA 58866 [=LACMIP 10290], unfigured paratypes UCLA 58867 [=LACMIP 10291, 10330–10336].

....., pl. 6, figs. 9–12. East fork of Fish Canyon, Warm Springs Mtn. quad., Los Angeles Co. UCLA 1579b [=LACMIP 21579]. Paratypes UCLA 58881–58884 [=LACMIP 10300–10303].

....., Warm Springs Mtn., Warm Springs Mtn. quad., Los Angeles Co. UCLA 1588 [=LACMIP 21588]. Unfigured paratypes UCLA 58876 [=LACMIP 10296, 10297, 10337, 10338].

....., Warm Springs Mtn. quad., Los Angeles Co. UCLA 1579c [=LACMIP 21579c =LACMIP.16870]. Unfigured paratypes UCLA 58879 [=LACMIP 10299, 10339, 10340].

Turritella peninsularis quaylei intergrades to *T. peninsularis* Anderson and G D. Hanna, 1935. Saul 1983a. UCPG 125:89, 90, text figs. 21, C1, C4; pl. 6, figs. 13, 16. Santa Susana Fm. (Las Virgenes Member), Paleocene. Calabasas quad., Simi Hills, Ventura Co. UCLA 3111 [=LACMIP. 23111]. Hypotypes UCLA 58887, 58888 [=LACMIP 10305, 10306]. [Turritellidae].

....., pl. 6, fig. 14. San Francisquito Fm., Paleocene. Warm Springs Mtn. quad., Los Angeles Co. UCLA 1579c [=LACMIP 21579]. Hypotype UCLA 58878 [=LACMIP 10298].

....., pl. 6, fig. 15. East fork Fish Canyon, Warm Springs Mtn. quad., Los Angeles Co. UCLA 1581 [=LACMIP 21581]. Hypotype UCLA 58885 [=LACMIP 10304].

Turritella peninsularis quaylei Saul, 1983a. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 2 (not fig. 1). Las Virgenes Fm., Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCLA 3111 [=LACMIP 23111]. Hypotype UCLA 58888 [=LACMIP 10306]. [Turritellidae].

Turritella reversa Waring, 1917. Saul 1983a. UCPG 125:91–92, text fig. 21, B1; pl. 6, fig. 24. Lower Santa Susana Fm., Paleocene. Poison Oak Canyon, Santa Susana quad., Ventura Co. UCLA 6547 [=LACMIP 26547]. Hypotype UCLA

58932 [=LACMIP 10307]. [Turritellidae].

Turritella reversa Waring, 1917. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 19. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 4569. Hypotype UCR 4569/28. [Turritellidae].

Turritella reversa Waring, 1917. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 3 (not fig. 5). Santa Susana Fm., Paleocene. Poison Oak Canyon, Santa Susana quad., Ventura Co. UCLA 6547 [=LACMIP 26547]. Hypotype UCLA 58932 [=LACMIP 10307]. [Turritellidae].

Turritella sargeanti Anderson and G D.Hanna, 1925. G.D. Hanna and Hertlein 1943. CDM Bull. 118(2):170, fig. 62-18. Tejon Fm., Eocene. Live Oak Creek Kern Co. CASG 244. Hypotype CASG 5903. [Turritellidae].

Turritella schencki delaguerrae Weaver and Kleinpell, 1963 (n. subsp.). UCPG 43:184, pl. 23, figs. 5. 6 (peels). "Coldwater" Sandstone, Eocene. At Sacate-"Coldwater" contact, San Rafael Mtn. quad., Santa Barbara Co. UCMP. B6939. Holotype SU 9180 [=CASG 70259], paratype SU 9181 [=CASG 70260]. [Turritellidae].

Turritella scrippsensis M.A. Hanna, 1927. Kelley 1943. BAAPG 27(1):12, pl. 1, fig. 10. "Matilija Fm.," Eocene. Cañada de Santa Anita, Santa Barbara Co. SU 2090. Hypotype SU 7415 [=CASG 72022]. [Turritellidae].

Turritella scrippsensis M.A. Hanna, 1927. Weaver and Kleinpell 1963. UCPG 43:184, pl. 23, fig.10. Matilija Fm., Eocene. Cañada de Santa Anita, Lompoc quad., Santa Barbara Co. UCMP. B6922. Hypotype SU/CASG 7415. [Turritellidae].

Turritella scrippsensis M.A. Hanna, 1927. Givens, 1974. UCPG 109:63, pl. 6, fig. 1. Juncal Fm., Eocene. Near Thorn Meadows, San Guillermo quad. (1943), Ventura Co. UCR 4690. Hypotype UCR 4690/10. [Turritellidae].

Turritella stocki Merriam, 1941. Smith 1975b. SEPM Symposium vol., p. 476, pl. 1, fig. 5. Lodo Fm., Paleocene. Near junction of Panoche and Silver Creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP. A9717]. Hypotype SU 10226 [=CASG 61666.20]. [Turritellidae].

Turritella susanaensis Nelson, 1925 *nomen dubium*. Squires 1999b. NHMLAC CS 479:17, fig. 32. Santa Susana Fm., Paleocene/Eocene. South side of Simi Valley, Calabasas quad. (1952, PR 1967), Ventura Co. CSUN 1343 [=LACMIP 17186]. Hypotype LACMIP 12681. [Turritellidae].

*Turritella tembloris** Wiedey, 1928. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):172, fig. 63-4. Topanga Fm., Miocene. Dry Canyon, near Calabasas, Los Angeles Co. CASG 567. Paratype CASG 2984. **Remarks:** Error for *temblorensis*. [Turritellidae].

Turritella temblorensis Wiedey, 1928. Allison 1965. Palaeont. 8(4):676, pl. 92, fig. 15. Topanga Fm., Miocene. Topanga Canyon, Los Angeles Co. UCMP B7853. Hypotype UCMP 36493. [Turritellidae].

Turritella temblorensis Wiedey, 1928. Avila and Weaver 1969. AAPG/SEPM Guidebook, p. 59, pl. 34, figs. 4, 5. Rincon Fm., Miocene. Santa Rosa Is., California Channel Ids. UCSB SR64-6 [=LACMIP 16438]. Hypotypes UCSB M27, M28 [=LACMIP 6315, 6316]. [Turritellidae].

Turritella temblorensis Wiedey, 1928. Stadum 1973. OCF, p. 25, pl. 3, fig. 3. Topanga Fm., Miocene. Orange Co. Hypotype possibly at SDSNH, current whereabouts unknown. **Remarks:** *Ex* Grouard collection. [Turritellidae].

Turritella temblorensis Wiedey, 1928. Addicott et al. 1978. USGS OFR 78-446:58, 60, pl. 1, fig. 14. Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS M2869. Hypotype USNM 254363. [Turritellidae].

Turritella temblorensis Wiedey, 1928. Addicott et al. 1980. SEPM Guidebook 6:18, 20, pl. 1, fig. 14 (refigured from Addicott et al. 1978, pl. 1, fig. 14). Monterey Fm. (Saltos Shale Member), Miocene. Shell Creek area, La Panza Range, San Luis Obispo Co. USGS. M2869. Hypotype USNM 254363. [Turritellidae].

Turritella temblorensis Wiedey, 1928. Susuki 1992, Topanga Story, p. 7, fig. 7. Topanga Fm., Miocene (Cold Creek Member). Topanga Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP 22638 [=UCLA 2638]. Hypotype LACMIP 13079 [=UCLA 57325)]. [Turritellidae].

Turritella temblorensis Wiedey var. *tritschi* Hertlein, 1928a. Avila and Weaver 1969. AAPG/SEPM Guidebook, p. 59,

pl. 34, fig. 6. Rincon Fm., Miocene. Lower Cañada Garanon, north coast Santa Rosa Is., California Channel Ids. UCSB SR67-55 [=LACMIP 16427]. Hypotype UCSB M29 [=LACMIP 6317]. [Turritellidae].

Turritella uvasana Conrad, 1855b. Shimer and Shrock 1944. Index Foss. N.A., p. 493, pl. 202, fig. 15 (refigured from Arnold and Anderson 1910, pl. 26, fig. 11). Tejon Fm., Eocene. Coalinga District, Fresno Co. USGS 4617. Hypotype USNM 165653. [Turritellidae].

Turritella uvasana Conrad, 1855b. Stewart 1946. USGS PP 205-C:91, pl. 11, figs. 25, 26. Avenal Sandstone, Eocene. Reef Ridge, Reef Ridge quad., Kings Co. USGS 14494. Hypotypes USNM 498726, 498727. [Turritellidae].

Turritella uvasana Conrad, 1855b n. var. Crowell and Susuki 1959. GSA Bull. 70:588, pl. 2, fig. 10. Maniobra Fm., Eocene. Orocopia Mtns., Canyon Spring quad., Riverside Co. UCLA 3779 (not UCLA 2779 as in pl. caption) [=LACMIP 23779]. Hypotype UCLA 28986 [=LACMIP 8843]. **Remarks:** *Turritella uvasana infera* Merriam, 1941, *fide* Givens (1974: p. 65). [Turritellidae].

Turritella uvasana Conrad, 1855b. Easton 1960. Invert. Paleo., p. 386, fig. 10.10.5 (refigured from Merriam 1941, fig. 2b). Eocene. Line drawing, source specimen unknown. [Turritellidae].

Turritella uvasana Conrad, 1855b. Weaver and Kleinpell 1963. UCPG 43:184, pl. 23, fig. 7. Cozy Dell Fm., Eocene. Tequipis Canyon west of San Marcos Pass, Santa Barbara Co. Dibblee locality 29. Hypotype SU 9182 [=CASG 70263]. [Turritellidae].

Turritella uvasana Conrad, ss 1855b. Givens 1974. UCPG 109:64–65, pl. 6, fig. 2. Juncal Fm., Eocene. Near Pine Mtn. Lodge, 900 ft. Lion Canyon quad. (1943), Ventura Co. UCR 4722. Hypotype UCR 4722/210. [Turritellidae].

Turritella uvasana Conrad, 1855b. Fowkes 1982. Coalinga Guidebook, p. 21, unnumbered fig. Domengine Fm., Eocene. West of Coalinga, Fresno Co. WHC hypotype lost? [Turritellidae].

Turritella uvasana uvasana Conrad, 1855b. Squires 1994b. SEPM Guidebook 74:52, pl. 1, fig. 1 (cast). Upper Matilija Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 24260. Hypotype LACMIP 11626. [Turritellidae].

....., pl. 2, fig. 7. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23729. Hypotype LACMIP 11647. [Turritellidae].

Turritella uvasana Conrad, 1855b. Shapiro 1997. Santa Cruz Is., Geol. Guide, p. 40, unnumbered fig. p. 43. Cañada Fm., Eocene. Santa Cruz Is., California Channel Ids. Line drawing, source specimen unknown. [Turritellidae].

Turritella uvasana Conrad, 1855b. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 2 (pl. 1 in caption), fig. D. Cañada Fm., Paleocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8773 [=SBMNH 60191]. **Remarks:** Determined here as *Turritella infragranulata pachecoensis*. [Turritellidae].

Turritella uvasana aedificata Merriam, 1941. Hertlein 1951. CDM Bull. 154:189, fig. 1, 5. Domengine Fm., Eocene. Mt. Diablo St. Park, Contra Costa Co. UCMP A4311. Hypotype UCMP 30279]. [Turritellidae].

Turritella uvasana applinae M.A. Hanna, 1927. Moore 1968. SDSNH Occas. Pap. 15:28, pl. 12, fig. e. "Rose Canyon Fm." [=possibly Ardath Shale], Eocene. San Clemente Canyon, San Diego Co. SDSNH2395. Hypotype SDSNH 4149]. [Turritellidae].

Turritella uvasana applinae M.A. Hanna, 1927. Givens 1974. UCPG 109:66, pl. 6, fig. 3. Juncal Fm., Eocene. Vicinity of Piru Creek and Alamo Creek watersheds, San Guillermo quad. (1943), Ventura Co. UCR 4694. Hypotype UCR 4694/21. [Turritellidae].

....., pl. 6, fig. 4. San Guillermo quad. (1943), Ventura Co. UCR 4702. Hypotype 4702/101.

....., pl. 7, fig. 19. Near Thorn Meadows, Lion Canyon quad. (1943), Ventura Co. UCR 4688. Hypotype UCR 4688/101.

Turritella uvasana applinae M.A. Hanna, 1927. Saul 1983b. SEPM Guidebook 35:75, pl. 2, fig. 18. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad., Ventura Co. UCLA 2312 [=LACMIP 22312]. Hypotype UCLA 59377 [=LACMIP 10446]. [Turritellidae].

Turritella uvasana applinae M.A. Hanna, 1927. Squires 1983b. SEPM Guidebook 35:88, fig. 9G. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co. LACMIP7242. Hypotype LACMIP 6514. [Turritellidae].

Turritella uvasana applinae M.A. Hanna, 1927. Squires 1984. NHMLAC CS 350:19, fig. 6j. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969) Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6514. [Turritellidae].

Turritella uvasana applinae M.A. Hanna, 1927. Squires 1987. NHMLAC CS 388:28–29, fig. 26. Matilija Sandstone?, Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 219 [=LACMIP 16100]. Hypotype LACMIP 7454. [Turritellidae].

Turritella uvasana hendoni [s].l. Merriam, 1941. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 4. Juncal Fm.?, Eocene. Lockwood Valley area, Ventura Co. CSUN 987 [=LACMIP. 16175]. Hypotype LACMIP 7697. [Turritellidae].

Turritella uvasana hendoni s.l. Merriam, 1941. Squires 1988c. NHMLAC CS 398:11, fig. 16. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 987 [=LACMIP 16175]. Hypotype LACMIP 7697. [Turritellidae].

Turritella uvasana hendoni s.l. Merriam, 1941. Squires 1991c. SEM Guidebook 68:220, pl. 1, fig. 15. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. CSUN 662 [=LACMIP 23779]. Hypotype LACMIP 11458. [Turritellidae].

Turritella uvasana infera Merriam, 1941. Givens 1974. UCPG 109:65–66, pl. 6, fig. 5. Juncal Fm., Eocene. Hot Springs Creek, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4662. Hypotype UCR.4662/201. [Turritellidae].

....., pl. 6, fig. 6. Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4661. Hypotype UCR 4661/41.

....., pl. 6, fig. 7. Hot Springs Creek, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4659. Hypotype UCR 4659/103.

Turritella uvasana infera Merriam, 1941. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 19. Santa Susana Fm., Paleocene. Las Llajas Canyon, Santa Susana quad., Ventura Co. UCMP 7000. Hypotype UCMP 37429. [Turritellidae].

....., pl. 2, fig. 4. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad., Ventura Co. UCLA 6616 [=LACMIP 26616]. Hypotype UCLA 59359 [=LACMIP 10436].

Turritella uvasana infera Merriam, 1941. Squires 1984. NHMLAC CS 350:19, fig. 6i. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad., Ventura Co. UCLA 6616 [=LACMIP 26616]. Hypotype UCLA 59359 [=LACMIP 10436]. [Turritellidae].

Turritella uvasana infera Merriam, 1941. Squires 1987. NHMLAC CS 388:27–28, fig. 25. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 805 [=LACMIP 16397]. Hypotype LACMIP 7453. [Turritellidae].

Turritella uvasana infera Merriam, 1941. Squires 1999b. NHMLAC CS 479:17, fig. 30. Santa Susana Fm., Eocene. North side Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 967 (=LACMIP 12648). Hypotype LACMIP 12679. [Turritellidae].

....., fig. 31. North side Simi Valley, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 959 [=LACMIP 17189]. Hypotype LACMIP 12680.

Turritella uvasana cf. *T. uvasana neopleura* Merriam, 1941. Weaver and Kleinpell 1963. UCPG 43:184, pl. 23, fig. 8. Cozy Dell Fm., Eocene. North of Camino Cielo, San Rafael Mtn. quad., Santa Barbara Co. UCMP B6927. Hypotype SU 9183 [=CASG 70264]. [Turritellidae].

Turritella uvasana neopleura Merriam, 1941. Givens 1974. UCPG 109:66–67, pl. 6, figs. 8, 9. Juncal Fm., Eocene. West of Reyes Peak, Reyes Peak quad. (1943), Ventura Co. UCR 4706. Hypotypes UCR 4706/201, 4706/204. [Turritellidae].

....., pl. 6, fig. 10. Matilija Fm., Eocene. San Guillermo quad. (1943), Ventura Co. UCR 4744. Hypotype UCR 4744/21.

....., pl. 6, fig. 11. San Guillermo quad. (1943), Ventura Co. UCR 4743. Hypotype UCR 4743/2.

Turritella uvasana sargeanti Anderson and G D. Hanna, 1925. Givens 1974. UCPG 109:67, pl. 6, figs. 12–14. Matilija, Eocene. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4726. Hypotypes UCR. 4726/101–4726/103. [Turritellidae].

....., pl. 6, figs. 15, 16. Near Pine Mtn. Lodge, Lion Canyon quad. (1943), Ventura Co. UCR 4732. Hypotypes UCR 4732/301, 4732/302.

Turritella uvasana sargeanti Anderson and G D. Hanna, 1914. Deméré et al. 1979. SEPM Guidebook 4:100, pl. 2, fig. 8. Mission Valley Fm., Eocene. Scripps Ranch, southeast of Miramar Reservoir, San Diego, San Diego Co. SDSNH 2962. Hypotype SDSNH 20777. [Turritellidae].

Turritella vanvlecki Arnold, 1909 [1910]. Woodring et al. 1940 [1941]. USGS PP 195:86, pl. 31, fig. 2. Etchegoin Fm. (*Siphonalia* Zone), Pliocene. North Dome, ridge east of La Maseta, Kettleman Hills, Kings Co. USGS 12464. Hypotype USNM 495809. [Turritellidae].

Turritella vanvlecki Arnold, 1909 [1910]. Durham and Addicott 1965. USGS PP 524-A:A12, pl. 5, fig. 11 (cast). Pancho Rico Fm., Miocene/Pliocene. North side of Walker Canyon, Wunpost quad., Monterey Co. USGS. M1935. Hypotype USNM 649110. [Turritellidae].

....., pl. 5, fig. 14. Salinas River, Sarah Canyon, Wunpost quad., Monterey Co. USGS M1934. Hypotype USNM 649111.

Turritella vanvlecki Arnold, 1909 [1910]. Walker 1998. Ichnos 6:112, fig. 8b (with *Entobia* endobiont), 8d (with spionid borings). Pancho Rico Fm., Miocene/Pliocene. Lynch Canyon, San Ardo quad., Monterey Co. LACMIP 22587. Hypotypes LACMIP 12426, 12428. [Turritellidae].

Turritella variata Conrad, 1857. G D. Hanna and Hertlein 1943. CDM Bull. 118(2):170, fig. 62-19. Gaviota Fm., Eocene. Nojoqui Creek, Santa Ynez Mtns., Lompoc quad., Santa Barbara Co. UCMP "A889" [=UCMP A887). Plastohypotype CASG 5665 determined here as missing. [Turritellidae].

Turritella variata Conrad, 1857d. Kelley 1943, BAAPG 27(1):12, pl. 1, figs. 3, 7. Gaviota Fm., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP A948. Hypotypes UCMP 33905, 33906. [Turritellidae].

Turritella variata Conrad, 1857d of Clark and Anderson 1938. Kelley 1943. BAAPG 27(1):12, pl. 1, figs. 5, 8, 13. Type Wheatland Fm., Eocene. Dry Slough [=Dry Creek], near Wheatland, Smartsville quad., Yuba Co. UCMP A1889. Hypotypes UCMP 11012, 11024, 11058. [Turritellidae].

Turritella variata Conrad, 1857d. Weaver and Kleinpell 1963. UCPG 43:185, pl. 23, figs. 11, 13. Gaviota Fm., Eocene. Las Varas Canyon, Goleta quad., Santa Barbara Co. UCMP B6966. Hypotypes SU 9184, 9185 [=CASG 70261, 70262]. [Turritellidae].

....., pl. 23, fig. 14. Eocene. North side of Santa Inez [*sic*] Mtns., Santa Barbara Co. Holotype USNM 13346.

Turritella variata juliana Merriam, 1941. Weaver and Kleinpel 1963. UCPG 43:185, pl. 23, fig. 16. Gaviota Fm., Eocene. Near junction of Yridsis Creek with El Jaro Creek Lompoc quad., Santa Barbara Co. UCMP B7007A. Hypotype SU 9186 [=CASG 70274]. [Turritellidae].

Turritella variata Conrad cf. var. *juliana* Merriam, 1941. Kelley 1943. BAAPG 27(1): pl. 1, fig. 1. Gaviota Fm., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP A948. Hypotype UCMP 33911. [Turritellidae].

Turritella variata lompocensis Arnold, 1907. Weaver and Kleinpell 1963. UCPG 43:185, pl. 23, fig. 15. Gaviota Fm., Eocene. Near junction of Yridsis Creek with El Jaro Creek, Lompoc quad., Santa Barbara Co. UCMP B7007E. Hypotype SU 9187 [=CASG 70229]. [Turritellidae].

Turritella variata lorenzana Wagner and Schilling, 1923. Weaver and Kleinpell 1963. UCPG 43:185, pl. 23, fig. 12. Alegria Fm., Oligocene. Vicinity of Arroyo el Bulito, Lompoc quad., Santa Barbara Co. UCMP B7032. Hypotype SU 9188 [=CASG 70266]. [Turritellidae].

....., pl. 24, fig. 1. Upper Gaviota Fm., Eocene. El Jaro Creek, (see Weaver and Kleinpel 1963:225), Lompoc quad., Santa Barbara Co. UCMP B7017. Hypotype SU 9189 [=CASG 70267].

Turritella variata sanmarcosensis Weaver and Kleinpell, 1963 (n.subsp.). UCPG 43:185–186, pl. 24, figs. 2, 3 (peels). "Coldwater" Sandstone, Eocene. Along Camino Cielo west of San Marcos Pass, San Rafael Mtn. quad., Santa Barbara Co. UCMP B6939. Paratypes SU 9191, 9192 [=CASG 70257.10, 70257.20]. [Turritellidae].

....., pl. 24, fig. 4 (peel). Along Camino Cielo near Sacate-"Coldwater" contact, San Rafael quad., Santa Barbara Co. UCMP B6940. Holotype SU 9190 [=CASG 70257].

Turritella cf. *T. variata sanmarcosensis* Weaver and Kleinpell, 1963 (n.subsp.). UCPG 43:186, pl. 24, fig. 5. "Coldwater" Sandstone, Eocene. Santa Barbara Co. Dibblee locality 238. Hypotype SU 9194 (not SU 9501 as in text and pl. caption) [=CASG 70256]. [Turritellidae].

Turritella variata wheatlandensis Clark and Anderson, 1938. Weaver and Kleinpell 1963. UCPG 43:185, pl. 23, fig. 9. Wheatland Fm., Eocene. Northwest of Wheatland, Smartsville quad., Yuba Co. UCMP A1889]. Holotype UCMP 11059. [Turritellidae].

Turritella wheatlandensis Clark and Anderson, 1938. Kelley 1943. BAAPG 27(1):12, pl. 1, fig. 11. Type Wheatland Fm., Eocene. Northwest of Wheatland, Smartsville quad., Yuba Co. UCMP A1889. Holotype UCMP 11059. **Remarks:** Determined here as *Turritella variata wheatlandensis*. [Turritellidae].

Turritella Fowkes 1982. Coalinga Guidebook, p. 96, unnumbered fig. Etchegoin/Jacalitos Fm., Miocene/Pliocene. East of Coalinga, Fresno Co. WHC hypotype lost? [Turritellidae].

Turritella n. sp. Zinsmeister 1983a. SEPM Guidebook 35:68, pl. 2, fig. 17. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6825. Hypotype UCR 6825/100 (not UCR 6825/1 as cited in pl. caption). **Remarks:** Described as *Turritella cornuatus*, *fide* Zinsmeister (1983b: p. 1289). [Turritellidae].

Turritella n. sp. Saul 1983b. SEPM Guidebook 35:74, pl. 1, fig. 12. Santa Susana Fm., Paleocene. Santa Susana quad., Ventura Co. CIT 531 [=LACMIP. 7153]. Hypotype UCLA 59363 [=LACMIP 10428]. **Remarks:** Determined here as *Turritella buwaldana* Dickerson 1916. [Turritellidae].

Turritella n. sp. Stadum 1984b. NHFOC Mem. 1:92, pl. 2, fig. 9. Monterey Fm., Miocene. "Pecten Reef," Saddleback Valley, Orange Co. Hypotype determined here as missing. [Turritellidae].

Turritella-rich sandstone. Squires and Filewicz 1983 (eds.). SEPM Guidebook 35:44, unnumbered fig. Las Virgenes Sandstone, Paleocene. Just west of Burro Flats, Simi Hills, Ventura Co. Hypotype current whereabouts unknown.

Turritella sp. Perry 1977. Foss. Santa Cruz Co., p. 4, lower fig. Locatelli Fm., Paleocene. Gold Gulch, near Felton, Felton quad., Santa Cruz Co. SCCM. 22. Hypotype SCCM. 21000]. **Remarks:** *Turritella infragranulata pachecoensis* Stanton 1896, *fide* L.R. Saul (personal communication, 1998). [Turritellidae].

Turritella sp. Squires et al. 1988. SEPM Guidebook 58:185, pl. 1, fig. 2 (latex peel). Goler Fm., Eocene. El Paso Mtns., Inyokern SE quad. (1972), Kern Co. USGS M9067. Hypotype USNM 424890. [Turritellidae].

Turritella sp. Stadum and Finger 2016. NHMLAC CS 524:38, 40, 50, fig. 11. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312. Hypotype SDSNH 85244 (error) [83244 in errata, p. 50]. [Turritellidae].

Turritella sp. "A." Kelley 1943. AAPG Bull. 27(1):12, pl. 1, figs. 9, 12, 14. Sacate Fm., Eocene. Quarta Canyon area Santa Barbara Co. SU. 1484. Hypotype SU 7414 [=CASG 72020]. **Remarks:** *Turritella variata lompocensis* Arnold, 1907, *fide* Weaver and Kleinpell (1963: p. 185). [Turritellidae].

Turritella sp. "B." Kelley 1943. AAPG Bull. 27(1):12, pl. 1, fig. 6. "Coldwater Fm.," Eocene. Southeast of Matilija, Ventura Co. SU. 2379. Hypotype SU/CASG 7238 determined here as missing. [Turritellidae].

Turris sp. Weaver and Kleinpell 1963. UCPG 43:193, pl. 27, figs. 5,6. Middle Gaviota Fm., Eocene. Cañada de Santa Anita, Lompoc quad., Santa Barbara Co. UCMP B7013. Hypotypes SU 9232 (not SU 9504 as in text), 9236 [=CASG 70252, 70253]. [Turridae].

Tympanotonus* (*Tympanotonus*) *californicus Squires, 1999c (n. sp.). NHMLAC CS 480:12, 13, figs. 6–13. Matilija Sandstone, Eocene. Matilija quad. (1952, PR 1967), Ventura Co. CSUN 1453 [=LACMIP 16962). Holotype LACMIP

12442, paratypes LACMIP 12443–12448. **Remarks:** In the genus *Certhideopsis*, *fide* Reid et al. (2008: table 4 on p. 691).

Typhis* (*Talityphis*) *lampada Keen, 1943 (n. sp.). Tr.SDSNH 10(2):53–54, pl. 3, figs. 14, 19, 23. Lower Round Mtn. Silt, Miocene. Caliente quad., Kern Co. SU 2121. Holotype SU 7548 [=CASG 72016], [unfigured paratypes SU 7549, 7949 [=CASG 72017, 7949]. [Muricidae].

Typhis (*Talityphis*) *lampada* Keen, 1943. Addicott, 1970. USGS PP 642:83, pl. 8, fig. 17; pl. 9, fig. 5. Lower Round Mtn. Silt, MioceneRio Bravo Ranch quad. (1954), Kern Co. USGS M1613. Hypotypes USNM 650129, 650130 detemined here as missing. [Muricidae].

....., pl. 9, fig. 5. Kern River, Kern Co. UCLA AC-13-34 [=LACMIP 16380]. Hypotype UCLA 45766 [=LACMIP 8433].

Typhis n. sp. Smith 1975b. SEPM Symposium vol., p. 376, pl. 1, figs. 16, 17. Lodo Fm., Paleocene. Near junction of Panoche and Silver creeks, Tumey Hills quad., Fresno Co. SU 2073 [=UCMP A9717]. Hypotype UCMP 14203. [Muricidae].

Umpquaia oregonensis Turner, 1938. Givens and Kennedy 1976. Jour. Paleo. 50(5):966, 971, pl. 3, figs. 11–22. Delmar Fm. [=Santiago Fm.?], Eocene. Near Vista and San Marcos, San Diego Co. UCR 4865. Hypotypes UCR 4865/102–4865/107. [Buccinidae].

Undetermined gastropod. Addicott 1970. USGS PP 642: pl. 12, fig. 16. Olcese Sand, Miocene (of Matthews 1955: pp. 11–14). Mobil Oil Co. (General Petroleum Corp.) 3891 ft. depth, Kern Co. UCR 1199. Hypotype UCR 1199/1 (not UCR 1199 as in pl. caption). **Remarks:** Determined here as possible nassariid. [Nassariidae].

Undetermined species, moon snail-like shells. Cōcke 2015. Foss. Palos Verdes Hills, p. 78–79, unnumbered fig. on p. 78 (lower), unnumbered fig. on p. 79 (upper). Monterey Fm., Miocene. George F. Canyon, Palos Verdes Hills, Los Angeles Co. Hypotype to be donated to LACMIP. [Naticidae].

Undetermined species, olive-like snail. Cōcke 2015. Foss. Palos Verdes Hills, p. 79, unnumbered fig. on p. 79 (upper). Monterey Fm., Miocene. George F. Canyon, Palos Verdes Hills, Los Angeles Co. Hypotype to be donated to LACMIP. [Olividae].

Undetermined species, snail. Cōcke 2015. Foss. Palos Verdes Hills, p. 80, unnumbered fig. on p. 80 (lower). Monterey Fm., Miocene. George F. Canyon, Palos Verdes Hills, Los Angeles Co. Hypotype to be donated to LACMIP.

Unknown gastropod. Bedrossian 1974. Calif. Geol. 27(8): back cover, unnumbered fig., upper center specimen. “Merced” Fm., Pliocene [=Wilson Grove Fm., Miocene/Pliocene]. Santa Rosa Valley, Sonoma Co. Hypotype CASG determined here as missing. **Remarks:** Determined here as possibly a buccinid.

Urosyca caudata Gabb, 1869. Squires 2014. NHMLAC CS 522:5–6, fig. 15. Vine Hill Sandstone, Paleocene. [Martinez area, Contra Costa Co.]. Lectotype (of Stewart 1926 [1927]:379) ANSP 4208, [paralectotypes (4) ANSP. 79507]. **Remarks:** Name reassigned back to the original name *Uroscya caudata* Gabb from *Priscoficus caudata* (Gabb), *fide* Squires (2014: p. 5. [Ficidae].

....., fig. 9. Santa Susana Fm.. Paleocene. Simi Hills, Ventura Co.. LACMIP 23132. Hypotype LACMIP 14472.

....., fig. 10. Santa Susana Fm. Paleocene. Santa Ynez Canyon, Santa Monica Mtns., LosAngeles Co. LACMIP 16869. Hypotype LACMIP 14773.

....., figs. 11–13. Santa Susana Fm., Simi Hills, Ventura Co.. LACMIP 22330. Hypotype LACMIP. 10978.

....., figs. 14–15. Santa Susana Fm., Santa Ynez Canyon, Santa Monica Mtns., Los Angeles Co. LACMIP 10689. Hypotypes 14474, 14475.

Urosyca robusta Weaver, 1905. Squires, 2014a. NHMLAC CS 522:5, fig. 4. Vine Hill Sandstone, Martinez area, Contra Costa Co. UCMP 1888. Hypotype UCMP 11865. [Ficidae].

....., figs. 5–7. Vine Hill Sandstone, Paleocene. Near Martinez, Contra Costa Co. UCMP 243. Holotype UCMP 11866.

Uzita? *arnoldi* (Anderson, 1905). [*Nassa*]. Moore 1963 [1964]. USGS PP 419:39, pl. 5, figs. 16, 17. Temblor Fm. [=Lower Round Mtn. Silt], Miocene. Kern River, Kern Co. USGS 6623. Hypotype USNM 563158. **Remarks:** In the genus/subgenus *Nassarius* (*Catilon*), *fide* Addicott (1965a: p. B12). [Nassariidae].

Vasum* (*Vasum*) *pufferi Emerson, 1964 (n. sp.). AMN 2202:11–13, fig. 7. Imperial Fm. [=Latrania Fm.], Pliocene. Carrizo Mtn. [=Coyote Mtn.], Imperial Co. UCMP A1269. Holotype UCMP 15089. [Turbinellidae].

....., fig. 8. First narrow box canyon east of Alverson Canyon, Imperial Co. CASG 682. [Paratype CASG 682.01, *ex* CASG 2447].

Vasum pufferi Emerson, 1964. Deméré and Rugh 2006. Foss. Treas. Anza-Borrego Desert, p. 54, fig. 3.5F. Latrania Fm., Miocene/Pliocene. Coyote Mtn., Imperial Co. SDSNH 252. Hypotype SDSNH 23112. [Turbinellidae].

Velates californicus Vokes, 1935a. Squires and Filewicz 1983 (eds.). SEPM Guidebook 35:80 [follows Saul 1983b], figs. A–C. Santa Susana Fm., Paleocene. Southwest of Runkle Canyon, Simi Hills, Calabasas quad.,Ventura Co. UCLA 3173 [=LACMIP 23173]. Hypotype UCLA 58275 [=LACMIP 8881]. [Neritidae].

Velates californicus Vokes, 1935a. Woods and Saul 1986. Jour. Paleo. 60(3):647–649, figs. 5.15, 5.16, 5.18, 5.19, 5.21. Santa Susana Fm., Paleocene. Southwest of Runkle Canyon, Calabasas quad., Simi Hills, Ventura Co. UCLA 3173 [=LACMIP 23173]. Hypotypes UCLA 58274, 58275 [=LACMIP 8880, 8881]. [Neritidae].

Velates perversus (Gmelin, 1791). [*Nerita*]. Givens 1974. UCPG 109:61, pl. 5, figs. 5, 6, 13. Juncal Fm., Eocene. Hot Springs Canyon, Topatopa Mtns. quad. (1943), Ventura Co. UCR 4668. Hypotypes UCR 4668/33, 4668/34. [Neritidae].

Velates perversus (Gmelin, 1791). [*Nerita*]. Squires 1984. NHMLAC CS 350:16–17, figs. 6b, c. Llajas Fm., Eocene. Simi Hills, Ventura Co. UCMP 7193 [=CSUN 702). Hypotype UCMP. 37435. [Neritidae].

Velates perversus (Gmelin, 1791). [*Nerita*]. Woods and Saul 1986. Jour. Paleo. 60(3):648, fig. 5.22. Llajas Fm., Eocene. Bus Canyon Rd., Thousand Oaks quad., Simi Hills, Ventura Co. UCLA 7069 [=LACMIP 27069]. Hypotype UCLA 59278 [=LACMIP 8886]. [Neritidae].

....., figs. 5.24, 6.1, 6.8. Lower Juncal Fm., Eocene. Hot Springs Canyon, Topatopa Mtns. quad., Ventura Co. UCLA. 4244 [=LACMIP 24244]. Hypotypes UCLA. 58376, 59579 [=LACMIP 8884, 8887].

Velates perversus (Gmelin, 1791). [*Nerita*]. Squires 1987 NHMLAC CS 388:23–24, figs. 15, 16, 18, 19. Juncal Fm., Eocene. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 850 [=LACMIP 16400. Hypotypes LACMIP 7444, 7446, 7447. [Neritidae].

....., fig. 17. Whitaker Peak quad. (1958), Los Angeles Co. CSUN 830 [=LACMIP 16166]. Hypotype LACMIP 7445.

Velates perversus (Gmelin, 1791). [*Nerita*]. Squires 1991c. SEPM Guidebook 68:220, pl. 1, figs. 10, 11. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 665 [=LACMIP 16335]. Hypotype LACMIP 11454. [Neritidae].

Velates perversus (Gmelin, 1791). [*Nerita*]. Squires 1999b. NHMLAC CS 479:13, 15, figs. 22, 23. Santa Susana Fm., Paleocene/Eocene. Calabasas quad. (1952, PR 1967), Ventura Co. LACMIP 7124. Hypotype LACMIP 12676. [Neritidae].

Vermetid. Stadum and Finger 2016. NHMLAC CS 524:40, 50, fig. 29. Monterey Fm. (Saddleback Valley Limestone member), Miocene. Fossil Reef Park, Laguna Hills, Orange Co., San Juan Capistrano quad. SDSNH 4312 [4512 *in errata* is erroneous]. Hypotype SDSNH 142016. [Vermetidae].

Vitrinella (*Vitrinellops*) *lens* (Keen, 1943). [*Teinostoma*]. Addicott 1970. USGS PP 642:46, pl. 2, figs. 4, 10. Lower Round Mtn. Silt, MioceneRio Bravo Ranch quad. (1954), Kern Co. USGS M1612. Hypotype USNM 650052. [Vitrinellidae].

....., pl. 2, fig. 5. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USGS M1597. USNM hypotype 650053.

Vitrinella stearnsi Bartsch, 1907, var. Woodring and Bramlette 1950 [1951]. USGS PP 222:70, pl. 12, figs. 6–8. Careaga Fm. (Cebada Member), Pliocene. Graciosa Ridge, near Orcutt, Santa Barbara Co. USGS 14648. Hypotype USNM

560065. [Vitrinellidae].

Volutilithes orocopiaensis Squires and Advocate, 1986 (n. sp.). Jour. Paleo. 60(4):859–860, figs. 3.1, 3.2. Maniobra Fm., Eocene. Orocopia Mtns., Canyon Spring NW quad. (1963), Riverside Co. CSUN 662 [=UCLA 3779, =LACMIP 23779]. Holotype LACMIP 7168, unfigured paratype LACMIP 10567. [Volutidae].

Volutilithes orocopiaensis Squires and Advocate, 1986. Squires, 1991c. SEPM Guidebook 68: 222, pl. 2, fig. 7. Maniobra Fm., Eocene. Maniobra Valley, Hayfield quad. (1987), Riverside Co. CSUN 662 [=LACMIP 23779]. Hypotype LACMIP 7168. [Volutidae].

Volutilithes torreyensis Givens, 1978 (n. sp.). Jour. Paleo. 52(1):104–107, figs. 2a–d. Ardath Shale, Eocene. Torrey Pines St. Park, San Diego Co. UCR 4920. Holotype UCR 4920/1. [Volutidae].

Volutocorbis (*Retipirula*) *crassitesta* (Gabb, 1869b). [*Turbinella*]. Wenz 1943. Handbh. Palaoz. 6:1318, fig. 3749 (refigured from Stewart, 1926 [1927], pl. 25, fig. 11 (as *Retipirula crassitesta*)). Martinez Fm., Paleocene. Martinez, Contra Costa Co. Lectotype (of Stewart, 1926 [1927]: p. 406) ANSP 4332 missing, *fide* K. Estes-Smargiassi (personal communication, 2019), paralectotypes (3) ANSP 79506]. **Remarks:** In the genus *Retipirula*, *fide* Saul and Squires (2008b: p. 234). [Volutidae].

Volutocorbis (*Retipirula*) *crassitesta* (Gabb, 1869b) [*Turbinella*]. Zinsmeister 1977. Jour. Paleo. 51(1):178, figs. 1A. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6846. Hypotype UCR.6846/12. [Volutidae]. **Remarks:** In the genus *Retipirula*, *fide* Saul and Squires (2008b: p. 234). [Volutidae].

....., fig. 1B. Simi Hills, Ventura Co. UCR 6864. Hypotype UCR 6864/111.

....., fig. 1C. Simi Hills, Ventura Co. UCR 6863. Hypotype UCR 6863/151.

....., fig. 1D. Simi Hills, Ventura Co. UCR 6803. Hypotype UCR 6803/111.

Volutocorbis (*Retipirula*) *crassitesta* (Gabb, 1869b). [*Turbinella*]. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, fig. 15. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6863. Hypotype UCR 6863/151 (not UCR 6803/1 as in pl. caption). [Volutidae]. **Remarks:** In the genus *Retipirula*, *fide* Saul and Squires (2008b: p. 234). [Volutidae].

Volutocorbis virginiae Zinsmeister, 1977 (n. sp.). Jour. Paleo. 51(1):177–179, figs. 1E–H. Santa Susana Fm.(?), Paleocene. Vicinity of Meier and Runkle canyons, Calabasas quad. (1952 [PR 1967), Simi Hills, Ventura Co. UCR 6887. Holotype UCR 6887/11, paratypes UCR. 6887/12, 6887/13, unfigured paratypes UCR 6887/14–6887/19. [Volutidae].

*Volutocorbis virginea** Zinsmeister, 1977. Zinsmeister 1983a. SEPM Guidebook 35:70, pl. 4, figs. 18, 19. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6887. Hypotype UCR. 6887/1. **Remarks:** Error for *virginiae*. [Volutidae].

Volutocristata lajollaensis (M.A. Hanna, 1927). [*Plejona*]. G D.Hanna and Hertlein 1943. CDM Bull. 118 (2):172, fig. 62-29. Llajas Fm., Eocene. Aliso Creek, Los Angeles Co. CASG 364. Hypotype CASG 5714. **Remarks:** In the genus *Lyrischapa*, *fide* Squires (1984: p. 36; 1987: p 47). [Volutidae].

Volvulella gluma Keen, 1943 (n. sp.). Tr.SDSNH 10(2):54–55, pl. 4, fig. 10. Basal Round Mtn. Silt (possibly uppermost Olcese Sand), Miocene. Kern River, Bakersfield or Caliente quad., Kern Co. SU 2641. Holotype SU 7550 [=CASG 72018], [unfigured paratype SU 7967 [=CASG 7967]. [Rhizoridae].

....., SDSNH5422 (*ex* SU 2121). Unfigured paratype SDSNH 7967.

Volvulella gluma Keen, 1943. Addicott 1970. USGS PP 642:141, pl. 20, fig. 3. Upper Olcese Sand, Miocene. Oil Center quad. (1950), Kern Co. UCMP B1598. Hypotype UCMP 37102 [Rhizoridae].

....., pl. 20, fig. 4. Oil Center quad. (1954), Kern Co. USGS M1597. Hypotype USNM 650276.

Volvulella joaquinensis Addicott, 1970 (n. sp.). USGS PP 642:141, pl. 20, fig. 2. Lower Round Mtn. Silt, Miocene. Caliente quad. (1914), Kern Co. UCMP B1637. Holotype UCMP 37101. [Rhizoridae].

Whitneya ficus Gabb, 1864.G D. Hanna and Hertlein 1943. CDM Bull. 118(2):170, fig. 62-22. Tejon Fm., Eocene. Live

Oak, Kern Co. CASG 244. Hypotype CASG 5713. **Remarks:** In the genus *Strepsidura*, *fide* Wenz (1943: p. 1270). [Fasciolariidae].

Whitneyella sinuata (*s.l.*) (?) Weaver and Kleinpell, 1963. UCPG 43:193, pl. 26, fig. 12. Gaviota Fm., Eocene. Nojoqui Creek, Lompoc quad., Santa Barbara Co. UCMP B6985. Hypotype SU 9231 [=CASG 70273, as *Whitneyella sinuata* aff. *W. s. argoensis* in CASG online database]. [Fasciolariidae].

Whitneyella sp. Throckmorton 1988a. USGS OFR 88-59:56, pl. 7, fig. 6 (latex peel) (refigured in Throckmorton 1988b, pl. 1, fig. 24). Tesla Fm., Eocene. Midway quad., Alameda Co. UCMP D8156. UCMP unnumbered hypotype lost, *fide* C. Throckmorton (personal communication, 2002). [Fasciolariidae].

Xenophora simiensis Nelson, 1925. Zinsmeister, 1983a. SEPM Guidebook 35:69, pl. 3, figs. 8. 9. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6871. Hypotype UCR 6871/20. [Xenophoridae].

Xenophora stocki Dickerson, 1916. Givens 1974. UCPG 109:71, pl. 7, fig. 8. Juncal Fm., Eocene. Thorn Meadows area, Lion Canyon quad. (1943.), Ventura Co. UCR 4680. Hypotype UCR 4680/7. [Xenophoridae].

Xenophora stocki Dickerson, 1916. Squires 1984. NHMLAC CS 350:21, fig. 6r. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN [=LACMIP 7242]. Hypotype LACMIP 6520. [Xenophoridae].

Xenophora stocki Dickerson, 1916. Squires 1988a. SEPM Guidebook 58:108, pl. 1, fig. 7. Llajas Fm., Eocene. Simi Valley, Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6520. [Xenophoridae].

Xenophora stocki Dickerson, 1916. Squires 1988c. NHMLAC CS 398:11–12, fig. 20. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 979 [=LAMCIP 16081]. Hypotype LACMIP 7701. [Xenophoridae].

Xenophora stocki Dickerson, 1916. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 10. Coldwater Sandstone, Eocene. Upper Sespe Creek, Ventura Co. LACMIP 23735. Hypotype LACMIP 11650. [Xenophoridae].

Xenophora zitteli Weaver, 1905 (not Dickerson as cited in pl. caption). Zinsmeister 1983a. SEPM Guidebook 35:69, pl. 3, figs. 6. 7. Santa Susana Fm., Paleocene. Simi Hills, Ventura Co. UCR 6896. Hypotype UCR 6896/1. [Xenophoridae].

Xenoturris antiselli (Anderson and Martin, 1914). [*Drillia*]. Addicott 1970. USGS PP 642:128, pl. 19, fig. 3. Top of Olcese Sand, Miocene. Caliente quad., Kern Co. SU 29501. Hypotype SU 9942 [=CASG 73129]. [Turridae].

....., pl. 19, fig. 15. Upper Olcese Sand, Miocene. Oil Center quad. (1954), Kern Co. USNM M1597. Hypotype USNM 650257.

Zonaria* (*Zonaria*) *emmakingae Groves, 1994 (n. sp.).Veliger 37(3):246, figs. 2, 3. Topanga Canyon Fm. (Cold Creek Member), Miocene. Santa Monica Mtns., Los Angeles Co. LACMIP 5136. Holotype LACMIP 12277. [Reprinted in Bull. SCPA 26(9-10): pp. 81, 82, 1994]. **Remarks:** In the genus *Pseudozonaria*, *fide* Lorenz, (2017: p. 399). [Cypraeidae].

Zonaria (*Neobernaya*) *spadicea* (Swainson, 1823a). [*Cypraea*]. Squires 2012. NHMLAC CS 520: 77, figs. 68, 69. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotype LACMIP 14388. **Remarks:** In the genus *Neobernaya*, fide Groves (2019: p. 133). [Cypraeidae].

Zonaria spadicea fernandoensis (Arnold, 1907). [*Cypraea*]. Cate 1969. Veliger 12(1):116, pl. 15, fig. 26. "Fernando Fm." [=Pico Fm.], Pliocene. Elsmere Canyon, near Newhall, Los Angeles Co. Holotype USNM 164961. **Remarks:** Junior synonym of *Neobernaya spadicea* (Swainson 1823a), *fide* Groves (2019: p. 133). [Cypraeidae].

CLASS POLYPLACOPHORA Gray, 1821

Amicula solivaga n. sp. Vendrasco et al., 2012. NHMLAC CS 520:37–38, figs. 14.1–14.10, 14.13–14.17. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Holotype LACMIP 13846. Paratypes LACMIP 13842–13845, 13847–13850, 13852–13856. [Mopaliidae].

....., figs. 14.14. 14.15. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 16817 [=LACMIP 305C]. Paratype LACMIP 13851.

Callistochiton palmulatus Dall, 1879. Vendrasco et al. 2012. NHMLAC CS 520:24, 27, figs. 7.3. 7.4, 7.20–7.25. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13757, 13764–13766, unfigured hypotypes LACMIP 14301, 14302. [Ischnochitonidae].

….., figs. 7.1, 7.2, 7.15–7.19. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 16817 [=LACMIP 305C]. Hypotypes LACMIP 13756, 13758–13763.

Callistochiton sphaerae n. sp. Vendrasco et al., 2012. NHMLAC CS 520:27–29, figs. 8.1–8.18, 8.20–8.27. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Holotype LACMIP 13769, paratypes LACMIP 13767, 13768, 13770–13776, unfigured hypotype LACMIP 14304. [Ischnochitonidae].

….., fig. 8.19. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 16817 [=LACMIP 305C]. Paratype LACMIP 13854.

Dendrochiton sp. indeterminate. Vendrasco et al. 2012. NHMLAC CS 520: 44, figs. 17.1–17.19. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 14285–14291. [Mopaliidae].

Leptochiton nexus Carpenter, 1864. Vendrasco et al. 2012. NMHLAC CS 520:21, 23, figs. 5.18–5.34. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13739–13746. [Leptochitonidae].

Leptochiton rugatus (Pilsbry, 1892) species complex. [*Lepidopleurus*]. Vendrasco et al. 2012. NHMLAC CS 520:20–21, figs. 5.1–5.17. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13730–13738. [Leptochitonidae].

Lepidozona kanakoffi n. sp. Vendrasco et al., 2012. NHMLAC CS 520:33, figs. 11.1–11.20, 11.23–11.28. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Holotype LACMIP 13810, paratypes LACMIP 13801–13809, 13811.13812, 13814–13816. [Ischnochitonidae].

….., figs. 11.21, 11.22. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 16817 [=LACMIP 305C]. Paratype LACMIP 13813.

Lepidozona mertensii (Middendorff, 1847). [*Chiton*]. Vendrasco et al. 2012. NHMLAC CS 520:29–30, figs. 9.7–9.9, 9.14, 9.15. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13780, 13781, 13785, 13786. [Ischnochitonidae].

….., figs. 9.1–9.6, 9.10–9.13. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 16817 [=LACMIP 305C]. Hypotypes LACMIP 13777–13779, 13782–13784.

Lepidozona pectinulata (Carpenter *in* Pilsbry, 1892). [*Ischnochiton*]. Vendrasco et al. 2012. NHMLAC CS 520:30, figs. 10.1. 10.12, 10.14–10.24. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13787–13792, 13974–13798. [Ischnochitonidae].

….., figs. 10.13, 10.25–10.28. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 16817 [=LACMIP 305C]. Hypotype LACMIP 13793, 13799, 13800.

Lepidozona sp. cf. *L. radians* (Carpenter *in* Pilsbry, 1892). [*Ischnochiton*]. Vendrasco et al. 2012. NHMLAC CS 520:30, 33, 11.6–11.10. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13804–13806. [Ischnochitonidae].

Lepidozona sp. cf. *L. rothi* Ferreira, 1983. Vendrasco et al. 2012. NHMLAC CS 520:30, figs. 11.1–11.5. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13801–13803. [Ischnochitonidae].

Mopalia sinuata Carpenter, 1864b. Vendrasco et al. 2012. NHMLAC CS 520:38, 40, figs. 15.1–15.3. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13894, 13895. [Mopaliidae].

Mopalia sp. cf. *M. swanii* Carpenter, 1864b. Vendrasco et al. 2012. NHMLAC CS 520:40, figs. 15.5, 15.6, 15.8–15.26.

San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13858–13872. [Mopaliidae].

….., figs. 15.4, 15.7. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 16817 [=LACMIP 305C]. Hypotype LACMIP 13857.

Mopalia sp. indeterminate. Vendrasco et al. 2012. NHMLAC CS 520: 40, fig. 15.27. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotype LACMIP 13873. [Mopaliidae].

Nuttallina sp. indeterminate. Vendrasco et al. 2012. NHMLAC CS 520: 44, figs. 17.20–17.22. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13892. [Lepidochitonidae].

Oldroydia percassa (Dall, 1894). [*Lepidopleurus*]. Vendrasco et al., 2012. NHMLAC CS 520:23, figs. 6.1–6.17. San Diego Fm., Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13747. 13735, unfigured hypotypes LACMIP 14297–14299. [Leptochitonidae].

Placiphorella sp. cf. *P. mirabilis* Clark, 1994. Vendrasco et al. 2012. NHMLAC CS 520: 41, figs. 16.9–16.15. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13879–13883. [Mopaliidae].

Placiphorella velata Dall, 1879. Vendrasco et al. 2012. NHMLAC CS 520:40–41, figs. 16.1–16.8. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13874–13878. [Mopaliidae].

Stenoplax circumsenta Berry, 1956. Vendrasco et al. 2012. NHMLAC CS 520:34–35, figs. 12.1–12.4. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13817–13820. [Ischnochitonidae].

….., figs. 12.5–12.7. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 16817 [=LACMIP 305C]. Hypotype LACMIP 13819, 13820.

Stenoplax fallax (Carpenter *in* Pilsbry, 1892). [*Ischnochiton*]. Vendrasco et al. 2012. NHMLAC CS 520:35, figs. 12.8–12.14, 12.17–12.21. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13821–13826, unfigured hypotypes LACMIP 14317, 14319. [Ischnochitonidae].

….., figs. 12.15,12.16. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 16817 [=LACMIP 305C]. Hypotype LACMIP 13827.

Stenoplax sp. cf. *S. heathiana* Berry, 1946. Vendrasco et al. 2012. NHMLAC CS 520:35–36, figs. 13.1–13.13, 13.16–13.19. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13832–13838, 13840, 13841. [Ischnochitonidae].

….., figs. 13.14, 13.15. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 16817 [=LACMIP 305C]. Hypotype LACMIP 13819.

Tonicella sp. cf. *T. venusta* Clark, 1999. Vendrasco et al. 2012. NHMLAC CS 520:41, 43–44, figs. 16.16–16.30. San Diego Fm., Pliocene. Goat Canyon, just north of the U.S./Mexico boundary, San Diego Co. LACMIP 305. Hypotypes LACMIP 13884–13891. [Mopaliidae].

CLASS SCAPHOPODA Bronn, 1862

Cadulus* (*Platyschides*?) *addicotti Emerson, 1957 (n. sp.). Jour. Paleo. 31(5):990, pl. 126, fig. 2. Olcese Sand, Miocene. Kern River Gorge, Kern Co. UCMP B1638. Holotype UCMP 37584, unfigured paratypes UCMP 37585–37589. [Gadilinidae].

Cadulus (*Platyschides*) *gabbi* Sharp and Pilsbry, 1898. Emerson 1957. Jour. Paleo. 31(5):988–989, pl. 126, figs. 1, 5. "Cretaceous" [=Eocene]. Northeast of Martinez, Contra Costa Co. Lectotype (of Emerson 1957:989) ANSP 79582, paralectotype ANSP 79583. [Gadilinidae].

Cadulus* (*Cadulus*) *mcfarlandae Emerson, 1957 (n. sp.). Jour. Paleo. 31(5):986–987, pl. 126, fig. 4. Capay Fm. [="Vacaville Shale"], Eocene. Ualatis Creek, southwest of Dunns Peak, Vaca Valley, Solano Co. UCMP A3365. Holotype UCMP 37590, unfigured paratypes UCMP 37591–37594. [Gadilinidae].

Coccodentalium emersoni Squires, 1988c (n. sp.). NHMLAC CS 398:8–9, figs. 7, 8. Juncal Fm.?, Eocene. Lockwood Valley, Sawmill Mtn. quad. (1943), Ventura Co. CSUN 979 [=LACMIP . 16081]. Holotype LACMIP 7690. [Dentaliidae].

Dentalium (*Laevidentalium*) *calafium* Vokes, 1939. Squires 1983b. SEPM Guidebook 35:88, fig. 9H. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana Mtns., Ventura Co. LACMIP 16211. Hypotype LACMIP 6507. [Dentaliidae].

Dentalium (*Laevidentalium*) *calafium* Vokes, 1939. Squires 1984. NHMLAC CS 350:16, fig. 5i. Llajas Fm., Eocene. Devil Canyon, Santa Susana quad., Los Angeles Co. CSUN 373 [=LACMIP. 16211]. Hypotype LACMIP 6507. [Dentaliidae].

Dentalium cf. *D. conradi* Dall, 1909. Hall 1958. UCPG 34(1):59, pl. 9, fig. 1. Oursan Sandstone, Miocene. Northwest of Pleasanton, Dublin quad. (1943), Alameda Co. SU 3229. Hypotype SU 8481 [=CASG 69951]. [Dentaliidae].

Dentalium (*Antalis*) *cooperi* Gabb, 1864. Shimer and Shrock 1944. Index Foss. N.A., p. 523, pl. 214, figs. 22, 23 (refigured from Gabb 1864, pl. 21, fig. 100). Martinez Fm., Eocene. Rose Canyon, San Diego Co. Holotype ANSP 13144. **Remarks:** Anderson and G D. Hanna (1925: p. 143) stated that the type locality has been difficult to ascertain and noted "since Dr. Cooper really made collections at Rose Canyon near san Diego, from which Gabb described certain species, it is entirely probable that the type of *D. cooperi* came from there." [Dentaliidae].

Dentalium laneensis Hickman, 1969. Addicott 1972b. SEPM Symposium vol., p. 6, pl. 1, fig. 9 [fig. missing]. Temblor Fm. (*Phacoides* Sand member) (of Stinemeyer et al. 1959:12, 13), Miocene. Las Yeguas Ranch quad., Temblor Range, Kern Co. USGS M3772. Hypotype USNM 646611. **Remarks:** Label in USNM collection reads "never received from author," and is presumed missing. Fig. 9 is missing from pl. 1 as noted in 'errata' sheet provided by the author. [Dentaliidae].

Dentalium laneensis Hickman, 1969. Addicott 1973b. USGS PP 791:7, 38, pl. 8, fig. 14 [was to have been refigured from Addicott 1972b, pl. 1, fig. 9, see preceeding entry]. Temblor Fm. (Wygal Sandstone Member), Miocene. Media Agua Creek, Las Yeguas Ranch quad., Kern Co. USGS M3772. Hypotype USNM 646611. **Remarks:** Label in USNM collection reads "never received from author" and is presumed missing. [Dentaliidae].

Dentalium* (*Fissidentalium*?) *mcganna Powell, et al., 2019b (n. sp.). *PaleoBios* 36:15–17, figs. 27, 28, 30. Sobrante Fm., Miocene. Caldecott Tunnel excavation, Berkeley Hills, Oakland, Alameda Co. UCMP IP13003. Holotype UCMP 251012, paratypes 218713, 218799. **Remarks:** Although the species name should have been correctly formed as the genitive noun "*macgannae*," it is left here as is, for taxonomic stability, as should subsequent authors, in accordance with ICZN Article 32.5.1 (ICZN, 1999). [Dentaliidae].

....., fig. 29. Gallaway Fm., Miocene. Near Point Arena, Saunders Reef quad., Mendocino Co. UCMP D7149. Paratype UCMP 14436.

Dentalium neohexagonum Sharp and Pilsbry *in* Pilsbry and Sharp, 1897. Squires 2012. NHMLAC CS 520:77, figs.100, 101. Pico Fm., Pliocene. Newhall area, Los Angeles Co. LACMIP 7752. Hypotypes LACMIP 14417, 14418. [Dentaliidae].

Dentalium stentor Anderson and G D. Hanna, 1925. Squires 1984. NHMLAC CS 350:16, fig. 5h. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 444 [=LACMIP 16203]. Hypotype LACMIP 6506. [Dentaliidae].

Dentalium stentor Anderson and G D. Hanna, 1925. Squires 1987. NHMLAC CS 388:21, fig. 9. Matilija Sandstone?, Eocene. Sharps Canyon, Whitaker Peak quad. (1958), Los Angeles Co. CSUN 219 [=LACMIP 16100]. Hypotype LACMIP 7439. [Dentaliidae].

Dentalium stentor Anderson and G D. Hanna, 1925. Squires 1994b. SEPM Guidebook 74:54, pl. 2, fig. 1 (cast). Cozy Dell Shale (Circle B Sandstone Member), Eocene. Upper Sespe Creek, Ventura Co. CSUN 531 [=LACMIP 16668]. Hypotype LACMIP 11641. [Dentaliidae].

Dentalium stentor Anderson and G D. Hanna, 1925. Squires 1997b. Simi Valley Hist. Soc. vol., p. 297, fig. 2c (refigured from Squires, 1984, fig. 5h). Llajas Fm., Eocene. North side Simi Valley, Ventura Co. [CSUN 444 [=LACMIP 16203].

Hypotype LACMIP. 6506. [Dentaliidae].

Dentalium stramineum? Gabb, 1864. Squires 1991c. SEPM Guidebook 68:220, pl. 1, fig. 7. Maniobra Fm., Eocene. Maniobra Valley, Red Canyon quad. (1986), Riverside Co. CSUN 676 [=LACMIP 16192]. Hypotype LACMIP 11451. [Dentaliidae].

Dentalium sp. Weaver and Kleinpell 1963. UCPG 43:194, pl. 27, fig. 10. Middle Gaviota Fm., Eocene. Cañada de Santa Anita, Lompoc quad., Santa Barbara Co. UCMP B7013. Hypotype SU 9241 [=CASG 70160]. [Dentaliidae].

Dentalium sp. Stanton 1966. Jour. Paleo. 40(1):35, pl. 7, fig. 21. Castaic Fm., Miocene. East of Dry Canyon Dam, Los Angeles Co. CIT 1670 [=LACMIP 7751]. Hypotype LACMIP 4216. [Dentaliidae].

Dentalium sp. Watkins 1974. Paleo.3 15:253, fig. 7D (latex cast). Kreyenhagen Fm., Oligocene. Monocline Ridge, Monocline Ridge quad. (1955), Fresno Co. UCMP D6531]. Hypotype UCMP 37160. [Dentaliidae].

Dentalium sp. Phillips et al. 1976. SEPM Symposium vol. p. 147, pl. 4, fig. 4. Gallaway Fm., Oligocene. Vicinity of Iverson Pt., Saunders Reef quad., Mendocino Co. UCMP D7149. Hypotype UCMP 14436. **Remarks:** Described as *Dentalium* (*Fissidentalium*?) *mcganna* by Powell et al. 2019b. [Dentaliidae].

CLASS CEPHALOPODA Cuvier, 1795

Aturia angustata (Conrad, 1849a). [*Nautilus*]. Miller 1947. GSA Mem. 23:85–88, pl. 48, fig. 5. San Lorenzo Fm., Miocene. Along Deer Creek, Santa Cruz Co. Hypotype SU 5379 [=CASG 69748], determined here as missing. [Aturidae].

....., pl. 91, figs. 1–3 (refigured from Schenck 1931, fig. 4, pl. 91, figs. 1, 2). Temblor Fm., Miocene. Near Bakersfield, Hypotype SU 612 [=CASG 71609].

Aturia angustata (Conrad, 1849a) [*Nautilus*]. Miller and Downs 1950. Jour. Paleo. 24(1):9–10, pl. 3, fig. 8. Temblor Fm., Miocene. Possibly near Mt. Poso oil field, Kern Co. Hypotype UCMP 31466. [Aturidae].

Aturia angustata (Conrad, 1849a) [*Nautilus*]. Saul and Stadum 2005. Jour. Paleo. 79(3):525, fig. 4.2. Vaqueros Fm., Miocene. F.R. Bowerman Landfill [=Bee Canyon Landfill], El Toro quad., Orange Co. LACMIP 17601. Hypotype LACMIP 13064. [Aturidae].

Aturia dickersoni Schenck, 1931. Miller 1947. GSA Mem. 23:94–95, pl. 86, fig. 3. Chico Fm., Cretaceous or Martinez Fm., Paleocene. Mt. Diablo area, Contra Costa Co. UCMP 150. Holotype UCMP 11840. [Aturidae].

Aturia kerniana Anderson and G D. Hanna, 1925. Miller 1947. GSA Mem. 23:98–99, pl. 85, figs. 7, 8. Tejon Fm., Eocene. Liveoak Canyon, Kern Co. CASG 61661. Hypotype SU 7917 [=CASG 72106]. [Aturidae].

....., pl. 88, fig. 4; pl. 89, figs. 3, 4. Grapevine Canyon, Kern Co. CASG 711. Holotype CASG 881, hypotype (topotype), CASG 5222.

Aturia myrlae M.A. Hanna, 1927. Miller 1947. GSA Mem. 23:100–101, pl. 76, figs. 2, 3. "La Jolla Fm. (Rose Canyon Member)," Eocene. Tecolote Valley, La Jolla quad., San Diego Co. UCMP 3989. Holotype UCMP 31089. [Aturidae].

....., pl. 77, figs. 1, 2. "Domengine horizon" [=Llajas Fm.], Eocene. Las Llajas Canyon, Simi Valley, Ventura Co. UCMP 7004]. Hypotype UCMP 31894.

....., pl. 92, figs. 6, 7. "La Jolla Fm.," Eocene. Rose Canyon area, La Jolla quad., San Diego Co. CASG 61655. Hypotype SU 7891 [=CASG 72107].

Aturia myrlae M.A. Hanna, 1927. Squires, 1984. NHMLAC CS 350:54–55, fig. 13a. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 7242]. Hypotype LACMIP 6595. [Aturidae].

Aturia myrlae M.A. Hanna, 1927. Squires 1997b. Simi Valley Hist. Soc. vol., p. 297, fig. 2j (refigured from Squires 1984, fig. 13a). Llajas Fm., Eocene. Simi Valley, Los Angeles Co. CSUN 374 [=LACMIP 7242). Hypotype LACMIP 6595]. [Aturidae].

Aturia myrlae M.A. Hanna, 1927. Specimen illustrated on front cover of the present paper. Llajas Fm., Eocene,

north side of Simi Valley, Ventura Co.. LACMIP 40374. Hypotype LACMIP 14872. **Remarks:** A juvenile specimen. [Aturidae].

Aturia sp. [of California]. Miller 1947. GSA Mem. 23:110, pl. 42, fig. 5. *Agasoma gravidum* beds, Contra Costa Co. UCMP 1173]. Hypotype (of Clark 1918, pl. 17, fig. 1) UCMP 11258. [Aturidae].

Aturia spp. Miller and Downs 1950. Jour. Paleo. 24(1):15–17, pl. 3, figs. 1, 2 (as *Aturia* sp. in pl. caption). Capay Fm. (Vacaville Shale Member), Eocene. Putah Creek, Yolo Co. UCMP A3990. Hypotype UCMP 30285. [Aturidae].

....., pl. 3, figs. 5, 6 (as *Aturia* cf. *A. myrlae* Hanna in pl. caption). Arroyo Hondo Fm., Eocene. Near where Urruttia Canyon enters Salt Creek, north of Coalinga, Fresno Co. UCMP 1817. Hypotype UCMP 15877.

Aturoidea mathewsoni (Gabb, 1864). [*Aturia*]. Miller 1947. GSA Mem. 23:71–72, pl. 49, fig. 3 (refigured from Gabb 1864, pl. 17, fig. 31). Martinez Fm., Paleocene. Near Martinez, Contra Costa Co. Institution unknown. Syntypes, lost, *fide* Miller (1947: p. 71). [Hercoglossidae].

....., pl. 50, figs. 1, 2. Near Martinez, Contra Costa Co. UCMP P244. Lectotype (of Schenck 1931:452) UCMP 31893.

Eutrephoceras hallidayi (Waring, 1914). [*Nautilus*]. Miller 1947. GSA Mem. 23:31, pl. 98, figs. 1–3. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Calabasas quad., Ventura Co. CASG 69612. Holotype SU 560 =[CASG 69725]. [Nautilidae].

Eutrephoceras hannai Vokes, 1937a. Miller, 1947. GSA Mem. 23:31–32, pl. 15, figs. 6–8. "La Jolla Fm. (Rose Canyon Shale Member)," Eocene. Rose Canyon area, La Jolla quad., San Diego Co. UCMP IP2720. Holotype UCMP 32296. [Nautilidae].

....., pl. 16, figs. 3–6. "La Jolla Fm. (Rose Canyon Shale Member)," Eocene. Rose Canyon area, La Jolla quad., San Diego Co. CASG 61655. Hypotypes SU 7896. 7897 [=CASG 72111].

Eutrephoceras marksi Miller, 1947 (n. sp.). GSA Mem. 23:33–34, pl. 20, figs. 1, 2. Tejon Fm., Eocene. Tecuya Creek area, Tejon quad., Kern Co. CASG 72114. Holotype SU 7899 [=CASG 72114]. [Nautilidae].

Eutrephoceras stephensoni (Dickerson, 1914a). [*Nautilus*]. Miller 1947 GSA Mem. 23:36–37, pl. 15, figs. 4, 5. Martinez Fm., Paleocene. Muir Station area, Concord quad., Contra Costa Co. UCMP 243. Holotype UCMP 11841]. [Nautilidae].

....., pl. 17, figs. 1–4. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Valley, Ventura Co. UCMP 3773. Hypotype UCMP 15983.

....., pl. 57, figs. 3, 4. Calabasas quad., Ventura Co. UCMP 3820. Hypotype UCMP. 15982.

Eutrephoceras aff. *E. stephensoni* (Dickerson, 1914a). [*Nautilus*]. Miller and Downs 1950. Jour. Paleo. 24(1):3, pl. 1, figs. 4, 5. Martinez Fm., Paleocene. Contra Costa Co. UCMP IP 12165. Hypotype UCMP 30283. [Nautilidae].

Eutrephoceras sp. Miller and Downs 1950. Jour. Paleo. 24(1):3–4, pl. 1, figs. 1–3. Capay Fm., Eocene. West of Winters, Yolo Co. UCMP A3073]. Hypotype UCMP.11412. [Nautilidae].

Eutrephoceras sp. Shapiro 1998. AAPG Guidebook MP 45:129, pl. 3, fig. G. ?San Onofre Breccia [?Cañada Fm.], Miocene. Cañada Posa area, Santa Cruz Is., California Channel Ids. Hypotype UCSB 8704 [=SBMNH 60177]. [Nautilidae].

Hercoglossa merriami Dickerson, 1914a. Miller 1947. GSA Mem. 23:54–55, pl. 36, figs. 1, 2. Martinez Fm., Paleocene. Near Martinez, Contra Costa Co. Hypotype ANSP 16122, missing, *fide* K. Estes-Smargiassi (personal communication, 2019). [Hercoglossidae].

....., pl. 37, figs. 1, 2. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Hills, Calabasas quad., Ventura Co. UCMP 3763. Hypotype UCMP 15984.

....., pl. 76, fig. 1. Martinez Fm., Paleocene. Near Muir Station, Concord quad., Contra Costa Co. UCMP 243]. Holotype UCMP 11842.

Kummelonautilus sp. Squires 2001. NHMLAC CS 489:20–21, fig. 43. Llajas Fm., Eocene. Las Llajas Canyon, Santa

Susana quad. (1951, PR 1969), Ventura Co. CSUN 374 [=LACMIP 22312]. Hypotype LACMIP 12759. [Nautilidae].

Mizuhobaris lepta Saul and Stadum, 2005 (n. sp.). Jour. Paleo. 79(3):527–528, fig. 4.3. Puente Fm. (Yorba Member), Miocene. Olinda Landfill, Yorba Linda quad., Puente Hills, Brea, Orange Co. LACMIP 17597. Holotype LACMIP 13056. [Argonautidae].

….., fig. 4.4. Olinda Landfill, Yorba Linda quad., Puente Hills, Brea, Orange Co. LACMIP 17599. Paratype LACMIP 13058.

….., fig. 4.5. Olinda Landfill, Yorba Linda quad., Puente Hills, Brea, Orange Co. LACMIP 17600. Paratype LACMIP 13059.

….., fig. 4.6. Puente Fm., Miocene. Carbon Canyon, Puente/Chino Hills, ?San Bernardino Co. LACMIP 2950. Paratype LACMIP 13060.

….., fig. 4.7. Puente Fm. (La Vida Member), Miocene. Baldwin Park quad., San Jose Hills, West Covina, Los Angeles Co. LACMIP 17558. Paratype LACMIP 13061.

….., fig. 4.8. Monterey Fm. (Valmont Dolomite Member?), Miocene. Eastern Palos Verdes Hills, Los Angeles Co. LACMIP 12021. Paratype LACMIP 13063.

….., fig. 4.9. Puente Fm. (Yorba Member), Miocene. Olinda Landfill, Yorba Linda quad., Puente Hills, Brea, Orange Co. LACMIP 17598. Paratype LACMIP 13057.

….., fig. 4.10. "Blue Modelo Shale," Miocene. Upper Stone Canyon Reservoir, ripped from reservoir bottom, Beverly Hills quad., Santa Monica Mtns., Los Angeles Co. LACMIP 23350. Paratype LACMIP 13062.

Rhyncolites sp. Teichert and Stanley 1975. Geology 3(4):179, figs. 1A–C. Ardath Fm., Eocene. Near Mt. Soledad, San Diego, San Diego Co. Hypotype KU 115,355 (not KU 155,355 as published, *fide* R. Kaesler (personnal ommunication, 1998)), missing, *fide* R. Kaesler (personal communication, 1998). [family uncertain].

Sepiamorph sepiid Squires 1991e. BSCAS 90(2):86–88, figs. 1–5. Undetermined strata [=Ardath Shale or Scripps Fm.], Eocene. Rose Canyon, San Diego Co. LACMIP 16359]. Hypotype LACMIP 8407. [Sepiidae].

Spirulimorph sepiid Squires 1983a. Jour. Paleo. 57(2):360, figs. 2J. K. Llajas Fm., Eocene. Las Llajas Canyon, Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 493 [=LACMIP 16198]. Hypotype UCLA 59197 [=LACMIP 12885]. [Spirulidae].

Spirulimorph sepiid Squires 1984. NHMLAC CS 350:55, fig. 13b. Llajas Fm., Eocene. Santa Susana quad. (1951, PR 1969), Ventura Co. CSUN 493 [=LACMIP 16198]. Hypotype UCLA 59197 [=LACMIP 12885]. [Spirulidae].

Woodringia simiensis (Vokes, 1937a). [*Hercoglossa*]. Miller 1947. GSA Mem. 23:67–68, pl. 17, figs. 5, 6. Martinez Fm. [=Santa Susana Fm.], Paleocene. Simi Valley, Santa Susana quad., Ventura Co. UCMP 7016. Holotype UCMP 15985. [Hercoglossidae].

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APPENDIX. Although masters theses and Ph.D. dissertations are not included in the checklist they are listed here "for the record" provided they contain illustrations of Paleogene–Neogene marine mollusks of California.

Adegoke, O.S. 1966. Stratigraphy and paleontology of the Neogene formations of the Coalinga Region, California. Ph.D. diss. University of California, Berkeley, CA. 470 p., 5 figs., 19 pls.

Alexander, R.R. 1972. Autecological studies of the brachiopod *Rafinesquina* (Upper Ordovician), the bivalve *Anadara* (Pliocene), and the echinoid *Dendraster* (Pliocene). Ph.D. diss. Indiana University, Bloomington, IN. 199 p.

Bedrossian, T.L. 1970. Paleoecological evaluation of the "Merced" Formation, Sonoma County, California. MS thesis. University of California, Davis, CA. 92 p.

Corby, G.W. 1922. The geology and paleontology of the San Joaquin and Niguel hills, Orange County, California. MA thesis. Stanford University, Palo Alto, CA. v + 69, 19 pls.

Coté, R.M. 1991. Paleontology of the "Santa Margarita" Formation on the Coalinga Anticline, Fresno County, California. MS thesis. California State University, Northridge, CA. xxii + 280 p., 39 figs., 9 pls.

Davis, G.E. 1998. Systematic paleontology of a densely fossiliferous upper Pliocene molluscan shell lens, 6th and Flower streets, Los Angeles, California, with commentary on the stratigraphic nomenclature of the "Fernando Formation." MS thesis. California State University, Northridge, CA. xviii + 235 p., 11 figs., 10 pls.

Doumani, G.I. 1958. Stratigraphy of the San Pablo Group, Contra Costa County, California. M.A. thesis. University of California, Berkeley, CA. 72 p., 11 figs., 3 pls.

Faustman, W.F. 1961. Paleontology of the Scotia and Centerville Beach, California sections of the Wildcat Group. M.A. thesis. University of California, Berkeley, CA. 172 p., 4 figs., 23 pls.

Fritsche, A.E. 1969. Miocene geology of the central Sierra Madre Mountains, Santa Barbara County, California. Ph.D. diss. University of California, Los Angeles, CA. xvi + 385, p. 21 figs., 24 pls.

Funkhouser, L.W. 1948. Geology of the Arroyo del Valle area, Alameda County. M.A. thesis. Stanford University, Palo Alto, CA. 75 p., 1 pl.

Givens, C.R.. 1969. Eocene molluscan biostratigraphy of the Pine Mountain area, Ventura County, California. Ph.D. diss. University of California, Riverside, CA. 239 p., 16 pls.

Glen, W. 1957. Pliocene and lower Pleistocene of the western part of the San Francisco Peninsula. M.A. thesis. University of California, Berkeley, CA. 119 p., 5 figs., 3 pls.

Groves, L.T. 1991a. Paleontology and biostratigraphy of the Plio-Pleistocene lower Saugus Formation, Santa Susana Mountains, southern California. M.S. thesis. California State University, Northridge, CA. xiv + 383 p., 10 figs., 11 pls.

Kennedy, G.L. 1972. West American Cenozoic Pholadidae (Mollusca: Bivalvia). M.S. thesis. University of California, Davis, CA. V + 288 p., 102 figs., 1 pl.

Kilmer, F.H. 1953. Stratigraphy of the "Diablo Formation." M.A. thesis. University of California, Berkeley, CA. v + 68 p., 5 figs., 4 pls.

Kirby, M.X. 1991. Macropaleontology and biostratigraphy across the Cretaceous/Tertiary boundary, San Francisquito Formation, Warm Springs Mountain, Los Angeles County, southern California. M.S. thesis. California State University, Northridge, CA.vii + 134 p., 8 figs., 4 pls.

Kirby, M.X. 1999. Stable isotope sclerochronology and paleoecology of Cenozoic oysters. Ph.D. diss. University of California, Davis, CA. 120 pp.

Kooser, M.A. 1980. Stratigraphy and sedimentology of the San Francisquito Formation, Transverse Ranges, California. Ph.D. diss. University of California, Riverside, CA. x + 201 p., 20 figs., 6 figs. in Appendix B, 3 figs., 1 pl in Appendix C.

Lutz, G.C. 1950. The Sobrante Sandstone and its fauna. M.A. thesis. University of California, Berkeley, CA. 70 p., 3 figs., 10 pls.

Marincovich, L., Jr. 1973. Neogene to Recent Naticidae (Mollusca: Gastropoda) of the eastern Pacific. Ph.D. diss.

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Nelson, C.M., Jr., 1974. Evolution of the late Cenozoic gastropod *Neptunea* (Gastropoda: Buccinacea). Ph.D. diss. University of California, Berkeley, CA. 802 pp.

Powell, C.L., II. 1986. Stratigraphy and bivalve molluscan paleontology of the Neogene Imperial Formation in Riverside County, California. M.S. thesis. San Jose State University, CA. xi + 325 p., 10 figs., 13 pls.

Roth, B. 1979. Late Cenozoic marine invertebrates from northwest California and southwest Oregon. Ph.D. diss. University of California, Berkeley, CA. 792 p., 11 figs., 11 pls.

Stadum, C.J. 1982. The development and analysis of a paleontological park in the pecten reef of the Monterey Formation, Orange County, California. M.A. thesis. California State University, Long Beach, CA. v + 113 p.,11 pls.

Stanton, R.J., Jr. 1960. Paleoecology of the upper Miocene Castaic Formation, Los Angeles County, California. Ph.D. diss. California Institute of Technology, Pasadena, CA. 319 p., 40 pls.

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Terry, J.S. 1968. Taxonomy and distribution in space and time of the marine gastropod genera *Argobuccinum, Fusitriton*, and *Priene* (Family Cymatiidae). Ph.D. diss. Stanford University, Palo Alto, CA. 203 p., 11 pls.

Throckmorton, C.K. 1982. Geology and paleontology of the Tesla Formation, Alameda and San Joaquin counties, California. M.A. thesis. University of California, Berkeley, CA. v + 189 p., 16 figs., 8 pls.

Vendetti, J.E. 2009. Phylogenetics, development, and Cenozoic paleontology of Buccinidae (Mollusca: Gastropoda). Ph.D. diss. University of California, Berkeley, CA. ix + 159 p., 22 figs., 11 pls.

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