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الأثل

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Caroline Arbuckle MacLeod

Tamariske

Tamaris

Tamarisk refers to a group of tree species, several of which are indigenous to Egypt. These trees are able to survive in dry, saline environments, and so they are found throughout the country's varied regions. Due to its ubiquity, tamarisk timber has been used extensively throughout history, though it is now considered to be a lower quality wood. In ancient Egypt, the tree was valued as an essential resource for fuel and construction, and had religious associations with the gods Wepwawet, Osiris, and Ra. Although the true value and significance of the tamarisk tree and its products are only beginning to be understood by Egyptologists, it is clear that the ancient Egyptians held it in high esteem.

يشير مصطلح الأثل إلى مجموعة من أنواع الأشجار، ينمو عدد منها بصورة طبيعية في مصر. وتتميز هذه الأشجار بقدرتها على البقاء في البيئات الجافة والمالحة، ولذلك تنتشر في مختلف المناطق. وبسبب انتشارها الواسع، استُخدم خشب الأثل على نطاق واسع عبر التاريخ، رغم أنه يُعدّ في الوقت الحاضر من الأخشاب الأقل جودة مقارنة بغيره. وفي مصر القديمة كان للأثل قيمة كبيرة؛ إذ عُدّ موردًا أساسيًا للوقود ومواد البناء، كما ارتبط بدلالات عقائدية، حيث نُسب إلى عدد من الآلهة مثل وبواوت وأوزيريس ورع. ورغم أن القيمة الحقيقية والميزة لشجرة الأثل ومنتجاتها بدأت للتو في الفهم من قبل علماء المصريات، فإنه من الواضح أن المصريين القدماء كانوا يقدرّون هذه الشجرة تقديرًا كبيرًا.



The tamarisk tree was used widely in ancient Egypt and continues to be used throughout Egypt today. Although it was, and remains, a very useful and important plant for the Egyptian people, it has been frequently overlooked by Egyptologists. Scholars tend to view it as a low-quality local wood that did not grow to significant sizes. Yet the trees have been used, among other things, as sand stabilizers, and the wood has been used for fuel, or constructed into large objects such as coffins and boats in addition to smaller objects. While it was once rare to identify the charcoal and wooden objects found on excavations and in tombs throughout Egypt, the practice is now

becoming much more common (see for instance the discussion in Blondel et al. 2023: 193-195). As more examples of wooden remains are identified and added to the known repertoire, it is becoming increasingly evident that local trees were valued more highly than was once believed. The tamarisk clearly held a significant position in ancient Egypt, as it continues to do today.

Morphology

There is some disagreement regarding how many species belong to the genus *Tamarix*, though the total number may be as many as 73 (Gale and Cutler 2000: 251; Plants of the World Online 2026). This disagreement also

extends to how many species can be found growing in Egypt, though most scholars suggest between six to nine species grow regularly there (N. Baum 1988: 200; Boulos 2000: 126-130; Zahran and Willis 2009; also see discussion in Waly 1999a: 115 and Neumann et al. 2001: 415). These include *T. arabica* Bge, *T. arborea* (Sieb. Ex Ehrenberg) Bge, *T. mannifera* (Ehrenb.) Bge, *T. nilotica* (Ehrenb.) Bge, *T. aphylla* (L.) Karst., *T. tetragyna* Ehrenb., *T. amplexicaulis* Ehrenb., *T. macrocarpa* (Ehrenb.) Bge, and *T. passerinoides* Del. Ex Desv. By far the most common species found in Egypt, however, are the *Tamarix aphylla* (L.) Karsten and *Tamarix nilotica* (Ehrenb.) Bunge. Occasionally *Tamarix jordanis* has been identified within Egypt (Western 1973: 93), though this species is generally found in Jordan and Syria (Gale et al. 2000: 345). As the most common varieties, *T. aphylla* and *T. nilotica* will comprise the focus of the present discussion.

Tamarix aphylla is also known as the athel pine, eshel, and salt cedar (figs. 1-2) (Orwa et al. 2009: 1; see further *Tamarix aphylla* [L.] H.Karst. in Plants of the World Online 2026). It can grow to be around 15 to 18 meters tall, with a trunk of up to one meter in diameter; however, usually they are much smaller, between two and 12 meters in height. They also tend to have thin, twisted trunks and branches, and can often be found in shrub form (B. Baum 1978: 81; Gale and Cutler 2000: 251; Gale et al. 2000: 345; Zahran and Willis 2009: 366). The bark of *T. aphylla* is dark in color, and smooth in young trees, but becomes thick and furrowed over time (Zahran and Willis 2009: 366). The branches are cylindrical, jointed, and articulate (Gale et al. 2000: 345). The leaves are sheath-like, about two millimeters long (B. Baum 1978: 81; Zahran and Willis 2009: 366), with raceme flowers, or flower bunches, that are white or pink in color (Zahran and Willis 2009: 366). Hepper (2009: 48) likens the flowers to “little bottle brushes.” The tree usually flowers from August to November (B. Baum 1978: 81).

Tamarix nilotica tends to be smaller than *T. aphylla*. They are generally found as shrubs, though they can sometimes grow to be small

trees (figs. 3-4) (Gale and Cutler 2000: 251; Gale et al. 2000: 345; Zahran and Willis 2009: 366; see further on *Tamarix nilotica* [Ehrenb.] Bunge in Plants of the World Online 2026). The bark can be smooth, becoming bumpy over time, similar to that of *T. aphylla* (B. Baum 1978: 72). The leaves grow in articulated branchlets that can be small and appear scale-like (Gale et al. 2000: 345; Hepper 2009: 48). The brush-like, pinkish-white feathery racemes grow to around one to six centimeters long (B. Baum 1978: 72; Gale et al. 2000: 345). The tree flowers from November to April, and occasionally from June to August (B. Baum 1978: 72).

Tamarisks have deep root systems. The initial tap root can travel as deep as 20-50 meters before branching outwards with extensive side roots (B. Baum 1978: 3; Zahran and Willis 2009: 366). This allows the trees to establish a strong foundation, even in sandy dunes. While tamarisks need considerable amounts of water to survive, they are able to store this water in their root systems, often removing the remaining water in the area, causing them to be seen as a competitive species (B. Baum 1978: 13; N. Baum 1988: 201; Andelković and Asensi Amorós 2005: 356).

Tamarisks are xerophytic halophytes, which means that they have adapted to survive in both dry and salty environments. This can often be perceived visually because the leaves and branches excrete salts that appear as a white, sometimes crystalline, layer on the plants and on the ground below their branches. The salts can also lead to an increased salinity in the surrounding soils (B. Baum 1978: 13; N. Baum 1988: 201; Zahran and Willis 2009: 52, 211).

In addition to trees and shrubs, tamarisks can also create hillocks in the landscape. As the shrubby tamarisks grow in sandy areas, the lower growth layers become covered in the windblown sands, and these fast-growing plants then grow through the sand layers. Over time, these hillocks of shrub and sand can grow quite large in height and area. For example, hillocks in the Wadi Araba in the Eastern Desert are known to be one to four



Figure 1. *Tamarix aphylla* in Thebes.

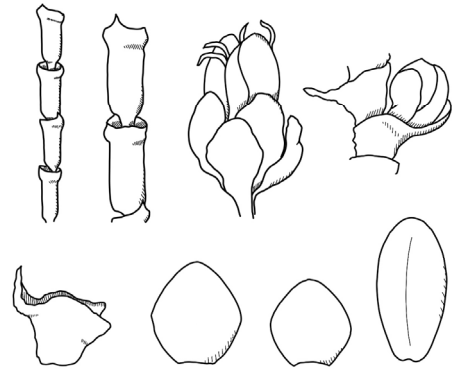


Figure 2. *Tamarix aphylla* twigs and flowers.



Figure 3. *Tamarix nilotica*, North Israel.

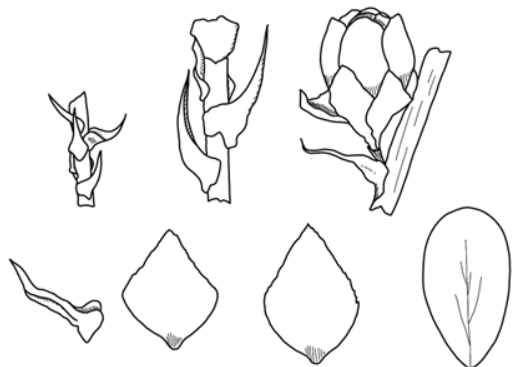


Figure 4. *Tamarix nilotica* twigs and flowers.

meters in height, comprising an area of 10-100 square meters (Zahran and Willis 2009: 122).

Tamarix spp. in Modern Egypt

Natural habitat

Thanks to the deep root systems that are able to store water, and the halophytic nature of *T. aphylla* and *nilotica*, the trees and shrubs of these tamarisk species are able to flourish in widely variable habitats. *Tamarix spp.* can grow in “clayey, silty, sandy, and saline” soil types and in dry, hot climates (Zahran and Willis 2009: 366). In Egypt, they are often found in salt marshes and along river beds and canals, and can grow in dryer desert areas, particularly near wadis. They can also grow in areas that have a short, seasonal water supply, like in rock crevices or higher rocky ridges that only receive water during periods of flood or high-water levels (Zahran and Willis 2009: 290). While they require a significant amount of water, they can also be drowned, particularly during the sapling stage, and so the ground where they grow does need to be well draining (Andelković and Asensi Amorós 2005: 356; Zahran and Willis 2009: 291; Butzer 2015: 108).

Modern distribution

The above description of the natural habitat of *Tamarix spp.* describes a significant proportion of the landscape of both modern and ancient Egypt. Such widespread diversity allows the trees and shrubs of these species to flourish throughout the country (Gale and Cutler 2000: 251; Andelković and Asensi Amorós 2005: 356), and they are known to be indigenous to Egypt (Butzer 1959: 53; Zahran and Willis 2009: 312). In their discussion of the vegetation of Egypt, Zahran and Willis (2009) note the presence of either *Tamarix aphylla* or *Tamarix nilotica* in all of the major geographic areas covered in their study. This includes the Western Desert, the Eastern Desert, the Sinai Peninsula, and the Nile region (which includes the Fayum Depression). Although both species can grow to be trees, such extended growth generally represents their presence as a climax community—that is, as long as there is no

intervening event, such as fire or human interference, tamarisks will grow to be trees in these areas due to natural, ecological succession. Tamarisk forests exist, for instance, in the Sinai, especially at Wadi el-Arish (Kassas 1952: 347; Abd el-Wahab et al. 2008); however, in many areas of Egypt where there was a potential for these forests to grow, tamarisks are cut down before they can reach this point. This is often due to the use of tamarisk wood for fuel. In Wadi Araba in the Eastern Desert, or in the Egyptian Red Sea coastal desert, for instance, there are extensive stands of *Tamarix aphylla* where human cutting seems to be responsible for limiting the growth to shrubs, hillocks, or thickets (Zahran and Willis 2009: 136, 177). In these areas, it is therefore possible that in previous periods the trees had been permitted to grow to larger sizes and may have even created small forests.

On the other hand, the flooding caused by the establishment of the Aswan High Dam, along with the creation of large bodies of water in the Nubian Desert, which would of course not have existed in antiquity, have provided space for the abundant growth of *Tamarix nilotica* to a considerable size (Zahran and Willis 2009: 202-203).

Looking beyond Egypt, *T. aphylla* is found further afield in North and East Africa, through the Levant, and in East Asia. The distribution covers Morocco, Algeria, Libya, Senegal, Sudan, Abyssinia, Eritrea, Somalia, Kenya, Israel, Saudi Arabia, Yemen, Iraq, Kuwait, Iran, Pakistan, and Afghanistan (B. Baum 1978: 81). More recently it has also been introduced as an exotic species to Australia, Canada, Mexico, South Africa, and the United States (Orwa et al. 2009: 2). *Tamarix nilotica* is found largely in northeast Africa and, in addition to Egypt, grows in the Levant, in Lebanon, Israel, Sudan, Somalia, Ethiopia, and Kenya (B. Baum 1978: 72).

Modern Uses of the Tamarisk Tree and Its Products

A significant ecological use of tamarisk is to stabilize sand dunes and prevent erosion, as this plant grows much more quickly and effectively than many other species of desert

tree (Khan and Siddiqui 1984: 37; Orwa et al 2009: 3). Shifting sands can have a serious negative impact on irrigated farmlands, human settlements, villages, canals, railways, motor roads, and civil structures (Zahran and Willis 2009: 367; see also Philip et al. 2004). Planting tamarisks is an environmentally friendly and relatively cost-effective means of preventing these issues. From a domestic point of view, tamarisks can also be planted around houses as a hedge to protect from dust and wind. They are also planted along roads, home courtyards, or schools as ornamental plants (Springuel 2006: 36-37).

The branches and trunks of tamarisk trees and shrubs can also be used for fuel and charcoal (Khan and Siddiqui 1984: 37; though see Vermeeren and Cappers 2002: 4). Although the wood catches fire slowly, it subsequently burns well; however, if green wood is used, it is known to give off an unpleasant odor (National Academy of Sciences 1980: 158; Orwa et al. 2009: 3).

When tamarisks are left to grow to a workable size, they can also be used for furniture and building constructions, and for agricultural implements. They are used for such especially in areas where other trees are scarce—though Khan and Siddiqui (1984: 39) note that the wood should first be treated with preservatives. *Tamarix aphylla*, in particular, has been found to be a strong and quite dense timber, with a specific gravity of about 0.69; however, the size of logs tends to be small and if left to grow to a larger size, the older trees are found to be hollowed out by decay (Khan and Siddiqui 1984: 38-39). Moreover, due to significant tangential shrinkage and swelling, the timber is not an ideal construction material when alternatives are available (Mantanis and Birbilis 2010: 86). The wood can instead be turned into chips that can be used to manufacture particleboard (Orwa et al. 2009: 3).

Tamarisks are also often associated with the production of a substance called *manna*. When the insect *Coccus manniparus* eats the sap of the tree, it secretes a sweet white material, which can be collected and eaten (Gale and Cutler 2000: 251). This manna is referred to in

biblical sources, Exodus 16 and Numbers 11, as a food that sustained the Israelites in the desert (Bodenheimer 1947: 2).

Finally, various species of tamarisks are widely used in traditional medicine throughout North Africa and Western Asia (Bahramsoltani et al. 2020: 2; Alshehri et al. 2022: 2). The plants are understood to have a cleansing effect, and a decoction of the roots or leaves has been prescribed to treat a number of ailments, including wounds, diseases related to the liver, spleen, and uterus, periodontal disease, tuberculosis, leprosy, and smallpox (Boulos 1983: 172; Benhouhou 2005; Zahran and Willis 2009: 367; Bahramsoltani et al. 2020: 22). The bark has also been used for skin related conditions (Alshehri et al. 2022: 2). The presence of polyphenolic compounds, which have proven “antioxidant, anti-inflammatory, anticancer, and antimicrobial effects” (Rasouli, Farzaei, and Khodarahmi 2017; Bahramsoltani et al. 2020: 2), may explain the widespread belief in the medicinal efficacy of the plant. Alshehri et al. (2022: 24) noted that at least nonclinical trials have shown that *Tamarix aphylla* “has significant antimicrobial, antioxidant, and cytotoxic activities.” Nevertheless, these and other authors of recent literary reviews on the pharmacology of *Tamarix* noted that they were unable to find any scientific trials with human subjects, and so there is need for further analysis by the scientific community (Bahramsoltani et al. 2020: 21; Alshehri et al. 2022: 24).

Tamarisk Wood in the Archaeological Record

Although there are morphological differences in species of tamarisk trees, it is usually not possible to distinguish the species anatomically, particularly while in the field (Neumann 1989a: 92; Schweingruber 1990: 709; Asensi Amorós 2007: 82; though see Waly 1999a). As anatomical identification is typically used for archaeological woods (Newsom 2022: 18), a general designation of *Tamarix* spp., or simply “tamarisk,” is usually the most specific identification provided in archaeological discussions of the wood and wood materials. The present discussion

therefore relates to the finds of any species of *Tamarix* spp.

In the archaeological record related to ancient Egypt the remains of tamarisks are found in a variety of forms, as desiccated wood and artifacts, charred remains, or as charcoal. Table 1 provides an overview of examples of these remains to afford a better understanding of the frequency, distribution, and ancient use of tamarisk; however, this information should by no means be understood as an exhaustive survey, and new examples continue to be identified and discovered on a regular basis.

Tamarisks are considered to be indigenous to Egypt. Their wide distribution in the archaeological record reflects, in many cases, their modern distribution (see Table 1). Some differences between the modern and ancient growth patterns of tamarisks, however, suggest changes in the environmental conditions in Egypt over time. This is particularly true for the prehistoric periods of Egypt. For example, in the Wadi Qena, large growths of carbonized tamarisks date back to as early as the Pliocene in areas where there are currently no living plants (Sandford 1929: 503; Zahran and Willis 2009: 186). Tamarisk remains, largely in the form of charcoal, have been identified at other early sites that include, but are certainly not limited to, the Early Holocene to the Neolithic in the Fayum, the Old and Middle Epipaleolithic at Wadi Kubbaniya, a number of Neolithic sites including Badari, and at Predynastic and Early Dynastic sites in the Western and Eastern Deserts and Nile Valley (see Table 1; Brunton and Caton-Thompson 1928: 62; Roubet and El Hadidi 1981: 464; El Hadidi 1985: 88; N. Baum 1988: 202; Gale et al. 2000: 345; Newton 2005; Marston, Holdaway, and Wendrich 2017: 1818). The widespread distribution of carbonized plant remains, including in now arid regions such as Wadi Qena, suggests a drop in the water table from the ancient to modern context (N. Baum 1988: 202; Newton 2005: 362; Marston, Holdaway, and Wendrich 2017). Indeed, studies of the changes to Egypt's climate and the movement of the Nile support the

botanical evidence, which indicates that in ancient periods there were probably many wetter and cooler areas, which could have supported the growth of larger populations of tamarisks and other trees in areas that are now quite arid (Bunbury and Rowe 2021).

Greater distributions of tamarisks should also be assumed for the later Pharaonic and Ptolemaic and Roman Periods, given the likelihood of a milder and wetter climate; however, the analysis of charcoal and wood was not carried out as commonly on excavations by early Egyptologists from sites that date to these periods. This limits our understanding of its ancient context. Fortunately, more recent excavations are beginning to correct for this void in the data. Evidence from at least Wadi Gawasis (Gerisch 2011: 86) and el-Amarna (Gerisch 2007) demonstrates that tamarisk continued to be used as charcoal throughout the Pharaonic Period. Indeed, the charcoal analyst for those sites, Rainer Gerisch (2007: 53), notes in his analyses that tamarisk was second only to acacia as a source of fuel. Examples from the Ptolemaic and Roman Periods are much more numerous, and again, *Tamarix* spp. continues to be present in charcoal deposits in significant amounts (Van der Veen, Gale, and Übel 2011; Bouchaud et al. 2018; see, however, Vermeeren and Cappers 2002: 4). Its use as fuel should therefore be seen as one of tamarisk's primary functions in the ancient world, as it remains so today. No doubt the widespread use of tamarisk for this purpose is due to its wide-ranging availability and its rapid regrowth (Marston 2009; Newton 2005: 363; Zahran and Willis 2009: 115; Marston, Holdaway, and Wendrich 2017: 1818).

Although few ancient gardens have been identified in the archaeological record, tamarisks have been found as a component of several. In the forecourt of the mortuary temple of Nebhepetra Mentuhotep at Deir el-Bahri, tamarisks were found planted in rows alongside sycamore trees (*Ficus sycomorus*) (fig. 5) (Winlock 1922: 26-28). Perhaps of a similar significance, a fragment of tamarisk was also found in a tree pit alongside conifers at the



Figure 5. Plots for tamarisk trees in front of the temple of Mentuhotep Nebhepetra at Deir el-Bahri.

Osireion at the temple of Sety I at Abydos (Frankfort 1926: 159). A trunk of a tamarisk

tree was also discovered in a 12th Dynasty funerary garden in Dra Abu el-Naga (Galán and García 2019), and remains of the trees were found in garden beds at el-Amarna, in both chapel 531 and at Kom el-Nana (Stevens and Clapham 2014: 161). While the temple and funerary associations may have a religious function, tamarisks may also have been planted in gardens to provide shade and for ornamental reasons.

The most frequent occurrence of *Tamarix* spp. in the published archaeological record is as wood used for the construction of objects. As is demonstrated in Table 1, tamarisk objects are found from throughout Egyptian history and have a broad geographic distribution as well. The wood was used (often

in combination with planks or pieces from other tree species) to create agricultural implements, weaponry, boats, musical instruments, household objects such as bowls and furniture, headrests, house poles and beams, statues and figurines, and, quite frequently, coffins and mummy labels (figs. 6-8) (for examples and bibliography, see Table 1).

For the vast majority of these objects, it seems that the wood was selected due to its availability, rather than for any qualities that would make it particularly well suited for its function. For instance, while a study of musical instruments demonstrated that tamarisk comprised components of a lyre (Louvre E 14470) and a harp (Louvre ME 1282), the authors noted that it was used infrequently and only for the smaller



Figure 6. Coffin Turin S.15701.

components, probably due to its “brittle properties” that make it a less than desirable medium (Quiles et al. 2021: 564). Moreover, in many cases, in order to use the relatively short, knotted wood of tamarisk trees to construct boats, the shipwrights seem to have had to frequently cut out particularly troublesome knots. Some examples, such as boat planks from Lisht, demonstrate that the craftspeople were still able to craft lengths together in a masterful display of joinery, working with notches and joggled boards (“joggling” is a woodworking technique in which pieces of wood with complementary notches are securely joined) (fig. 9) (Ward 2000: 110; 2006; Creasman 2014: 23). While the shorter lengths of wood may have allowed the boats to be easily disassembled and repaired (Ward 2006), the constant need to work around defects was no doubt undesirable. Moreover, as is

described for the modern use of *Tamarix* spp., the significant shrinkage and swelling of the wood (Mantanis and Birbilis 2010: 86) would impact the quality of the completed objects.

Nevertheless, any apprehensions related to *Tamarix* spp. as a construction material were clearly not significant enough for the ancient woodworkers to search for alternatives—likely because there were so few timber species available. They instead adapted their approach to the material, and in some instances, working with these imperfect forms seems to have reshaped established techniques, leading to new traditions of construction (Ward 2006; Inglis 2020: 433). Moreover, it was a stronger wood than some other local varieties. The study of Egyptian coffins, in particular, has revealed numerous instances in which coffins with large planks made of sycamore (*Ficus*



Figure 7. Model folding bed from the 18th Dynasty.



Figure 8. Model paddling boat from the tomb of Meketra at Thebes, Middle Kingdom.

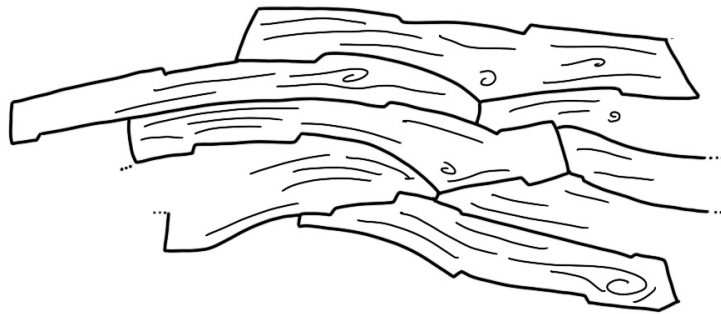



Figure 9. Boat planking from Lisht.

sycomorus) had dowels or tenons (the small connective elements that held the planks together) made of tamarisk (Cartwright 2016: 78; 2019: 3-4; Eschenbrenner-Diemer, Sartini, and Serpico 2021; Arbuckle MacLeod 2025: 68, 71; see also Table 1). *Ficus sycomorus* is a fairly soft wood, and it is clear that the Egyptian carpenters relied on denser woods such as tamarisk, acacia, and sidder to hold the planks together (Cartwright 2016: 78-79; 2019: 3-4). Due to the small size of these pieces, warping would have posed little concern. Similarly, in a recent study of Roman Period mummy labels, where the warping of wood is unlikely to pose problems, tamarisk was found to be the most common local wood used (16.2% of 451 examples; Blondel et al. 2023: 206-207).

Tamarisk timber should therefore be seen as a valuable commodity for the ancient Egyptians, as a readily available material in areas where alternatives were not accessible. While it was likely seen as a less prestigious material in comparison to imported varieties such as cedar (*Cedrus libani*; see Arbuckle MacLeod 2024), it was certainly useful, desired, and never wasted. There are in fact exceptional instances of tamarisk being used for finely constructed objects, such as coffins now in the Museo Egizio in Turin, S.15701 and S.14061 (see Figure 6 and discussion in Arbuckle MacLeod 2023: 5-6, 11-12). It is possible that aspects beyond its physical attributes added to its perceived value, as suggested by references in the textual record.

Textual References to the Tamarisk Tree in Ancient Egypt

While there is some disagreement about whether the ancient Egyptian word *jsr*  refers to *Tamarix aphylla* or *Tamarix nilotica* (Keimer 1924: 155; Charpentier 1981: 114; Germer 1985: 202), N. Baum (1988: 202) suggests that the term should be understood to refer to *Tamarisk spp.* more generally (see also Andelković and Asensi Amorós 2005: 357). This seems like a reasonable suggestion given the modern difficulty with distinguishing the species, particularly after felling and processing. The variant form *jsy* is also found (Keimer 1924: 155f; Janssen 1975: 193). *jsr* wood is occasionally referenced specifically in administrative texts, though it is more commonly found in religious texts. Using the references in the *Wörterbuch* (Erman and Grapow 1963) for a sample selection, tamarisk (I: 130) is mentioned quite rarely in comparison to other local woods such as acacia (IV: 520) and sycomore (II: 282). This may indicate that tamarisk was used less frequently than these woods in an official or elite capacity, though of course this may also be due to selective preservation of textual references.

Tamarisk as a Commodity

The majority of the surviving textual evidence for tamarisk as a commodity comes from the New Kingdom or later; however, there is a particularly interesting reference that dates to the Middle Kingdom. *jsr* wood (with the wood determinative: Gardiner Sign-list M3) is

listed in the tomb of Khnumhotep I (Beni Hassan Tomb 3) as one of the commodities that the tomb owner had to consider when dividing up the boundaries of his territories, demonstrating the importance of this resource (Newberry 1893, Vol. 1: 59, lines 50-53, pl. XXV; N. Baum 1988: 203).

In the New Kingdom, tamarisk occurs in accounting lists, receipts, and supply lists, where it is listed as wood for furniture and construction materials (N. Baum 1988: 203). The rare references of the cost of this wood and its products suggest that the prices varied considerably, which complicates our understanding of its value. For instance, a beam or plank (*sꜣy*) of tamarisk wood is priced in one instance at $\frac{1}{4}$ *kbar* (*Hier. Ostr.* 63, 1, I, 13), and Janssen states that it is logical that this local wood would be quite cheap (1975: 374). On the other hand, in other price lists, a large folding footstool (*jsbwt*) and a secondary footstool made of tamarisk (*jsy*) are listed together as 30 *deben* (O. Cairo 25 800, II, 7-18; Janssen 1975: 193). Similarly, an unfinished coffin (*wꜣt*) made of tamarisk (*jsy*) is listed as 80 *deben*, with another 65 *deben* for painting and varnishing (O. Turin 57368, formerly 9599; Janssen 1975: 219). The total cost of 145 *deben* renders this one of the highest prices

listed for a coffin in the ostraca from Deir el-Medina (see also Cooney 2007; there is also a possibility that here *jsy* could mean old wood, and so perhaps reused wood, as suggested by Helck 1965: 910). The discrepancy in these prices may be due to issues with translations, but may also be due to the fact that we do not have access to the size or quality of the pieces, so basing values on these accounting lists can be quite problematic. Based on our current understanding of these terms, we can only conclude that the cost of tamarisk wood varied, but it could be used for expensive objects. As suggested by the archaeological remains, this means that the use of tamarisk does not automatically suggest a low quality or cheap object.

Tamarisk in Ancient Egyptian Culture and Religion

Tamarisk (wood and berries) is noted in several sources as an ingredient in ancient Egyptian medicine (Papyrus Ebers 96; O.Berlin 5570). It seems to have been particularly used in medicines for improving circulation and inflammation, as noted in Papyrus Ebers (Germer 1979: 54; N. Baum 1988: 203). Due to the presence of polyphenolic compounds, it may indeed have been an effective treatment.

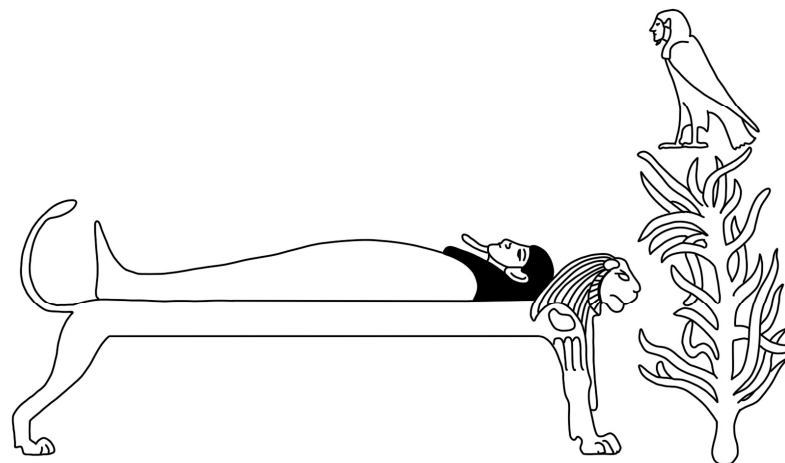


Figure 10. A tamarisk(?) growing near the mummy of Osiris, from the temple of Hathor, Dendara.

References to the tamarisk in religious texts are quite varied. Tamarisk is listed among the trees described as part of the tomb garden of Ineni (TT81), grown through the grace of Amun (N. Baum 1988: 3). The fact that remains have been found in tomb gardens suggests that such gardens truly existed, and would have been considered areas where the soul of the deceased could rest. The Ptolemaic Geographic List from Edfu also refers to the presence of a sacred tamarisk at Saka, the 17th nome of Upper Egypt (Chassinat 1984: 342,7; N. Baum 1988: 204; Andelković and Asensi Amorós 2005: 357), while Papyrus Jumilhac records one at the district of Dunanwy (Vandier 1961: XII 11; N. Baum 1988: 204).

There are also a number of gods associated with the tamarisk. As early as the Pyramid Texts, the jackal-god Wepwawet is noted as “coming forth from the tamarisk” (PT 210; Faulkner 1969: 39), a statement repeated in the Book of the Dead spell 178 (Allen 1974: 187). Jackals were frequently referred to as desert dwellers, and the ability of the tamarisk to survive in remote desert areas may have brought about this connection.

In the Coffin Texts, Nut is described as bearing Osiris, the god of the dead, in the “field of the tamarisk” that protects the god in the nest (CT 682; Faulkner 1973: II.247; see also CT 989; Faulkner 1973: III.98). Visual representations also appear to depict images of tamarisk trees near the tomb or mummy of Osiris. In a chapel from the temple of Hathor at Dendara, for instance, Osiris is shown in mummiform laid out on a lion-form bed. Near Osiris’s head is a twisting tree, atop which rests an image of a *ba* (fig. 10). There is also an image of Osiris Sokar lying within a sarcophagus with a twisted tree growing around it. Although the specific tree is referred to only as a golden tree in the inscriptions, both trees have been interpreted as tamarisks, though the acacia is also a possible designation (Koemoth 1994: 172-173; Wilkinson 1994: 3-4, fig. 2). Moreover, in the calendar of the “great mystery of the earth-hoeing festival,” also from the temple of Dendara, an effigy of Osiris Sokar was meant to be placed in the “crypt of tamarisks”

(Centrone 2006: 41), which may reflect the previously mentioned image. In the natural landscape, clumps of tamarisks rising out of the Nile, or the hillocks in the desert, may have allowed the tamarisk to be viewed as fertile new growth and indicative of places in the landscape where water, and therefore hope for new life, might be found in largely inhospitable areas. This would connect well with the concept of Osiris as the god of fertility and rebirth, and may relate to the presence of tamarisk trees at mortuary temples (as also discussed by N. Baum 1988: 204).

From the New Kingdom on, as Osiris and Ra became part of a cycle of death and rebirth, the tamarisk also seems to have taken on solar associations. On the walls of the Osireion at Abydos is inscribed: “I am Ra, establishing praises; I am the great god within the tamarisk-tree (*jsr*), the twice beautiful one, more splendid than yesterday” (Murray 1904: 9, pl. VII). In Chapter 42 of the Book of the Dead, Ra also claims to be “the spine (*tsf*) of the god within the tamarisk (*jsr*)” (Quirke 2013: 118; Hussein and Ezz el-Din 2023: 188). Nathalie Baum suggests that the concept of the tamarisk clump as a mound rising out of the Nile may relate to the idea of the primordial mound atop which Ra sat to begin creation (N. Baum 1988: 204). This would then indeed be related to the cycle of death that begins with Osiris and continues with the birth of Ra. The fact that tamarisk remains were found associated with the Osireion prompted Baum to suggest that a physical representation of the mound topped with tamarisk may have existed at the temple (N. Baum 1988: 204-205).

In addition to the religious significance of the tree, a number of sources note the importance of tamarisk wood for specific religious objects. A somewhat unique reference comes from what Heerma van Voss (1971) refers to as a variant of the Book of the Dead Spell 193, from Leiden Papyrus T3, dating to the 21st Dynasty. This text describes the use of different species of trees for the construction of coffins. The relevant passage states, “As for a coffin of tamarisk (*jsr*), he [the owner] travels to the field of reeds. He

drinks at the eddy of the river” (see for commentary Arbuckle 2018: Appendix 1; see also Quirke 2013: 508). This suggests that the wood of the coffin assists with transporting the soul of the deceased to paradise in the afterlife. Some scholars also suggest that the plant (ἔρσις) Plutarch describes as having sheltered Osiris’s coffin when it came to rest near Byblos was the tamarisk, which would have had a similar significance, though this interpretation is debated (see Koemoth 1994: 275-279; Funk 2018). The association with the field of reeds and the riverbank may again be related to the image of clumps of tamarisks often found near water sources.

The use of tamarisk wood to fashion protective amulets and sticks to fight away enemies was also not uncommon (for full bibliography see N. Baum 1988: 203, n. 1193). An early reference, for example, comes from Coffin Text 857, where a club of tamarisk “smites the disaffected” (Faulkner 1973: III.37). Much later at the Ptolemaic temple of Edfu, a protective litany similarly refers to encircling the room with a *mḥ n jsr*—a cubit of tamarisk—which is described as the *mdw* (staff) that strikes down enemies (Alliot 1954: 636-637). In Coffin Text 472, tamarisk is also noted as an effective material from which to carve *shabtis* (Faulkner 1973: 106), the figurines frequently placed in tombs to do the work of their owner in the afterlife. As reflected in Table 1, tamarisk *shabtis* have indeed been found in the archaeological record, and so this may reflect a reality of

practice. Given the relatively frequent references to the religious significance of tamarisks, it is possible that these additional aspects added value to the timber, making it more desirable in certain contexts for certain objects.

Conclusions

The tamarisk has been a significant and valued tree throughout its lengthy history in Egypt. Its ability to flourish in harsh habitats ensured its availability in regions where other plant life could not survive. The true significance of this resource has likely been underestimated due to a lack of wood and charcoal analysis performed on excavations, particularly from sites that date to the Pharaonic Period; however, more recent studies have begun to correct for this lacuna in the data. The current published examples demonstrate that tamarisk wood was often used for a variety of objects. The preserved specimens are frequently found in religious contexts, reflecting the textual references to the significance of the tree, and in particular its relationship to the gods Osiris and Ra. Egyptologists are beginning to grasp the practical and religious importance of local trees and timbers for ancient Egyptians and the continued use of local wood by Egyptian communities today. As more resources are allocated for the study of wooden objects, we will be better equipped to understand the varied uses of these important elements of Egyptian culture.

Table 1 Archaeological attestations of Tamarisk.

| Date | Find Location | Object Type | References |
|---------------------------|----------------------|--------------------|---|
| Late Quaternary | Wadi Qena | Stems and branches | Sandford 1929: 503; Lucas and Harris 1989: 440; Gale et al. 2000: 345 |
| Early and Middle Holocene | Fayum | Charcoal | Marston, Holdaway, and Wendrich 2017 |
| Holocene | Abu Ballas | Charcoal | Neumann 1989b: 102-104 |
| Holocene | Gilf Kebir | Charcoal | Neumann 1989b: 104 |
| Holocene | Wadi Shaw/Wadi Sahal | Charcoal | Neumann 1989b: 108 |

| Date | Find Location | Object Type | References |
|------------------------------|---------------------------------|--|--|
| Holocene | Tree Shelter, Red Sea Mountains | Charcoal | Marinova, Linseele, and Vermeersch 2008: 395 |
| Holocene | Sodmein Cave | Charcoal | Vermeersch et al. 2015 |
| Late Paleolithic | Wadi Kubbaniya | Charcoal | Tomczynska 1989 |
| Neolithic | Unknown | Twigs | Greiss 1949: 262-273; Lucas and Harris 1989: 440; Gale et al. 2000: 345 |
| Neolithic | Fayum | Worked sticks | Caton-Thompson and Gardner 1934: 45-46; Lucas and Harris 1989: 440; Gale et al. 2000: 345 |
| Neolithic | Mostagedda, Badari | Stick coffin (Brunton's no. 426) | Brunton 1937: 33; Andelković and Asensi Amorós 2005: 358 |
| Neolithic | Nabta Playa | Charcoal | Barakat 1996 |
| Badarian | Badari | Several fragments, some from buildings | Brunton and Caton-Thompson 1928: 62; Lucas and Harris 1989: 440; Gale et al. 2000: 345 |
| Badarian | Badari | Charcoal | Brunton and Caton-Thompson 1928: 62 |
| Predynastic | Armant | Root and twigs | Mond and Myers 1937: 137-138; Lucas and Harris 1989: 441; Gale et al. 2000: 345 |
| Predynastic | Maadi | Wooden post | Van Zeist and De Roller 1993: 13; Andelković and Asensi Amorós 2005: 357 |
| Predynastic | Maadi | Bowls | Kroll 1989: 135; Andelković and Asensi Amorós 2005: 357 |
| Predynastic - Early Dynastic | Hierakonpolis | Charcoal and wood fragments | Fahmy, Friedman, and Fadl 2008 |
| Predynastic - 2nd Dynasty | Adaïma | Charcoal | Newton 2005; Newton and Midant-Reynes 2007 |
| 1st Dynasty | Abydos | Boats | Ward 2003: 20 |
| 1st - 3rd Dynasty | Armant | Charcoal | Mond and Myers 1937: 137-138; Gale et al. 2000: 345 |
| 2nd Dynasty | Elkab | Charcoal | Newton 2005 |
| Old Kingdom | Unknown | 3 cylinder seals | Liphshitz, Bonani, and van den Brink 1997: 38; Andelković and Asensi Amorós 2005: 357 |
| 3rd - 4th Dynasty | Tarkhan | Coffin (MMA 12.187.54) | Identification from MMA records; Hayes 1990: 41-42 |
| 4th Dynasty | Gebelein | Coffin (Turin S.14061) | Identification by Arbuckle MacLeod; Donadoni Roveri 1990: 27; Arbuckle 2018: 72, 198; Arbuckle MacLeod 2023: 5-6 |

| Date | Find Location | Object Type | References |
|--|---------------|---|---|
| 5th Dynasty | Gebelein | Coffin (Turin S.15701) | Identification by C. Arbuckle MacLeod; Donadoni Roveri 1989: 40-41; Arbuckle 2018: 72, 200-201 |
| 6th Dynasty | Asyut | Coffin (BM EA46629) | Davies 1995: 146; Gale et al. 2000: 345; Anđelković and Asensi Amorós 2005: 358; Arbuckle 2018: 225 |
| 6th Dynasty - First Intermediate Period | Akhmim | Coffin dowels (Ashmolean 1911.477) | Gale et al. 2000: 345; Liphshitz 1998: 269; Anđelković and Asensi Amorós 2005: 358 |
| Late Old Kingdom / First Intermediate Period | Gebelein | Inner coffin (Turin S.16742) | Arbuckle 2018: 72, 256-257 |
| First Intermediate Period | Naga el-Deir | Bow fragment (Hearst Museum 6-2778) | Western and McLeod 1995: 80; Gale et al. 2000: 345; Anđelković and Asensi Amorós 2005: 357 |
| 11th Dynasty | Thebes | Roots (Deir el-Bahri) | Winlock 1922: 26-28; Lucas and Harris 1989: 441; Gale et al. 2000: 345 |
| Middle Kingdom | Unknown | Walking stick and throw stick (Kew Museum no. 61/1923 26522, 40726) | Lucas and Harris 1989: 441; Liphshitz 1998: 270; Gale et al. 2000: 345 |
| Middle Kingdom | Beni Hassan | Coffin box, lid, pegs (Ashmolean AN E3907) | Identified by A. C. Western in Meiggs 1982: 404; Liphshitz 1998: 269; Gale et al. 2000: 345 |
| Middle Kingdom | Unknown | Headrest (Ashmolean 1912.600) | Identified by A. C. Western in Meiggs 1982: 404; Liphshitz 1998: 269; Gale et al. 2000: 345 |
| Middle Kingdom | Asyut | Coffin dowels (BM EA46646) | Davies 1995: 147; Gale et al. 2000: 345; Anđelković and Asensi Amorós 2005: 357-358 |
| Middle Kingdom | Asyut | Fragmentary coffin (BM EA47594) | Davies 1995: 147; Gale et al. 2000: 345; Anđelković and Asensi Amorós 2005: 357-358 |
| Middle Kingdom | Asyut | Coffin dowels (BM EA47596) | Gale et al. 2000: 345 |
| Middle Kingdom | Unknown | Statue base | Delange 1987: 116; Anđelković and Asensi Amorós 2005: 357 |
| Middle Kingdom | Asyut | Statue bases | Delange 1987: 156, 158; Anđelković and Asensi Amorós 2005: 357 |
| Middle Kingdom | Unknown | Worked sticks | Schoske, Kreißl, and Germer 1992: 191; Anđelković and Asensi Amorós 2005: 357 |

| Date | Find Location | Object Type | References |
|----------------------------|---------------------------------|--|---|
| Middle Kingdom | Unknown | Hoe and sickle | Schoske, Kreißl, and Germer 1992: 98; Andelković and Asensi Amorós 2005: 357 |
| Middle Kingdom | Unknown | Stamp seal (Israel Museum) | Lipshchitz 1998: 259; Andelković and Asensi Amorós 2005: 357 |
| Middle Kingdom | Thebes, tomb of Meketra | Model paddling boat (Cairo Museum) | Winlock 1955: 99; Lipshchitz 1998: 269; Andelković and Asensi Amorós 2005: 357 |
| Middle Kingdom | Thebes, tomb of Meketra | Model paddling boat (Metropolitan Museum) | Winlock 1955: 100; Lipshchitz 1998: 269; Andelković and Asensi Amorós 2005: 357 |
| Middle Kingdom | Thebes, tomb of Meketra | Model sailing boat (Cairo Museum) | Winlock 1955: 99; Lipshchitz 1998: 269; Andelković and Asensi Amorós 2005: 357 |
| Middle Kingdom | Thebes, tomb of Meketra | Model figure, mooring pegs, mallet (Metropolitan Museum) | Winlock 1955: 97-99; Lipshchitz 1998: 269; Andelković and Asensi Amorós 2005: 357 |
| Middle Kingdom | Gebelein | Headrest (University of Cairo QA1175.a2) | Waly 1999b: 269 |
| Middle Kingdom | Gebelein | Incomplete headrest (University of Cairo QA1172) | Waly 1999b: 269 |
| Middle Kingdom | Gebelein | Fragments of wooden sticks (University of Cairo QA41.a2/a3/a5) | Waly 1999b: 269 |
| Middle Kingdom | Lisht | Hull, frame, and tenons of a boat | Ward 2000: 107; Creasman 2014: 23 |
| Middle Kingdom | Dashur (Pittsburgh CMNH 1842-1) | Boat tenons | Ward 2000: 84; Creasman 2014: 23 |
| Middle Kingdom | Wadi Gawasis | Charcoal | Gerisch 2011: 86 |
| Middle Kingdom | Beni Hassan | Coffin dowels | Abdrabou et al. 2022 |
| Early 12th Dynasty | Asyut | Coffin (BM EA46631) | Davies 1995: 146; Gale et al. 2000: 345 |
| Early 12th Dynasty | Asyut | Statue | Delange 1987: 154 |
| 12th Dynasty | Thebes (Dra Abu el-Naga) | Tree trunk in garden | Galán and Garcia 2019 |
| Second Intermediate Period | Thebes (Deir el-Medina) | Lyre (Louvre E 14470) | Quiles et al. 2021: 559, 570 |
| 17th Dynasty | Thebes | Coffin dowels (BM EA29997) | Davies 1995: 147; Gale et al. 2000: 345; Andelković and Asensi Amorós 2005: 357-358 |

| Date | Find Location | Object Type | References |
|--------------|----------------------------------|---|---|
| 17th Dynasty | Thebes | Coffin (National Museum of Scotland A.1909.527.1.A) | Petrie 1909: 6-10; Eremin et al. 2000; Miniaci 2011: catalog no. rT01ED; Arbuckle 2018: 280-281 |
| New Kingdom | Unknown | Twig | Greiss 1949: 262-273; Gale et al. 2000: 345 |
| New Kingdom | Unknown | Statuette of Osiris (Ashmolean 1971.74) | Identified by A. C. Western in Meiggs 1982: 404; Liphshitz 1998: 273; Gale et al. 2000: 345 |
| New Kingdom | Unknown | Wooden peg or dowel (Ashmolean 1971.74) | Gale et al. 2000: 345 |
| New Kingdom | Unknown | Musical instrument | Ziegler 1979: 118; Andelković and Asensi Amorós 2005: 357 |
| New Kingdom | Unknown | Shabtis | Schoske, Kreißl, and Germer 1992: 109; Andelković and Asensi Amorós 2005: 357 |
| New Kingdom | Unknown | Pegs in wooden masks (Hecht Museum H-49, 50, 51) | Liphshitz 1998: 258; Andelković and Asensi Amorós 2005: 357 |
| New Kingdom | Unknown | Shabti (Israel Museum) | Liphshitz 1998: 259 |
| 18th Dynasty | Unknown | Lid of box (MMA) | Hayes 1935: 29; Lucas and Harris 1989: 441; Gale et al. 2000: 345 |
| 18th Dynasty | Unknown | Foot of pall support | Chalk 1932-3: 12; Lucas and Harris 1989: 441; Gale et al. 2000: 345 |
| 18th Dynasty | Thebes (KV62) | Throw stick | Hepper 2009: 44 |
| 18th Dynasty | Unknown | Model bed (MMA 20.2.13) | Gale et al. 2000: 345 |
| 18th Dynasty | Thebes | Chair (MMA 12.182.28) | Gale et al. 2000: 345 |
| 18th Dynasty | el-Amarna | Coffin dowels | Kemp, Skinner, and Bettum 2015: 27-32; Arbuckle 2018: 337-338 |
| 18th Dynasty | el-Amarna (South Tombs Cemetery) | Matting | Kemp 2007 |
| 18th Dynasty | el-Amarna (South Tombs Cemetery) | Charcoal | Gerisch 2007 |
| 18th Dynasty | el-Amarna (Worker's Village) | Roof poles | Kemp 1987: 25 |
| 18th Dynasty | el-Amarna (Chapel 531) | Plant remains in garden plots | Stevens and Clapham 2014: 161 |
| 18th Dynasty | el-Amarna (Kom-el Nana) | Plant remains in garden plots | Stevens and Clapham 2014: 161 |
| 18th Dynasty | Thebes (KV22) | Flange of chariot wheel (Ashmolean 1923.663) | Western 1973: 91; Liphshitz 1998: 271; Gale et al. 2000: 345 |
| 18th Dynasty | Unknown | Harp (Louvre ME 1282) | Quiles et al. 2021: 557 |

| Date | Find Location | Object Type | References |
|--------------|-----------------|---|---|
| 18th Dynasty | Thebes | Coffin dowel (6526 Egyptian Museum in Florence) | Giachi et al. 2021: 38 |
| 18th Dynasty | Thebes | Coffin lid boards (2175a Egyptian Museum in Florence) | Giachi et al. 2021: 38 |
| 18th Dynasty | Deir el-Medina | Dowels and tenons from the Coffin of Menkheper (DEM_19_12_031/031bis) | Eschenbrenner-Diemer, Sartini, and Serpico 2021 |
| 18th Dynasty | Deir el-Medina | Coffin footboard planks and dowels (DEM_19_12_003) | Eschenbrenner-Diemer, Sartini, and Serpico 2021: Table 1 |
| 18th Dynasty | Deir el-Medina | Coffin foot (DEM_19_12_004) | Eschenbrenner-Diemer, Sartini, and Serpico 2021: Table 1 |
| 18th Dynasty | Deir el-Medina | Coffin case side planks and dowels (DEM_19_12_015) | Eschenbrenner-Diemer, Sartini, and Serpico 2021: Table 1 |
| 18th Dynasty | Deir el-Medina | Coffin case plank (DEM_19_12_016) | Eschenbrenner-Diemer, Sartini, and Serpico 2021: Table 1 |
| 18th Dynasty | Deir el-Medina | Coffin lid plank (DEM_19_12_017) | Eschenbrenner-Diemer, Sartini, and Serpico 2021: Table 1 |
| 18th Dynasty | Deir el-Medina | Coffin lid plank (DEM_19_12_018) | Eschenbrenner-Diemer, Sartini, and Serpico 2021: Table 1 |
| 18th Dynasty | Deir el-Medina | Coffin case plank and dowels (DEM_19_12_028) | Eschenbrenner-Diemer, Sartini, and Serpico 2021: Table 1 |
| 18th Dynasty | Deir el-Medina | Coffin lid plank (DEM_19_12_050) | Eschenbrenner-Diemer, Sartini, and Serpico 2021: Table 1 |
| 18th Dynasty | Deir el-Medina | Planks of the coffin of Setau (DEM_19_12_217_1 [box]) | Eschenbrenner-Diemer, Sartini, and Serpico 2021 |
| 18th Dynasty | Deir el-Medina | Dowels of coffin (DEM_19_12_217_2 [box]) | Eschenbrenner-Diemer, Sartini, and Serpico 2021 |
| 18th Dynasty | Deir el-Medina | Tenons from coffin of Bakiset (DEM_2019_217_093/093bis) | Eschenbrenner-Diemer, Sartini, and Serpico 2021 |
| 19th Dynasty | Thebes (Sety I) | Shabti of Sety I (Musée Antoine Vivenel de Compiègne L 729) | Asensi Amorós 2007: 81 |
| 19th Dynasty | Thebes (TT320) | Dowel from coffin of Ramesses II (Cairo Museum CG61020) | Daressy 1909: 32; Normand 1985: 327; Andelković and Asensi Amorós 2005: 357-358; Arbuckle 2018: 317-318 |
| 19th Dynasty | Thebes | Inner coffin (British Museum EA48001) | Taylor 1989: 36; 1999: 61; Cooney 2007: 400-402; Arbuckle 2018: 340-342 |

| Date | Find Location | Object Type | References |
|---------------------|-----------------------|--|---|
| 19th Dynasty | Thebes (Bab el-Gasus) | Coffin dowels and beard (8525 Egyptian Museum in Florence) | Giachi et al. 2021: 39 |
| 19th Dynasty | Abydos (Osireion) | Fragment in tree-pit | Frankfort 1926: 159 |
| 20th Dynasty | Saqqara | Coffin tenons (Boston MFA 1994.216) | Raven, Aston, and Taylor 1991: 27; Cooney 2007: 457 |
| 20th Dynasty | Saqqara | Coffin tenons (Raven et al. 1991: n.40) | Raven, Aston, and Taylor 1991: 28; Cooney 2007: 458; Arbuckle 2018: 349 |
| 20th Dynasty | Saqqara | Coffin tenons (Raven et al. 1991: ns.49, 58) | Raven, Aston, and Taylor 1991: 29; Cooney 2007: 459; Arbuckle 2018: 349 |
| 20th Dynasty | Saqqara | Coffin tenons (Raven et al. 1991: n.66) | Raven, Aston, and Taylor 1991: 31; Cooney 2007: 460; Arbuckle 2018: 349 |
| 20th Dynasty | Saqqara | Coffin tenons (Raven et al. 1991: n.67) | Raven, Aston, and Taylor 1991: 31; Cooney 2007: 460; Arbuckle 2018: 349 |
| 20th Dynasty | Saqqara | Coffin tenons (Raven et al. 1991: n.69) | Raven, Aston, and Taylor 1991: 31; Cooney 2007: 461; Arbuckle 2018: 349 |
| 20th Dynasty | Saqqara(?) | Coffin lid (Michael C. Carlos Museum L2003.14.38) | Cooney 2007: 480-482; Cooney 2017; Arbuckle 2018: 347 |
| 20th - 26th Dynasty | Unknown | Coffin | Chalk 1932; 1933: 11; Lucas and Harris 1989: 441; Gale et al. 2000: 345 |
| 21st Dynasty | Saqqara | Coffin (Raven et al. 1991: no. 27) | Raven, Aston, and Taylor 1991: 26-27; Arbuckle 2018: 377-378 |
| 21st Dynasty | Thebes | Elements of the outer coffin (Fitzwilliam Museum E.1.1822) | Dawson and Strudwick 2016: 184-189; Arbuckle 2018: 374-375 |
| 21st Dynasty | Thebes | Sticks (Cairo Museum) | Winlock 1932: 78; Liphshitz 1998: 273 |
| 21st Dynasty | Thebes (Bab el-Gasus) | Coffin dowels (8523) | Giachi et al. 2021: 39 |
| 22nd Dynasty | Unknown | Coffin dowels (Bible Lands Museum Jerusalem 3592) | Liphshitz 1998: 258; Andelković and Asensi Amorós 2005: 357-358 |
| 22nd Dynasty? | Fayum? | Coffin face (Petrie Museum) | Narkiss and Wellman 1995: 175; Liphshitz 1998: 273 |
| 25th Dynasty | Thebes | Stela (BM EA8453) | Bierbrier 1987; Davies 1995: 149; Gale et al. 2000: 345 |

| Date | Find Location | Object Type | References |
|---------------------------------|---------------|---|--|
| Late Period | Unknown | Coffin (Naprstek Museum Prague P 625) | Brezinová and Hurda 1976: 141; Verner 1977; Andelković and Asensi Amorós 2005: 357-358 |
| Late Period | Unknown | Coffin (Natural History Institute, Slovak National Museum Bratislava, A 3263) | Brezinová and Hurda 1976: 141; Verner 1977; Andelković and Asensi Amorós 2005: 357-358 |
| Late Period | Unknown | Coffin | Lucas and Harris 1989: 441; Andelković and Asensi Amorós 2005: 357-358 |
| Late Period | Gebelein | Fragments of wooden sticks (University of Cairo QA35.a3 and a11) | Waly 1999b: 269 |
| Late Period | Gebelein | Headrest (University of Cairo QA54.a1) | Waly 1999b: 269 |
| Late Period | Gebelein | Incomplete headrest (University of Cairo QA79.a1) | Waly 1999b: 269; Andelković and Asensi Amorós 2005: 357 |
| Late Period | Thebes | Arrow fragment (Ashmolean 1886.811a) | Western and McLeod 1995: 81; Andelković and Asensi Amorós 2005: 357 |
| Late Period | Unknown | Horus figurine (Akhem) | Andelković and Asensi Amorós 2005: 357 |
| Late Period | Unknown | Ptah-Sokar-Osiris (Musée Antoine Vivenel de Compiègne L 728) | Asensi Amorós 2007: 81 |
| Late Period | Unknown | Falcon figurine (Musée Antoine Vivenel de Compiègne n. inv.: 1964-26) | Asensi Amorós 2007: 81 |
| 26th Dynasty | Thebes | Arrow (Pitt Rivers Museum 1896-2-2-4) | Western and McLeod 1995: 86 |
| 26th Dynasty | Unknown | Head of Osiris (Israel Museum 82.2.55) | Lipshchitz 1998: 259 |
| 26th Dynasty | Abusir | Wood from a basket | Beneš 2011: 182 |
| Late Ptolemaic Period | Saqqara | Ptah-Sokar-Osiris statuette (Musée Antoine Vivenel de Compiègne L 726) | Asensi Amorós 2007: 81 |
| 30th Dynasty - Ptolemaic Period | Unknown | Statuette of Isis (Musée Antoine Vivenel de Compiègne L 710) | Asensi Amorós 2007: 81 |
| Ptolemaic Period | Unknown | Stela of Horus (Ashmolean 1874.279a) | Gale et al. 2000: 345 |

| Date | Find Location | Object Type | References |
|-----------------------------|---------------------------|--|--|
| Ptolemaic Period | Unknown | Statuette of Isis (Israel Museum) | Liphschitz 1998: 259 |
| Ptolemaic Period | Unknown | Head of Ptah-Sokar-Osiris statuette (Israel Museum) | Liphschitz 1998: 259 |
| Ptolemaic Period | Unknown | Base of Ptah-Sokar-Osiris statuette (Israel Museum) | Liphschitz 1998: 259 |
| Ptolemaic Period | Elephantine | Coffin fragments | von Willerding and Wolf 1990: 264 |
| Ptolemaic Period | Unknown (probably Akhmin) | Coffin (National Museum of Belgrade) | Andelković and Asensi Amorós 2005 |
| Ptolemaic Period | Saqqara | Ptah-Sokar-Osiris statuette (Musée Antoine Vivenel de Compiègne L 725) | Asensi Amorós 2007: 81 |
| Ptolemaic Period | Unknown | Statuette of Isis (Musée Antoine Vivenel de Compiègne L 711) | Asensi Amorós 2007: 81 |
| Ptolemaic and Roman Periods | Unknown | Cat coffin (Marseille Musée d'archéologie méditerranéenne AM 737) | Liphschitz 1998: 258; Asensi Amorós 2003: 186; Andelković and Asensi Amorós 2005: 358 |
| Ptolemaic and Roman Periods | Unknown | Coffin planks (Marseille Musée d'archéologie méditerranéenne AM 262) | Asensi Amorós 2003: 186; Andelković and Asensi Amorós 2005: 358 |
| Ptolemaic and Roman Periods | Unknown | Coffin dowels (Marseille Musée d'archéologie méditerranéenne AM 258) | Andelković and Asensi Amorós 2005: 357-358 |
| Ptolemaic and Roman Periods | Unknown | Coffin dowel (Bible Lands Museum Jerusalem 3728) | Liphschitz 1998: 259; Andelković and Asensi Amorós 2005: 358 |
| Ptolemaic and Roman Periods | Unknown | Ptah-Sokar-Osiris statuettes (Marseille Musée d'archéologie méditerranéenne AM 274, 277) | Liphschitz 1998: 259; Asensi Amorós 2003: 186; Andelković and Asensi Amorós 2005: 358 |
| Ptolemaic and Roman Periods | Unknown | Ptah-Sokar-Osiris statuette (Amiens Musée de Picardie 3057.164) | Asensi Amorós 2003: 186 |
| Ptolemaic and Roman Periods | Unknown | Mummy labels (Amiens Musée de Picardie MP 94.3.141) | Ribstein 1925; Lucas and Harris 1989: 441; Asensi Amorós 2003: 186; Andelković and Asensi Amorós 2005: 358 |
| Ptolemaic and Roman Periods | Unknown | Seals | Nachtergaele 2000: 156; Andelković and Asensi Amorós 2005: 358 |

| Date | Find Location | Object Type | References |
|-----------------------------|-------------------------|---|--|
| Ptolemaic and Roman Periods | Unknown | Part of canopic boxes (Marseille Musée d'archéologie méditerranéenne AM 282, 283, 284) | Asensi Amorós 2003: 185; Andelković and Asensi Amorós 2005: 358 |
| Ptolemaic and Roman Periods | Unknown | Osiris statuettes (Marseille Musée d'archéologie méditerranéenne AM 611, 615) | Lipshitz 1998: 259; Asensi Amorós 2003: 185; Andelković and Asensi Amorós 2005: 358 |
| Ptolemaic and Roman Periods | Unknown | Furniture leg (Amiens Musée de Picardie 3060.512) | Asensi Amorós 2003: 186; Andelković and Asensi Amorós 2005: 358 |
| Ptolemaic and Roman Periods | Gebelein | Wood fragment (University of Cairo QA159.a1) | Waly 1999b: 269 |
| Ptolemaic and Roman Periods | Unknown | Statuette of Osiris (Musée Antoine Vivenel de Compiègne L 708) | Asensi Amorós 2007: 81 |
| Roman Period | El-Kuser | Mummy labels | Lipshitz 1998: 274 |
| Roman Period | Karanis | Charcoal and wood fragments | Marston, Holdaway, and Wendrich 2017: 1819; Arbuckle MacLeod: unpublished data |
| Roman Period | Qesir al-Qadim | Small wooden objects (bowls, lids, tenon, wood shavings, maritime implement - brail ring); charcoal | Van der Veen, Gale, and Übel 2011: 212-220; Veal 2017: 340-341; Bouchaud et al. 2018 |
| Roman Period | Berenike | Wooden objects; charcoal | Bouchaud et al. 2018 |
| Roman Period | Didymoi | Wooden objects | Tengberg 2011; Bouchaud et al. 2018 |
| Roman Period | Xeron Pelagos | Wooden objects; charcoal | Bouchaud and Redon 2017; Bouchaud et al. 2018 |
| Roman Period | Mons Claudianus | Charcoal | Van der Veen 2001; Van der Veen and Tabinor 2007; Bouchaud et al. 2018 |
| Roman Period | Domitianè/Kainè Latomia | Charcoal | Bouchaud et al. 2018 |
| Unknown | Unknown | Statuette of Osiris (Musée Antoine Vivenel de Compiègne L705) | Asensi Amorós 2007: 81 |
| Unknown | Unknown | Statuette of Osiris the Child (Musée Antoine Vivenel de Compiègne L 709) | Asensi Amorós 2007: 81 |
| Unknown | Unknown | Nude figurine (Musée Antoine Vivenel de Compiègne L 723) | Asensi Amorós 2007: 81 |

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The most complete, recent source on the modern distribution and morphology of tamarisks and other Egyptian trees can be found in *The Vegetation of Egypt*, second edition (Zahran and Willis 2009). References to tamarisk in the archaeological record and to its religious significance tend to be quite short, or included in sections on the use and significance of trees in ancient Egypt more generally. Two particularly useful introductions that focus on the timber and materiality of tamarisk can be found in the “Wood” section in *Ancient Egyptian Materials and Technology* (Gale et al.: 334-371 in Nicholson and Shaw eds. 2000), and in Cheryl Ward’s *Sacred and Secular: Ancient Egyptian Ships and Boats* (2000). For the religious significance of tamarisk, the most helpful source, despite its age, continues to be Nathalie Baum’s *Arbres et arbustes de l’Égypte ancienne* (1988). Another useful article that combines a number of these different elements, and includes a selective catalog that became part of the present Table 1, is “The Coffin of Nesmin: Construction and Wood Identification” (Andelković and Asensi Amorós 2005), though this focuses on coffin woods.

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- Table 1. Archaeological attestations of Tamarisk. (Table by the author.)
- Figure 1. *Tamarix aphylla* in Thebes. (Photograph by Victoria Jensen.)
- Figure 2. *Tamarix aphylla* twigs and flowers. (Drawing by author, after B. Baum 1978: pl. XX.)
- Figure 3. *Tamarix nilotica*, North Israel. (Photograph by Ori Fragman-Sapir.)
- Figure 4. *Tamarix nilotica* twigs and flowers. (Drawing by author, after B. Baum 1978, pl. XVII.)
- Figure 5. Plots for tamarisk trees in front of the temple of Mentuhotep Nebhepetra at Deir el-Bahri. (Winlock 1922: fig. 11.)
- Figure 6. Coffin Turin S.15701. (Image by Nicola Dell'Aquila for the Museo Egizio, Turin.)
- Figure 7. Model folding bed from the 18th Dynasty. (MMA 20.2.13; Open Access Image from the Metropolitan Museum of Art, New York; Creative Commons 0.)
- Figure 8. Model paddling boat from the tomb of Meketra at Thebes, Middle Kingdom. (MMA 20.3.5; Open Access Image from the Metropolitan Museum of Art, New York; Creative Commons 0.)
- Figure 9. Boat planking from Lisht. (Line drawing by author, after Ward 2000: fig. 71.)
- Figure 10. A tamarisk(?) growing near the mummy of Osiris, from the temple of Hathor, Dendara. (Line drawing by author, after Mariette 1873: pl. 72.)