

Review: Unnatural Landscapes: Tracking Invasive Species

By Ceiridwen Terrill

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Ceiridwen Terrill. *Unnatural Landscapes: Tracking Invasive Species*, Tucson: University of Arizona Press, 2007. 240 pp. ISBN: 0-8165-2523-4. US \$17.95. Soft cover, acid-free paper, black and white illustrations, indexed.

The domesticated cat has gone feral and threatens the delicate ecological balance of the Midriff Islands in the Sea of Cortez. It is one of many invasive exotic species set loose by humanity. We humans are like Pandora with a box full of organisms we simply cannot seem to resist unleashing on unprepared natural habitats. In an age of global commerce the introduction of exotic life forms occurs with a rapidity that the environment is unable to absorb and the precarious balances tend toward the extinction of endemic populations. With compassionate clarity and amazingly unflinching optimism, Ceiridwen Terrill recounts her experiences with the native and invasive species of four selected island ecosystems in a book that itself is a delicate balance somewhere between an action adventure story, a poetic narrative, and a lively scientific field journal. Her goal, which she accomplishes rather well, is to educate her reader. The educated human, aware of our culpability in this ecological damage, is less likely to perpetuate the mistakes that lead to landscapes dominated by bioinvasives.

There is a straight-forwardness about Terrill's writing style, which disarms the reader. Perhaps it is because she does not wail and scream about unfairness; she simply tells us what she saw, what has happened to the native species, what is taking their place, and what is, or is not, being done about it. In revealing her experiences it is almost as though Terrill has created a documentary film, rather than written a book; the readers feel they might be standing beside her watching the scene in real time. Interspersed with the details of her journey (often by kayak) are conversations with scientists, naturalists, and other travelers, so that by the time she reaches the native White Pelicans on Anaho Island, or the 150 year-old alien Eucalyptus groves at Scorpion Canyon Campground on Santa Cruz Island, the reader reaches the scene with her, well-versed in the history, geography, and lore of the area, ready to hear about the flora

and fauna, and able to grasp the repercussions of careless ignorance, a lack of funding, or an imprudent building project.

Many non-native plants that now threaten endemic populations are accidental introductions such as the menacing Cheatgrass (*Bromus tectorum*) discussed in chapter 1 ("Not Only For the Birds"), and the Black Rat (*Rattus rattus*) whose partial eradication on the Channel Islands she rationalizes in chapter 4 ("The Pied Pipers of Anacapa"). On the other hand, many of the now invasive exotics detailed in Terrill's book, were intentionally established -- easy "solutions" -- like the smothering low-maintenance Crystal Iceplant (*Mesembryanthemum crystallinum*), which is still being planted to control erosion along California highways. Take the case of the Mosquito Fish, currently provided for free by several state agencies to combat West Nile virus. It seems these foreigners actually eat more native fish eggs than mosquito larvae, unlike the (mosquito-eating) native, and we might add threatened, pupfish. The compelling story of the pupfish, detailed in chapter 2 ("Pister's Pupfish") expands the idea of an island by focusing our attention on "reverse islands," the fragile ecosystems of Fish Slough and Ash Meadows, Nevada. Terrill also looks seriously at some of the underlying problems inherent in our current management systems, or lack thereof. One gets the impression that she is politically neutral, if a bit melancholy, in the way that she carefully includes both sides of each story.

Terrill quotes Erika Zavaleta about the Tamarask, but it might be any of the scientists speaking about any of the invasive species detailed in the book, "When faced with a decision either to spend billions of dollars in control or to tolerate tens of billions of dollars in continued damage by the invader, one is reminded that both costly choices could have been prevented - and could be prevented in the future - by decisions to prevent introductions at an earlier stage" (p.87). One of the recurring themes of the book is prevention; we are dealing with the cost and consequences of human actions and only human action can curtail further contaminations.

Island habitats are both more irreplaceable and more unfrequented than other locations, making them perfect laboratories for attempts to eradicate invasive species. A return to pre-conquistador ecology may be impossible but we need to tip the scales back in favor of our natural species across the continent. Genuinely certain that people want to help if they only understood the reasons, this book is a testament to Terrill's commitment to pleasantly re-educate the public about our environment -- to explain the reasons. One could wish that someone would undertake to write so well about each regional microcosm, as Terrill has written about these four island habitats.

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