BOOK REVIEWS

Invasion Biology: Critique of a Pseudoscience, by David I. Theodoropoulos. 2003. Published by Avvar Books, Blythe, CA. 237+xiv p. Softcover, \$14.50. ISBN 0-978504-1-7.

The contentious subject of invasive exotic species might become even more so with the publication of *Invasion Biology: Critique of a Pseudoscience*, by David I. Theodoropoulos. Individuals who believe in homogenizing the Earth's organisms might greet this book with enthusiasm, but I find the content and intention alarming. Theodoropoulos presents a litany of arguments intended to absolve invasive exotic species of any harmful effects. At best, this book serves to challenge us to rigorously test invasive exotic species effects.

Theodoropoulos' basic tenant is that, "in no case have the facts been accurately or completely reported by invasion biologists seeking to promote an invasion crisis," and that "the anti-invader literature is found to be replete with unsubstantiated and highly exaggerated claims of harm" (p. 183). A search of the peer-reviewed, primary ecological literature (which he claims to have done) will readily show that he is mistaken.

Theodoropoulos presents only examples from the scientific literature that fail to show negative effects of exotic species on natural areas,

while ignoring the scientific literature that does. For example, he cites the work of Treberg and Husband (1999), who state that the results of their study "provide no support for the hypothesis that the number of species in wetlands is decreasing in association with the invasion of *Lythrum salicaria* (purple loosestrife) in Ontario." These results are not unexpected given that purple loosestrife, at present, is not considered a noxious weed in Canada, as it is a rather recent introduction. He does not include the studies compiled by Blossey, Skinner, and Taylor (2001), who report that "recent work has demonstrated that the invasion of purple loosestrife in North American (U.S.) freshwater wetlands alters decomposition rates and nutrient cycling, leads to reductions in wetland plant diversity, reduces pollination and seed output of the native *Lythrum alatum*, and reduces billed grebes, and marsh wrens." Theodoropoulos' biased reporting is pervasive, and makes no reference to the most often cited, scientific, peer-reviewed ecological literature on the negative effects of exotic organisms.

One of the most reasonable approaches to preventing new pest plant introductions is risk assessment. A voluntary incentive for the nursery industry to use this measure was proposed by Reichard and Hamilton (1997), where an importer would be granted some patent

rights on a pre-screened exotic introduction. Theodoropoulos charges Reichard and Hamilton with “serving corporate interests” and that this process represents a “theft of the commons.” His criticism only serves to stymie a rational approach to evaluating potential pest plant introductions.

The book culminates with the chapter “Towards a New Theory of Anthropogenic Dispersal,” which helped me to understand the underlying basis for his proposal that exotic species benefit natural ecosystems rather than harm them. Theodoropoulos encourages humans to homogenize the Earth’s organisms to *conserve* biological diversity. He states that, for example, “the Monotremata should be brought out of the Australasian region—certainly we have room for wild platypus here in California. Many higher taxa of flowering plants should be naturalized in new regions. Expanding the ranges of monotypic families like the Lactoridaceae of the Juan Fernandez Islands, the Gomortegaceae of Chile, the Geissolmataceae of Southern Africa, the Cercidiphyllaceae of eastern Asia, and others would be beneficial projects.” And the list goes on culminating in the statement that “there is no intellectually honest or biologically valid reason for restriction to historical range.”

A revelation found in the book’s Literature Cited shows that Theodoropoulos generally publishes under the pseudonym and operates his seed distribution business as J.L. Hudson. A visit to the J.L. Hudson, Seedsman website (www.jlhudsonseeds.net/) reveals that he already practices and advocates worldwide seed distribution as a means of “conservation through dissemination.”

Theodoropoulos also argues that “investigations into the psychology of prejudice and xenophobia illuminate the psychopathologies underlying the failings of invasion biology, and the reasons for its uncritical acceptance” (p. 184), and that “these examinations demonstrate that invasion biology is a manifestation of the xenophobic, racist, and authoritarian delusion, not a merely analogous belief-system” (p. 185). I will defer to other professionals with regard to the psychological underpinnings of invasive exotic species awareness.

I had the opportunity to attend a session at the 2003 American Association of Botanical Gardens and Arboreta conference on Differing Perspectives on Invasive Species, at which Theodoropoulos spoke. His presentation was a synopsis of his book, where he blatantly stated that all of the studies that show negative effects of exotic species on natural areas are “lies.”

Invasion Biology: Critique of a Pseudoscience, by David I. Theodoropoulos, is an inaccurate and biased text that I cannot recommend. It is useful only as an extreme and idiosyncratic viewpoint on biological conservation that must be balanced with more objective readings.

Literature Cited

- Blossey, B., L.C. Skinner, and J. Taylor. 2001. Impact and management of purple loosestrife (*Lythrum salicaria*) in North America. *Biodiv. Conserv.* 10: 1787-1807.
- Reichard, S.J. and C.W. Hamilton. 1997. Predicting invasions of woody plants into North America. *Conserv. Biol.* 11:193-203.
- Treberg, M.A. and B.C. Husband, 1999. Relationship between the abundance of *Lythrum salicaria* (purple loostripe) and plant species richness along the Bar River, Canada. *Wetlands* 19:118-125.

Johnny Randall

Assistant Director

North Carolina Botanical Garden

University of North Carolina at Chapel Hill