Rambunctious Garden: Saving Nature in a Post-Wild World by Emma Marris

Article *in* The Quarterly Review of Biology · January 2013

DOI: 10.1086/669328

1 author:

Arthur Shapiro
University of California, Davis
187 PUBLICATIONS **5,287** CITATIONS

SEE PROFILE

cally linked statistics and facts. The treatment of the rivers is inevitably uneven: most authoritative and engaging on the Mississippi, but much less convincing on lesser-known rivers such as the Congo and Ganges. Clearly, Wohl cares a great deal and I applaud her for that but, to me, this book does not really work as a readable source for interested citizens.

Alan Hildrew, *School of Biological & Chemical Sciences, Queen Mary, University of London, London, United Kingdom*

Rambunctious Garden: Saving Nature in a Post-Wild World.

By Emma Marris. New York: Bloomsbury Press. $25.00. vii + 210 p.; index. ISBN: 978-1-60819-032-4. 2011.

Several years ago, I attended a seminar on the psychology of the animal-liberation movement. The speaker observed that although very few animal-lib activists were actually religious, most such people scored very highly on the "religiosity" scale in personality inventories. He suggested that animal liberation served the same functions for such people as religion did for many more: it gave life meaning and conferred a group identity centered on shared moral superiority over others. After years of interacting with "weed warriors"—people who spend their free time trying to eradicate "invasive species" from parks and public lands—I would advance the same hypothesis about most of them. They tend to be absolutely convinced of the righteousness of their cause and highly resistant to any suggestion that naturalized exotics might not be all bad. They also tend to be oblivious to the disconcerting degree to which their rhetoric converges to that of racists and xenophobes, and highly defensive if you point that out to them. After all, they are on the "green" side, right?

In the face of such popular enthusiasm for the alarmist viewpoint on exotics, Emma Marris, a professional science writer, has produced an eminently reasonable, well-researched, and engagingly written defense of the notion that human beings have changed the world and the most sensible way to deal with that is to manage it for the greatest good. She demonstrates very convincingly that communities and ecosystems have always been in flux as the physical world changes around them. The idea of freezing them at some arbitrary moment in time is as wrongheaded as it is impractical. Some naturalized exotics present serious threats to human beings or their support systems: we call them pests, pathogens, and vectors, and they are not what is at issue. Some are such radical ecological game-changers that they need to be assessed with an eye to the full scope of their impacts (think cheatgrass in the desert and its impact on fire ecology). Most, however, are trivial, and in a world of limiting resources where we must assign priorities to our actions, they do not merit serious attention. But it is not merely a matter of using our management resources effectively. Much of our "invasive species" discourse simply ignores the evolutionary creativity consequent on community reorganization. Yet we know both in theory and from the fossil record that precisely such creativity is essential for long-term survival in a changing physical context. Ecotypes or ecological races arise in response to novel challenges, both biotic and abiotic. The future of endangered species is likely to depend on such processes. Failure to appreciate this is the single biggest flaw in the "climatic envelope" or "niche modeling" approach to conservation biology. Much of California's lowland butterfly fauna is now dependent on nonnative larval host plants. When I tell garden clubs—or public land managers—that successful eradication of invasive "weeds" would drive their beloved backyard butterflies to extinction, they stare at me in disbelief. But it is true and emblematic of the larger problem explored very well in this volume.

Shortly after Marris's book appeared there was a flurry of articles in the professional literature advancing precisely the same ideas. Among the best are by Carroll (2011. *Evolutionary Applications* 4:184–199) and Thomas (2011. *Trends in Ecology and Evolution* 26:216–221). But Marris got there first, and with luck her wise words will be read and acted upon far and wide.

Arthur M. Shapiro, *Center for Population Biology, University of California, Davis, California*

EVOLUTION

Arguing for Evolution: An Encyclopedia for Understanding Science.

By Sehoya Cotner and Randy Moore. Santa Barbara (California): Greenwood Publishing. $85.00. xxvi + 318 p.; ill.; index. ISBN: 978-0-313-35947-7 (hc); 978-0-313-35948-4 (eb). 2011.

This is the best overall defense of evolutionary biology that I have read, and I have read lots, including many excellent ones. As someone who has one foot in philosophy of science and the other in evolutionary biology, I am impressed with