

conserving biodiversity. Although some of the habitat types are localized, the phenomena and threats experienced are universal.

"Terrestrial Ecoregions of North America: A Conservation Assessment" is a timely compendium of information relevant to conservation practitioners, teachers and anyone interested in the status of a continent's biodiversity. It would be useful as a companion text in courses on conservation and habitat restoration or could be the basis of a semester course for advanced undergraduate or graduate students. Actually, this book should be on the shelf of anyone concerned with preserving our natural heritage. - Scott Ruhren, Department of Ecology, Evolution and Natural Resources, Rutgers, The State University of New Jersey, New Brunswick, NJ 08901-1582.

Bromeliaceae: Profile of an Adaptive Radiation. Benzing, D. H. 2000. ISBN 0-521-43031-3 (cloth US \$120.00) 690 pp. Cambridge University Press, Cambridge, UK. This vast compendium of information on the Bromeliaceae is a thorough review of the evolutionary physiology and ecology of this principally Neotropical family. David Benzing (along with several collaborators) have done a tremendous service to botanists, ecologists, and evolutionary biologists in pulling together a huge amount of natural history information and existing experimental data on the bromeliads. This book will undoubtedly serve as the benchmark reference on this family for many years to come.

According to the preface, Benzing originally envisioned this book as an edited volume. However, the book evolved into a more integrated monographic work with Benzing as the sole author of seven of the 9 core chapters, and senior author on the remaining two. Following a brief introduction to the family, the reader is taken on a detailed run through the vegetative and reproductive structures of the bromeliads, their disparate modes of photosynthesis (C3, various types of CAM), mineral nutrition, life history and reproduction, relationships with fauna, and their overall phylogeography and evolution. These topics, each to a core chapter, are viewed through an adaptationist framework that spans the entire book. This framework is "how and why one family of flowering plants, and a truly exceptional one by virtue of adaptive specialization to counter drought, came to assume such extraordinary importance in the Neotropics" (pp. xi-xii).

Benzing is largely successful in hanging the available information on this adaptive framework. The overwhelming majority of these data are descriptive, and focused on a relatively small subset of the nearly 3000 species in the family. Because of the descriptive nature of the data, it is relatively easy to develop adaptive explanations for observed patterns; the experiments to test these adaptive hypotheses, in almost every instance, have yet to be done. Every chapter (and most

pages) provides many open questions about the functional evolutionary ecology of the Bromeliaceae, any one of which could form the basis of a doctoral dissertation.

Throughout the core chapters, the material is well-integrated, but in some ways almost too well-integrated. References are constantly made to figures, tables, and text of chapters already read or chapters to come. I found myself thumbing backwards and forwards through the text to find points referred to (usually by figure or table number, as opposed to page number), which had a tendency to interrupt the reading flow. In many ways, this book would be ideally produced as a web-based, hyper-linked document, where figures and tables could be called up at will in separate windows on a computer screen. Chapters 2-8 are more encyclopedic than synthetic; only chapter 9, on the history and evolution of the family, is a true synthesis of existing information. Given its high price (almost 20 per page), I was surprised that all the photographs of bromeliads are produced in black & white, often with inadequate contrast to discern the relevant details (an electronic version could, perhaps, have color digital photographs). The line-drawings are adequate, but again, given the book's cost, it seems that a gentle artistic hand could have improved them substantially.

In addition to the core chapters, there are also six chapters on "special topics", four on systematics of especially difficult groups (Neoregelia subgenus *Hylaeicum*, and *Cryptanthus* by I. Ramirez; Tillandsioideae, and *Tillandsia* and *Racinaea* by W. Till) that provide a "snapshot of the more traditional approach to plant systematics and evolution as applied to the Bromeliaceae" (p. xi). The remaining two special topics chapters, *Ethnobotany of Bromeliaceae* by B. Bennett; *Endangered Bromeliaceae* by M. Dimmitt are contemporary hot-topics. None of these special topics chapters are well-integrated into the rest of the volume, and they might better have been published on their own either as a second volume, or as a special issue of a journal.

Overall, Bromeliaceae is a must-have book for researchers actively studying this family or other epiphytes. Its high price tag will limit its sales, and one can only hope for either a paperback edition or (better) a CD-ROM version. Bromeliaceae is a valuable reference book for any science library, and it will provide the foundation for the next generation of study in this exceptional group of angiosperms. - Aaron M. Ellison, Department of Biological Sciences, Mount Holyoke College, South Hadley, MA 01075-6418.

