

## Book Review

**Rare and Endangered Biota of Florida, Volume IV. Invertebrates.** Mark Deyrup and Richard Franz (Eds.). Gainesville, FL: University of Florida Press. 1994. xxx+798 pp. Illustr. ISBN: 0-8130-1322-4 (cloth); 0-8130-1323-2 (paper). \$75.00, cloth; \$39.95 (paper).

Of all of the Florida invertebrates that exist, or may have existed (one estimate claims 50,000 species) only descriptions of 350 species are included in this book. These are species that are thought to be, according to the many individual authors who wrote the accounts of these species, in decline or in danger of extinction. Final acceptance to be included in this book, and others in the series, is made by the Florida Committee on Rare and Endangered Plants and Animals. They believe, as do the various authors and editors, that there is enough information available to show that these species need special attention.

A well presented introduction, which includes a brief history of the project, and definitions of status categories, is followed by a most useful description of the major habitats of Florida. The body of the work is the detailed accounts of the species that are in one or another of the categories used to designate the status of these invertebrates. Needless to say, most of the species are insects. A lot of work and thought has gone into this study. Almost all of these species are illustrated and in most cases a distribution map is included.

A quick glance at the contents will show two major defects: 1) Much space is lost by redundancy; 2) Given the limitations of space, and a shortage of specialists, the groups selected for study are far from representative of species endangered or otherwise needing protection.

*Redundancy:* Each species included is written, following a standard format selected, as a distinct document which stands alone. Each document is signed by the author and his complete affiliation is cited each time. Thus we have 33 article prepared on the Odonata by one author. This, incidently, represents 43% of the species of Odonata found in Florida. Other groups may have over 50 articles by the same author. Considerable space might have been saved by citing the authors and their affiliations in a section in the front of the book, thus freeing space for more representation of species.

*Representation:* Assuming that space is not of major concern in this work, what about representation? Over 130 families of beetles occur in Florida. Only five families of beetles are accounted for, with 84 representatives. There are many specialists on beetles in Florida. Only 5 were asked to prepare articles. Of the more than 4,300 species of beetles known to occur in this state, only 2% of the species are of concern? However, wherever Odonata occur, about 10 times as many water beetles also live. If the Odonata in these ponds, lakes, and streams are in trouble, so are most of the species of water beetles.

In all fairness, the editors and authors of this book have never claimed to have covered all of the species in trouble in Florida. So the omissions are not what the book is to be judged on. Therefore, I am quick to say that what has been done is, for the most part, a grand start. It certainly provides a nice guide to these species. Too bad manuals for the study of all of the species cannot be produced. A most useful one for the Scarabaeidae of Florida (one part yet to be finished) has already been written by Robert E. Woodruf. Considering the fact that only about 10% of the beetles are known well enough to make a statement about its endangered status, perhaps such a work (which could be done in a book not much larger than this one) would make sense.

The reader will certainly be aware that in almost every case the reasons for the status classification is based on the changes in the habitat brought about by human invasion or contamination. Is it possible that the only solution for saving the species inhabiting Florida is to get rid of mankind? Alternatively, must we be content with only those species that can live with man, such as the mighty cockroach, or those that can live in zoos? Which will come true? Obviously current trends is for zoos and botanical gardens, with some space set aside, at least for awhile as parks and preserves.

- Ross H Arnett, Jr., Gainesville, FL.