## REVIEW

Florida's Snakes: A Guide to their Identification and Habits.—Richard D. Bartlett and Patricia P. Bartlett. 2003. University Press of Florida, Gainesville, Florida. 182 pages. \$24.95 paperback. ISBN 0-8130-2636-9.—For individuals interested in the snakes of Florida, several field guides and reference texts exist. The objective of field guides is to help identify species, whereas reference texts provide comprehensive information about the biology of individual species. At a regional level, Conant and Collins (1998) is an excellent field guide to amphibians and reptiles in the eastern U.S., while Ernst and Barbour (1989) and Ernst and Ernst (2003) are thorough reference texts for snakes of the eastern U.S., and the entire U.S. and Canada, respectively. The downside of using these regional texts is that they contain much more information than is needed if your only interest is snakes of Florida. However, if you have general interests in snakes of the eastern U.S., I strongly recommend these excellent texts.

If you are interested only in the snakes of Florida, two field guides exist: Ashton and Ashton (1981) and Tennant (1997; recently re-released by a new publisher as Tennant 2003). Thus, field guides to snakes of Florida are available. However, neither of these serves well as a reference text. A recent trend is for state guides to amphibians and reptiles to serve as both field guide and reference text (e.g., contrast Hammerson (1982) with Hammerson (1999) for amphibians and reptiles of Colorado). This is probably because excellent regional field guides preclude the need for state-oriented field guides. A text similar to Hammerson (1999), for amphibians and reptiles of Florida, would be an important contribution. Bartlett and Bartlett's (2003) new book does not fill this need, but is uniquely different than previously existing field guides to snakes of Florida.

The book begins with brief sections (each two to eight pages in length) about habitats of Florida, how to use the book, how to care for captive snakes, how to locate snakes, general biology of snakes, legal status of Florida snakes, taxonomy and classification, and legless lizards. These sections are introductory and will be of use to individuals without much knowledge of snakes. In general the content is adequate (though better addressed in Conant and Collins (1998)), but not always. Coverage of snakebite, an important topic in a book about snakes (it should have its own section), is not extensive. No recommendations are made about how to avoid snakebite, and what to do if bitten, other than to "find a qualified doctor . . . before a need arises." The section titled "Snakes and the Florida Law" lists protected snakes and designates each as simply state or federally protected. This is a missed opportunity to quickly inform about the causes of the conservation status of Florida's snakes. The section on taxonomy and classification is a haphazard collection of opinions, rather than appropriately cited sources of current taxonomy. The authors state that taxonomy is in a current state of upheaval and write that "in time, taxonomy may again become less conjectural." Yet, taxonomy has always been unstable, requiring revision when new information becomes available. Further, much of the current controversy in taxonomy is due to persistence of a pre-evolutionary taxonomic scheme (the Linnean hierarchy) in the face of mounting pressure for a new systematic framework explicitly reflecting evolutionary history (see essay 21 in Gould (2003)). Additionally, the authors write "sadly, there is also a current school of thought holding that allopatrism (noncontiguous populations) equates to speciation." Few, if any, systematists name groups of organisms simply based on allopatry.

Most of the book consists of descriptions of individual species. Snakes are divided into nonvenomous and venomous snakes. Within each group, species accounts are arranged by higher taxonomic level, with a brief introduction to the family, subfamily, and genus. These introductory sections contain detailed husbandry information. Accounts for snakes endemic to Florida are followed by species accounts for introduced species. Separate accounts are provided for every subspecies that occurs in Florida.

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Information for each snake is divided into nine categories: (1) venom status; (2) size; (3) identification; (4) behavior; (5) habitat/range; (6) abundance; (7) prey; (8) reproduction; (9) similar snakes. For snakes with more than one subspecies in Florida, information on these topics is only provided for one subspecies. Identifying characteristics, geographic range and habitat are provided for additional subspecies. Intuitively, one would expect the lead subspecies to be the widest ranging, or the subspecies for which the most information is available. This is not the case. Subspecies that occur only in Florida are given lead status, even when the amount of information available for that subspecies is much less than for the wider ranging subspecies (e.g., the Key Ring-necked Snake is covered more extensively than the better known Southern Ring-necked Snake). A map of the geographic range of each subspecies (included in the subspecies accounts) and a photograph (all photographs are together near the end of the book) are provided.

Though information in the species accounts is useful, the layout does raise issues. Presenting separate range maps for each subspecies implies distinct separation from other forms (i.e., that subspecies are unique entities, with discontinuous distributions from other subspecies), which is often not the case in nature. For instance, three separate range maps are presented for Black Racers, suggesting that each form is biologically, and possibly geographically, distinct. However, if a single range map is provided, it is clear that ranges of subspecies are contiguous. Also, because information is provided separately for each subspecies, unique common names are provided for possible intergrades between subspecies (e.g., Peninsula Kingsnake for Lampropeltis getula getula  $\times$  L. g. floridana, and Apalachicola Lowland Kingsnake for L. g. getula  $\times$  L. getula subspecies). Providing unique names for organisms that are likely intergrades between different subspecies is unwarranted and taxonomically unjustified.

To identify species, the authors recommend first looking at the photographs, then reading the text for that subspecies, followed by referring to the range map. By presenting information separately for each subspecies, this task becomes more difficult. Rather than evaluating 39 possible species, the reader is faced with deciphering among 67 subspecies. The task is made more difficult because the authors rely heavily on color and the number of various scales to differentiate among subspecies, but these characteristics are notoriously variable. For example, the authors describe variation in dorsal color pattern and a few scale characteristics for Corn Snakes (Pantherophis guttata), but, after reading the text, the reader would still have little idea what characteristics distinguish a Corn Snake from any other snake. This is a problem throughout. Using the range maps and photographs in conjunction with the text is made even more difficult because the photographs are not included in each species account. Rather, they are presented as a block in the back of the book. Further, the photographs and the text are not cross-referenced. In sum, it is difficult to identify species using this text because the reader must sift through almost twice as many possible candidates (because data are presented separately for each subspecies), extremely variable characteristics are used for identifying species, and all the materials necessary to identify species (range maps, text, photographs) are not presented together.

Species accounts are followed by a glossary, list of references, and index. The glossary contains mainly useful terms, though some definitions are too operational (e.g., the definition of ontogenetic as "age-related (color) change" ignores all other types of characters that change with age) and others unnecessary (e.g., anterior). The list of references is confusing because no in-text citations are made to any of the sources. Further, assuming all of the information in this text comes directly from primary literature, it contains too few references to be comprehensive.

Four aspects make this book unique. First, detailed husbandry information is provided for each family or subfamily of snakes. Such information can be useful to those interested in keeping snakes and the authors are careful to emphasize which species require permits. Second, information about each subspecies is presented, which is use-

ful to individuals interested in geographic variation. Third, information on introduced snakes is presented and can be used to better understand why such snakes have been successful. Fourth, the photographs are excellent and comprehensive (every subspecies of snake is represented).

I recommend this book if you are interested in any of these aspects.

I do not recommend this book as either a field guide or reference text. If you are interested in the best, cheapest, and most compact field guide that will help you identify snakes in Florida I strongly recommend Conant and Collins (1998). If you are interested in a reference text providing detailed knowledge of snakes of Florida, find a copy of Ernst and Barbour (1989) or Ernst and Ernst (2003). Both provide detailed information, with specific citations for all information that is presented.—**Kyle G. Ashton**, Kutztown University, Kutztown, Pennsylvania 19530.

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