Biology of the Snapping Turtle (*Chelydra serpentina*)

Edited by A. C. Steyermark, M. S. Finkler, and R. J. Brooks. 2008. The Johns Hopkins University Press, 2715 North Charles Street, Baltimore, Maryland 21218-4363. x + 225 pages 75 USD.

The *Biology of the Snapping Turtle* consists of 17 review papers on various aspects of the life history of one of the most recognizable turtles of North America. Part 1, Taxonomy and Systematics, consists of four chapters covering the systematics of the family Chelydridae, the fossil history of the family, the anatomy of the skull, and molecular insights into the systematics of the family. Part 2, Physiology, Energetics, and Growth, consists of seven chapters covering such disparate topics as respiration, reproductive physiology, thermal ecology, energetics, embryology, overwintering adaptations and growth patterns. The final section of the book, Life History and Ecology, consists of six chapters on nesting ecology, water relations of the eggs, sex determination, physiology of hatchlings, population biology and geographic variation in life history traits.

Although many of the chapters are strictly review papers, a number of the authors have included previously unpublished data from their own work or the work of others. For example, H. Bradley Shaffer and his co-authors include their analysis of the genetic variation across the currently recognized four subspecies of Snapping Turtle. Their results are consistent with earlier less extensive work: first of all, there is no molecular evidence to support the recognition of the Florida Snapping Turtle *C. s. osceola*) as a distinct taxa; second of all, the Central American Snapping Turtle *C. s. rossignonii*) and the South American Snapping Turtle *C. s. acutirostris*) both appear to be separate evolutionary lineages and should be viewed as separate species.

While many of the papers in this volume are tightly focussed on the Snapping Turtle, a number of the papers could just as easily have appeared in a volume on the biology of turtles in general. For example, Gordon Ultsch and Scott Reese's paper on overwintering is a thorough review of the literature on turtle physiology with regards to hibernation.

Overall, the quality of the papers is high. One of the highlights of the book is the chapter on nesting ecology written by researchers involved in three long-term studies of Snapping Turtles at Algonquin Park, Ontario; the Edwin S. George Reserve, Michigan; and the Savannah River Site, North Carolina. There are also a few careless mistakes in the book that more careful editing could have caught. The Wood Turtle (*Glyptemys insculpta*) and the Bog Turtle (*G. muhlenbergii*) are still placed in the genus *Clemmys* in the text and in the index. There is also more overlap in material than is required. Growth of the embryo is discussed in both the chapter on the embryo and the chapter on growth. The relationship between clutch size and body size is thoroughly charted in the chapter on nesting ecology, discussed in the chapter on population biology and re-visited in the chapter on geographic variation. The editors are also strangely silent. There is no introduction from them explaining the origin or rationale for the volume or any kind of concluding chapter synthesizing the themes of the volume. Nonetheless, anyone with a technical interest in the biology of turtles (not just Snapping Turtles) will find this an extremely valuable reference work.

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Wildlife of North America: A Naturalist's Lifelist

By Whit Bronaugh. 2006. University Press of Florida, Gainesville, Florida, USA. 565 pages. 29.95 USD.

This is a bold and daring compilation that few would have the courage to undertake and present. It is a contribution to the attempt to promote systematic record keeping by the vast number of casual or non-academic naturalists. The volume is essentially a checklist of all native and introduced mammals, birds, reptiles, amphibians, freshwater fishes, butterflies, dragonflies and damselflies recorded to date for North America. These groups include relatively large and often conspicuous animals for which a naturalist can identify a significant number of species on sight.

It is based on the latest (at the time of publication) authoritative listing for each group with the full realization that work is ongoing for all group names and species recognition is constantly changing with each new study that produces new knowledge that necessitates revisions. Despite this, probably enough stability has been reached in each included group that names used here will still be able to at least be equated with those that will be current in another decade or two hence.

The contents include a Preface (the author's purpose and how he came to compile the book and his acknowledgments), a Checklist of North American Orders and Families for the included groups, A List of Symbols (indicating species extinct and since when), an Introduction to the main text, How to Use this Book, Biodiversity and Zoogeography of North America (with maps of number of species in each province and state) and Extinct Species. The bulk of the book follows (pages 83 to 430) listing English and scientific name for each species by family and blank spaces for user remarks such as first observation date, place or other data considered relevant. The