

tadpoles with exceptionally long external gills, making them almost look like newt larvae, or of *R. arvalis* tadpoles with rather beautiful gold flecking.

Although the book is written in German, there is little text and for these parts it is easy to understand (or to translate), and anyone with a modest command of the language should have no trouble. All covered species are more or less widespread throughout Europe, so this book should be of use not only to herpetologists working in Germany, but well beyond her borders. Furthermore, anyone with an interest in amphibians and their larvae will appreciate this book and enjoy the beautiful photographs.

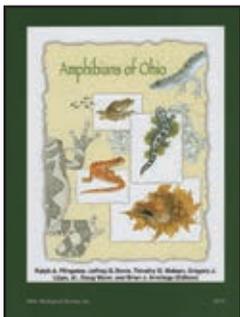
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Amphibians of Ohio

Edited by Ralph A. Pfungsten, Jeffrey G. Davis, Timothy O. Matson, Greg J. Lipps, Jr., Doug Wynn, and Brian J. Armitage. 2013. Ohio Biological Survey Bulletin New Series, Volume 17, Number 1 (www.ogiobiologicalsurvey.org). xiv + 899 pp. Hardcover. US \$90.00. ISBN 978-0867271645.



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When I first received a copy of *Amphibians of Ohio*, the first thing that hit me was the size of this volume. At 916 pages and a mass of over 3.5 kg, this beast certainly won't be accompanying any but the most masochistic of herpetologists in their field

pack. With this massive volume, Ohio joins the ranks of states that have been producing quality publications on their native herpetofauna over the last decade that target herpetologists but can also serve the novice herp enthusiast. It has been over a quarter-century since Pfungsten and Downs published the *Salamanders of Ohio* (1989) and nearly 80 years since C. F. Walker's *Amphibians of Ohio. Part I. The Frogs and Toads* (1946). Such a complete and comprehensive guide to Ohio's amphibians has been long overdue.

This book begins with a brief Abstract, Preface, Dedications, Acknowledgements, Editors and Contributors, and a very brief description of the maps. This page also provides a very useful map of Ohio's Lake Erie Islands. As mentioned on this page, included with the volume is a pull-out map of Ohio's townships and counties. This map is also reproduced on the final four pages. The book is then broken down into 12 sections: Introduction, History of Herpetology in Ohio, the Ohio Environment, Amphibian Systematics, Salamanders, Frogs and Toads,

Potential Occurrences and Exclusions, Developing Priorities for Conservation of Ohio's Amphibian Diversity, Amphibian Conservation, Ohio Amphibian Distributions, Environmental Applications, and Summary and Outlook. Following these sections are two Appendices, a Glossary, Literature Cited, and finally the Index.

The Introduction is short and comprehensive. Of greatest interest to me were the tables breaking down the exhaustive work conducted by each of the editors over the years that ultimately contributed to this volume. To produce a volume such as *Amphibians of Ohio* takes a massive amount of work and I can't recall seeing a book such as this providing detailed information on the effort put into gathering the data to produce it. I think a great many take for granted the sheer amount of work and dedication it takes to pull off something like this.

Section II reviews the history of herpetology in Ohio, which is quite storied. This includes a short synopsis of how our own international Society for the Study of Amphibians and Reptiles began as The Ohio Herpetological Society. Included as well are contacts for all of Ohio's extant herpetological societies. Given the general decline in herpetological societies over the years, it is nice to see that Ohio still has several up and running.

Section III and its six subsections describe all aspects of the environments in Ohio. These are straightforward, yet detailed enough to provide the reader with more than just the brief overview found in some guides. Section IV covers amphibian systematics. There is also an introduction to the species chapters, which make up the majority of the book.

The next two sections cover salamanders and frogs (Sections V and VI, respectively). Each section begins with a detailed discussion of each order's biology. This portion also includes a key for all species of Ohio salamanders and frogs. Section VI also includes a very detailed discussion on anuran calls. There are written descriptions of each species calls, including the various kinds of call that may be produced (advertisement, aggressive, etc.). There are even sonograms of each species' advertisement call, which is a nice detail missing from many state guides. Then the sections move into the real meat of this tome, the species chapters, of which there are 37. The authors have made every effort to make each chapter as detailed as possible. For example, the chapter on the relatively poorly known Four-toed Salamander (*Hemidactylium scutatum*) by Timothy A. Herman is over 19 pages long. Each chapter also includes a number of quality color photographs, although there are a handful that appear a bit grainy or somewhat pixelated (e.g. Fig. 33-1 C and D, Fig. 33-2, and F33-7). Thankfully, it is a small number of images and detracts little from the overall book.

Section VII includes potential occurrences and exclusions. The one potentially occurring species, the Southern Leopard Frog (*Lithobates sphenoccephalus*), is discussed with the same care and within the same format as the regular species chapters. In most state guides, potentially occurring species are covered with little more than a short paragraph. The exclusions were interesting to me as I have not seen a guide that goes out of the way to point out species that do not occur in the state. However, the section makes perfect sense as all of these species live nearby in surrounding states and had been previously claimed as possibly entering Ohio.

Section VIII, titled Developing Priorities for Conservation of Ohio's Amphibian Diversity, is valuable for those wanting to know how species are ranked for research and conservation needs within a state. The methods and materials are laid out

clearly. This is followed by Section IX which discusses conservation of Ohio's amphibians and the threats faced. Section X discusses the distribution of amphibians in Ohio in a contextual way, pointing out the fact that many of the state's amphibians are at periphery of their ranges. Section XI has three subsections discussing amphibians as indicators of wetland quality and using salamanders to classify headwater streams.

Section XII rounds out the book with a summary of what led to the creation of this book as well as comments on the future of amphibian work in Ohio. The two appendices are very useful, covering field techniques, proper documentation, and preparation of voucher specimens. Included is a photo-documentation form that can be copied and used by those in the field to turn into the Ohio Department of Natural Resources Division of Wildlife. Directions on where to send it, something that many amateur herpers are often unsure of when they make a potentially new observation, are also provided. There are also recommendations for the photo-documentation of each species. Following this are the Glossary and the Literature Cited, which is a whopping 72 pages! In my estimation, this massive reference section is almost worth the price of the book on its own.

If you work with, or have more than a passing interest in, any of the species covered in *Amphibians of Ohio* you would do well to purchase this masterpiece no matter what part of that species' range you are in. Even if you are extralimital, this is a fantastic addition to any herp library. And of course, if you are a herp enthusiast at any level residing in Ohio, this book should definitely be on your bookshelf. You are unlikely to find a better referenced or more thorough treatise on any state's amphibians. What makes *Amphibians of Ohio* even more of a triumph is that while massive and incredibly detailed, it is as accessible to the amateur field herper or naturalist as it is to the most seasoned of herpetologists. *Amphibians of Ohio* is well worth the cost and I eagerly await the upcoming sister volume on the reptiles of Ohio.

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Art in Herpetology

As space and available material permit, we will occasionally publish examples of historical as well as contemporary herpetological art. We welcome the submission of historical material under the following conditions:

- The work should be copyright-free and be provided as a high-resolution digitized file (consult Herpetological Art and Illustration Coordinator or Editor for specifications).
- Accompanying text should provide information on the subject matter, artist/illustrator, and publication source. Include references as needed to appropriately attribute information from other sources.

Contemporary artists are invited to submit their own work for publication:

- Artist will retain copyright of all submitted material.
- Accompanying text should provide information about technique, media, or other information likely to be of interest, especially to other artists. Other details of interest include the source of illustration subject (e.g., scientific name, geographic origin, etc.) or the work (e.g., book publication, etc.) for which the illustration was produced.
- Artists are welcome to include contact information (e.g., email address, website location), as well as indicating whether original art or prints are available for sale or if the artist is available for commissioned work.

Material may be submitted for review to Jackson Shedd, Herpetological Art and Illustration Coordinator at jackson_shedd@sbcglobal.net.

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