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Review of *Amphibians and Reptiles of Montana* by J.
Kirwin Werner, Bryce A. Maxell, Paul Hendricks,
and Dennis L. Flath

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Amphibians and Reptiles of Montana. By J. Kirwin Werner, Bryce A. Maxell, Paul Hendricks, and Dennis L. Flath. Missoula, MT: Mountain Press Publishing Company, 2004. xii + 262 pp. Maps, photographs, identification guide, appendixes, glossary, selected bibliography, index. \$20.00 paper.

This volume documents comprehensively Montana's herpetofauna in a field guide/natural history format. As such, it joins other relatively recently published

guides to the herpetofaunas of the northern Great Plains states and provinces that border Montana to provide extensive background information about amphibians and reptiles across this broad region. Assembled by a consortium of authors with a wealth of first-hand experience, the guide is profusely illustrated with color photographs of habitats and animals in the field, almost all of good to excellent quality, though a few are too small or indistinct to illustrate clearly the features being considered. For the most part, however, this shortcoming is offset by simple and effective line drawings elsewhere in the book (if one knows where to look, as cross-referencing is not the volume's greatest strength).

The main body of the book (136 pages) provides accounts of the 31 species known to occur in Montana and six species of questionable occurrence. These species accounts are attractively set out, each comprising four pages, the first of which displays a full-body picture of the species and a range map. The next two pages provide textual description of features, taxonomy, distribution, habitat, behavior, reproduction, development, and remarks, as well as information about the etymology of the scientific name of the species in question (which is mostly accurate, though there are a few lapses). The final page presents a variety of supplemental photographs of life history stages and color variants. Boldfaced terms and phrases in the species accounts help with cross-referencing to the keys and glossary.

Even though the contents of the book are generally well executed, I was left feeling that a different order of presentation would be more user-friendly. Placing the coverage of Montanan environments and native amphibian and reptile taxa before the ancillary information about the history of herpetology in Montana, the general biology of amphibians and reptiles, and conservation issues would help to keep associated sets of material together.

The keys are logically laid out and written in a way to allow nonspecialists to use them with relative ease. Placing the keys before, rather than after, the species accounts would be a better strategy, in my opinion, thereby introducing basic and important terminology earlier.

Overall the book has high production values. The text is clearly written and there are few typographical errors. In the section dealing with the biology of amphibians and reptiles a few factual errors appear, such as characterizing the caecilians as lungless (page 12). The glossary is suspect in its definition of a few terms (allantois, costal groove, epithelial, gestation, incubation), but mostly the information is concise and accurate. The map of Montana's ecological provinces is strangely segregated by 200 pages from the table (appendix A) that documents which species occur in each of these provinces.

Useful details about contact information for wildlife agencies, the reporting of amphibian and reptile observations, and rattlesnake bites and treatment are provided as appendices D-F. A selected bibliography rounds out the text.

Quibbles about layout aside, I found this volume lucid, packed with information, attractive, and extremely useful. It is a major contribution to Montanan natural history and herpetology and a must for anyone interested in these topics. **Anthony P. Russell**, *Department of Biological Sciences, University of Calgary*.