

Preface

It is an admirable feature of herpetologists that they are able to cross the boundaries between different aspects of their subject, which remains, perhaps more than other branches of zoology, a single coherent discipline.

A. d'A. Bellairs and C. B. Cox, 1976

Those of us lucky enough to be herpetologists, whether professional or amateur, clearly recognize the value of all amphibians and reptiles. They not only are part of our own evolutionary history, but also are an integral part of our natural heritage; they, along with all other animal and plant species, constitute life on Earth. The excitement and enthusiasm that we all experience while observing and studying amphibians and reptiles have brought together a remarkable diversity of people, collectively known as herpetologists. The continued survival of the animals that have so deeply touched our lives depends on our ability to communicate what we know about them. We broadened our horizons writing this book; we hope reading it broadens yours.

Our goal in revising *Herpetology: An Introductory Biology of Amphibians and Reptiles* was twofold. First, we wished to update the text to include new concepts and interpretations of biology as they apply to herpetology and to provide the evolutionary and classificatory perspective of living amphibians and reptiles circa mid-1999. Second, we wished to improve the didactic scope of the text by introducing more concepts and associated examples and by demonstrating different interpretations and uncertainties. We have not attempted to be encyclopedic; thus, we have not included all concepts or all of the excellent studies that examine these concepts.

The first edition excluded literature citations from the text. We recognize their importance to the more advanced readers and their disruptive influence on the

biologically and herpetologically novice reader. As a compromise, we have included citations in the text but have limited their numbers; we have included reference information at the end of each chapter for those desiring ready access to additional information. We include a brief glossary of terms and concepts that are not explained when first used in the text.

Classification and nomenclature are amidst major changes. New fossils, new techniques for obtaining and interpreting phylogenetic data, and the beginnings of a truly phylogenetic taxonomy and its associated nomenclature are changing amphibian and reptilian classification monthly. We have attempted to be as current as possible, and our classification sections reflect published interpretations through July 1999. Our classification contains a mix of the old and the new, perhaps befitting of these changing times. We have adopted the phylogenetic taxonomic concept of using a hierarchical arrangement to depict classificatory levels and have discontinued the use of higher-level labels (order, class, etc.). While we avoid the use of family and subfamily as labels in titles and classifications, we have found it convenient at times to use the familial and generic label within a textual discussion. There are numerous phylogenies for most groups of amphibians and reptiles, and these hypotheses result in different classifications—sometimes strikingly different. We have simply selected a single cladistic interpretation for each group or combined the results of two interpretations when a single cladistic analysis for all members of the group (clade) was not available. We

discuss other interpretations and analyses, but not necessarily all available studies, to ensure that the reader is aware that other interpretations exist. We use Latinized familial and subfamilial group names for monophyletic groups and Anglicized or Latinized names in quotes for groups that are of uncertain monophyly. Some authors have not assigned family names to some species and groups of species that represent a sister taxon to another family; where Latinized familial names are available, we

have used the available name or elevated a subfamilial name if that latter taxon includes the same set of species. For example, Ford and Cannatella (1993) recognized *Hemisus* as a potential sister taxon of Dendrobatidae or Microhylidae; hence, we use the available Hemisotidae. Distributions are an important component of an organism's biology; our maps show the natural (non-human dispersed) distribution as best as we were able to determine it.