



How to use this book

Grzimek's Animal Life Encyclopedia is an internationally prominent scientific reference compilation, first published in German in the late 1960s, under the editorship of zoologist Bernhard Grzimek (1909–1987). In a cooperative effort between Gale and the American Zoo and Aquarium Association, the series has been completely revised and updated for the first time in over 30 years. Gale expanded the series from 13 to 17 volumes, commissioned new color paintings, and updated the information so as to make the set easier to use. The order of revisions is:

- Volumes 8–11: Birds I–IV
- Volume 6: Amphibians
- Volume 7: Reptiles
- Volumes 4–5: Fishes I–II
- Volumes 12–16: Mammals I–V
- Volume 3: Insects
- Volume 2: Protostomes
- Volume 1: Lower Metazoans and Lesser Deuterostomes
- Volume 17: Cumulative Index

Organized by Taxonomy

The overall structure of this reference work is based on the classification of animals into naturally related groups, a discipline known as taxonomy—the science in which various organisms are discovered, identified, described, named, classified, and catalogued. Starting with the simplest life forms, the lower metazoans and lesser deuterostomes, in Volume 1, the series progresses through the more advanced classes of classes, culminating with the mammals in Volumes 12–16. Volume 17 is a stand-alone cumulative index.

Organization of chapters within each volume reinforces the taxonomic hierarchy. In the case of the volume on Reptiles, introductory chapters describe general characteristics of the Class Reptilia, followed by taxonomic chapters dedicated to Order and Family. Species accounts appear at the end of Family chapters. To help the reader grasp the scientific arrangement, each type of taxonomic chapter has a distinctive color and symbol:

- = Order Chapter (blue background)
- ▲ = Family Chapter (yellow background)

As chapters narrow in focus, they become more tightly formatted. Introductory chapters have a loose structure, reminiscent of the first edition. Although not strictly formatted, chapters on Orders are carefully structured to cover basic information about the group. Chapters on Families are the most tightly structured, following a prescribed format of standard rubrics that make information easy to find. These chapters typically include:

- Thumbnail introduction
 - Common name
 - Scientific name
 - Class
 - Order
 - Suborder
 - Family
 - Thumbnail description
 - Size
 - Number of genera, species
 - Habitat
 - Conservation status
- Main chapter
 - Evolution and systematics
 - Physical characteristics
 - Distribution
 - Habitat
 - Behavior
 - Feeding ecology and diet
 - Reproductive biology
 - Conservation status
 - Significance to humans
- Species accounts
 - Common name
 - Scientific name
 - Subfamily
 - Taxonomy
 - Other common names
 - Physical characteristics
 - Distribution
 - Habitat
 - Behavior
 - Feeding ecology and diet
 - Reproductive biology
 - Conservation status
 - Significance to humans

Resources

- Books
- Periodicals
- Organizations
- Other

Color graphics enhance understanding

Grzimek's features approximately 3,500 color photos, including nearly 130 in the Reptiles volume; 3,500 total color maps, including more than 160 in the Reptiles volume; and approximately 5,500 total color illustrations, including approximately 300 in the Reptiles volume. Each featured species of animal is accompanied by both a distribution map and an illustration.

All maps in *Grzimek's* were created specifically for the project by XNR Productions. Distribution information was provided by expert contributors and, if necessary, further researched at the University of Michigan Zoological Museum library. Maps are intended to show broad distribution, not definitive ranges.

All the color illustrations in *Grzimek's* were created specifically for the project by Michigan Science Art. Expert contributors recommended the species to be illustrated and provided feedback to the artists, who supplemented this information with authoritative references and animal skins from University of Michigan Zoological Museum library. In addition to illustrations of species, *Grzimek's* features drawings that illustrate characteristic traits and behaviors.

About the contributors

All of the chapters were written by herpetologists who are specialists on specific subjects and/or families. Topic editor James B. Murphy reviewed the completed chapters to insure consistency and accuracy.

Standards employed

In preparing the volume on Reptiles, the editors relied primarily on the taxonomic structure outlined in *Herpetology: An Introductory Biology of Amphibians and Reptiles*, 2nd edition, edited by George R. Zug, Laurie J. Vitt, and Janalee P. Caldwell (2001). Systematics is a dynamic discipline in that new species are being discovered continuously, and new techniques (e.g., DNA sequencing) frequently result in changes in the hypothesized evolutionary relationships among various organisms. Consequently, controversy often exists regarding classification of a particular animal or group of animals; such differences are mentioned in the text.

Grzimek's has been designed with ready reference in mind, and the editors have standardized information wherever feasible. For **Conservation Status**, *Grzimek's* follows the IUCN Red List system, developed by its Species Survival Commission. The Red List provides the world's most comprehensive inventory of the global conservation status of plants and an-

imals. Using a set of criteria to evaluate extinction risk, the IUCN recognizes the following categories: Extinct, Extinct in the Wild, Critically Endangered, Endangered, Vulnerable, Conservation Dependent, Near Threatened, Least Concern, and Data Deficient. For a complete explanation of each category, visit the IUCN web page at <http://www.iucn.org/themes/ssc/redlists/categor.htm>.

In addition to IUCN ratings, chapters may contain other conservation information, such as a species' inclusion on one of three Convention on International Trade in Endangered Species (CITES) appendices. Adopted in 1975, CITES is a global treaty whose focus is the protection of plant and animal species from unregulated international trade.

In the Species accounts throughout the volume, the editors have attempted to provide common names not only in English but also in French, German, Spanish, and local dialects. Unlike for birds, there is no official list of common names for reptiles of the world, but for species in North America an official list does exist: *Scientific and Standard English Names of Amphibians and Reptiles of North America, North of Mexico, with Comments Regarding Confidence in our Understanding*, edited by Brian I. Crother (2000). A consensus of acceptable common names in English, French, German, Portuguese, and Spanish for European species exists in the *Atlas of Amphibians and Reptiles in Europe*, edited by Jean-Pierre Gasc, et al. (1997). Two books purportedly contain common names of reptiles worldwide, but these are names mostly coined by the authors and do not necessarily reflect what the species are called in their native countries. The first of these books, *Dictionary of Animal Names in Five Languages. Amphibians and Reptiles*, by Natalia B. Anajeva, et al. (1988), contains names in Latin, Russian, English, German, and French. The second is *A Complete Guide to Scientific Names of Reptiles and Amphibians of the World*, by Norman Frank and Erica Ramus (1995); for those species for which no commonly accepted common name exists, the name proposed in this book has been used in the volume on Reptiles.

Grzimek's provides the following standard information on lineage in the **Taxonomy** rubric of each Species account: [First described as] *Atractaspis bibroni* [by] A. Smith, [in] 1849, [based on a specimen from] eastern districts of the Cape Colony, South Africa. The person's name and date refer to earliest identification of a species, although the species name may have changed since first identification. However, the entity of reptile is the same.

Readers should note that within chapters, species accounts are organized alphabetically by subfamily name and then alphabetically by scientific name.

Anatomical Illustrations

While the encyclopedia attempts to minimize scientific jargon, readers will encounter numerous technical terms related to anatomy and physiology throughout the volume. To assist readers in placing physiological terms in their proper context, we have created a number of detailed anatomical drawings. These can be found on pages xxxxx, xxxxx, xxxxx,

xxxxx, and xxxxx. Readers are urged to make heavy use of these drawings. In addition, terms are defined in the **Glossary** at the back of the book.

Appendices and index

In addition to the main text and the aforementioned **Glossary**, the volume contains numerous other elements. **For Further Reading** directs readers to additional sources of information about reptiles. Valuable contact information for **Organizations** is also included in an appendix. An exhaustive **Reptiles species list** records all known species of amphibians as of November 2002, based on information in the EMBL Reptile Database (<http://www.reptiliaweb.org>) and organized according to *Herpetology*, 2nd edition, by Zug, Vitt, and Caldwell; the section of turtle species was supplemented with information obtained from the World Turtle Database, EMYSsystem (<http://emys.geo.orst.edu/>). And a full-color **Ge-**

ologic time scale helps readers understand prehistoric time periods. Additionally, the volume contains a **Subject index**.

Acknowledgements

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