

Reptile Ecology and Conservation: A Handbook of Techniques

Edited by C. Kenneth Dodd, Jr. 2016. Oxford University Press, Great Clarendon Street, Oxford, UK, OX2 6DP. 490 pages, 79.95 CAD, Paper, 58.99 CAD, E-book.

Methods in reptile ecology and conservation have evolved greatly over the past few decades. Satellites can now track the movement of sea turtles and water samples can be used to detect the species present in a wetland using environmental DNA. *Reptile Ecology and Conservation* brings together 30 papers written by 57 experts on a variety of new and standard techniques. While most of the authors are from the USA, there are authors from South America, Europe, Africa, and Asia, giving the book a global perspective.

The book is divided into six parts. Part one, Introduction, consists of three chapters covering reptile diversity and life history, setting research objectives, and data collection. Part two, The Individual, consists

of six chapters on marking and measuring individuals, digital identification, preserving specimens, reproduction, diet, and movement patterns. Part three, Sampling Reptiles, is composed of seven chapters on locating or capturing different groups of reptiles. Two preliminary chapters summarize basic methods for surface-dwelling reptiles and arboreal or fossorial reptiles, while the other chapters focus on different reptile groups: sea snakes, freshwater turtles, terrestrial turtles, sea turtles, and crocodylians. Part four, Reptiles in the Community, consists of six chapters on plot and transect censuses, rapid assessments of species diversity, measuring microhabitats, water quality and toxicology, species richness and diversity, and landscape ecology. Part five,

Experimental Applications, Physiological Ecology, and Genetics, is composed of three chapters on experimental design, thermal ecology, and the role of genetics. Part six, Trends Analysis and Conservation Options, consists of four chapters on occupancy models, estimating abundance, biological sampling for disease monitoring, and conservation management.

Entire books have been written on many of these topics, so these chapters only provide a basic introduction and high-level review of the concepts and issues. As such, the chapters can lack detail. For example, the section on cover board surveys does not even discuss the effect of different types of cover objects on the species detected. Although chapters had to be kept short to limit the physical size of the book, inserting additional references would not have significantly increased the length of the book.

The chapter on data collection took a novel approach. Rather than just present his own perspective, the author surveyed 28 experienced herpetologists to get a broad range of opinions and experiences. Although the trusty field book is the most commonly used method for data

collection, a compelling argument is made that tablet computers have many advantages over field books, particularly when coupled with back-up cloud storage to prevent data loss and the ability to consult years of data in the field.

Reptile Ecology and Conservation is similar to another recent book, *Reptile Biodiversity: Standard Methods for Inventory and Monitoring* (edited by McDiarmid *et al.* 2012, University of California Press). For example, Richard Vogt wrote the section on sampling freshwater turtles for both books. Which book is better will depend upon a reader's particular interest. Dodd's book has chapters on toxicology and biological sampling for disease, which are not covered in the McDiarmid book. Examine both books carefully before deciding which one to purchase. *Reptile Ecology and Conservation* is an excellent book both for established researchers looking for new ideas and graduate students just beginning their research careers.

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