

## The Bog Turtle. Natural History and Conservation

Robert T. Zappalorti. 2023. ECO Natural History Series, ECO Publishing, Rodeo, New Mexico (www.ecouniverse.com). Gordon W. Schuett and Charles R. Smith (eds.). 188 pp. Softcover. US \$29.95. ISBN: 978-1-938850-63-9.

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*The Bog Turtle: Natural History and Conservation* by Robert T. Zappalorti is an engaging, in-depth species review of the secretive and critically endangered Bog Turtle (*Glyptemys muhlenbergii*), a small turtle occurring in bogs and fens of the

eastern United States. Robert Zappalorti has studied Bog Turtles for over 50 years and therefore has a unique perspective on the history of Bog Turtle research. This book combines information about Bog Turtle ecology and life history with Robert Zappalorti's personal stories about his time studying Bog Turtles. This book also summarizes Bog Turtle research literature, with descriptions of research designs and methodologies that enabled important discoveries about Bog Turtle biology. The book is packed with colorful photographs not only of Bog Turtles, but also of suitable habitat, co-occurring species, and even research supplies. Anyone interested in the natural history of the Bog Turtle will appreciate this book, including academics, wildlife professionals, aspiring herpetologists, and simply those interested in understanding more about this secretive and rare turtle.

The book is organized into chapters that cover all major aspects of Bog Turtle ecology, life history, and conservation strategies. The early chapters provide a comprehensive breakdown of geographic range by state without disclosing the specific localities of Bog Turtle sites. The chapter on Bog Turtle habitat is uniquely useful, as it includes numerous photographs of suitable habitat throughout the geographic range of the species. This chapter discusses indicator plant species as well as suitable soils and hydrology. Robert Zappalorti has conducted Bog Turtle surveys across the geographic range of the species, and therefore succinctly outlines commonalities of habitat characteristics across the range.

Another unique aspect of this book is the detailed description of the process and standards of Bog Turtle surveying and trapping. Again, one strength is the quality and quantity of photographs included. The book includes images of turtles of different ages (including examples of young versus older turtle carapaces), common shell abnormalities, and detailed photos of marking strategies. Beyond that, there are photos of equipment used to conduct surveys and even examples of datasheets. For those interested in the details of how Bog Turtle populations have been identified and monitored over the past few decades, succinctly outlines commonalities of habitat characteristics across the range.

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Chapters focusing on Bog Turtle ecology, such as life history, behavior, and reproduction, combine information from the published literature with personal stories from

Robert Zappalorti's own experiences and insights from other researchers in the field. These personal insights will engage a general audience, and help readers connect the results of studies conducted in different geographic regions. Chapters focused on conservation strategies discuss a broad array of potential habitat management strategies, habitat protection through easements, as well as captive breeding efforts and considerations.

Species accounts that include comprehensive overviews of past research efforts are especially significant for turtle conservation. The long life spans of many turtle species necessitate sustained research projects to characterize population dynamics or monitor the effects of management strategies. Such endeavors may span the careers of multiple generations of researchers, making comprehensive summaries of research history critical for guiding future inquiries. In this regard, this book is a valuable resource, offering a meticulous overview of the current state of our understanding of Bog Turtle ecology and the journey that brought this knowledge to light.

