

Book Review

Mammals of Ohio

Harder JD, Cameron GN. 2022. *Mammals of Ohio*. Athens (OH): Ohio University Press. 437 p. 7 x 10 in., paper. \$39.95. ISBN-13: 978-0-8214-2463-6.

MAMMALS OF OHIO IS A HIGHLY informative and useful publication that should quickly become a favorite of wildlife biologists, scholars, students, and others interested in the diversity and habits of mammalian wildlife found in Ohio. Organized and presented in a compact volume—small enough to be useful in the field—it is comprehensive in describing phylogenetic relationships and morphological characteristics as accepted by the current literature in mammalogy.

The text is useful for field identification because it is written in a clear and concise manner, focusing on the more salient features of each species. This volume includes detailed descriptions and behavior information for 55 wild mammalian species considered by the authors to be currently present in Ohio. (Interestingly, the economically and ecologically significant—and increasing—population of feral swine (wild boar, *Sus scrofa*) in Ohio is not addressed.)

The presentation is thorough, with well selected illustrations and clear, concise, descriptions that define specific characteristics and differences of habitat, anatomy, behavior, diet, and other factors among similar species. The text offers typical ranges of physical measurements for individual adults, as well as a discussion of variations in appearance and pelage color. Specific illustrations include color photographs, charts, and confirmed range maps, plus excellent line drawings of dental, skeletal, and other morphological characteristics. Sexual dimorphism is also discussed when significant.

This work includes a preface that discusses other resources on North American mammalian species, mostly focusing on other states or subcontinental regions. For Ohio, the work of J.P. Kirtland (1838) (listing 50 mammalian species) and particularly Jack L. Gottschang's *A Guide to the Mammals of*

Ohio (1981)¹ are significant. Differences in species included in Gottschang's *Guide* and this current book are discussed in detail as deemed appropriate by chapter. The preface is followed by acknowledgments and an introduction providing general information and a clear outline of the organization of the individual chapters. Chapters 1 and 9 are broadly descriptive of Ohio in general, while chapters 2 through 8 are arranged phylogenetically.

Chapter 1 reviews the natural history of mammals in Ohio. The review of Ohio's geological evolution provides a good description of the state's sedimentary bedrock formations and subsequent alteration by glaciation and erosion. A map of glacial deposits in Ohio includes county boundaries. Each of Ohio's physiographic regions are illustrated on a state map with county outlines. These

5 physiographic regions (Lake Plains, Till Plains, Glaciated Allegheny Plateau, Unglaciated Allegheny Plateau, and Bluegrass Section of the Interior Low Plateau) are discussed in detail, with descriptions of geologic formation, topography, soil types, historic and current flora, fauna, and land use practices. Illustrations include maps showing the current extent of forested land and the natural vegetation encountered during Ohio's earliest land surveys. The chapter concludes with historic land use, wildlife exploitation, and a chronology of habitat alteration and conservation measures.

Ohio's mining industry and related environmental issues are not discussed. Coal mining practices in the Allegheny Plateau have significantly and permanently altered geological strata and features, and continue to disrupt ecosystems. Surface mining devastated vast areas of natural communities and, along with underground mines, polluted ground water and watersheds with acid runoff and sedimentation. These ecological alterations and environmental disruptions are unlikely to ever be thoroughly documented, as the Ohio Allegheny Plateau is historically one of the least studied and least documented areas of Ohio prior to the significant mining activity that began in the 1800s.²

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Chapters 2 through 8 are devoted to the species of each mammalian group in Ohio's natural fauna. The chapters are presented according to accepted zoological phylogenetic order and nomenclature. Range maps, history in Ohio, morphology, life history, and ecological relationship details are excellent, as are the maps and literary citations. Each chapter includes information regarding economic importance, common parasites, and diseases (particularly any affecting their continued existence or transmittable to humans or domestic animals).

Chapter 2 features Ohio's only marsupial mammal, the Virginia opossum, *Didelphis virginiana*. Characteristics of marsupials are discussed, and unique features of the opossum including dentation, the prehensile tail, the opposable "thumbs" on the rear feet, and the bifurcate sexual organs (among other features) are described.

Chapter 3 describes Ohio's single surviving lagomorph, the eastern cottontail rabbit, *Sylvilagus floridanus*, a significant game and prey species.

Chapter 4 describes rodents—earth's most important and successful mammalian order—represented in Ohio by 21 species ranging in size from mice to the beaver.

Chapter 5 is devoted to moles and shrews, including Ohio's smallest mammal, the least shrew, *Cryptotis parva*.

Chapter 6 describes Ohio's carnivores, including canids (foxes and coyotes), a feline (bobcat, *Lynx rufus*), a mephitid (striped skunk, *Mephitis mephitis*), a *Procyon* (northern raccoon, *Procyon lotor*), an ursid (American black bear, *Ursus americanus*), and several mustelids (river otter, badger, mink, and weasel).

Chapter 7 describes Ohio's single hoofed species, the white-tailed deer, *Odocoileus virginianus*.

Chapter 8 is devoted to Ohio's flying mammals, the bats (Chiroptera), represented by 10 species.

Chapter 9 discusses mammalian species that are in any of the following 3 categories: extirpated from Ohio but known to have existed in historic times, known in Ohio through documented occasional occurrences, or known only from the fossil record of Ohio's prehistoric mammalian fauna.

The text concludes with useful appendixes including dental formulas of Ohio mammals, equivalent units of metric and imperial measures, a list of common and scientific names of selected plants and animals, and a glossary of scientific terms that may be unfamiliar to many readers.

Reviewer Comments

In general, this is an excellent work with comprehensive material of interest to professional biologists, teachers, college students, hobbyists, farmers, landowners, and anyone in the general public wishing to learn more about Ohio's mammalian fauna. Obvious editorial errors are minimal. Information concerning mining in the Allegheny Plateau² and feral swine³ in Ohio is available in Ohio Department of Natural Resources publications. Overall, the book is a valuable addition to any naturalist's personal library.

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Literature Cited

- ¹ Gottschang JL. 1981. A guide to the mammals of Ohio. Columbus (OH): Ohio State University Press. 176 p. ISBN-13: 9780814202425.
- ² Abandoned mine lands reclamation programs [webpage]. Columbus (OH): Ohio Department of Natural Resources, Division of Mineral Resources Management, Mining Reclamation and Restoration; [accessed 2023 Apr 10]. <https://ohiodnr.gov/business-and-industry/best-management-practices/mining-reclamation-restoration/aml-reclamation-programs>
- ³ Invasive species: feral swine in Ohio [webpage]. Columbus (OH): Ohio Department of Natural Resources, Wildlife Management, Invasive Species; [accessed 2023 Apr 10]. <https://ohiodnr.gov/discover-and-learn/safety-conservation/wildlife-management/invasive-species/feral-swine>

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