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Book Review: *MAMMALS OF THE NORTHERN
GREAT PLAINS* by Jones, J. K., Jr., D. M.
Armstrong, R. S. Hoffmann, and C. Jones

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REVIEWS

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Jones, J. K., Jr., D. M. Armstrong, R. S. Hoffmann, and C. Jones. MAMMALS OF THE NORTHERN GREAT PLAINS. Univ. Nebraska Press, Lincoln, xii + 379 pp., illustrated, 1983. Price, \$32.50 (hardbound).

Mammals of the Northern Great Plains is an attractive clothbound book that comes in a colored dust jacket showing a female pronghorn walking in the snow. The book is produced in a double-column format set in a 47½ by 32½ pica typebed (I personally do not like the unjustified right-hand margins on both columns). The book contains 206 figures most of which are set in a single column. Of the 206 figures, 80 are distribution maps, 104 are photographs mostly of living animals, 20 are drawings used to illustrate keys or points made in the text, and two are maps of the potential natural vegetation and important physiographic features. The geographic ranges are shown by shading on the distribution maps. Where appropriate, distribution of subspecies are shown by differential shading. Some maps combine the ranges of more than one species. Dots are used only on maps for *Tadarida brasiliensis* and the combined map for *Sorex merriami*, *S. nanus*, and *S. palustris*.

The geographic region covered by this book is the states of North Dakota, South Dakota, and Nebraska. A total of 111 species is covered by the book (105 native and six introduced species). Five of the introduced species (those from Europe) are covered in a short section following the main accounts, whereas the other introduced species, *Oreamnos americanus* (a North American species), is covered in taxonomic order along with the native taxa.

Initial pages include the Contents, Figures, Introduction, Environment, Zoogeography, and a section on the Class Mammalia. In the Introduction, we learn that the authors intended this book to provide "a comprehensive, yet semi-technical, treatment of free-living mammals that would prove useful to specialist and non-specialist alike." They hope that the book would be used by interested high school students to professional mammalogists as well as all professions in between. They have succeeded in this goal, although I believe the book will be less useful to the professional user. The Introduction also includes a brief history of mammalogical studies on the Northern Great Plains beginning with the expedition of Lewis and Clark. The final section of the Introduction is entitled "Study of Mammals" and appears to be directed at the younger, less-experienced readers. It encourages them to become involved in the study of mammals, but also includes a caution that it be done in a scientific manner.

The chapter on the Environment opens with a plea to look beyond the supposed monotony of this unique region revealed by the interstate highway systems to the mosaic of ecosystems that make up the Northern Great Plains. The remainder of this chapter is devoted to sections on vegetation, physiography and drainage patterns, soils, climate, and mammalian communities. The latter section includes a brief discussion of mammalian communities in general with examples from the plains and concludes with a discussion of the unique communities of the Northern Great Plains.

The chapter on Zoogeography is the best in the initial portion of the book and is well worth reading. A comparison of the diversity of the mammalian fauna of the Northern Great Plains with those from the surrounding areas is made along with a discussion of the influence of Pleistocene glaciation and post-Pleistocene climate on this diversity. Faunal elements recognized among the mammals of the Northern Great Plains are as follows: widespread (27 species, 25.8% of native fauna); Campestrian (16, 15.1%); Eastern (17, 16.2%); Montane (5, 4.8%); Boreal (6, 5.7%); Boreomontane (14, 13.3%); Chihuahuan (8, 7.6%); Great Basin (8, 7.6%); Neotropical (4, 3.9%).

The last chapter of the introductory material is titled "Class Mammalia" and is a brief review for those with a limited background in mammalogy of the history and characteristics of mammals. The last two sections of this chapter are a key to the orders of mammals of the region and a checklist. The latter is referenced to the page on which the account for the particular species occurs, which I found quite useful for quick reference.

The bulk of the book is devoted to accounts of the 105 native species and *Oreamnos americanus* that occur on the Northern Great Plains. A section is devoted to each order; each section opens with a brief account of the order and, where appropriate, keys to families and species. These keys alone are probably worth the price of the book. Short accounts are given for each included family. Accounts for each species include information under five headings—Name, Distribution, Description, Natural History, and Selected References. Each account begins with the scientific and vernacular names of the species. The section on Name gives the derivation of the scientific name and alternative vernacular names. The section on Distri-

butation gives the geographic range of the species on the Northern Great Plains to supplement the map as well as a description of the general distribution of the species. Changes in the distributional patterns of a species in recent times are discussed when appropriate. As the heading Description implies, this section gives a brief description of the characteristics of the species, including measurements. The section on Natural History covers the biology of the species including ecology, behavior, reproduction, development, molt, food habits, predators, and parasites.

The last section of each species account is Selected References. It is here that I believe the book has its greatest shortcoming. This section is typically abbreviated and in many cases will not provide an introduction to the literature of the species. Also, the facts in the text are not referenced. This will be particularly annoying to the professional trying to check the original source for an interesting fact about a species, but I also believe that this will prove frustrating to the beginning student trying to learn the literature.

The final portion of the book is devoted to short chapters beginning with Introduced Species. This chapter presents short accounts for the European rabbit, house mouse, Norway rat, nutria, and fallow deer. This is followed by a Glossary in which technical terms, which were used in the text, are explained. The addenda updates the significant literature published after the submission of the manuscript through 1982. The final two chapters are Literature Cited and an Index to scientific and vernacular names.

This book is one of only a few second-generation faunal studies including the *Mammals of the Pacific States* by Ingles (Stanford Univ. Press, 1965), *Wild Mammals of New England* by Godin (Johns Hopkins Univ. Press, 1977), and *Mammals of the Eastern United States* by Hamilton and Whitaker (Cornell Univ. Press, 1979) that cover mammals from natural geographic areas rather than on a state-by-state basis. This book is very successful in this treatment of mammalian faunas and should inspire similar regional books. *Mammals of the Northern Great Plains* will be valuable to all mammalogists and any professional who must deal with mammals from this region, as well as students from the included states who are beginning their study of mammals. This book is worth far more than its purchase price.—HUGH H. GENOWAYS, *Carnegie Museum of Natural History, 4400 Forbes Avenue, Pittsburgh, PA 15213.*