

iot's fellow expedition member and grandfather of Virginia Dare (the first English child born in America), have survived. White painted 35 species of birds and gave the Algonquian name for 23 of them.

The first naturalists in Virginia were the clergyman and botanist, John Banister, who lived at Bristol Parish from 1678 until he was accidentally killed in 1692, and the Reverend John Clayton (1657-1725), who published information about birds and weather in the world's first scientific journal, *Philosophical Transactions of the Royal Society of London*; four pages of Clayton's account are reproduced by Johnston. Sadly, although Mark Catesby spent seven years in Virginia, 1712-1719, he was then a botanical collector who had not yet learned to paint birds; from those years he mentioned only 33 bird species. When he returned later for another six years, Catesby spent his time farther south, so that his famous book deals mainly with the Carolinas and rarely makes specific mention of Virginia. In 1787, Thomas Jefferson, 14 years before he became the third president of the United States, made the first attempt to list all the birds of Virginia, adding 34 additional species to the 100 pictured for adjacent regions by Catesby.

Later chapters deal specifically with topics such as the contributions of ornithologists with the Smithsonian Institution and the United States government; conservation and game laws; artist-naturalists; extirpated and introduced bird species; falconry; and regions of ornithological importance describing the observers

All-Weather Hawk Watcher's Field Journal

By Donald Heintzelman. J. L. Darling Corp. 2614 Pacific Hwy., Tacoma, Washington 98424-1017 USA. 66 pages. U.S. \$7.95 Paper

This handy pocket field notebook, 12 by 17.5 cm., consists of a conservation note, a one-page introduction, a three-page list of the diurnal birds of prey of North and Central America, and 51 pages for field observations. At the top of each page are blanks to

Self-Portrait With Turtles: A Memoir

By David Carroll. 2004. Houghton Mifflin, 222 Berkeley Street, Boston, Massachusetts USA. 181 pages. U.S. \$23.

David Carroll first saw a Spotted Turtle at the age of eight. He has been enchanted by these amazing creatures ever since.

In this exquisitely written book the author of *The Year of the Turtle* and *Swampwalker's Journal* shares his obsession with turtles, nature and art. This basically chronological book is divided into four sections: Early Years, Art School, Middle Years, Later Years. Through these sections we see the development of a consummate naturalist and artist, witness his choice of art school over science and the growth of his teaching and artistic careers. The book concludes with Carroll hunting for turtles on the 50th anniversary of his first discovery of a Spotted Turtle.

and the contributions for each. Many famous naturalists worked in or passed through Virginia, among them John James Audubon and Roger Tory Peterson. Peterson, while stationed with the U.S. army at Fort Belvoir, "successfully petitioned the officer-in-charge to reroute the line of march on the drill field to avoid an occupied Horned Lark's nest" (page 121).

Items deserving special commendation are the detailed lists: principal ornithological accomplishments; type specimens from Virginia; local bird lists, 1870-1926; recent bird lists since 1952; Virginia nature writing, 1817-1998; books since 1965 that mention Virginia's avifauna; Algonquian Indian names of birds; bird banders, 1923-1965; principal collectors of bird specimens; and observers reporting migration records to the U.S. Biological Survey, 1884-1946. Detailed references throughout and a selection of old drawings and more recent photographs add to the interest.

Johnston's scholarly and painstaking research makes this is one of the finest ornithological histories available for any state. There are some weaknesses, such as the lack of a Virginia map and an incomplete and inconsistent index which omits names of some important people. This book is a necessity in every museum and University library in North America, and for any one with an interest in the history of ornithology.

C. STUART HOUSTON

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fill in for date, time, weather, and location, including GPS coordinates. The special feature is the use of all-weather writing paper so that one can write in the rain!

C. STUART HOUSTON

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Carroll's memoir overcomes the common pitfall of bogging down in autobiographical trivia. His writing is compelling and thought-provoking: "Consecrated to the God of my parents before my eyes were open, I lived my first eight years in a closed circle of family, relatives, church, and school. I lived in a totally human environment filled with human concerns and considerations. It was a world built by people for people." And yet within three days of his family moving to a new home, Carroll had discovered a wetland and encountered a Spotted Turtle: "With that first turtle I crossed a boundary of greater dimensions than I can ever fully comprehend. I changed lives within a life, worlds within a world."

Although Carroll's passion is turtles, his deep connection with nature will resonate with any avid natu-

ralist. His writing is honest and moving in its evocation of special places and moments as well as the loss of many of those special places over time: "My long history with turtles has been marked time and again by loss of place, by the physical and spiritual annihilation of the landscape, compelling me to move on in search of wilder places."

This is also the kind of book you can give to non-naturalist friends to try to make them understand why

you love wading through swamps. Its combination of graceful writing, compelling anecdotes and Carroll's own beautiful black and white illustrations are enough to enchant almost any intelligent reader.

DAVID SEBURN

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Wild Mammals of North America: Biology, Management, and Conservation (Second edition)

Edited by George A. Feldhamer, Bruce C. Thompson, and Joseph A. Chapman. 2003. The Johns Hopkins University Press, 2715 North Charles Street, Baltimore, Maryland 21218-4363 USA. xiii + 1216 pages. U.S. \$175. Cloth.

After a 21 year interlude, the update of this monumental volume on the biology and management of North American mammals has added a third editor and given a more prominent role to conservation as opposed to economic importance. Even with a larger page format and a reduction of two chapters, the second edition is longer than the first, which reflects the accumulated increase in research over the past two decades. All of the accounts are updated to various degrees with some references as recent as the same year of publication (2003) of this book. A completely new set of authors has been recruited to write half (28) of the 55 chapters. Only six chapters have retained the original contributors and these are all single authored accounts. However, three of these accounts (black bear, badger, and manatee) are negligibly changed from the first edition. Of the 102 authors, there are three who have contributed to two chapters.

The species coverage of this revised volume has been slightly modified. There are new accounts for *Cynomys ludovicianus* (Black-tailed Prairie Dog) and *Neotoma floridana* (Eastern Woodrat) but the invasive *Rattus norvegicus* (Brown Rat) has been removed and the species of foxes, *Martes*, and skunks that were each previously presented in two chapters have each been combined. Furthermore, three chapters have been expanded including the addition of *Macrotus californicus* (California Leaf-nosed Bat) to the bats, *Ammospermophilus* (antelope ground squirrel) to the ground squirrels, and the subsuming of *Cervus nippon* (Sika Deer) into a more inclusive non-native large mammals category covering several species at the end of the book. Recent taxonomy also has been incorporated such as the generic use of *Lontra* for the river otter, *Puma* for the Mountain Lion, and *Tayassu* for the Collared Peccary.

Of the over 400 species of mammals known from North America, approximately half (210) are covered but 155 of these species are not full accounts. The chapters range from 28 detailed single-species accounts to six chapters that focus on two species with multi-taxa reports comprising the remainder. Some of these latter chapters concentrate on higher taxonomic groups including the six species of voles (genus *Microtus*)

found in North America; two genera of ground squirrels (*Spermophilus* and *Ammospermophilus*) covering 25 species; six species of foxes in the genera *Alopex*, *Urocyon* and *Vulpes*; 19 species of pocket gophers in the family Geomyidae; six species of bats from the Vespertilionidae family, one species from Molossidae, and one species from Phyllostomidae; six species representing the toothed whale suborder Odontoceti; and 11 species of the baleen whale suborder Mysticeti. The final chapter treats several exotic or alien species and their associated problems as related to the native fauna.

The general format within each account essentially has remained the same as the first edition. Chapters begin by reviewing the nomenclature, distribution, and description of the species or species-group. Most accounts include life history topics such as physiology, reproduction, age estimation, ecology, feeding habits, behavior, and mortality. A summary is then presented on the economic status, management, conservation, and research needs of the taxa under study. Other subjects covered by some but not all accounts are genetics, anatomy, development and habitat. Except for the last chapter, all have distribution maps, skull figures, and most have photographs of live animals. The book ends with two appendices identifying cranial bones and illustrating standard cranial measurements, a glossary, and an index.

With over 100 contributors to this edited book on wild mammal species deemed to have management significance in North America, it was inevitable that there would be inconsistent treatment across groups. For example, the account of the Black Bear (*Ursus americanus*) is one of the shortest chapters although it is a relatively well-studied and endangered mammal that is in need of a comprehensive management programme. There is almost no mention of its conservation status or of its economic importance, and the chapter is not much changed from the first edition. In contrast, the longest single-species account is for the Bison (*Bison bison*), a highly managed species with very few free-ranging individuals. The text has been substantially revised from the original account and is one of the more thoroughly covered species. Within the multi-taxa chapters, the presentation of information was not standardized, making it difficult to locate specific information for comparative purposes. For example, the seals began with general characteristics for pinnipeds