

lated taxa exist, such as an extinct and a threatened species or subspecies, the author juxtaposes their respective accounts, which emphasizes the precarious nature of those that are still able to hold on, albeit by a thread in numerous cases. For example, readers can compare the endangered New Zealand kaka with the extinct subspecific Norfolk Island kaka, or the relatively fortunate endangered indigo macaw with the extinct congeneric glaucous macaw. Knight's beautiful color plates accompany the accounts that, in the case of extinct species, recapture scenes that will never be enjoyed again, such as two Cuban macaws gracing a palm-studded beach or several Carolina parakeets foraging in an overgrown field.

The author opens with a reminiscence of experiencing thousands of red-spectacled amazons settling in to roost in an *Araucaria* forest in southern Brazil, only to learn 10 years later the forest was cleared for pasture and the parrots were mostly gone. His visceral response was the seed that inspired his focus on the plight of parrots around the world and, ultimately, this book. The 2014 Red List of the International Union for Conservation of Nature informed the selection of endangered species to include in this collection, with the addition of, in Forshaw's determination, especially vulnerable species, such as those restricted to islands. The introduction offers a summarized preview of the specific challenges that face parrots, as well as those concerned with parrot conservation, which are elaborated in the species accounts. For example, for many species there exists a paucity of studies on status and population trends and, regarding extinction, there are often complex reasons why a species went extinct.

The author partitions the pressures on wild parrot populations into three categories: biological, anthropogenic, and socioeconomic. The first includes characteristics such as large body size (e.g., the macaws) correlated with higher extinction risk, restricted ranges in some species, and habitat specialization. The second and third are linked and are characterized by, for example, habitat loss, degradation, and fragmentation by agriculture, logging, and commercial development. Hunting and trapping also play major roles and have decimated some populations, and the introduction of predators has had devastating effects on certain species, such as the New Zealand kakapo's inability to withstand predation by introduced mustelids. When various pressures combine, the outlook becomes particularly grim. For example, persecution of birds as crop pests in species that have already experienced loss of habitat can nudge them further toward extinction, as evidenced in the red-fronted macaw in Bolivia.

Overall, Forshaw and Knight have provided a thorough, well-organized, and aesthetic work that not only inspires us to look back at what we have lost

but also forward to prevent further extinctions; we can learn from past mistakes. In many ways, the current volume also serves as a companion volume to Forshaw and Knight's *Parrots of the World: An Identification Guide* (2006. Princeton (NJ): Princeton University Press; reviewed in *QRB* 81:293). Those involved in parrot conservation, as well as parrot admirers from all walks of life, will want a copy within reach.

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HANDBOOK OF THE MAMMALS OF THE WORLD. *Volume 7: Rodents II.*

Chief Editors: Don E. Wilson, Thomas E. Lacher, Jr., and Russell A. Mittermeier; Associate Editors: Albert Martínez-Vilalta, David Leslie, Jr., David A. Christie, and Andrew Elliott; Artwork Editor and Color Plates Illustrator: Toni Llobet; Photographic Editors: Josep del Hoyo and José Luis Copete; Distributions and Bibliography Editor: Marc Olivé; Authors: Ken Aplin et al. Barcelona (Spain): Lynx Edicions. €160.00. 1008 p.; ill.; index. ISBN: 978-84-16728-04-6. 2017.

This is the second volume of the *Handbook of the Mammals of the World* that I have reviewed and I have looked through several other published volumes. This (the seventh of nine planned volumes), like the others, is striking, large, and lavishly illustrated with color photographs and comprehensive plates illustrating species. It contains range maps and species descriptions that summarize available information.

This is the second volume on rodents, an order that includes about 40% of living mammals. The families described in this treatise include the two largest rodent families—Cricetidae (hamsters, voles, lemmings, New World rats, and mice) and Muridae (true mice and rats, gerbils and their relatives)—but also the families containing birch mice (Sminthidae), jumping mice (Zapodidae), jerboas (Dipodidae), tree mice (Platacanthomyidae), muroid mole-rats (Spalacidae), brush-tailed mice (Calomyscidae), and pouched rats, climbing mice, and fat mice (Nesomyidae). Unlike Volume 6, which included a number of diurnal species, many of these species are nocturnal, some have shockingly small distributions, and are thus uncommon. This book ensures that they will not be entirely unknown.

Among the many things that I learned is that what I assumed were Royle's Mountain voles, which used to course through my alpine hut in Pakistan, are now likely a different species—the silver mountain vole. Thus, and ironically, while I studied golden marmots, silver voles nibbled at my food and occasionally my clothes. I verified that, using our hats and patience next to their burrows, I was probably trying to catch a great jerboa with some Russian naturalists years ago (we failed). I learned about a South American

genus of vesper mice and that my favorite two species are the rejected vesper mouse (found in Brazil) and the crafty vesper mouse (found in Argentina). I learned that I really have to get to the Bale Mountains in the Ethiopian highlands—home to a number of really cute looking rats. I will likely never see a Gag Island rat—found only on Gag Island, West Papua, Indonesia. Indeed, the ranges of many of the species are depressingly small. And I learned that Norway brown lemmings can be aggressive to people (they certainly are photogenic).

There are a number of photographs of the animals in action, and there are some of inactive animals in the jaws or beaks of their predators (rodents are, after all, food for many species). Yet, compared to other volumes, this book has fewer photographs likely because most species are nocturnal and relatively unstudied. This is a shame because reading through this volume reminded me of the wonders of adaptation, the importance of isolation for speciation, and the spoils to versatile species that have been spread throughout the world. Species maps typically include only native ranges rather than introduced ranges. I was reminded that brown rats are native to Europe and northern Eurasia, while roofrats (also known as black rats) originally ranged from Europe to India and through parts of Africa. Both human commensals are now remarkably widespread.

The species accounts include what is known about distribution, habitat, food, breeding, activity patterns, movements, home range and social organization (regretfully, often very little is known), and what is known about their status and conservation. There are 89 pages and about 9700 bibliographic references—an amazing resource. The challenge is associating facts with literature because of the way the references are all bundled at the end of a species account or an introductory section. A minor quibble about another outstanding volume in this vitally important series that documents mammalian biodiversity. This is a must buy for all libraries and for mammal enthusiasts.

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MAMMALS: A VERY SHORT INTRODUCTION.

By T. S. Kemp. Oxford and New York: Oxford University Press. \$11.95 (paper). xvii + 148 p.; ill.; index. ISBN: 978-0-19-876694-0. 2017.

BONOBOS: UNIQUE IN MIND, BRAIN AND BEHAVIOR.

Edited by Brian Hare and Shinya Yamamoto. Oxford and New York: Oxford University Press. \$120.00 (hardcover); \$60.00 (paper). xiv + 285 p. + 18 pl.; ill.; index. ISBN: 978-0-19-872851-1 (hc); 978-0-19-872852-8 (pb). 2017.

After decades spent in the shadows of their better-known cousins, the chimpanzees, bonobos have finally attracted the spotlight to them, due to significant behavioral differences with their closest relatives, which makes them appear closer to humans in many ways. *Bonobos: Unique in Mind, Brain and Behavior*, edited by two researchers largely responsible for the resurgence of interest in bonobos, aims to precisely express how peculiar bonobos are, often in comparison to chimpanzees. Another of the book's goals is to establish bonobos as a valuable species, independently of chimpanzees, in order to reconstruct models of human evolution. Does this volume achieve its goals? Certainly yes. Gathering contributions of current bonobo researchers, the book will be of interest to students of animal cognition and developmental psychology, as proposed on the back cover. Students of primate ecology and conservation biology, also targeted, may find less interest in the volume, owing to the bias toward cognitive rather than ecological or conservation chapters. For example, I regret the absence of an updated chapter tackling current views on ecological differences between the habitats of chimpanzees and bonobos, which are often referred to in various chapters for their explanatory power but not laid out. Most of the authors are comparative psychologists, and although I very much agree with the theses developed by Rosati and Call in Part V, Foraging Strategies, regarding the need to explore the connections between bonobo psychological biases and their socioecology (to copy Call's title), I would have also appreciated the contribution of a field researcher on the topic. I gained most food for thought in the parts Mind and Communication and Mind and Brains Compared. In particular, contributions by Krupenye et al. and Clay and Genty suggest that bonobos may truly display unique features in theory of mind and communicative skills, respectively. I also enjoyed Hopkins et al.'s neurological approach to compare bonobos and chimpanzees. I particularly appreciated their caution regarding attempts to find fundamental differences between *the* bonobo and *the* chimpanzee. Often in this book, I indeed felt that authors contrasted bonobos with a particular image of the chim-