system that will soon be coming to your neighborhood.—MICHAEL A. MARES, *Sam Noble Oklahoma Museum of Natural History and Department of Zoology, University of Oklahoma, Norman, OK 73072, USA.*

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Macdonald, D. W., and P. Barrett. 2001. MAMMALS OF EUROPE. Princeton University Press, Princeton, New Jersey, 312 pp. ISBN 0-691-09160-9, price (paper), $24.95.

Having great respect for my old mammalian field guide (Corbet and Ovenden 1980), I took *Mammals of Europe* in hand with high expectations. Also, following recent comprehensive works on European mammals (Niethammer and Krapp 1978–2001; Mitchell-Jones et al. 1999), the time seemed ripe for more detailed information to be incorporated into field guides for the general public.

To my satisfaction, the authors were able to upgrade the book's quality in many novel ways. This field guide describes the mammals of Europe in a most colorful way, both visually and literally. The color figures are some of the most vivid I have seen in a field guide. Although expanded species descriptions fill the field guide, the language remains enjoyable and easy to follow. In general, the appearance of the book is more appealing than previously published field guides. Besides some minor shortcomings that are common characteristics for any 1st-edition books, *Mammals of Europe* is superior when judged against the present selection of field guides.

The general appearance and organization of the book is similar to other field guides. The book includes 64 color plates and detailed descriptions of 201 European mammal species with distribution maps. Navigation is facilitated by the index at the end and the table of contents in the beginning of the guide. The guide starts with an 8-page chapter on the navigation and organization of the book. This book lacks the general introduction found in its predecessor (Corbet and Ovenden 1980); I especially missed the overview map of the major biomes in Europe, as this helped to explain the distribution of many mammalian species. The use of the guide is also supported by a glossary of biological terms used in the book and a bibliography. Each order is introduced by a 1- or 2-page description, including a summary of ordinal characteristics.

The color plates are bound in the middle of the book, and the book opens easily and directly to these drawings. Color figures (at times exceeding the quality of photographs) are positioned on the right-hand side of the facing pages, whereas the left-hand side contains short descriptions of notable characteristics. Animal portraits are arranged based on taxonomic relationship as well as external similarities. Thus, the striped field mouse (*Apodemus agrarius*) shares the page with the similar but taxonomically distant birch mice (*Sicista betulina* and *S. subtilis*). Images are larger than those in previous field guides, and generally, no more than 3 or 4 species are depicted on each page. Black-and-white–penciled backgrounds supplement the color figures, depicting typical habitat of a given species. Additional pencil drawings illustrate skulls, droppings, typical tracks, and signs of the animals, although skull drawings are small and hence low on details. For rodents, these drawings can help to identify individuals at the genus level, but in many instances no species-level identification can be made. "Dead space" beneath the concise species descriptions often is filled with diagrams depicting 1 of the species in a more life-like position.

The text for each species includes name (alternative common names and explanation of the Latin name), conservation status, characteristics, habitat, habits, breeding properties, measurements, and general information. Rapid navigation is facilitated with small ink drawings: the description of each species starts with a small black-and-white picture of the animal. Although the distribution maps were updated and reflect changes from those in Mitchell-Jones et al. (1999), they are printed in black and white and are rather small. This is particularly problematic for species with limited distributions; for example, the range of the spiny mouse (*Acomys minous*) is sufficiently small (Crete and possibly Cyprus) that the map is entirely uninformative. Additionally, maps are not inserted into the species description; rather, they are placed in pairs, either on the top or at the bottom of the pages. Therefore, the connection between the maps and the species' descriptions is weak; sometimes, the distribution map of a given species is located somewhere in the following pages.

Overall, the authors of the book have done a

splendid job. Although I was less satisfied with the editorial work, I hope that these minor errors will be corrected in the next print of the book. In spite of these concerns, this book provides the most attractive and accessible summary of the mammals of Europe and will be highly useful to professionals and amateurs alike.—GÁBOR R. RÁCZ, *Biology Department, Museum of Southwestern Biology, University of New Mexico, Albuquerque, NM 87131, USA.*

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Hartwig, W. C. (ed.). 2002. THE PRIMATE FOSSIL RECORD. Cambridge University Press, Cambridge, United Kingdom, 530 + *xiv* pp. ISBN 0-521-66315-6, price (cloth), $175.00.

This valuable new volume challenges significant components of the normal view of primate history. In Chapter 1, the editor briefly comments that "... fossil primates have always been interpreted in light of how they might relate to living ones. Whether this tendency stems from scientific insight or myopia, a framework of closely related forms and conservative phylogenies has persevered." In the normal view (e.g., Clark 1959; Eisenberg 1981; Fleagle 1999), the earliest primates were Plesiadapiformes (or were closely related to them) that "took to the trees" at the end of the Cretaceous. The suborder Prosimii emerged in the Eocene, and ancestral Anthropoidea diverged in the Late Eocene in Africa. Derived African anthropoids of the Oligocene that retained only 2 premolars founded our infraorder Catarrhini. The superfamily Hominoidea radiated in East Africa and Eurasia beginning in the early Miocene, but by the Pliocene, specialized Cercopithecoidea (Old World monkeys) had replaced most hominoids. A bipedal African hominoid begat the family Hominidae during climatic perturbations of the Plio-Pleistocene.

Fieldwork and analysis by the contributors to this book over the last 2 decades have revised several key points of this view, but the editor (Chapter 1) makes it clear that the volume is not a new synthesis of fossil and living primate systematics. Instead, multiple systematic inferences coexist, supported by conflicting interpretations of the same evidence. Following the brief introduction, Rasmussen reviews current functional models for the origin of the primates by reprising his observations of *Caluromys derbianus* to address 2 competing hypotheses, that primates were initially successful "visual predators" (Cartmill 1972) and that primates initially exploited fruits at terminal branches of evolving angiosperms (Sussman 1991). Well-chosen authors with few or no axes to grind introduce 4 of the 5 sections that follow: the earliest primates and fossil prosimians (Covert); the origin and diversification of anthropoid primates (Dagosto); the fossil record of early catarrhines and Old World monkeys (no introduction); the fossil record of hominoid primates (Pilbeam); and the fossil record of human ancestry (McHenry). Each chapter reviews discovery, interpretation, and debate about a set of fossils (thoroughly illustrated with photographs and drawings), and discusses the evolutionary history of the taxon. Authors explain the phylogenetic inferences leading to their taxonomies, which seldom agree exactly when they overlap. Chapters conclude with lists of selected key historical references by fossil genus. The book ends with a comprehensive list of references cited, an index of historical figures, and a taxonomic index. Citations cover literature through 1998 comprehensively. The volume includes stimulating chapters treating all fossil primates, but this review outlines only a few modifications of the traditional primate history illuminated by agreement and disagreement among some contributors.

What new information about the origins of primates do fossils reveal?—Plesiadapiformes are quickly dropped from the primates (Rasmussen, p. 7; Covert, p. 13), although specimens obtained since this book went to press have revealed intriguing shared characters with early primates (Bloch et al. 2001). Covert's overview and the following chapters on Adapiformes (Gebo, Chapter 4) and Tarsiiformes (Gunnell and Rose, Chapter 5) illustrate differing inferences about early primates. A cladistically correct classification divides primates into the sub-