
As is commonly known the relationship between man and some wild mammalian species is extremely problematic. This holds true especially for those species whose bodily attributes are believed to be essential for human medical or cultural needs. Without doubt the musk deer belong to this group. In contrast to older assumptions of only one existing species in total four species of this small and primitive cervid genus are recognized in modern taxonomy (Himalayan musk deer – Moschus chrysogaster; black musk deer – M. fuscus; forest musk deer – M. berezovskii; Siberian musk deer – M. moschiferus). These are distributed throughout a large region in Asia including certain parts of Afghanistan, Pakistan, Nepal, Bhutan, Myanmar, the Koreas, China, Mongolia, Kyrgyzstan, Kazakhstan, and Russia (eastern Siberia, far East, Sakhalin). Males of these species produce musk in an integumental gland and store this substance in the musk sac located between the navel and the sexual organ. Although some other mammalian species (i.e., muskrat – Ondatra zibethica; desman – Desmana moschata; musk oxen – Ovibos moschata; suni – Neotragus moschatus) or plants (i.e., musk mallow – Hibiscus abelmoschus; musk rose – Rosa moschata; musk milfoil – Achillea erba-rotta moschata) are believed to produce similar aromas, these have nothing in common with the chemical substance of musk or with its odour and characteristics. Original musk exceeds most other natural constituents in smell intensity, persistence and fixative properties. In Asiatic and Arabic cultures it has been used by man for over 5,000 years as a fragrance, fixative for other fragrances or in medicine as a tonic for the heart and mind, for chronic headache and, of course, as an aphrodisiac. In ancient times musk was introduced to the western world by Arabic doctors and since then increasing has been in demand worldwide. Today, it is one of the most expensive substances derived from any animal. In Europe, for example, the price for musk per g during the 1990s reached three to five times that of gold. Consequently moschus deer males have been extensively pursued and hunted by native people with the aim to remove the entire gland (pod) and thus obtain musk. An adult deer male produces approximately 18 to 32 g of musk and by selling 2 musk pods (about 50 g) a Nepalese family in remote mountain regions is reported to have acquired at least a year’s income. This situation has led to a serious decrease in numbers of deer. All musk deer species, therefore, have been included in the Appendices I or II of the Convention on International Trade in Endangered Species (CITES) since 1979 and the IUCN Red List of Threatened Animals from 1986 classifies these species as vulnerable or at least as nearly threatened. In Russia, e.g., between 1989–1993 a total of 90 to 100 thousand individuals was killed and the population size was estimated to be 53–60 thousand in 1996. However, poaching of deer and illegal trade with musk most probably still exists in vast regions of remote areas although musk deer farms have been established since 1958 in China and methods were developed to remove musk from live individuals without injuries. The brochure in hand is a thorough research report on the international trade and use of musk from musk deer carried out by TRAFFIC Europe-Germany between January and July 1998. It contains much information on the biology of these cervids, on their status as well as on the effects of conservation efforts.

D. KRUSKA, Kiel

In this time of specialisation and over-specialisation, when many authors seem to avoid overviews, it is wonderful to experience a book like that from Derek Yalden, the managing editor of the British "Mammal Review"! The author presents a broad approach to the problems related to "The history of British mammals". His presentation is based on own mammalogical investigations, publications dealing with questions of general zoology, as well as on information concerning domestic mammals, palaeontology, archaeology, biogeography and history. From these sources Dr. Yalden has produced an authoritative text that offers delightful and informative reading on up-to-date knowledge.

Short remarks on Mesozoic and Tertiary mammals introduce the reader to the subject at hand. A section on Pleistocene mammals follows; it is illustrated with instructive maps and tables. The second chapter deals with "the beginning of history" during the late Pleistocene, but also comparisons with mammalian faunas of continental Europe can be found. However, the "splendid isolation" of Britain since, at least, about 7000 years before present, forms a biological "laboratory" with scientific problems different from those on the European continent. For the Roman, Saxon, Norse and Norman and later mediaeval periods of British history and for modern times, introductions of mammals, as well as extinctions of other species are described – once again illustrated by diagrams, maps and tables. In these paragraphs detailed information on surviving species is also supplied. The author also takes a look at the twentieth century and beyond. In a special chapter problems confronting mammals on large (Ireland) and small islands, such as Shetland, Orkney, Hebrides, Man, Scilly and Jersey, are addressed.

It is impossible in deal here with the multitude of stimulating ideas presented in this book. A very detailed list of references (24 pages) and an index of ten pages concludes this remarkable publication. As the author draws information from a wide range of sources, this is an outstanding reference source also for readers with specialised fields of interest. The present reviewer hopes that the book from Derek Yalden will find a wide distribution and can thus be appreciated by a wide range of mammalogists and lay persons!

P. Langer, Giessen


This book gives detailed information on *Hippopotamus amphibius*, the river hippo. The data supplied for *Hexaprotodon (Choeropsis) liberiensis* (pygmy hippo), however, are still limited. For example, while eleven pages deal with reproduction in *Hippopotamus amphibius*, less than two pages deal with respective data in the pygmy hippo. Similar relationships can also be found in the chapters on behaviour and on diet and feeding habitats. These statements do by no means indicate criticism of Keith Eltringham's accomplishments, but they make obvious where the gaps in our knowledge are and where research efforts are necessary. Observations, not to speak of field experiments, of *Hexaprotodon liberiensis* will become increasingly difficult: Most pygmy hippos live in countries – Liberia and Sierra Leone – with practically no means of law enforcement and a wide distribution of firearms because of civil wars and social unrest. For the larger species, the river hippo, one "can conclude . . . that, over the whole of Africa, there is no immediate threat to the hippo as a species although some of the constituent populations are certainly at risk" (page 171).

The book deals with anatomy and physiology of both species, their palaeontological origins, their social life and reproduction, with diet and feeding habits, ecology, as well as diseases, parasites and commensals and with the relationships between the hippo species and man. Finally, the distribution of the two species is discussed. The origin of the wealth of information that is woven into the text is documented on six pages of references. Special questions can be easily accessed with the help of an index of six pages. The text is clear and direct and sometimes also humorous. It is obvious that the author often draws on his own profound research experience with both species!

P. Langer, Giessen