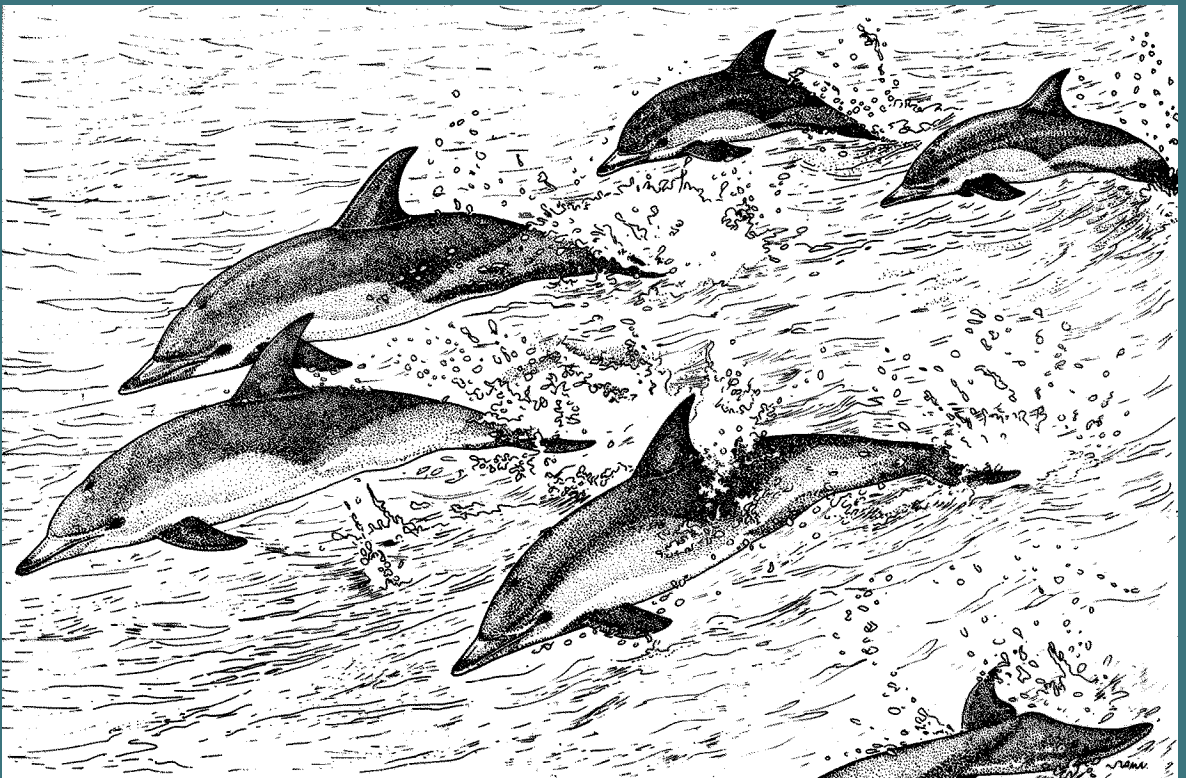




FAO SPECIES IDENTIFICATION GUIDE

MARINE MAMMALS OF THE WORLD



UNITED NATIONS ENVIRONMENT PROGRAMME

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS



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MARINE MAMMALS OF THE WORLD

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PREPARATION OF THIS DOCUMENT

This identification guide was prepared under the direction of the Species Identification and Data Programme of the Marine Resources Service, Fishery Resources and Environment Division, Fisheries Department, Food and Agriculture Organization of the United Nations (FAO), Rome, Italy. Preparation was supported jointly by the United Nations Environment Programme, Nairobi, Kenya, and the FAO Fisheries Department Regular Programme.

The authors of this document are well know experts in marine mammal taxonomy and biology. They have extensively studied these magnificent creatures both live, in their natural habitat, and as specimens in museums around the world. The illustrator of the main full-body illustrations, Pieter A. Folkens, is also a prominent marine mammal biologist and conservationist. His extensive observations of marine,mammals account for the accuracy and usefulness of his illustrations.

The title of this document is slightly misleading since we also included 4 cetacean, 2 seal, and 1 sirenian species that spend all of their lives in freshwater. However, since all other members of these groups are marine, we include the freshwater species for sake of completeness.

The format of this document is different from the 4 kinds of publications normally prepared by the FAO Fisheries Department Species Identification and Data Programme (individual species synopses, world species catalogues of major resource groups, field guides for specific countries or small regions, and identification sheets for major regions of the world). It is intended asa worldwide field guide of a major resource group, with extended coverage of each species, and it therefore superficially resembles our identification sheet series.

Populations of marine mammals have been exploited to near the point of extinction in the past. More recently, marine mammals have become recognized not only as a fisheries resource and as a marketable tourist attraction, but also as an aesthetic resource, integral to the heritage of all mankind. The purpose of this guide is to aid in the management and conservation of this valuable natural resource.

Technical Editors: K.E. Carpenter, C. Sommer, A. Bogusch, and A.-L. Agnalt, FAO, Rome.

Illustrators: M. D'Antoni, FAO, Rome (skulls, 3 main speciesfigures, and all other line illustrations); P.A. Folkens, Oceanic Society, California (all other main species figures and surface profiles); and P. Lastrico, FAO, Rome (maps).

Page composition: A. Bogusch, FAO, Rome.

Jefferson, T.A., S. Leatherwood, and M.A. Webber

FAO species identification guide. Marine mammals of the world.

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Abstract

This is a worldwide guide for the identification of marine mammals and those cetaceans, seals, and sirenians also found in freshwater. The 119 species include a variety of taxa: baleen whales, toothed whales, dolphins, porpoises, seals, sea lions, sirenians, marine otters, and the polar bear. There is an introduction with notes on marine mammal distribution in regard to oceanography and marine mammal identification, a glossary of technical terms, illustrated keys to species, illustrated family keys for skulls, species sheets, and a table of species by major marine fishing areas. Every species sheet includes scientific and official FAO names, diagnostic features, notes on similar species, size, distribution, biology, habitat, behaviour, exploitation, and IUCN (World Conservation Union, formerly International Union for the Conservation of Nature and Natural Resources) status. The work is fully indexed and includes a list of referentes and sources for further reading.

Preface and Acknowledgments

This guidebook summarizes the best information available to us on marine mammal identification through 1993. We did not have the luxury of time to consult all the thousands of original references that contribute to the substantial body of knowledge on these diverse animals. Instead, we took the following approach. First, we compiled much of the information for initial drafts from outstanding recent compilations, supplemented by our knowledge of more recent information. Second, with humble admission that we are not experts on all 119 species covered in this guide, we submitted these drafts to from one to three colleagues per species and revised the text, often substantially, based on their corrections and suggestions (and often their generous contributions of yet unpublished data). Finally, we carefully re-edited the manuscript to eliminate extraneous information and to ensure that what we have included in the species accounts is in a format that facilitates comparison and cross-referencing, both of which are essential in a field guide.

The FAO Species Identification Sheets for Fishery Purposes do not usually contain referents within the text (Bonner and Laws, 1985; di Natale, 1987). However, we acknowledge here our primary sources. For cetaceans, we depended heavily on Leatherwood et al. (1976, 1982, 1988), Leatherwood and Reeves (1983), Ridgway and Harrison (1985, 1989, in press a and b), Martin (1990), and Klinowska (1991). Our primary sources for pinnipeds were Ridgway and Harrison (1981 a, b), King (1983), Riedman (1990a), and Reeves et al. (1992). Finally, information on sirenians, otters, and the polar bear comes largely from Reeves et al. (1992) and Reynolds and Odell (1991). We are particularly grateful to R. R. Reeves and B. S. Stewart for their indulgence of our extensive use of the published version and working drafts of Reeves et al. (1992), which was released just as this manuscript was submitted for publication.

Individual species accounts were reviewed by R. W. Baird, A. Baker, C. S. Baker, K. C. Balcomb III, N. B. Barros, J. Bengston, N. Bonner, M. Borobia, F. Bruemmer, M. M. Bryden, J. Calambokidis, I Christensen, V. G. Cockcroft, C. Cowles, M. Cawthorn, V. da Silva, R. W. Davis, S. Dawson, D. P. Domning, M. Donoghue, F. H. Fay, L. Fleischer, V. Fountree, J. Francis, R. L. Gentry, W. Gilmartin, R. N. P. Goodall, M. P. Heide-Jergensen, G. Heinsohn, J. Horwood, M. A. Iñiquez, T. Kasuya, K. Koracs, S. D. Kraus, S. L. Kruse, A. C. Lesrauweet, J. K. Ling, C. Lockyer, D.M. Lorigine, R. M. Laws, H. Marsh, A. R. Martin, J. G. Mead, M. Marmontel, M. W. Newcomer, D. K. Odell, W. F. Perrin, W. Perryman, M. C. Pinedo, R. L. Pitman, B. Powell, R. Praderi, A. J. Read, R. R. Reeves, S. B. Reilly, J. C. Reyes, D. Robineau, G. J. B. Ross, V. Rowntree, M. D. Scott, R. Sears, D. E. Sergeant, P. Shaughnessy, G. K. Silber, R. K. Sinhaio, B. Smith, P. J. Stacey, B. S. Stewart, S. L. Swartz, B. Tershy, K. Van Waerebeek, O. Vidal, Wang Ding, R. S. Wells, B. Würsig, and Zhou Kaiya. Assistance in various aspects of manuscript preparation was given by B. E. Curry.

Body illustrations were prepared by P. A. Folkens, and skull and line illustrations were prepared by M. d'Antoni, (FAO) from materials assembled by the authors. D. Robineau provided French common names, and A. Aguilar provided them in Spanish. T Sullivan, S. Stuart, and P. Reijnders provided current IUCN status designations for some species. Our editors at FAO, K. Carpenter, C. Sommer, and A.-L. Agnalt, were very helpful in all aspects of the preparation of this guide, and were patient with our missing of deadlines.

We are very grateful to all these colleagues and friends for their generosity and genuinely helpful spirits. Because of their involvement, this manuscript is much improved from our original draft. Any remaining errors and deficiencies are our responsibility.