

Book Reviews

Cetaceans

The Life History and Ecology of the Gray Whale (*Eschrichtus robustus*). DALE W. RICE and ALLEN A. WOLMAN. American Society of Mammalogists, 1971 (order from Bryan P. Glass, Oklahoma State University, Stillwater). viii, 142 pp., illus. \$5. American Society of Mammalogists Special Publication No. 3.

This timely book appears as public and scientific interest in great whales approaches apogee. The morality of man's predation on animals, of which there is no better example than his use of whales in largely trivial ways, is being questioned. Though it is sometimes forgotten that most large whales, including the gray, have already been protected by the International Whaling Commission, it is also true that whales generally are in a sorry state and, more important, so may be their environment.

Gray whales were taken commercially until 1946. The eastern Pacific stock has come back, to what extent of carrying capacity we do not know. Concern that hunting might be resumed in ignorance evidently led the U.S. government to support the ten-year study reported here. Results are based upon a review of the literature, field operations which were largely shore-based, and examination of 316 specimens taken off central California, under special permit, by arrangement with a whaler. What emerges is a significant gain in our knowledge, but it is apparent that the study suffers from two handicaps: the biologists did not have enough control in directing the kill, and they were not sufficiently supported to enable them to study whales on the feeding and breeding grounds.

Nevertheless, the book contains valuable information. It is essential to management to show how age classes might be segregated. Though information is lacking on social structure, the authors indicate different migration times for males, females, and immatures. Further, though there is no completely reliable technique for determining age, a

reasonably good start is made toward population dynamics. The sections on growth, parasites, and population are good; those on male and female reproduction are the best in the volume. The authors have also served nomenclature well by choice of *robustus*, which is supported by a specimen, rather than the older *gibbosus*, which is not.

On the negative side is a section on seasonal changes in nutritive condition (pp. 27-37) in which the authors support the thesis that gray whales probably do not feed on the winter grounds. The last (and only) gray whale examined there for food in the stomach was Scammon's over a century ago. The authors have no data of their own. Instead, they have calculated the weights of 309 whales from the true weights of but seven. Then a weight loss per day is calculated and metabolic data are estimated from the lung volume of a fin whale and the metabolic rate of *Tursiops*. A few data on blubber thickness and oil yield are presented (though the authors admit that their northbound and southbound samples are not strictly comparable), and from such calculations the conclusion is reached that "there is no reason to assume that gray whales must feed while on the winter grounds. This conclusion may not apply to females with calves as we have no data for them."

The American Society of Mammalogists is to be complimented on this publication. However, one gets the distinct impression of a heavy editing hand; for \$2 more, we might have had more of the data. Further, the pictures are dense and there is none of a gray whale in the water (or out) but for some embryos and one fetus and one photo (or drawing) on the dust jacket. The index is too brief; this gringo had to search to find that Scammon's Lagoon is really Laguna Ojo de Liebre (p. 19). The map (p. 2) is totally inadequate; there is not a place name on its cramped half page.

This well-written book deserves to be read with care, for it presents a great deal of new information about this im-

portant species. But it is not truly a "life history and ecology." Perusal of recent studies of other large mammals (wolf, caribou, and others) reveals real deficiencies by comparison. The assertion that "we have now learned more about the biology of the porquals and the sperm whale than of most other species of wild mammals" (p. v) describes the situation as seen by those more impressed with the volume of statistics derived from the commerce of whaling than with an eye for social structure, niche, habitat, sensory perception, communication, and ethology; these, of which the authors speak hardly a word, are the core of natural history. For instance, Norris's discussion of gray whale migration (in *Animal Orientation and Navigation*, Oregon State University Press, 1966) is not cited, nor are causal factors of navigation considered here.

These valuable studies are thus presented under a misnomer, but they will aid in the design of research truly free of the restrictions of whaling operations. They may also lead naturalists to the Mexican lagoons or to the Bering Sea (the Eskimos know the "summer whale" well) where it respectively breeds and feeds, rather than studying it mostly en route. How much can be known of a swan along the flyway?

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Historiography

Modern Methods in the History of Medicine. EDWIN CLARKE, Ed. Athlone, London, 1971 (U.S. distributor, Oxford University Press, New York). xiv, 390 pp., illus. \$22.50.

As Edwin Clarke says in the preface of this very fine volume, historians have been examining their craft for many decades, and the number of critiques seems to be increasing. Historians of medicine, by and large, have never been in the vanguard of such self-appraisal. It is high time, then, that a book such as this should appear. That it will disappoint some readers as not really coming to grips with many of the problems in our field I do not doubt. But after one has read through the 21 chapters, it is obvious that here is both a timely and an important book. It is Clarke's wish that "the book will induce a higher overall level of