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 important 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 rorquals 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

scholarship in the history of medicine so that the status and respectability of the subject as an academic discipline may be more widely appreciated and more firmly established."

The historiography of ideas, so much talked about in recent years, has been a part of the history of medicine since ancient days, as Owsei Temkin shows in the first chapter. In times of rapid scientific advance in medicine most physicians prefer to look ahead rather than back; but it is just in such times that farseeing men realize the need for history. And at all times, as Temkin summarizes, "asking why others thought as they did challenges us to ask why we think as we do."

While "new ways" in the history of medicine may now indeed be stirring, the publication of this book being one indication, Charles Rosenberg in his chapter charges that much of medical history has consisted of studies of medical men in medical institutions, with an emphasis on the anecdotal, at the expense of a systematic consideration of such subjects as patient care. Rosenberg is correct, I believe, in pointing to studies of the provision of medical care and to the profession as an institution as topics that need to be explored. Yet neither he nor any of the other contributors saw fit to call the attention of readers to an increasingly important body of medical-sociological literature dealing extensively with the "role" of physicians and other medical personnel. What is more, such sociologists as David Mechanic and Eliot Freidson have used the historical approach in their analyses.

In one of the most provocative chapters, R. S. Roberts deals with the use of evidence by medical historians. It is true, as Roberts claims, that much of the evidence assembled in the past tends to "fossilize" much medical history as written today. Particularly appropriate is his calling our attention to the importance of philosophical assumptions of previous writers. Charles Creighton, who continues to serve as an authority on epidemic diseases in Great Britain, wrote in the 1890's and was an implacable foe of the germ theory. Roberts's stricture is an important one: "Many who use Creighton today proceed upon the assumption that his erroneous theories on the causation of disease can simply be separated out from his work. . . . What is not realized is that the facts themselves have in the first place emerged from a process of selection, whether conscious or not, designed to prove Creighton's theories."

The field of paleopathology, experiencing a resurgence in recent years, is well handled in two chapters by Don Brothwell and E. R. Kerley. New techniques and new approaches to the study of disease in the past, as applied by paleopathologists and paleoepidemiologists, have done much to revive and extend the work of Moodie, Hrdlička, and Horton earlier in this century.

Another new trend in historical studies, the demographic approach, receives only one chapter. Thomas McKeown ably summarizes recent studies and work that remains to be done. Here is an area in which much has been written by our historical colleagues, an area, furthermore, where medical historians can play an important role. Further development of the subject would have been welcome.

The relationship between the history of medicine and the history of science is brought up in several chapters, most specifically by Marie Boas Hall. The history of science has in recent years experienced a remarkable increase in vigor, especially measured in terms of university positions and numbers of graduate students. Much of what once was in the domain of medical history, such as anatomy and physiology, is now being very ably pursued by historians of science. These subjects were formerly in the province of the history of medicine, partly no doubt because the history of science had not yet begun to flourish and because most physiologists and anatomists interested in the history of their field had received medical training, hence considered themselves "medical" men. It is of interest that of the 20 contributors to this volume, only eight have medical degrees.

To define the boundaries of medical history is at once important and treacherous. Edwin Clarke, in one of the four chapters he wrote or coauthored, addresses himself to that problem. His answer is broad enough that it should find fairly wide agreement: "Medical history proper should be compounded of all the scientific and social aspects of human health and disease. It can be thought of as fundamentally the history of the medical sciences and of the history of medicine in society." What about the behavioral sciences? I suppose the recent appearance of an entire volume devoted to methods in the history of psychiatry justifies its omission from this book.

Saul Benison, an expert in oral history, contributes an interesting chapter describing the way he goes about using this age-old method with modern electronic equipment. Painstaking research is as necessary for the oral historian as for his colleague using other methods of data gathering. Benison allows between 20 and 30 hours of research for each hour of interview, and recommends that the oral historian generally should collect no more than 125 hours of interview in any year.

There are other interesting chapters in this book, and because I believe it is a useful one I am sorry to end the review on a negative note. This is not an overly large book. It contains some tables, maps, and diagrams, all of which are necessary to the text, and four pages of photomicrographs, which are not. The price in English bookstores is in the vicinity of $13.20, high for students, but in view of today's book prices within reason, I suppose. I believe the price set by the American distributor is outrageously high and goes counter to the aims and labors of Clarke and his contributors. The references, the subject matter, the discussions, all should be made readily available to students with an interest in the history of the life sciences; but we will be forced to buy the book abroad.

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A Chapter in Medical History

A History of Poliomyelitis. JOHN R. PAUL. Yale University Press, New Haven, Conn., 1971. xx, 486 pp., illus. $15. Yale Studies in the History of Science and Medicine.

Poliomyelitis is probably as old as man himself, yet it may be considered a "recent" disease since it was a rare medical curiosity until a mere century and a half ago. No substantial epidemics occurred before the end of the 19th century, and most of its known history is confined to the 20th. Seldom has it been possible for an individual to write the complete story of an important episode in the medical history of man most of which took place during his lifetime and in which he played an active role and knew personally most of the other principal actors. John R. Paul was able to do this, and he has produced an authoritative, intensely personal, and highly readable account. Shortly after the publication of this book Paul died, at the age of 77, but he had lived to