



Editorial

Readers will remember in Volume 12, No. 2, the Department of the Environment were setting up a Steering Group to consider the detailed standards as suggested in the Klinowska Report 'A Review of Dolphinarium'. At the time of writing this note, we are still awaiting the standards, as agreed and approved by this Committee, although we have heard that it may come now formally, for implementation, during the month of July. Readers, I am sure, will be pleased to see the continuation of our policy of printing Book Reviews, and I would draw their attention to a third number published by Springer-Verlag of Berlin, Heidelberg, New York, London, Paris and Tokyo on the 'Community Ecology of Sea Otters' edited by van Balaricom and Estes—a 246 page volume with an extensive bibliography and excellent index. It is obviously recommended reading for anyone working with, or indeed interested in, sea otters. Another book of interest to many subscribers will be the slim volume entitled 'Approaches to Marine Mammal Energetics' edited by Huntley Costa, Worthy and Castellini. This book includes 14 chapters ranging from fuel homeostasis in marine mammals to ecological energetics of harp and grey seals, and may be obtained from The Society for Marine Mammology, P.O. Box 368, Lawrence, KS 66044, USA for the sum of \$18.00 U.S. payable to the Society of Marine Mammology. Further information may be obtained from the above address through the Assistant Editor—Gary J. D. Smith.

Our companion journal 'Marine Mammal Science' has published two numbers in Volume 4 since our last journal, and these contain articles on skin biopsies in free-ranging whales, the assessment of competition between seals and commercial fisheries, implications from physiological studies of marine mammals, ecotoxicological perspectives in marine mammalogy, geographic variation in tooth morphology, and distribution of white-sided and common dolphins versus environmental features on the continental shelf of the north-eastern United States.

In Volume 22 of the Fauna and Flora Preservation Society Journal 'Oryx', there is an article on the distribution and exploitation of manatees in Sierra Leone, which gives cause for much concern for the continued survival of this species. There are also comments regarding the continued complaints over the Japanese 'scientific' whaling takes, challenges to the whaling industry in Iceland, and a note that the I.W.C. is insisting on the total ban on hunting pilot whales (*Globicephala melaena*) off islands between Scotland and Iceland. A further protective measure is in the Mediterranean designating 100 areas to protect the monk seal. There is also a report of the numbers of bottlenose dolphins along the Natal coast of South Africa, which may be fewer than 800. One of the reasons for the fall-off in numbers may be related to the entanglement of animals into the anti-shark nets, which are kept to protect human bathers. There is a report in 'Oryx' of Japan's oldest whaling town Taiji investigating the possibility of breeding whales in two bays near the town. This move, I am sure, will be closely watched by all those interested in the future of whales. It was encouraging also to read that the porpoise mortality quota for the U.S. tuna fleet in 1987 was 20,500 animals, and only 14,000 had been recorded. It mentions, in passing, the award to a purse-seine boat catcher whose captain only caused 184 mortalities in catching 4,752 tonnes of tuna out of 137,000 porpoises encircled. This represents a successful porpoise release rate of 99.87%. What a pity though that it couldn't be 100%, and be mirrored by all the other tuna fishermen around.

Members will be interested to hear of the foundation of a new research institute in Japan called the Institute of Cetacean Research, which is a non-profit organization formed to conduct research, and to study various aspects of cetaceans and other marine mammals. Further details may be obtained from Dr Ikuo Ikeda, the Director General of the Institute of Cetacean Research, 3-32-11 Ojima, Koto-ku, Tokyo 136, Japan. The International Marine Mammals Trainers' Association meeting will be held in October 1989 in Amsterdam. Further details may be obtained from Martin Huigen of Dolphinarium Munster, Zool.-G. Munster, 14400 Munster, West Germany.

It is very rewarding to record that we now have 158 subscribers to 'Aquatic Mammals' from 28 countries. This means that we have not needed to increase the subscription rate for 'Aquatic Mammals' since Volume 11. The Editor, of course, always hopes that if the number of subscribers could be increased substantially, then he would be able to bring the price of the subscription down since its level is related entirely to the production costs of the journal. He would like to thank, however, all the subscribers for their continued support, and looks forward to the next volume in 1989.

Book Reviews

FUR SEALS: MATERNAL STRATEGIES ON LAND AND AT SEA. Edited by Roger L. Gentry and Gerald L. Kooyman. Princeton University Press 1986. ISBN 0-691-08399-1. xiii + 291 pp. Price: cloth £26.25, paper £10.95.

It is often said that while pinnipeds are relatively well-studied on land, little is known about how they spend their time at sea. This book describes a major contribution to the increasing body of research designed to study the behaviour of pinnipeds at sea and to relate this to their behaviour on land. The central theme is the investigation of similarities and differences in the way several species of fur seal rear their pups using the complementary techniques of observation of attendance behaviour on land and collection of diving data at sea using the Time-Depth:Recorder (TDR). Without the development of the TDR only half the story could have been told.

The book begins with two useful chapters for the uninitiated; an introduction to fur seals and where they live, and a description of the use of TDRs to monitor diving behaviour. The bulk of the book comprises chapters on attendance patterns and diving behaviour of fur seals of the northern, Antarctic, South African, South American and Galapagos varieties and the Galapagos sea lion. There is also a chapter on the use of labelled water techniques to quantify the energetics of free-ranging fur seals. These chapters describe the current state of knowledge for the individual species and there is understandably considerable variation in the quantity and quality of the data available. Nevertheless, there is more than sufficient information to allow the final, and most important, chapter to draw some general conclusions about fur seal maternal strategies. The authors identify those biological features which show little variability among species, such as number of young, pup weight at weaning as a proportion of mother's weight, and most aspects of individual dives—time of day, depth, dive frequency, and the linearity of the relationship between depth and duration. They also bring together specific differences in synchrony of pupping, time to weaning, number and length of feeding trips, and duration of attendance periods into two main strategies for rearing pups. These are defined as 'subpolar', indicative of strong seasonality but a predictable environment, and 'tropical', indicative of weak seasonality but an

uncertain environment in the form of unpredictable El Nino conditions at irregular times.

This is a well-edited book and mostly well written. Its strength and value lies not only in presenting and synthesizing some important data on fur seal life histories but also in demonstrating that with innovation and application, pinnipeds can and should be studied at sea as well as on land.

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BIBLIOGRAPHY OF WHALE KILLING TECHNIQUES. (Reports of the International Whaling Commission, Special Issue 7). 1986. E. D. Mitchell, R. R. Reeves and A. Evely. International Whaling Commission, Cambridge. 160 pp. £12.00 (plus £2.50 postage and packing)

A preliminary version of this bibliography was available, for a number of years, as an internal document of the International Whaling Commission. It is now formally published in a much extended and corrected form, together with a twelve page introduction which summarizes the listed material and with appendices by Edward Mitchell on pre-World War II German electric whaling and by G. P. Donovan on the involvement, between 1982 and 1986, of the International Whaling Commission with the problem of the humane killing of whales. This latter essay extends the coverage of the introduction and includes recent material not listed in the main bibliography. The book itself contains 42 figures and plates and is completed by author and subject indices.

The main body of the work is formed around 357 references which have been read and assessed by the compilers of the bibliography and this is followed by a list of 39 other titles thought to be relevant but not actually seen prior to going to press. Most of the papers are individually summarized and or commented on. The volume should, perhaps, have been called an *annotated* bibliography—the given title rather undervalues the substantial amount of material presented to the reader.

The methods used to kill whales progressed from the hand-flung harpoon through the gun-fired solid (cold) harpoon to the gun-fired explosive headed

harpoon. This latter device was most extensively employed in recent times for the harvesting of the larger cetacea. It was certainly the most efficient, in that fewer hits were needed and the whales usually died more quickly than when non-explosive means were used. There have been some attempts to use drugs (e.g. succinylcholine) and poisons (e.g. hydrocyanic acid) but they were not successful under commercial conditions. The nearest approach to humane killing was, seemingly, the use of an electrical current to stun and/or kill. The methods used never really took on, however, because of the difficulties of producing reliable, insulated, stretchable conducting cables which could run from the source of electricity on the catcher vessel to the harpoon embedded in the body of the whale. The safety of the crew was also a problem: the electrical current completed its circuit by passing from the whale, through the sea and back into the metal hull of the vessel.

From the nature of the prey and the conditions of

the hunt, the killing of whales was technically difficult and often inhumane. For this reason, if for no other, the ending of commercial whaling is to be wholeheartedly welcomed.

This bibliography and its associated essays are fascinating to browse through and easy to read. Although the material has been deliberately selected to only include papers related to killing, it inevitably covers many aspects of the history of whaling and the biology of whales. The book will have a much wider use than the title alone would suggest. It is a well written, finely produced and most interesting, if somewhat unusual, volume.

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Both the above volumes together with all others reviewed in *Aquatic Mammals* may be purchased from: Chiron Publications, P.O. Box 25, Keighley, West Yorkshire, United Kingdom.

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