

Book Reviews

HANDBOOK OF MARINE MAMMALS volume 4: River Dolphins and the Larger Toothed Whales. Edited by S. H. Ridgway and Sir Richard Harrison. Academic Press, New York and London. 1989. ISBN 0-122-588504-0. 442 pp. Price £49.50.

The penultimate volume in the Handbook of Marine Mammals series covers the Platanistoid dolphins, the Monodontidae (including the Irrawaddy dolphin), the Physeteridae, Kogiidae and Ziphiidae. The style and format are similar to those of the earlier volumes and again, unfortunately, the quality of the individual chapters is somewhat uneven.

The chapters on the Platanistoid dolphins are generally the most comprehensive and up-to-date. They reflect the deliberations of the workshop on these species organised by the IUCN SSC Cetacean Specialist Group in November 1986, which was held in Wuhan, Peoples Republic of China. (Perrin, W. F., Brownell, R. L., Jr., Zhou Kaiya and Liu Jiankang (Eds) *Biology and Conservation of the River Dolphins*. IUCN SSC Occasional Paper No. 3. 1989. IUCN, Gland, Switzerland. 173 p.) The difference between the chapters in the Handbook and the papers in the workshop proceedings is that the former contain the useful summaries of taxonomy, anatomy and physiology, while the latter go into the conservation-related topics in more detail. All the species (except the coastal franciscana) are riverine, and threatened with extinction, mainly through habitat degradation. The situation of the baiji in China is now so critical that semi-captive breeding may be the only hope for survival.

Reeves and Brownell explain their doubts about the evidence for two species of *Platanista*, although they do continue to refer to the populations in the Indus as *P. minor*. This is an important point, not only for taxonomy as such, but also for conservation. The river dolphins in the Indus (with only a few hundred individuals left, mainly in a single reserve area) are clearly in a much worse situation than those in the Ganges and Bramaputra (although this larger population with a wider distribution still has serious problems). Rightly or wrongly, international lists of 'Endangered Species' are based on *species*. It is thus possible to highlight the plight of the Indus river dolphins at the moment, as a species about to be lost through habitat destruction and illegal hunting. If they are to be regarded as a sub-population of a more widespread species, their conservation status does not appear to be so critical. It is a pity that not only

was the original case for two species put forward outside the refereed journal literature, but also that the case against has surfaced in a similar situation. Further work on the question is obviously urgently required!

The large body of information which has accumulated in recent years about the white whale and narwhal is competently reviewed by Brodie, and by Hay and Mansfield. The only possible criticism is that the chapters are written very much from the Canadian point of view, and that work from other countries is often only mentioned in passing. There is concern about the status of both species, because of hunting by local people. Again, the information given relates mainly to Canada, without drawing attention to the somewhat different situations in Greenland, USSR and USA.

The figures for sperm whale populations given by Rice in his extensive and thorough account of this species should be viewed with extreme caution. They are based on very old calculations made by the Scientific Committee of the International Whaling Commission (IWC), using methods which are no longer considered to be valid. Further, as was clearly demonstrated at their 1989 meeting, population estimates based on catch data greatly over-estimate abundance. These remarks apply equally to all the older IWC population estimates for other species. For example, catch data indicated about 10 000 blue whales in the Antarctic, but modern survey data show that there are less than 2000. The social behaviour of the sperm whale, with females and young remaining in tropical waters while mature males range as far as the pack ice, further complicates efforts to estimate abundance.

The authors of the chapter on the Irrawaddy dolphin plead for more research on this widely distributed, but little known, riverine and coastal Asian species. Access to much of the range has unfortunately been restricted by warfare in recent years, but there has been some work with more accessible populations in Indonesia and Australia. Lloze, one of the authors, has not done justice to his extensive work on this species in Viet Nam (Lloze, R. 1973. Contributions a l'etude anatomique, histologique et biologique de l'*Orcaella brevirostris* (Gray, 1866) (Cetacea-Delphinidae) du Mekong. Unpublished Thesis. University of Toulouse, France), which is only briefly mentioned here.

The *Kogia* chapter is disappointing. The opportunity to include systematic new information (rather

than anecdotes) from the extensive series of specimens stranded in Florida, and examined by the authors, has been lost.

The Ziphiidae are generally regarded as a group of elusive, little known species. The review by the IWC Small Cetaceans Sub-Committee in 1988 showed that we do, in fact, know a little more about them. It is unfortunate that the chapters on ziphiids in the Handbook are outdated in comparison with the material brought forward to the IWC, which will be published in their 'Special Reports' series.

The *Mesoplodon* species are perhaps the most confusing, and Mead's discussion is not organised in such a way as to be as helpful as it might have been. For example the Tables of statistics on morphometrics and organ weights of the genus are hardly even of academic interest for such a diverse group—and of no use at all for field work, which is supposed to be a main aim of the Handbooks. The careful illustrations of the skulls are wrongly captioned—the dorsal view being given in the upper left of each plate, not the upper right. There are also some excellent photographs of many of these strange-looking species, but one looks forward to the full guide to colour patterns in Ziphiidae, with ontogenetic variations, previewed by Ross, Baker, Best and Mead at the IWC in 1988 (IWC/SC/40/SM6). Mead has missed quite a few published records, including some for *M. bidens* (probably vagrants) in the eastern Baltic Sea. Sowerby himself should be given at least some credit for noting the light belly, greyer sides and scarred skin in the original description of his beaked whale. The back is also shown as a beautiful bluish-grey in the copy of the coloured illustration in Cambridge University Library (although he did not quite get the shape of the dorsal fin and flukes right). The 'unidentified *Mesoplodon*' seen in the eastern tropical Pacific is not mentioned (Pitman, R. L., Aguayo, A. L. and Urban, J. R. 1987. *Marine Mammal Science* 3(4): 345–352). (NB: readers with an interest in such matters might like to keep their eyes on the mainstream literature—according to the grapevine, yet another *Mesoplodon* species may be officially described soon.)

The 'unidentified *Hyperoodon*' of the eastern equatorial Pacific does get a brief mention in Mead's chapter on this genus. These 'unidentified species' are references to observations—specimens are needed for a 'proper' species description. In the old days, of course, people shot first at anything that looked interesting, and worked out what they had later. Northern bottlenose whales were not only taken in commercial fisheries, but also by local people for their own use. One of the earliest records of such catches comes from the Faeroe island of Suduroy in 1584 (Williamson, K. 1970. *The Atlantic Islands*. Routledge and Kegan Paul, London. 385 p.).

Although, as Mead says, the IWC have set a zero catch quota for this species from 1977, he does not mention that the Faeroese have continued their small catches—illegally, since Denmark is a member of IWC.

Shepherd's beaked whale looks remarkably dolphin-like in some of the illustrations to Mead's account, with functional teeth in both jaws, as well as the characteristic Ziphiid pair of large teeth which are clearly shown in an x-ray picture. This chapter seems to have been written in 1982, and since that time the species has also been recorded in Australia and South Africa. There are still only about 20 records of strandings, plus a few sightings, according to the IWC 1988 meeting.

Balcomb's chapter on the two species of *Berardius* has also been somewhat over-taken by recent work, particularly on the northern form. We now have abundance estimates (around 3500) for the seas around Japan. The case for separate stocks in this area is much stronger, with a clear indication of an inshore summer stock off the east coast. Unfortunately, the Japanese national annual catch quota was raised from 40 to 60 in 1988, the compensate for the refusal of the IWC to allow to inshore minke whale fishery any dispensation to continue during their current moratorium on commercial whaling (IWC, 1989). Kasuya has also now shown that male Baird's beaked whales live for up to 30 years longer than females. He notes that this is unique among cetaceans, and perhaps in mammals, and that it excludes polygyny for this species. He goes on to speculate that there would be selective benefit if related males contributed to the rearing of their weaned calves, thus reducing the female burden in calf rearing and allowing higher calf production (presentation at the 5th International Theriological Congress, Rome 1989).

Even with these reservations, I would recommend the Handbooks to everyone with more than a superficial interest in aquatic mammals. They are excellent starting points for studies of any species. Unfortunately, the very high price will deter all but the most dedicated (and rich) professionals. Most people will be forced to resort to their libraries (and, inevitably, to their photocopyers). Given the world-wide interest in these animals today, would it not make good business sense for the publishers to aim at a larger market through lower prices?

Margaret Klinowska,
Research Group in Mammalian Ecology and
Reproduction,
Physiological Laboratory,
University of Cambridge,
Downing Street,
Cambridge CB2 3EG, UK.