

Book Review

CRC HANDBOOK OF MARINE MAMMAL MEDICINE (2nd ed.). Editors: Leslie Dierauf and Frances Gulland. CRC Press, 2001. ISBN: 0-8493-0839-9, 1,063 pp., HBK. CRC website: www.crcpress.com.

Positive Aspects

The book is very complete and covers a very wide range of topics. It shows that marine mammal medicine has developed tremendously over the last 20 years. This strong improvement is largely due to the development of medical equipment both to determine diseases or physical problems, and partially because of the worldwide increase in the number of parks housing marine mammals. The medical advances are also related to the strongly evolved training techniques during the last 20 years. Thanks to professional associations such as the International Marine Animal Trainer Association, it is now possible to train very complicated husbandry behaviors, which facilitate regular monitoring of an animal's physiology, reduce stress during surgery, and allow monitoring of the healing process. Large companies that comprise several parks, such as Sea World, Inc., have impressive medical facilities in situ, and, per park, usually employ several full-time veterinarians who work almost 100% of their time with marine mammals, thus gaining a wealth of experience. While smaller facilities often use local veterinarians, these parks more often confer with specialists in human medicine or in terrestrial mammals, thus also achieving a high standard in marine mammal medicine. Because of the rapid pace of specialization, even large parks cannot afford to have experts in all clinical techniques anymore.

A good thing about this book is that each chapter is written by several authors who are specialists on a specific topic. Because of the diversity of modern marine mammal medicine, this division of topics is a must. No single person can contain all the existing veterinary knowledge or can operate all the medical equipment available.

Another trend that can be seen in this book is that marine mammal medicine is no longer confined to captive animals. Because of stranding networks and rehabilitation programs, as well as field studies in which animals are handled (for instance, tagging and tracking studies or

monitoring the health, physiology, and reproduction of a wild population), veterinary medicine now also plays a role in the lives of many wild animals.

It is good to see that some chapters are devoted to strandings and stranding networks. Experience in dealing with stranded animals should be shared among those taking care of these animals. Too many times in the past the wheel has been re-invented in many locations of the world, at the expense of the stranded animals that did not benefit from the experience gained at other locations.

The book is "hands-on" and provides contact information and websites, so that information can be exchanged quickly and efficiently. Because medicine is a discipline of numbers, retrieving the information in a written form reduces the chance of errors and miscommunication.

It is good to see that Chapter 11, "Reproduction," contains information on species other than the bottlenose dolphin. This clearly shows the advances that have been made in captive marine mammal reproduction during recent years. This also highlights the efforts made by some parks to become independent of wild-caught animals.

Chapter 34, "Public Health," is a very important chapter: No matter how valuable and familiar the animals are that are in your care, they are not worth dying for, or getting badly injured during medical procedures. This chapter is thus important for all personnel handling animals to read in order to be aware of appropriate safety procedures.

The conversion tables in the Appendix of the book are an important inclusion; however, it would be even better (and easier) if Americans would wholeheartedly embrace and adhere to the internationally standardized units for weight and volume. This would save money, time, and reduce the chances of mistakes in conversion.

Negative Aspects

Because of the great and spectacular advances in marine mammal medicine, more information becomes available seemingly daily. Thus, this second edition is even larger than the first. This has a negative aspect in that the book, weighing around 2 kg, is difficult to handle. It can only be read for some time when the book is laying on top of a desk. In addition, because of its thickness (6.5 cm), the pages often bulge when reading the

first and last quarter of the book. One suggestion for the editors in their third edition is to split the text into two or three volumes for easier use and handling, especially in the field.

This leads to another item: The order of the sections and chapters is not logical. It appears that no skeleton of the contents was made before the book was compiled. The information does not follow a logical order. For instance, the book starts with Section I, "Emerging Pathways in Marine Mammal Medicine. This should be the last section of the book. Including Chapter 7, "Careers in Marine Mammal Medicine," in Section I is not a logical subject within this section. After having discussed many techniques with many examples of various marine mammal species in the previous section, the book concludes with Section VIII, "Specific Medicine and Husbandry of Marine Mammals." In many cases, repetition of information shown in the previous sections occurs (e.g., the case studies in Chapter 19 are also arranged by species). Another example of a strange presentation order is that Chapter 21, "Gross Necropsy and Specimen Collection Protocols," comes before Chapter 24, "Overview of Diagnostic Imaging." Because of the enormous amount of information, the editors seem to have lost the overview of the contents.

It is disappointing to see that Section VII, "Marine Mammal Well-Being," which promises much, is only limited to legislation and regulation. The nonmedicine part of veterinary medicine has not been given the attention that it should. Well-being depends on many things: on social situation, the physical environment, method of feeding, the training method, and the animal's health. An animal of which the blood parameters look OK is not automatically a happy animal, as all trainers and others that observe animals closely will agree. In this context, Chapter 13 is disappointing in that it deals with "Stress and Marine Mammals" and only half a page is devoted to stressors while the rest of the chapter is dedicated to stress indicators in the blood. More attention should be paid to conditions that cause stress in marine mammals and how to prevent them.

Although the information in the book is impressive and extensive, the information is not complete, and in some chapters it is clear that the authors are not aware of all the literature that is available on the topic about which they write. This could be due to the fact that many of the authors are clinical persons with no research background, and, thus, are not familiar with the literature searches practiced in the academic world.

Although the advantage of having contact information in the book is obvious, this also makes part of the book quickly outdated. Because people move, retire, and change phone numbers

and e-mail addresses, the contact information will be less valuable as time passes. This information needs to be updated rigorously in future editions of the book.

Conclusions

This is a very valuable book, and every facility keeping marine mammals should have this book in their library. With the information in this book, the lives of animals can be saved, and reproduction and the well-being of animals can be improved. A future edition should consist of a series of physically smaller volumes, so the book can be handled more readily. Also, the structure of the content can be improved much, which will improve the reader's ability to find vital information in urgent situations. Congratulations to all the authors and the editors of this book for achieving such an impressive and useful handbook!

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