BOOK REVIEW

Anaesthetic and Sedative Techniques for Aquatic Animals, Third Edition

L. Ross and B. Ross
Blackwell Publishing, Ames, IO, USA (**2008**).
222 pages, hardback, ISBN 978-1405149389, $139.99

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The third edition of this book is a welcome revision of the expanding literature on anesthesia, sedation and euthanasia methods used in aquatic animals. Chapters cover such topics as defining and identifying stress in aquatic animals, an introductory overview of anesthesia principles, factors affecting anesthesia in aquatic animals, the use of anesthesia in the transportation of aquatic animals, and chapters on anesthesia of fish, amphibians and reptiles, and selected aquatic invertebrates.

The book provides a brief overview of international regulations with respect to the use, food safety, and environmental safety of these chemicals and techniques. The two major advancements of the book are the addition of a chapter on pain in fish and the revision of the chapters on anesthesia techniques in fish. Taking into consideration the expanding field of animal welfare, the authors include a new chapter summarizing the current literature on nociception in aquatic animals, and supports the conclusion of many researchers that even though aquatic animals may not perceive or experience pain in the same manner as higher vertebrates, the precautionary principles should be adopted when utilizing potentially stressful or painful techniques.

The revised chapters on individual anesthetic compounds categorized by route of administration (inhalation, oral, parenteral) have been completely reorganized and expanded to incorporate essential new information and updated references. Each anesthetic compound described has detailed information on the chemical nomenclature, structure, mode of action and recommended dosages. In addition, pertinent safety and toxicology information is included for each compound.

As in the past edition, the book includes a chapter on non-chemical methods of anesthesia such as hypothermia and electroanesthesia. Unfortunately, and most likely due to a paucity of available literature, this section is not revised significantly and still avoids discussing these techniques in terms of current animal welfare considerations. Another minor deficiency of the book is the use of photographs from the older edition. For instance, the authors could have added more up-to-date photographs of the anesthesia machine (Figure 8.6) and IM injection of fish (Figure 10.3), and several photographs depict handling fish and amphibians bare-handed without protective gloves (Figures 8.3 and 13.1). The authors should have also included the more current 2007 reference to the AVMA Guidelines on Euthanasia instead of the 2001 reference. Aside from these few shortcomings, the book is an easy-to-follow, well-written treatise on anesthesia of aquatic animals. Compared to the previous edition, the publisher has set this work in a much more acceptable layout and font for ease of reading. Thus, this book remains an essential resource for anyone working with aquatic animals including primarily fish, but also amphibians, reptiles and aquatic invertebrates and will serve as a practical guide for veterinarians, researchers, and personnel in fisheries, aquaculture, and aquarium settings.