BOOK REVIEW


This is an outstanding compendium of interesting fish health and ancillary information by many experts in the field. Unfortunately, it fails its omnibus premise—one book for everything. The text fills a void both in the instruction of fish health to veterinarians and for a reference in general veterinary medicine practice. It is also highly useful as an aquaculture-aquaculture health reference for the non-specialist. Fishery professionals, however, will be frustrated by its excess of materials that they do not need (or is presented in better form in other books), incompleteness, inconsistencies and errors. Post's 1987 textbook of Fish Health (TFFH Pub. Inc. Neptune City, NJ) is a more focused, practical and concise choice, although it is too narrow and is more dated. Despite these shortcomings, Fish Medicine is the best and most up-to-date compendium on fish health available.

This enormously ambitious undertaking includes, in Part I (p. 1-220), a general glimpse at everything that might have anything vaguely to do with fish health, including chapters entitled: Anatomy. Fish Health, Clinical Physiology, Clinical Genetics, Clinical Examination and Procedures, Anesthesia and Restraint, Surgery, Hospitalization, Clinical Pathology, General Parasitology, Immunology, Postmortem Examination, Water Analysis, Soil and Substrate Analysis, Specific Ion and Toxicologic Analysis, Epidemiology, and Zoonotic Diseases. Part II (p. 224-816) includes chapters on Freshwater Temperate Fishes; Salmonoids; Goldfish, Koi, and Carp; Catfishes, Freshwater Tropical Fishes; Marine Tropical Fishes; Marine Cold-Water Fishes; and Sharks, Skates, and Rays.

Most sections have chapters entitled (with minor variations) Taxonomy and Natural History, Special Anatomy and Physiology, Clinical Pathology, Environmental Requirements/Disease, Nutrition, Diet, Reproduction, Bacterial Diseases, Fungal and Algal Diseases, Viruses, Parasites, Neoplasms, Toxicology, and Pharmacology. Appendices include conversion tables, abbreviations for fish cell lines, diagnostic laboratories, supply companies, chemotherapeutics, fish names mentioned in the text, and index.

The "one-book-covers-everything" concept virtually guarantees production of a volume that is both unmanageable in size and incomplete. Part I (chapters 1-17) should be enlarged to a complete summary of fish health, written by the editor alone, and published as a separate book for non-fish people. The chapters on fish anatomy, histology, etc. are not needed by most specialists, for better guides to these topics exist on every fish biologist's bookshelf. Chapter 16 concerns fish epidemiology in a broad sense, but the term, by definition, refers only to humans (Williams et al. 1993, Nature 364:664-666). Epidemiology and its derivatives are misused throughout the volume, although some chapters, inconsistently, use the correct terms.

Part II (chapters 18-102) has no defined purpose or limit of scope. It lacks a "Temperate Marine" section, as well as coverage for fishes in offshore pelagic, deep-sea, polar, cave, and other habitats; "Estuarine" is inadequately tagged onto "Freshwater Temperate Fishes" (as if other aquatic zones lack brackish areas) and somehow stretches into strictly marine species. Part II is seriously deficient in lacking sections or chapters about (1) control of the extremely infectious exotic diseases that are transmitted in ornamental fish trade and aquaculture activities; (2) fish health management for largescale fish production (the major support of veterinary services); (3) ethical considerations of severe habitat modification, pollution, and fish health problems caused by intensive fish culture, wild tropical fish capture, and use of toxic collecting chemicals; (4) government fish health inspection; (5) fish health-related controversy involving professional status of university Ph.Ds versus DVMs; and (6) the future.

Most sections are not equivalent, overlap, and have vaguely outlined internal or synergistic goals. The featured fish species differ drastically in chapters within a section. Chapters vary in coverage from USA to worldwide. Titles and coverage of equivalent chapters vary—for example, "Parasites of..." (in chapters 27, 39, 60, 69). "Parasitic Diseases..." (chapters 39, 41, 100) and "Parasites..." (chap. 70). Almost nothing is known about some chapter topics. Others border on science fiction and must have been written with great difficulty. The text sometimes ignores, unnecessarly duplicates, or reinvents materials that are readily available elsewhere. Some authors extend their topic summaries beyond their expertise. If Part II is intended to be a guide to "Fish Medicine" for practicing veterinarians, then it should be redirected into a volume about the health of existing aquaculture and aquarium fish species (the only solvent clients for those fish that might be limited to aquarium care in the USA or Canada. The coverage of other fishes and countries should be reduced and the target groups expanded. The bulk of peripheral non-health topics should be replaced with mere citations to the existing and usually more adequate literature.

Some of the information on each pathogen is erroneous, outdated, inconsistent, or overgeneralized. Fish-associated isolates may be used as an example. Fifty-nine serious errors occur in less than 800 words on parts of 10 pages that concern isolates. A sentence on page 590 is illustrative: "Praziquantel baths will kill larval forms [do not occur on fish] of Livoneca [genus spelled correctly on page 726] symmetra (species not in this genus) [Moser et al., 1986 (J. Parasitol. 72; 125)] does not mention isolates, nor has he ever treated isolates with praziquantel (M. Moser, pers. comm.)." A phrase on page 657 ("...lionfish infected with Icthyolocytes pterosoma...") is doubly embarrassing: it is used as an example of an isolate, but is correctly cited as a copepod in literature mentioned on the next page. Such errors might have been avoided in the case of the lionfish especially, for it is a host species featured prominently on the cover of the book.

Appendix III (Fish Diagnostic Laboratories) is unnecessary because the USDA publishes a more accurate listing with more information (Directory of Animal Disease Diagnostic Laboratories [USA], Natl. Vet. Serv. Lab., P.O. Box 844, Ames, IA 50010). Appendix IV (Sources of Supplies) is incomplete, inexplicable, and illogical. Appendices VI (Scientific Names and Their Common Equivalents) and VII (Common Names and Their Scientific Equivalents) are schizophrenic. Either the common names or the scientific names of fishes should have been used throughout the book to avoid duplication. Fish Medicine at least should follow the American Fisheries Society, FAO/UN, or another standard authority on common names of fishes. In short, it should not pretend to be the source for everything. In any case, everyone will find something of use in this volume, as long as it is not trusted as the primary source of information. —Ernest H. Williams, Jr., Department of Marine Sciences, University of Puerto Rico, P.O. Box 908, Mayaguez, Puerto Rico 00687-0906 (tel: 809-899-2048, ext. 211; fax:809-899-5500; e-mail:e._williams@umac.upr.edu) and Lucy Bunkley-Williams, Department of Biology, University of Puerto Rico, P.O. Box 5000, Mayaguez, Puerto Rico 00681-5000 (tel:809-265-3837; fax:809-265-3837; e-mail:l._bunkley@umac.upr.edu).