Book Reviews

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BOOK REVIEW . . .

Journal of Wildlife Diseases, 26(2), 1990, p. 179

The Protozoan Phylum Apicomplexa, Norman D. Levine. CRC Press, Inc., Boca Raton, Florida. 1988. Volume I, 203 pp.; Volume II, 154 pp. Hardcover, $135.00 (Vol. 1), $110.00 (Vol. 2).

Despite the general title, the focus of this two volume set is strictly the classification of organisms in the phylum Apicomplexa. About 4,600 named species within the phylum are listed with their taxonomic authorities. In addition, the synonyms, the host(s) utilized and the site(s) of infection for each parasite are provided. Diagnoses are presented for all taxa above the species level. This impressive compendium of species is an extension of the classification provided by the author in the Society of Protozoologist's Illustrated Guide to the Protozoa (1985). Within the species listings there are a number of taxonomic and nomenclatural innovations including one new class, one new species, one new name, 16 new combinations and 54 emendations.

The two volumes are divided into 14 chapters. A short introduction (eight pages) precedes the classification proper (Chapters 2 to 14) which occupies the remainder of the first volume and 48 pages of the second. Ninety-five pages of references (approximately 2,800 entries) follow the classification. The reader is directed to the Index-Catalogue of Medical and Veterinary Zoology for citations which are not included in the references. Two useful appendices are included listing *Nomina dubia, Nomina nuda,* non-Apicomplexa, etc. (four pages) and Superseded Generic Names (three pages). A separate index, listing primarily taxa at the level of genus and above, is found in each volume.

In any classification of this breadth, differences of opinion will exist concerning the status and relationships of at least some of the taxa. This classification is no exception. Areas of controversy certainly exist within the arrangement of higher taxa in the subclass Coccidiasina and the class Aconoidasida. Some of these controversies reflect historical disagreements such as the species composition or taxonomic affinities of the genera *Atoxoplasma, Sarcocystis, Isospora* and *Haemohormidium*. Others reflect recent advances in our understanding of the biology and structure of some apicomplexan parasites. For example, the validity of the class Aconoidasida, which is recognized by the author, has been questioned recently because ookinetes of hemosporidian parasites have been demonstrated independently by several workers to possess conoids. As discussed by the author in the introduction, the classification presented in these volumes is only a snapshot of our current thoughts on the relationships among apicomplexan protozoa. This classification will undoubtedly be modified as our understanding of these parasites expands.

This work is not free of typographical errors. In one example from the subclass Coccidiasina, members of the genus *Schellackia* have been placed erroneously within the family Dactylosomatidae instead of within the proper family Lankesterellidae. Evidently the paragraphs concerning the Dactylosomatidae and the genus *Schellackia* have been transposed.

These volumes are definitely not directed at general readers looking for basic information concerning the phylum or even at specialists working with well known model systems. However, this two volume set will serve as a primary reference for all workers describing new species or proposing taxonomic changes within the phylum Apicomplexa. As such, these books are highly recommended for biomedical libraries and specialists of apicomplexan taxonomy and nomenclature.

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major bighorn sheep die-off from pneumonia in southern Alberta. Biennial symposium of the Northern Wild Sheep and Goat council 4: 356–363.

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BOOK REVIEW . . .

Symposium on Fish Vaccination, O.I.E. Fish Disease Commission, 12, rue de Prony 75017, Paris, France. 1988. 248 pp.

The book reporting on and entitled "Symposium on Fish Vaccination" is a compilation of topics discussing the theoretical background and practical results on the immunization of fish against infectious diseases." The symposium was held in February 1984 and the report was reprinted in November 1988. The symposium was to serve as a vehicle to introduce and involve veterinarians in fish health and maintenance. Although many aspects of the symposium are relevant in 1989, the vast majority of the topics desperately need updating. The overall quality of the report could be enhanced greatly by the inclusion of addenda to update chapters where possible. For example, the chapter dealing with "Immunization against viral diseases occurring in cold water" is a fairly detailed discussion of IPN, SVC, VHS, and IHN virus infectious, even to the level of describing the architecture of the virus and the various mechanisms of virulence. However, the following chapter "Immunization of warm water fish against five important pathogens" fails to describe the simplest of facts about the pathogens being discussed, such as gram stain reaction and cell shape or size. Although commercial warm water fish farming is a development of the past 20 yr and limited research data was available before 1984, some effort should have been employed to present similar details in all chapters and update chapters where possible. The pictures and photomicrographs of diseased fish and histopathology are severely lacking in quality and should not have been included in the present form. Aside from the previous noted deficiencies, the report does serve as an excellent primer for veterinarians and students pursuing studies in fish disease/pathology to introduce them to a limited number of fish species and pathogens.

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Ph.D. Dissertation. Southern Illinois University, Carbondale, Illinois, 144 pp.

YEATTER, R. E., AND D. H. THOMPSON. 1943. Cottontails, tularemia and weather. Illinois Conservationalist 8: 6–7, 36.

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BOOK REVIEW . . .

La Brucelosis de los animales en América y su relación con la infección humana, Casimiro García-Carillo. Office International des Epizooties, 12, rue de Prony, 75017 Paris, France. 1987. 303 pp.

The book is a compilation of factual data on brucellosis in the Americas. The largest amount of material presented includes information on the occurrence of this infection in domestic animals, wild mammals, and its impact on man in this continent. Additional information on the economical aspect in terms of animal health losses and medical expenses incurred during treatment of infected people on a country to country basis also is presented.

When it comes to control of brucellosis, it is encouraging to know that control programs are underway in most countries. Canada is one of the few countries which enjoys a brucellosis-free status. It is projected that in the near future, as a consequence of ongoing control programs, United States, Cuba, and Jamaica will be free of brucellosis as well. The efficacy of the control of brucellosis in Latin America, however, is continuously hampered because of the prevailing financial difficulties and the inherent political instability.

The positive role of the Panamerican Center for Zoonoses in Argentina in the control of brucellosis, particularly in Latin America, is emphasized. This Center is responsible for the production, standardization, and supply of brucella antigens to Latin American countries. It is also the reference center for the identification and characterization of new brucella isolates.

Due to the nature and importance of the topic under discussion, and since the common target is the elimination of brucellosis from the New World, it would have been desirable to include a section on control of brucellosis in Latin America. I am referring to the need for an outline of the basic technical principles for a successful control program taking into consideration the unique existing situations among Latin American countries. Here again, I see a unique opportunity for a direct participation of the Panamerican Center for Zoonoses. Admittedly, control programs of this nature cannot work without both realistic financial and technical support.

The second part of the book deals with a general overview of brucellosis in the Americas. It summarizes the occurrence of brucellosis by animal species, country or region, and whenever possible, the identification of the brucella species involved is documented. Taking as an example, the estimated annual losses from bovine brucellosis for several Latin American countries are presented. Although this information is not current, one can appreciate the negative implications of these losses on the already battered economies of those countries. Regarding the epidemiology of the disease, a direct correlation is seen between the occurrence of brucellosis in livestock in the Americas and the rate of this infection in man.

The illustrations used in the form of maps or tables are appropriate, and are easy to follow and understand. Except for a few typographical errors, the same applies to the illustrations in the first part of the book.

In summary, the author should be complimented for taking the initiative in writing this book. The search for information must have been a difficult task in itself if we consider that in several instances he had to resort to government files. Reading the book, I found a wealth of information of interest to the veterinary, medical, and related biomedical sciences. For example, I found it very interesting to know that the distribution of *Brucella suis* in the swine population of the Americas is nearly as wide as that of *Brucella abortus* in cattle. With all the implications that this pathogen has for human health, it also is interesting and important to know that certain *Brucella suis* isolates from Argentina and Colombia have unique and different characteristics from the brucella biotypes so far recognized.

I recommend the book to all of those presently involved with the control of brucellosis in the Americas.

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