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BOOK REVIEW . . .

Atlas of Zoo Animal Pathology, R. E. Schmidt and G. B. Hubbard. CRC Press Inc., 2000 Corporate Blvd., N.W., Boca Raton, Florida 33431, USA. 1987. Volume 1, 241 pp.; Volume 2, 192 pp. Set \$215.00 U.S.

As stated by the authors in the Introduction "we prepared this atlas for individuals involved in zoo animal medicine. It is designed to give a pictorial reference to numerous lesions seen in zoo animals, and to include a number of pertinent references for in-depth study of the conditions." In addition, the authors have relied on morphologic diagnosis because of the difficulty in obtaining a specific etiology for many of the lesions. Both volumes consist of black and white photomicrographs of lesions arranged by systematic classification. These are supplemented by several photographs of gross lesions. Each photograph has a brief legend which includes the tissue stain used and magnification.

Volume 1 concentrates on mammals and includes lesions observed in 97 species, consisting of carnivores, herbivores, and primates. Each of the 14 chapters contains a brief text describing some of the major observations by the authors. The chapters are followed by an appendix of scientific and common names of animals used in the text. An extensive bibliography consisting of 268 references completes the volume. There are 383 photographs covering 47 bacterial diseases, four viral diseases, 46 neoplasms, 15 mycotic diseases, 26 parasitic diseases, 95 miscellaneous conditions and 151 diseases of unknown etiology. However, there are several photographs of the same lesion at different powers and there are several photographs of the same

causative agent in different species. As a result the overall coverage of different diseases is not extensive.

Volume 2 includes data on 92 species of birds, 44 species of reptiles, three species of amphibians and five species of fish. As in Volume 1, lesions are classified by system and so each of the 14 chapters is devoted to a system. Each chapter includes members of the different animal groups having lesions in that system. The appendix of common and scientific names is followed by 190 references. The 298 photographs cover 31 bacterial diseases, seven viral diseases, 40 neoplasms, 30 mycotic diseases, 45 parasitic diseases, 50 miscellaneous conditions and 95 unknown etiologies. While there was a great deal of redundancy, as in Volume 1, the authors had better success at attributing more lesions to a specific cause in Volume 2.

Unfortunately, the quality of many photographs in both volumes is poor. Several are not in clear focus and many suffer from being taken at an inappropriate magnification. In such cases, it is difficult to appreciate what the legend is describing in the photograph. The legends could be more descriptive and the use of arrows would be beneficial. Many photographs are of conditions that are not special to zoo animals and so reduce the contribution of this work to zoo animal medicine. Consequently, the overall benefit of this work does not warrant the extreme cost.

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BOOK REVIEW . . .

Avian Histopathology, C. Riddell. American Association of Avian Pathologists, Inc., University of Pennsylvania, New Bolton Center, Kennett Square, Pennsylvania 19348, USA. 1987. vi + 152 pp. (211 plates on 53 pp.). \$22.00 U.S.

This is one of the many handbooks based on materials compiled during a series of graduate courses. The contents, as suggested from the title, provide details on avian histopathology. The author states his reason for publishing this work is that: "Information on avian histopathology is often difficult to find, as it is widely scattered in the literature." Yet he does not cover the histopathology of all avian diseases, but only those that he has experienced in his work on avian diagnostic pathology in North America. He discusses the pathogenesis of well known diseases, but neoplasms and parasitic diseases receive only a minor emphasis, except for those commonly found in domestic poultry.

The majority of avian disease texts are organized by specific diseases. This handbook describes microscopic pathology by systems. Much can be gained from attempts at novel construction of a text, but confusion can also be a consequence. I believe that the latter is true in this case. Chapter 1 deals with the hemic system, followed by chapters on the lymphoid, skeletal, muscular, cardiovascular, respiratory, and alimentary systems. Chapter 8 covers the liver, 9 the urinary system, 10 deals with the nervous system, 11 the endocrine and reproductive systems, and the manual ends with a chapter on the integumentary system. Each chapter is subdivided into sections, some of which are physical areas while others are specific maladies. For example, the chapter on the alimentary system has subheadings of: I. Normal; II. Oral Cavity; III. Esophagus and Crop; IV. Proventriculus; V. Gizzard; VI. Intestines; VII. Pancreas; VIII. Neoplasia, while the chapter on the urinary system has: I. Introduction; II. Normal; III. Circulatory Disturbances; IV. Gout; V. Degeneration; VI. Inflammation; VII. Miscellaneous; VIII. Neoplasia.

One of the most disconcerting aspects of this manual is the absence of specific citations within the text. All references are listed under their respective subheadings at the end of the chapter, and there is no indication within the chapter where each reference is used. The author even goes so far as to indicate in the Preface that "The lists of references provided for each chap-

ter are not complete but represent those references that the author found useful in studying avian histopathology." To further compound this problem he includes an Appendix listing 11 general references, probably to placate those who had expected some useful information on wild birds. His justification for this is "Where references provided are not adequate, supplemental information supporting the text may be found in the general texts and monographs listed in the appendix at the end of the handbook."

The quality of the plates is good, and the glossy mat of the paper helps to enhance detail. Unfortunately, they are all black and white photomicrographs. If the intent of the author, as stated, was to provide a handbook "useful for veterinarians either studying or working in diagnostic pathology, and research scientists working on avian diseases," then color plates would have been much more appropriate. The cost saving in publishing black and white plates is considerable, but this offers little consolation for the practitioner, teacher or student who is trying to reference from stained materials. One helpful aspect is that there are a number of 'normal' photomicrographs placed in juxtaposition to those exhibiting maladies. Although the text indicates where each figure is appropriate, all of the plates are collated at the end of the manual. This organizational option by the author makes it extremely awkward for the user, who has to flip back and forth to view each referenced plate. This problem is further exacerbated by the fact that the manual has a plastic spiral binding. It is difficult to make the latter pages (where the plates occur) lay flat, and it is this portion of the manual that would probably be the most useful to workers interested in avian histopathology. Moreover, this type of binding does not hold up well with use, and the pages in my copy are already starting to tear.

The old adage that one can tell a book by its cover holds true with this volume. The cover has a black and white line drawing of a chicken, a microscope, and a photomicrograph of a cartilaginous nodule in the lung of a broiler chicken. In fact, the whole manual is primarily about poultry, with token references to captive galliform and caged birds. Almost 85% of the plates are from poultry; 7% are devoted to waterfowl, 4% to caged psitticines, 2% to passerines, and the remaining five plates to quail, pheasant, owl and pigeon. As in most instances of avian pa-

thology, the wildlife practitioner or researcher is left to deduce what is happening in wild populations from basic work performed on poultry.

How useful will this handbook be for wildlife disease workers? For those interested in the histopathology of poultry, this manual would probably prove useful. However, for those of us in-

terested in a useful reference on the histopathology of wild birds, we must still wait.

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