

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Faculty Publications from the Harold W. Manter
Laboratory of Parasitology

Parasitology, Harold W. Manter Laboratory of

12-1978

**Review of *Parasitic Protozoa. Volume III: Gregarines, Haemogregarines, Coccidia, Plasmodia, and Haemoproteids.*
Edited by Julius P. Kreier (Academic Press, 1977)**

Donald W. Duszynski
University of New Mexico, eimeria@unm.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/parasitologyfacpubs>



Part of the [Parasitology Commons](#)

Duszynski, Donald W., "Review of *Parasitic Protozoa. Volume III: Gregarines, Haemogregarines, Coccidia, Plasmodia, and Haemoproteids.* Edited by Julius P. Kreier (Academic Press, 1977)" (1978). *Faculty Publications from the Harold W. Manter Laboratory of Parasitology*. 185.
<https://digitalcommons.unl.edu/parasitologyfacpubs/185>

This Article is brought to you for free and open access by the Parasitology, Harold W. Manter Laboratory of at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Faculty Publications from the Harold W. Manter Laboratory of Parasitology by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

ZOOLOGICAL SCIENCES

PARASITIC PROTOZOA. *Volume III: Gregarines, Haemogregarines, Coccidia, Plasmodia, and Haemoproteids.*

Edited by Julius P. Kreier. Academic Press, New York.

\$48.00. xv + 563 p.; ill.; index. 1977.

An expanding interest in parasitic protozoa, particularly those important to veterinary and human medicine, has spawned this new four-volume series. Volume III contains 10 reviews: Gregarines and Haemogregarines, by R. D. Manwell; Avian Coccidia, by M. D. Ruff and W. M. Reid; Coccidia of Mammals Except Man, by K. S. Todd, Jr. and J. V. Ernst; *Toxoplasma*, *Hammondia*, *Besnoitia*, *Sarcocystis*, and Other Tissue Cyst-Forming Coccidia of Man and Animals, by J. P. Dubey; On Species of *Leucocytozoon*, *Haemoproteus*, and *Hepatocystis*, by A. M. Fallis and S. S. Desser; Plasmodia of Reptiles, by S. C. Ayala; Plasmodia of Birds, by T. M. Seed and R. D. Manwell; Plasmodia of Rodents, by R. Carter and C. L. Diggs; Plasmodia of Nonhuman Primates, by W. E. Collins and M. Aikawa; and Plasmodia of Man, by K. H. Rieckman and P. H. Silverman.

In his chapter on gregarines Manwell notes that these organisms may be more important than now credited: they parasitize insects — our chief competitor on this planet. Unfortunately, the chapter is incomplete and out-dated so he does not convince the reader of his premise. In chapter 2, the *Eimeria* of domesticated fowl are discussed in terms of parasite nutrition and *in vitro* development, the structural, physiological and immunological changes in the host after coccidian invasion and the various means of diagnosing and controlling avian coccidiosis. In the chapter on the coccidia of nonhuman mammals the areas of eimerian biochemistry, nutrition, cultivation and various aspects of host-parasite interactions are discussed as they relate to 21 of the more familiar species. The chapter on tissue cyst-forming coccidia is mostly a compilation of recently published, though less extensive, reviews. As a result, much of the in-

formation and many of the illustrations are like a lengthy instant replay. For nonspecialists and specialists alike, however, the majority of pertinent, recent information is organized into a single framework.

The remaining six reviews summarize the haemsporidians of vertebrates. Much of the information presented in the chapter on *Leucocytozoon*, *Haemproteus* and *Hepatocystis* is a digest of two previous reviews (Fallis et al., 1974; Garnham, 1966) but, after all, we lack much knowledge on the biology of the parasites in these genera. The section on reptile malaria provides a good review of the species named to date and the hosts they were recorded from. This chapter clearly demonstrates the difficulty in working with and identifying these forms. The chapters on bird and rodent malaria are the most detailed in this group, and the most complete. They are followed by the plasmodia of nonhuman primates which adds little more than was covered by Coatney et al. (1971). This is reflected in the fact that only 8 of 58 references cited were published after 1971. Also, no immunology is covered in this chapter, a particularly telling deficiency, given the nature of the preceding chapter on rodent malaria. The final chapter on human malaria reflects more the chemotherapeutic and drug-related interests of the senior author than the immunological persuasion of the second author. A better balance between the two would have seemed more appropriate, though overall the section is concise (perhaps too!) and clear. The majority of illustrations in this volume are good, but a few are reduced to the point where a good imagination is essential. The biggest fault is in the correspondence between literature citations in the text and the references at the end of a chapter — usually typos that result in discrepancies, but too often references that are not found in the text and text citations for which there are no references. This might be understandable in the chapter by Dubey with 400 references (20 such errors) but certainly could have been avoided in a chapter like Manwell's with only 55 references (9 errors). Although such mistakes are frustrating, they do not detract seriously from the value of this volume as a reference for all professionals interested in the study of parasitic protozoa. More important than usefulness as a reference, perhaps, is that most chapters (particularly 2 and 6) foment many ideas for future research endeavors.

DONALD W. DUSZYNSKI, *Biology, The University of New Mexico*