Book Reviews

Ecology of Animal Parasites. Jean G. Baer. Urbana: Univ. Illinois Press, 1951. 224 pp. $5.00.

This book, according to the author, is an attempt "to review the field of parasitology from all possible angles and to show that parasites are subjected to the same general laws that govern all free-living organisms." The aim is "to stimulate the reader's thoughts and to encourage him to consider old problems from new angles." The approach is refreshingly different and the author's aim has certainly been achieved. Baer is primarily a taxonomist, and one of the best. In addition he has a speculative and philosophical turn of mind that makes his writing definitely thought-provoking, whether or not one agrees with his deductions. "A taxonomic background," according to Baer, "is absolutely essential to a complete understanding of the relationships between the parasites and their hosts," but it is not *all* that is essential. The sections of the book that deal with morphological and biological adaptions are extremely interesting and valuable. Unfortunately, the same cannot be said for some of the other sections. It is evident that parasitology has expanded to such a degree that no one individual can hope successfully to "review the subject from all possible angles."

After a short chapter orienting parasitism in relation to phoresis, commensalism, and symbiosis, none of which is believed to lead to parasitism, a series of chapters is devoted to adaptations to parasitism in various groups of organisms. Many interesting forms that are not widely known among parasitologists are discussed. The relatively large amount of space devoted to Mollusca and to Crustacea is particularly welcome, since the literature on these forms is widely scattered. This section of the book contains numerous beautifully executed illustrations, but the diagrams showing composites of various life cycle modifications are difficult to follow. At the end of each phylogenetic section there is a short bibliography.

In a section on "Host-Parasite Relations," one chapter deals with host specificity, and another with action of parasites on hosts. As far as vertebrates are concerned the latter chapter deals mainly with immunology. Here the treatment is spotty and superficial. "Physiology of Parasites" is discussed, and there is a short final chapter on the origin of parasitism. The chapters dealing with physiology unfortunately contain a number of errors and misconceptions. For example, it is incorrectly stated that since respiration in *Litomosoides* is completely inhibited by cyanide there is no cytochrome present in this worm. In view of the fact that almost all that has been learned about endoenzymes in any organism has resulted from experiments on homogenized tissues, the statement that "mashing up worms to discover enzymes or to effect chemical analyses should be a thing of the past" will come as a surprise to biochemists and physiologists. Such statements as that *T. evansi* "contains very few enzymes" and that "the presence of enzymes in the tissues of tapeworms has been claimed by several authors but has never been proved in a satisfactory manner" suggest unfamiliarity with the numbers and roles of enzymes in all forms of life above the simpler viruses.

In spite of these limitations, this book contains so much interesting information, hitherto widely scattered in the literature, that it will be a welcome addition not only to every parasitologist's library, but also to the bookshelves of general biologists, who are likely to have their ideas of parasitology limited by the comparatively narrow medical and veterinary fields covered by most books on the subject.

ASA C. CHANDLER
Department of Biology, Rice Institute

Photometric Atlas of the Near Infra-Red Solar Spectrum, λ8,465 to λ25,242. Orren C. Mohler *et al.* Ann Arbor: Univ. Michigan Press, 1950. 124 pp. $4.00.

This publication is the infrared counterpart of the *Utrecht Atlas* (Amsterdam, 1940), which covers the region up to λ8,771 A. It is the first work that contains continuous intensity tracings of high dispersion solar spectrograms in the near infrared region from 8,465 A to 25,242 A, a region of great interest to astrophysicists. The atlas represents a marvelous piece of work.

The intensity tracings given are reduced reproductions of the original records obtained at Mount Wilson Observatory with the Snow telescope and the infrared grating spectrometer constructed in the shop of the McMath-Hulbert Observatory of the University of Michigan. The grating has a ruled surface of 14½ cm × 18½ cm, with a total number of 74,000 lines. The resolving power averages about 30,000 but may be as high as 50,000 under favorable conditions. The recording system employs a lead-sulfide photoconductive cell, amplifier, and a Leeds & Northrup Speedomax recorder.

The atlas contains 324 partially overlapping tracings. In order to facilitate orientation and approximate wavelength measurements in general, three absorption lines are labeled with their wavelengths. The approximately linear dispersion, ranging from 3.7 mm/A at λ8,460 to 4.2 mm/A at λ25,000, allows simple linear interpolation.

The authors announce the preparation of a companion volume which will contain wavelength tables with identifications for solar and telluric lines of the atlas between 1.4 μ and 2.5 μ and data concerning equivalent widths.

K. W. MEISSNER
Department of Physics
Purdue University