

studied, and the way in which these ideas are used pointed out. At no time does the author content himself with dogmatic statement, and if an argument should lead too far from the main stream of this book the conclusion always gives the source in which the next stage of information can be found. Clarity is not sacrificed to brevity, and the writing flows smoothly from logical step to step.

There can be no hesitation in recommending this book to all undergraduates and postgraduates interested in thermodynamics, and many users of more advanced thermodynamics might well find pleasure in a study of this well-written account. The production of the book is of the usual standard of the Cambridge University Press, and, bearing in mind the preferred reader, it is good to see that an edition is available in paper covers at a substantial reduction in price.

S. ANGUS

## DISEASES OF BIRDS

### Tratado de Doenças das Aves

Por J. Reis e P. Nóbrega, com a colaboração de A. S. Reis, R. C. Bueno e M. Giovannoni. Vol. 1: Pp. 391. Vol. 2: Pp. 416. Vol. 3: Pp. 318. Vol. 4: Pp. 428. 2a Edição, revista e ampliada. (São Paulo: Edições Melhoramentos.) n.p.

**T**O undertake the compilation of a comprehensive work on a subject so enormous and ramifying as the diseases of birds requires courage. To complete such a work and present it in a manner that makes it of the greatest use, to both veterinary practitioners and students, is an achievement that does credit to the painstaking care and ability of the authors.

The "Treatise on the Diseases of Birds" by J. Reis and P. Nóbrega is now published in its second edition. The work was originally published in four volumes but in the new edition Vols. 1 and 2 and Vols. 3 and 4 are bound together to form two books only.

It is natural that the main bias of the work is toward the diseases of domestic poultry since it is in this field that the majority of work has been carried out, but information on matters of academic interest concerning wild birds is also included. The bibliography has been brought up to 1952 and, in some cases, more recent references are included. This fact alone will make the work useful even to those unable to read the Portuguese text.

The diseases are classified under their causative organisms. Thus, Part 1 is concerned with virus diseases, Part 2 with bacterial and fungal infections, Part 3 with diseases caused by Protozoa and parasitic arthropods and the last part deals with helminths and nutritional disorders. In Part 4, there are also sections on the pathological lesions of the organ systems, poisons, abnormalities of development, hygiene and a brief summary of surgical and general therapeutic measures.

In the parts dealing with virus and bacterial diseases the arrangement of the work is similar: the diseases are considered separately and a chapter is devoted to each. These chapters are in the nature of a complete account of the disease concerned. They begin with a synonymy of the common names of the disease in many languages, followed by a brief historical introduction and sections on geographical distribution, etiology, pathogenicity, symptoms, path-

ology, etc. At the end of each chapter is a bibliography of papers relevant to the disease under consideration.

The arrangement in Vols. 3 and 4 is slightly different in that the subject-matter is parasitological and each group of parasites is introduced by a brief general systematic account. The protozoan species recorded from birds are tabulated according to their hosts and are then discussed in groups with subsections dealing with the diseases in individual hosts. A somewhat similar arrangement has been used for the parasitic arthropods, but no keys for identification are given, and the whole group is dealt with from a systematic point of view, rather than by hosts. In the final volume the treatment of the various helminth groups is different. The nematodes are considered in groups according to the organs of the hosts in which they are found; the majority of the section on trematodes is devoted to lists of species found in both domestic and wild birds, again separated according to their site in the hosts; and the cestodes are dealt with in a similar manner except, of course, that position within the host is of little importance so far as the adult worms are concerned.

Vol. 4 closes with a general bibliography, eight coloured plates of pathological conditions and a comprehensive and most useful index.

It is realized that this account of the work does little to evaluate its merit in detail and, indeed, this would be a difficult task in view of the enormous field covered. The value of the inclusion of so much systematic detail in the helminthological sections is, perhaps, doubtful, since these groups are dealt with by many specialized works in a rather more satisfactory manner than is possible in this type of publication. In making this criticism I am undoubtedly biased by my own field of work.

In conclusion, it is perhaps best to summarize by suggesting that an English translation of the treatise would prove of great use to many people.

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## ENTOMOLOGY IN REVIEW

### Annual Review of Entomology

Vol. 3. Edited by Edward A. Steinhaus, in association with Ray F. Smith. Pp. vii + 519. (Palo Alto, Calif.: Annual Reviews, Inc., 1958. Published in co-operation with the Entomological Society of America.) 7 dollars.

**T**HE editors of scientific reviews have two main tasks; one is to ensure they get authoritative articles of current interest covering a wide range in the specialized field, and the other is to maintain a high scientific and literary standard in these articles. The reviewer of reviews may also consider these two aspects of policy and practice, and when the first two volumes of the "Annual Review of Entomology" were noticed in *Nature* (179, 1150; 1957) certain criticisms of the general policy were made, the main point being the disproportionately large number of articles devoted to the chemical control of insects. In the third volume, just issued, the balance is somewhat redressed, only 21 per cent of the space being devoted to insecticide work as against 35 per cent in both the preceding volumes.

The result is a book of better balance and much wider general appeal than hitherto, and it is clear