

SCIENTIFIC BOOKS

Lehrbuch der Protozoenkunde, eine Darstellung der Naturgeschichte der Protozoen mit besonderer Berücksichtigung der parasitischen und pathogenen Formen. Begründet von FRANZ DOFLEIN, neubearbeitet von EDUARD REICHENOW. Ed. 5, Jena, Verlag von Gustav Fischer. vi+iv+vii+1262 pp., 1201 figs. in text. 1927-1929. Price, bound, 70 marks.

AMONG the many German text-books of specialized nature issued by the well-known publishing house of Gustav Fischer, few, if any, have had the cordial reception which has been accorded to Doflein's "Text-book of Protozoology," and none has had a wider usefulness. This has been in part due to the key position which the Protozoa hold in the field of biology. They are first in the evolutionary series of animal forms, and have intimate relationship with the plant series. They present extraordinary diversifications in structure and life history; their ecological adaptations bring them into the most diversified environments; their cytological developments surpass those of all other cells in the complexities and modifications which have emerged in the long period of their evolution; it is probable that the number of species now living will be found to exceed that of all other animals, the insects included, and their interrelations in the web of life link them in intricate chains of food relations, soil conditions, oceanic deposits, commensalism, symbiosis and disease. Scarcely an animal or plant exists that is not in one or many ways entangled in this web with the Protozoa.

The merit of the series of editions of Doflein's text-book lies in the fact that he grasped the wide significance of the relationships of the Protozoa, advanced each successful edition in the forefront of this rapidly progressing science, and was never provincial in his grasp of his field or in its presentation.

In addition to these qualifications he organized his material logically, developed it symmetrically and presented it with lucidity and forcefulness. He had a keen scent for the significant organisms or features of structure—a fact revealed in the selection of subjects for his own contributions to protozoology. Protozoologists and biologists generally have come to await with eagerness the next edition of Doflein in order that they might catch up with the broader aspects of the subject. Although he always presented the parasites and pathogenic aspects of the Protozoa, he never subordinated their broader biological phases to these more practical or immediately useful subjects, as has been notably done in Wenyon's recent "Protozoology."

Another feature of Doflein's authorship which is distinctive and for which the publishing house of

Fischer is also to be congratulated is the high standard of artistic and technical skill in the illustrations. New and original illustrations were often prepared, figures from other investigators never suffered at his hands and a wealth of carefully selected figures adorns nearly every page of the large volume.

The new edition prepared by Dr. Eduard Reichenow, professor and director of the protozoological division of the widely known Hamburg School of Tropical Medicine, follows in the main very successfully along the lines of the earlier editions. Changes involved are the entire omission of the Spirochaetes, which, quite properly, are now relegated to the Bacteria. New illustrations, many of them original from Doflein, to the number of several hundred, have been introduced; the formerly separated sections on morphology and on physiology are quite significantly combined in one.

More than ten years have elapsed since the fourth edition was published. The great volume of new material which has been published in the intervening years has compelled a rewriting of almost the entire text, which, together with the vast array of material to be reviewed, is no small undertaking. This fact is doubtless responsible for the relatively larger use made of German sources in this revision as compared with the earlier ones.

This is hardly the place for a critical survey of the details of the new edition, but only for a brief characterization. The text, in comparison with the best edition, is in a somewhat more involved style; there is a relatively greater proportion of German work in the new bibliographic citations, and there is a considerably fuller presentation of the parasitic genera and species, which will doubtless meet with approval of many users of this monumental work.

The reviser is to be congratulated on the high order of scientific service rendered in the preparation of this summary of a field so wide, so diverse and so widely useful. The publisher has also given the book the fitting set-up which biologists the world over have long associated with his imprint.

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Der Hochgebirgssee der Alpen. By OTTO PESTA. Bd. VIII of Thienemann's Binnengewässer, 1929, 156 pp., 8 pls., 41 figs. Published by E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart.

THE author restricts the term "high mountain lakes of the Alps" to those bodies of water that are situated above the timber line, which lies at 1,800 to 2,000 meters above sea-level in this region. These elevated