Fresh-water Invertebrates of the United States

By ROBERT W. PENNAK.

The Ronald Press Co., New York, 1953. 769 pages.

It is curious to see how difficult it is for the limnologists of North America and Europe to acquire a thorough knowledge of each other's scientific literature. An example will show the correctness of this view: In PAUL S. WELCH's second edition of „Limnology” 1952, 88% of the literature quoted is written in English, and in FRANZ RUTTNER „Grundriss der Limnologie” 1952, 80% is written in German. It is, therefore, important to call the attention of European readers to a new, valuable, and handsome treatise by Professor PENNAK, a pupil of the late Professor C. JUDAY, Wisconsin. His book is of particular interest to American biologists and zoologists, but also to Europeans, since every chapter dealing with the various groups of fresh-water animals has a general biological and morphological introduction, summarizing classical and recent investigations; and among the latter are many important American papers published during the war-time or later, and as yet not very well known in Europe.

The general characteristics of each group of animals are clearly stated, and the account comprises a morphological description, locomotion, feeding, internal anatomy, reproduction, seasonal variation of numbers, developmental life cycle, general ecology, geographical distribution, economic significance, taxonomy etc. It concludes with a key to the species or genera. Of course the key cannot give the species for all large groups where the taxonomy is still vague, but in such cases it is limited to the genera. There are more than 2000 good, instructive figures, which facilitate the determination.

It is very difficult for one author to write about all fresh-water groups from Protozoa to Molluscs, but Professor PENNAK seems to have overcome all difficulties in this respect; he has had his manuscript carefully criticized and corrected by a great number of helpful specialists.

The excellently written text and the beautiful get-up of the book constitute a plea for and an encouragement to more limnological work on the fresh-water fauna in North America. The book will also be a valuable addition to the library of European limnologists. KAJ BERG