transfinite numbers. At this point, a breathing spell is offered with a rather trivial chapter on logic. But the author returns shortly to serious mathematics with a discussion of various topics in topology. Abstract algebra is then introduced, with an aside on the esthetics of mathematical symmetry, and this is followed by a discussion of infinite series. The foundations and essentials of mathematics are examined in the concluding chapters.

Although there is some new material, presented rather pleasantly, one has the impression that he has seen most of this before in some other popular treatment of mathematics. In addition, there are other failings; these include a very detailed table of contents that promises more than it delivers and several errors, some rather serious. Thus, the explanation of when one class has a greater transfinite number than another class (page 58) omits a crucial clause, and the discussion of bracketing in infinite series (page 126) is slightly misleading. Finally, I wonder how insulted the people at the University of North Carolina will be by his statement that extrasensory perception is investigated there, instead of at neighboring, rival Duke.

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Fresh-Water Biology. Henry Baldwin Ward and George Chandler Whipple. W. T. Edmondson, Ed. Wiley, New York; Chapman and Hall, London, ed. 2, 1959. xx + 1248 pp. Illus. $34.50.

Perhaps no field and laboratory identification manual in the English language has been so widely used as the original edition (1918) of "Ward and Whipple." Our knowledge of fresh-water invertebrates has increased so markedly, however, especially during the past 25 years, that this complete revision is long overdue. The general organization of the first edition has been followed; that is, each chapter is written by a specialist and is devoted to a particular taxonomic group. The material consists mainly of illustrated keys to those fresh-water forms found north of the Rio Grande. Beyond introductory remarks, little space is usually devoted to a consideration of the *biology* of the groups discussed. Depending on the complexity of the group and the degree to which it is known in North America, each key is usually carried to either genus or species. The former situation, for example, applies to the Protozoa, Bacteria, Fungi, most of the Algae, Nemata, Rotifera, Insecta, Acari, and Bryophyta. The latter arrangement includes such groups as the Myxophyceae, Porifera, Gastrotricha, Bryozoa, Tardigrada, Oligochaeta, Hirudinea, Crustacea, and common vascular plants.

Most of the 46 chapters contain many fresh illustrations, but for the Rhizopoda, Actinopoda, Porifera, Nemata, Oligochaeta, Hirudinea, Cladocera, and Mollusca the majority of the illustrations are those of the first edition (reproduced, apparently, from the old, worn plates). There are no halftones.

Although the editor, W. T. Edmondson, has done a good job of reconciling the inequalities in style, emphasis, illustration, and conviction of the contributors, there are important differences in the level of usefulness of the various presentations.

Many readers will be disappointed to find that vertebrates and internal parasites are not included, but, on the other hand, new and excellent chapters on the Fungi, Tardigrada, Polychaeta, and Bryophyta have made their appearance. In addition, the chapters on aquatic insects have been greatly expanded, although they no longer include terrestrial adult forms having immature aquatic stages. Other taxonomic groups given greatly revised and expanded treatment are Bacteria, Algae, Protozoa, Gastrotricha, phyllopods, Ostracoda, Copepoda, Malacostraca, Acari, and rooted aquatics. The brevity of the final chapter, on "Methods and equipment," however, is regrettable. There appear to be very few typographical errors.

The editor has been intentionally conservative in making up the index, but many biologists will feel that this is a serious error. The following terms, for example, are used in the text and keys but are not to be found in the index: *birotulate, cingulum, crawling water beetles, microsclere, operculum, paralabial plate, theca, trichocyst, trochus, water tiger,* and *whirligig beetle.*

Although specialists will disagree on matters of emphasis and taxonomy, there will be no argument as to the care and labor involved in the preparation of this book. Edmondson has done aquatic biology a great service in providing direction and stimulus for 50 other specialists in the preparation of the compilation, and in editing their efforts.

The high price is most unfortunate. Undoubtedly much of the cost is a reflection of the complicated (sometimes wastefully complicated) format.

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New Books

Antibiotic Therapy for Staphylococcal Diseases. Henry Welch and Maxwell Finland, Eds. Medical Encyclopedia, New York, 1959. 220 pp. $4.50.

Arterial Embolism in the Limbs. The clinical problem and its anatomical basis. A. L. Jacobs. Livingston, Edinburgh, Scotland, 1959. 212 pp.

Automatic Titrators. J. P. Phillips. Academic Press, New York, 1959. 233 pp. $6.

Automating the Manufacturing Process. George F. Hawley. Reinhold, New York; Chapman and Hall, London, 1959. 156 pp. $4.95.

Calculus with Analytic Geometry. Donald E. Richmond. Addison-Wesley, Reading, Mass, 1959. 473 pp. $8.75.

The Cathode-Ray Tube. And its applications. G. Parr and O. H. Davie. Reinhold, New York, ed. 3, 1959. 445 pp. $9.50.

The Clonal Selection Theory of Acquired Immunity. Sir MacFarlane Burnet. Vanderbilt Univ. Press, Nashville, Tenn.; Cambridge Univ. Press, London, 1959. 222 pp. $5.

La Corrosion des Métaux. André Hache. Presses Universitaires de France, Paris, 1959. 124 pp.

Dictionary of Atomic Terminology. Lore Lettenmeyer. Philosophical Library, New York, 1959. 298 pp. $6.

Faune de France. No. 63, *Coleopteres Scarabeides.* Renaud Paulian. Lechevalier, Paris, rev. ed., 1959. 298 pp. F. 5500.

Flat Rolled Products: Rolling and Treatment. Metallurgical Soc. Conferences, vol. 1. T. E. Dancy and E. L. Robinson, Eds. Interscience, New York, 1959. 147 pp. $3.75.

General Crystallography. A brief compendium. W. F. de Jong. Freeman, San Francisco, Calif., 1959. 290 pp. $6.

A Guide to Antibiotic Therapy. Henry Welch. Medical Encyclopedia, New York, 1959. 69 pp. $3.

Husa's Pharmaceutical Dispensing. A textbook. Eric W. Martin, Ed. Mack Publishing Co., Easton, Pa., ed. 5, 1959. 738 pp.

The Ice Was All Between, T. A. Irvine. Longmans, Green, New York, 1959. 240 pp. $4.50.

An Introduction to the Organic Chemistry of High Polymers. Carl S. Marvel. Wiley, New York; Chapman and Hall, London. 90 pp. $4.50.

An Introduction to Public Health. Henry S. Mustard and Ernest L. Stebbins. Macmillan, New York, ed. 4, 1959. 349 pp. $4.50.