A Text-Book of Convergence

By W. L. Ferrar. Pp. vii + 192. (Oxford : Clarendon Press ; London : Oxford University Press, 1938.) 10*s*. 6*d*. net.

IN this book, the theory of convergence is developed on two fundamental assumptions. The first of these is concerned with upper bounds, namely, that a certain set of numbers has in it a least number ; while the second refers to irrational number as the limit of a sequence of rational numbers, namely, that every irrational number is the limit of a monotonic increasing sequence of rational numbers. With the aid of these assumptions, the theory of convergence is developed without recourse to the properties of Dedekind cuts. The 'real' number appears only in the appendix, where the assumptions used in the body of the work are proved to be consequences of the definition of real number. In the appendix also, the first of the above-mentioned assumptions appears as a theorem, and a proof of the second is given. In fact, the appendix contains as much of the foundations of analysis as is necessary to justify the assumptions made in the initial chapters of the book. A short historical survey prefacing an examination of these 'foundations' shows why such a complex structure as the Dedekind cut is essential to the definition of number.

The notation used throughout the work is one familiar to all analysts ; but its use in a text-book is, as the author says, somewhat of an innovation. A great improvement on the majority of text-books is that the proofs do not teem with references to previous theorems. The references are given parenthetically if at all, and the student is advised to use them as sparingly as possible in following the proofs.

Organic Reagents for Metals and for Certain Acid Radicals

By the Staff of the Research Laboratory of Hopkin and Williams, Ltd. Third edition. Pp. 156. (London : Hopkin and Williams, Ltd., 1938.) 2*s*.

THE first edition of this small work appeared in January 1933, it was reprinted in July of the same year, a second edition appeared in 1934, and now a third edition has become necessary.

About forty compounds are mentioned in the book ; the systematic names (alphabetical order) are followed by trivial names, constitutional formulæ, molecular weight and salient properties. Concise directions are given for use in qualitative and quantitative work. The bibliographies for each compound are full and there is a good index. The book should be used in conjunction with "Modern Methods in Quantitative Chemical Analysis" by A. D. Mitchell and A. M. Ward.

The Conquest of Cholera :

America's Greatest Scourge. By Prof. J. S. Chambers. Pp. xv + 366 + 40 plates. (New York : The Macmillan Company, 1938.) 20*s*. net.

THIS book, which is based on the study of contemporary medical literature and old newspaper files, contains a detailed and vivid account of the epidemics of cholera which devastated the United States in 1832, 1833, 1849, 1866 and 1873. In addition to the description of the epidemics, chapters are also devoted to the contributions to medical literature between the epidemics of 1833 and 1849, the work of Pasteur and the substitution of the germ theory for the miasmatic origin of disease. The text is liberally interspersed with portraits, maps and other illustrations, and a bibliography of sixty references is appended.

Weather Rambles

By Dr. W. J. Humphreys. Pp. iv + 265. (London : Baillière, Tindall and Cox, 1937.) 11*s*. 6*d*.

IN the form of a series of chatty chapters, the author, whose larger books are well known to all students of meteorology, contrives to give a wealth of information concerning nearly all aspects of the weather in a simple form. The subjects discussed are much too varied to permit of summarizing in a few sentences. Starting with the tornado, or prairie twister, following on with the mysteries of the forms of solid condensation of water vapour and the problem of how the earth got its atmosphere, it ends with the problem of home-made weather, or the control of air conditions in enclosed spaces. This is no systematic text-book of meteorology, but contains a wealth of interesting information, all given in a clear and delightful style.

Climate :

a Treatise on the Principles of Weather and Climate. By W. G. Kendrew. Second edition. Pp. x + 328 + 12 plates. (Oxford : Clarendon Press ; London : Oxford University Press, 1938.) 15*s*. net.

THE new edition of Kendrew's book on climate gives an outline of the physical principles which underlie the variations of weather and climate. The effects of insolation, the relation of the distribution of pressure to wind systems, the formation of precipitation and of fog, the effect of elevation above sea-level on climatic factors, and a fairly detailed description of the weather of the temperate regions, form the most important features of the book.

This book is an interesting and valuable introduction to the study of climatology, and is so clearly written that it requires no special technical knowledge of the reader.

An Introduction to Weather and Climate

By Prof. Glenn T. Trewartha. (McGraw-Hill Series in Geography.) Pp. ix + 373 + 7 plates. (New York and London : McGraw-Hill Book Co., Inc., 1937.) 18*s*.

THE first half of Prof. Trewartha's book is devoted to the physical bases of weather and climate. While this contains a considerable amount of information, it cannot be regarded as free from errors, and so is perhaps not the perfect introduction to the second part of the book, which deals with the classification of climates in accordance with a scheme which is a slight variant of the Köppen classification. The second part of the book is clearly written, and can be recommended as an introduction to the longer treatises on the subject.