

has compelled the publishers to omit, for the present, the list of periodicals cited. In the section "Science and Technology, including Hygiene and Sport," published in April as part of the *Athenaeum* subject index for 1916, we are told that 311 periodicals are cited. The editors state that more than 500 periodicals have been indexed in their class lists for 1915-16.

The section "Science and Technology" of the "Athenaeum Subject Index to Periodicals" should have a wide circulation at the present time, when a knowledge of the best and most economical methods of carrying out a great variety of technical processes is of such importance to the country. The Council of the Library Association is to be congratulated on having brought this index into existence, and it is to be hoped that it will receive such support as will enable the work to be continued.

OUR BOOKSHELF.

Essentials of Practical Geography. By B. C. Wallis. Pp. xv+213. (London: Macmillan and Co., Ltd., 1918.) Price 4s. 6d. net.

THIS volume, which contains a great deal of original research work, is a valuable contribution to the practical side of the science of geography. It furnishes the teacher of the subject with a representative collection of practical exercises on the essential principles usually included in a four years' course of geography in an average secondary school. The 104 pages of part i. contain what may be regarded as a minimum course of practical geography. Part ii. (50 pages) is devoted to supplementary exercises which may be worked in the geography lessons or in the periods assigned to arithmetic, mathematics, physics, handwork, and drawing. The remainder of the book deals with outdoor work and advanced map-reading, revision exercises, etc. The work is skilfully planned, there being varied exercises for the beginner as well as for the advanced student. The principle of contour lines leads to isotherms, isobars, isohyets, etc. The diagrams showing isopleths for Java and Kew are particularly instructive.

The treatment of raininess is very full, several of the author's sets of monthly raininess maps being reproduced from the *Scottish Geographical Magazine* and from the *Monthly Weather Review* of the United States Weather Bureau. The example on p. 142 shows clearly the method of obtaining the "raininess numbers"; but since the actual monthly rainfall of Algiers for each month is given correct only to the nearest inch, it seems scarcely logical to calculate the theoretically evenly distributed rainfall in inches to two decimal places and to infer from the numbers so obtained that February is the rainiest of four months, each of which is credited with 4 in. of rain. If the figures for the monthly rainfall of Bombay had been given to a closer degree of accuracy, the corresponding raininess numbers given on p. 143

could have been made to agree with those assigned to Bombay on p. 43. On p. 143 (sixth line from the bottom) the word "quarter" should be "third."

At the end of the book is a useful glossary, a collection of examples of subjects for debates, and a set of indexes. W. M. C.

Practical Organic and Bio-chemistry. By R. H. A. Plimmer. New and revised edition. Pp. x+636. (London: Longmans, Green, and Co., 1918.) Price 18s. net.

THE speedy appearance of a new edition of this work indicates that it has established itself as a trustworthy and useful aid to practical bio-chemistry. The chief characteristics of the previous edition, to which attention was directed in *NATURE* of January 13, 1916 (vol. xcvi., p. 532), remain quite unaltered, and only slight changes in detail have been introduced. These are comparatively few in number, and take the form of modifications of methods of analysis and preparation rendered necessary by new publications. Thus the new methods of preparation of the bile acids, due to Schryver and to Mair, and the latest method of estimating glucose in blood (MacLean), are fully given. A new plate of absorption spectra forms the frontispiece, and includes the spectra of chlorophyll and other leaf pigments, as well as those of the colouring matters of the blood and urine. Appropriately for the times the remarks on diet have been recast, but the few lines devoted to "vitamines" scarcely do justice to the present state of our information with regard to those important dietary constituents.

A welcome addition to the new edition would have been some account of the methods employed in the estimation of the products of bacterial fermentation, a branch of bio-chemistry which has recently become of considerable importance, both from the scientific and the technical point of view. In particular a description of the processes proposed for the determination of mixtures of the lower fatty acids would have been of great value to many workers, although the problem has not yet been satisfactorily solved. A. HARDEN.

Yorkshire Type Ammonites. Edited by S. S. Buckman. The original descriptions reprinted, and illustrated by figures of the types reproduced from photographs mainly by J. W. Tutchter. Parts ix. to xv. (London: W. Wesley and Son, 1913-18.) Price 3s. 6d. net each.

ALL students of ammonites will welcome this latest addition to Mr. Buckman's work. It contains nearly fifty excellently reproduced figures of as many different species, accompanied by the original as well as detailed modern descriptions. The whole provides as good a substitute for the actual specimens as can be desired.

Seventeen new genera are instituted, the fate of which may be left to the future. It is unfortunate that no guiding principle has been followed consistently in devising new names. In accordance with common practice the majority end in "iceras"