

members, but also by botanists generally as providing expression of opinion by experts on subjects of current interest. An index of authors of papers and speakers in discussions facilitates reference. The *compte rendu* of the discussions in the subsection appointed to revise the rules of botanical nomenclature, prepared by the *rapporteur général*, Dr. John Briquet, will be of special interest to many botanists.

A photograph of the president forms a frontispiece to the volume, and one of the executive committee and officers is placed at the end. The book is clearly printed and of attractive appearance; a word of thanks is due to the Cambridge University Press for its share in this production.

Acoustics: a Text on Theory and Applications.

By Prof. G. W. Stewart and Prof. R. B. Lindsay.
Pp. ix+358. (London: Chapman and Hall, Ltd., 1931.) 25s. net.

THE revitalisation of the subject of acoustics brought about by applications of the thermionic valve is reflected in all the newer books on the subject. The present volume, based upon lectures in a graduate course in electrical communications given at Yale University by Prof. Stewart, who is known for his pioneer work on acoustical filters, is no exception. So good is the book that one can merely note two minor defects, the omission of authors' names from the index and the rather too comprehensive title.

Since the plan followed is to give only as much of general acoustical theory as is necessary for the treatment of the topics selected, omitting such subjects as vibrating strings and bars, the title "Theory of Applied Acoustics" would perhaps have expressed better the scope of the book. Needless overlapping with standard general works on sound is avoided and the space so saved is used to give remarkably lucid expositions of modern developments. Of necessity a good deal of difficult mathematics has to be used, but one feels that the mathematics has been written in a physical laboratory, as, for example, on p. 22, where in the midst of a derivation of the general wave equation a pause is made to examine the actual numerical values of the quantities represented by the symbols.

The book is so written that the treatment of many particular subjects can be read without further reference to other pages. Many readers will be thankful for such foresight as that shown on pp. 55-56, where the authors take care to explain not only their own use of the term 'acoustic impedance' but also the three other different uses in the literature. The book can be heartily recommended to all interested in modern acoustics.

W. H. G.

Handbook of Cornish Geology. By E. H. Davison.

Second edition. Pp. 114+4 plates. (Truro: Oscar Blackford, 1930.) 6s.

SINCE the first edition of this excellent little book was issued, in 1926, many investigations of the mineral veins and igneous rocks of Cornwall have been made, largely as a result of the work and

influence of the author and of Dr. A. Brammall. Mr. Davison is well known as an authority on the Cornish lodes, and Dr. Brammall's unsurpassed petrological work on Dartmoor has stimulated his colleagues and students to apply his methods to the Cornish granites. In consequence, though only five years have elapsed, the second edition marks a very considerable advance on the first. Many parts of the chapters on contact metamorphism, volatile constituents, and lodes have been rewritten, and a new chapter has been added on china clay.

As an outline of the geology and mineralisation of one of the most interesting of English counties the book should be widely welcomed by teachers and students of petrology and of mining and general geology. It is simple and lucid in style, and clearly and effectively illustrated with maps, sections, and photographs. There is certainly no better guide to the visitor who takes an amateur interest in his geological surroundings. Brief descriptions of localities of geological interest are given, and of the chief mines and their minerals. It is recorded that, although most of the mines are at present perforce closed down, specimens worth collecting can usually be found on the waste heaps. A bibliography is added of the Survey maps and memoirs and of the chief papers published since 1906 relating to the district.

The book can be warmly recommended to all who are interested in the geology and economics of Cornwall.

Physical Metallurgy Laboratory Manual. By Dr.

Norman E. Woldman. Pp. v+259. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1930.) 17s. 6d. net.

THIS manual is intended to give the student of metallography a series of exercises with the object of familiarising him with the structure of the most usual metals and alloys. The theory of the subject must be studied elsewhere, and stress is here laid on the practical methods of metallographic examination. The book contains a very large number of illustrations, mostly photomicrographs, and detailed directions for the development of each structure are given. The taking of heating and cooling curves and the determination of the effects of heat treatment on the structure of steel are also described. A short section on the subject of X-rays is useful so far as the detection of blowholes and cracks by that means is concerned, but the pictures of crystal structure obtained by the passage of X-rays through metals would be unintelligible without further explanation than is given here. The use of high magnifications is illustrated by some of the well-known photographs of Lucas, but a warning that only investigators of quite exceptional experimental skill can obtain such results at a magnification of several thousand diameters would not have been out of place. Most of the photographs are of very satisfactory quality, and the book will be found useful for reference, even by those who do not wish to work through its exercises.