

Our Bookshelf.

The Principles of Insect Control. By R. A. Wardle and P. Buckle. (Publications of the University of Manchester: Biological Series, No. 3.) Pp. xvi + 295. (Manchester: University Press; London: Longmans, Green and Co., 1923.) 20s. net.

THE literature dealing with the various methods of controlling injurious insects has now assumed such vast proportions that it is almost beyond the capacity of the economic entomologist to keep abreast of it. The necessity has arisen for periodic stocktaking of this accumulated information in order that the situation may be reviewed as a whole. Messrs. Wardle and Buckle have rendered a very distinct service in providing an excellent résumé of the present-day position with regard to insect control. In undertaking this task they have had the difficulty of sifting a literature often contained in unfamiliar languages, and scattered through a heterogeneous series of scientific, technical, and practical publications—many of which are relatively inaccessible. The collation and arrangement of the extracted information also presents certain difficulties, particularly on account of the wide and disjointed range of subjects dealt with.

These troubles have been surmounted by the authors very successfully, and they have managed to produce a very readable and coherent book. Their method has been to divide the volume into four parts, comprising altogether sixteen chapters. Part I. is devoted to biological means of control, including host-resistance, effects of climatic factors, disease, predaceous and parasitic insects, and insectivorous birds. All these different subjects are, for the most part, adequately treated. Part II. is concerned with insecticides, and is the longest and best section of the book. Part III. deals with mechanical control, including cultural methods, restriction of spread, storage of crops, and baits and traps. The section devoted to cultural methods might perhaps have been longer in view of their importance, and more examples of such methods enumerated. Part IV. is devoted to a short discussion of legislative control, and the book concludes with an appendix on various types of insecticide machinery, together with a very good classified bibliography. In a few words, it may be said that the volume should appeal to economic entomologists, since it covers the whole field of a subject which has not been previously surveyed in so comprehensive a manner.

(1) *Foundations, Abutments, and Footings.* Pp. xiv + 414. 20s. (2) *Structural Members and Connections.* Pp. xviii + 611. 30s. (3) *Stresses in Framed Structures.* Pp. xiv + 620. 25s. Compiled by a Staff of Specialists. Editors-in-chief, Prof. George A. Hool and Prof. W. S. Kinne. (Structural Engineers' Handbook Library.) (London: McGraw-Hill Publishing Co., Ltd., 1923.)

THE three volumes before us belong to a series of six, which is intended to provide a complete work of reference covering the design and construction of modern civil engineering structures. A large number of prominent American engineers have co-operated in the production, and the commendable plan has been

followed of making each volume, so far as possible, complete in itself. (1) The volume on foundations is copiously illustrated with examples taken from practice, and deals with all the matters which require consideration, from the preliminary investigation of the soil to the completed foundation, and includes such special points as underpinning, waterproofing, etc. Practically all types of engineering foundations are included. (2) The volume on structural members and connexions opens with brief statements of the general theory, occupying the first 171 pages; the remainder of the volume is taken up with the design of steel, cast-iron, wooden, and reinforced concrete members. The student who has mastered the elementary work on materials will find much of interest in the earlier part of this volume. The part dealing with design is exceptionally good, and contains much matter which is usually either omitted or receives scant treatment in British text-books. (3) The volume on framed structures also opens with a section on the general theory, occupying 158 pages. This part is by no means copied from the second volume, and includes methods of treating moving loads. The remainder of the volume deals with roof and bridge trusses, portal bracing, deflexion, secondary stresses, statically indeterminate frames, high buildings, towers, etc. The slope-deflexion method is generally employed for the solution of statically indeterminate frames in this treatise. Taking all three volumes, the authors have succeeded in producing an extremely valuable work of reference which cannot fail to be of service to civil engineers.

Theory and Practice of Mine Ventilation: a Text-book for Students and a Book of Reference for Managers and Under-managers. By Thomas Bryson. Pp. viii + 255. (London: E. Arnold and Co., 1924.) 8s. 6d. net.

MR. BRYSON is an experienced teacher of mining and is well known as a writer in mining technology. He has been at considerable pains to present his material in that order and manner which renders it most readily assimilable by the majority of his readers. The subject is undergoing re-solution; its treatment just now is difficult, and there is evidence that the author has not found it easy to balance between obsolescent dogma on one side and the quicksands of controversy on the other. The task is too Blondin-like to escape an occasional slip. We observe, for example, a repetition of the usual fallacy in reference to the origin of the "fuel cap," as the non-luminous mantle of a flame is inappropriately called. Nor do we agree with the neglect of the "dynamic water-gauge" at the expense of the "static gauge," especially as the former is required in determining the efficiency of fans. Again, the simpler and more precise form of Pitot tube made by the Cambridge and Paul Scientific Instrument Company is to be preferred to the type illustrated, and the simpler British alternative is more satisfactory than the hygrodeik.

It is to be doubted whether the inclusion of "ventilated" colliery plans without complete analysis can be of benefit. The author has, perhaps, attempted the impossible in treating of the "ventilation of plans" in a single short chapter.

Mr. Bryson is a strong and convincing advocate of