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SHORT REVIEWS

AGRICULTURE

Humus

Origin, Chemical Composition and Importance in Nature. By Prof. Selman A. Waksman. Second edition, revised. Pp. xiv+526. (London: Baillière, Tindall and Cox, 1938.) 30s.

THIS treatise, first published in 1936, is now recognized as the standard text-book of the science of humus, or 'humology', as the science has been called. The literature of humus is so diffused that the treatment of the subject in agricultural and soil science text-books must necessarily be somewhat superficial and inadequate to the importance of the subject. The fact that the chemistry, physics and biology of humus do not lend themselves to easy interpretation in terms of orthodox science is the main stumbling-block to progress in knowledge of the soil.

The book is in three parts. The first deals with the historical development of humus studies, the changing conceptions of the origin and composition of humus, and the reasons for the highly confused state of our knowledge of it. The nine chapters comprising the second part begin with the more rational approach to the subject, adopted about the commencement of the present century, in which the study of plant residues and the processes of their decomposition led to the modern conception of humus as a highly complex and changing group of organic and mineral substances. The decomposition of humus and its functions and applications in agriculture and industry occupy the remaining five chapters of the book, including a new chapter on humus and soil conservation.

The bibliography of 1608 references indicates the immense amount of work that has been devoted both to the investigation of humus and to the compilation of the book. If the amount of definite knowledge gained is disproportionately small to the amount of labour expended, it is nevertheless some of the most significant in the whole realm of soil science, and Dr. Waksman is to be congratulated on his selection of relevant facts and their condensation into a very readable and intelligible form.

Ce qu'il faut savoir des plantes des montagnes
Par P. Du Manoir. (Savoir en histoire naturelle, Vol. 5.) Pp. 54+40 plates. (Paris: Paul Lechevalier, 1939.) 16 francs.

Ce qu'il faut savoir pour manger les bons champignons
Par G. Portevin. (Savoir en histoire naturelle, Vol. 6.) Pp. 94. (Paris: Paul Lechevalier, 1939.) 12 francs.

THESE two little monographs are attractive in design, but any botanist would take issue with the claim that the contents represent what it is necessary to know on the subjects dealt with. Rather are they harmful in suggesting that, in the case of the alpine plants, with an idea of colour and size and a few notes on habitat, plants may be recognized by comparison with a rather impressionist representation in colours, usually of the flowering shoot alone.

The monograph on fungi does not pretend that the amateur can be sure to collect edible fungi on the basis of the brief descriptions of the fungi that it contains; it contents itself rather with suggestions as to modes of preparing the edible forms for the table when they are collected. Emphatically, however, this restricted field does not include what it is necessary to know before collecting and cooking fungi for the table.

ARCHAEOLOGY AND ETHNOLOGY

Buried Empires

The Earliest Civilisations of the Middle East. By Patrick Carleton. Pp. 290+12 plates. (London: Edward Arnold and Co., 1939.) 10s. 6d. net.

MR. CARLETON has excavated in Iraq as a member of Sir Leonard Woolley's archaeological expeditions to Ur, and he is a student of cuneiform. He writes, therefore, with the authority of first-hand knowledge; and his narrative of Mesopotamian pre- and proto-history, intended primarily for the general reader rather than the expert, summarizes in a vivid and eminently readable form the results of archaeological research from the beginnings, so far back as present knowledge