

Cultivation of the Vine in America.

Manual of American Grape-growing. By U. P. Hedrick. (The Rural Manuals.) Pp. xiii+458+xxxii plates. (New York: The Macmillan Co.; London: Macmillan and Co., Ltd., 1919.) Price 15s. net.

THIS book is one of the series of rural manuals edited by Prof. L. H. Bailey, and it should prove of great use to both commercial and amateur grape-growers. The opening chapter, dealing with the "Domestication of the Grape," is especially interesting. There are about fifty named species of the grape, most of them found in temperate countries. Of the Old World grapes only one species, *Vitis vinifera*, is cultivated for fruit, but of all grapes this is of greatest economic importance. *Vitis vinifera* is the grape of ancient and modern agriculture, and is the chief agricultural crop of Southern Europe and of vast regions in other parts of the world. The written records of its cultivation go back five or six thousand years, while the ancient Egyptians are known to have grown the vine for wine-making; the methods and processes of domestication, however are now unknown. The records of the New World yield information on the cultivation of wild species of grapes, and the author describes the domestication process of the four species now extensively cultivated.

The author states that "few other agricultural industries are more definitely determined by environment than the grape industry," and he describes the grape regions of America, discussing the factors which determine the suitability of a region for grape-growing. Climate is the chief of these factors, and is dealt with in detail. Other factors treated of are soil, insects and fungi, accessibility to markets, etc.

Full information is given on propagation, fertilisers, breeding, etc., as well as a chapter on the various operations involved in transferring the grapes from garden to market, together with advice on the carrying out of these operations. The important subject of grape pests and their control is dealt with, the life-histories of the several pests being given in so far as they bear on the control methods.

A particularly interesting chapter is that on "Stocks and Resistant Vines," where we are given an account of the root-louse Phylloxera. This pest made its appearance in France in 1861, and increased so rapidly that by 1874 the whole vine industry of Europe was threatened with ruin. The situation was saved by the realisation of the fact that American grapes did not suffer from

Phylloxera attacks, hence the European vines were saved by grafting them on the Phylloxera-resistant roots of American grapes.

The chapter on grape botany gives the general botany of the vine and also includes a detailed account of the American grape species, while in the chapter on varieties of grapes descriptions are given of a large number of different types with their respective characteristics and advantages, the varieties described being those which will appeal to the amateur as well as to the commercial grower. The book is well supplied with illustrations and figures.

V. G. JACKSON.

Our Bookshelf.

Ministry of Public Works, Egypt: Zoological Service. Hand-list of the Birds of Egypt. By M. J. Nicoll. (Publication No. 29.) Pp. xii+119+31 plates. (Cairo: Government Press, 1919.) Price P.T.15 (3s. 6d.).

AN up-to-date treatise on the avifauna of Egypt has for some time past been a desideratum in ornithological literature. It is now forty-eight years since the late Capt. Shelley's well-known book, hitherto the foremost on the subject, appeared, and much has been added to the knowledge of the subject in the meantime. This want is well supplied in an epitomised form by Mr. Nicoll's book.

The author, a well-known ornithologist, has resided in the country for thirteen years, and during the whole of this period has specially devoted himself to the study of its avifauna. The result of his labours is highly to be commended to the bird-loving visitor to Egypt, and to all who are interested in Palæarctic ornithology, to whom, indeed, it is indispensable. The ornithology of the "Land of the Pharaohs" is not only rich in its numbers—Mr. Nicoll treats of as many as 436 forms—but also of great interest, since its native birds, though Palæarctic in the main, comprise a number of Ethiopian representatives. Another notable feature is presented by the birds of passage, vast numbers of which bi-annually traverse the country, especially the Nile valley, *en route* to northern summer haunts in spring, and again in autumn on their return to their accustomed tropical, equatorial, and South African winter quarters.

Among the native birds the ostrich became extinct seventy years ago, and it is sad to learn that the characteristic and beautiful Egyptian plover has practically ceased to exist. On the other hand, several once declining species, among them the buff-backed heron, are increasing in numbers as the direct result of protection. In addition to giving the status of the species and sub-species known to occur in Egypt, and particulars on the dates of the coming and going of the migrating birds, the author has furnished a short and useful diagnosis of each bird.