

specially valuable alike to soldiers and to all others who are liable to find themselves removed from the normal conditions of civilised life. But it has no value which is exclusively military, and a broader foundation is desirable than will be found in this book if the more valuable sequel of practical observation is to be expected.

It should be mentioned that a special feature of the work is a set of diagrams giving for every 10° of latitude from 70° N. to 40° S. the bearing and altitude of the sun throughout the year. Something better in the way of star maps than the plates at the end of the book could easily have been provided.

A Manual for Spraying. By K. L. Cockerham. Pp. xi + 87. (New York: The Macmillan Co., 1923.) 7s. net.

THIS little book on spraying is intended as a reference book and guide for practical men. It is exceedingly brief, consisting of a short account of various types of spraying machines, including dusting apparatus; descriptions of and recipes for the more commonly used spray fluids; and a series of tables of insect and fungus pests, arranged under crop headings, giving the kind of injury caused by each pest and the spray recommended for its control. Unfortunately, the subject does not lend itself to quite such cut-and-dried treatment. The identification of a pest from a description of the injury, which seldom exceeds five or six words in length, is rarely likely to be successful. Moreover, the instructions for making up the spray fluids are in some cases so brief as to be incomprehensible. Chemical formulæ are used to excess, frequently without any clear indication of the ordinary name of the substance; and inaccuracies and mis-statements are inexcusably numerous. What is the fruit-grower to make of the following, with reference to Bordeaux mixture: "The liquid should be thoroughly tested for excess of CuSO_4 and Ca(OH)_2 . If it does not respond to these tests it is unfit for the purpose for which it is intended"? Under the heading of crude petroleum we get the information: "Specific gravity of crude petroleum ranges from $\cdot 1049$ (A) (ethane) to 0.775^{18° (hexadecane). Boiling-point of ethane as a solid is -86° ." Sulphur dioxide has "specific gravity 1. 433680. 2. 2639(A)." Directions for the use of nicotine sulphate are included, but not for nicotine. Many similar quotations could readily be given. If the author had left out most of the "chemistry" and devoted the space to some elaboration of the spray fluid recipes, the book might have proved useful to the growers and farmers for whom it was written. As it is, it cannot be recommended as helpful. C. T. G.

Refraction of the Eye: including Elementary Physiological Optics. By Dr. Charles Goulden. Pp. xii + 276. (London: J. and A. Churchill, 1925.) 10s. 6d. net.

THE author tells us that this book is the outcome of a series of lectures which he has given at the Moorfields Eye Hospital to candidates for the new Ophthalmic Diploma of the Conjoint Board of England, and that its object is to give an exposition in as elementary a way as possible of the facts upon which the study of the refraction of the eye is based.

We may say at once that the book seems to meet these requirements in an admirable way. The headings to the seven chapters are: optics; the optical constants of the eye; the eye as an optical instrument; errors of refraction; the ophthalmoscope; retinoscopy; muscular anomalies. In this type of book the student is apt to find that the optics and mathematics are not so elementary as the author supposes; he will find, however, in Dr. Goulden's book, that the mathematics required can quite safely be called elementary, and the descriptions are all so particularly lucid that he will find little difficulty in at once grasping the facts. The diagrams, of which there are one hundred and eighty, call for special praise; they are bold and clear and the lettering could not be improved upon.

It is a book that can be highly commended, not only to those whose immediate object is the negotiation of an examination test, but also to many who are well advanced along the road of ophthalmic practice and have not recently polished up such knowledge which is fundamental to the thorough understanding of much of their work. There is a very full index; the type and general get-up are excellent, and we may confidently predict a long life in future editions.

Practical Forestry: from a Workman's Point of View. By A. C. Drummie. Pp. xii + 340. (London: G. Routledge and Sons, Ltd., 1924.) 7s. 6d. net.

THIS book is written "from a workman's point of view," and is in great measure the outpouring of one discontented with the present conditions of society in England; as such it may be left to the criticism of sociologists. As regards practical forestry, it contains nothing new or even freshly put, the matter being ill-arranged and mixed up with discussions on subjects the connexion of which with forestry is not obvious. The author, for example, "trusts readers will excuse a few remarks on the formation of coal," and proceeds to air his views: "Why is coal put between species of stone or rock? Because the Almighty put it there, and no expert or scientist breathing will ever make the writer believe otherwise." This book is unsuitable for forestry students or woodmen who require accurate description and scientific method in their manuals of instruction. It merits, however, the attention of both landowners and educationists, as its perusal shows how much remains to be done in the school and in the lecture hall to enlighten skilled workmen and artisans concerning the real aims of science.

Medical Hydrology: Outlines for Practitioners and Students. Based upon Lectures given at the University of London. By Dr. R. Fortescue Fox. Pp. viii + 136. (London: J. and A. Churchill, 1924.) 6s. net.

THE application of various waters in the prevention and cure of disease is one of the oldest therapeutic measures known to medical science, and in the past has been mainly empirical. In his outlines of medical hydrology, Dr. Fortescue Fox explains briefly the properties and actions of waters and discusses the rationale of treatment by their application. His conclusions are summarised in a series of aphorisms, the dogmatic wording of which is justified in the preface. The book will be useful to practitioners in exercising a choice of spas for the treatment of chronic disease.