

Our Bookshelf.

Guide Pratique de Sylviculture. Par Dr. F. Fankhauser. Troisième édition française par M. Petitmermet. Pp. 348. (Lausanne, Genève, et Paris: Payot et Cie, 1921.)

DR. FANKHAUSER'S elementary text-book on forestry is used in Switzerland for the instruction of agricultural students and working foresters; that it has great merits is evidenced by its appearance in five German and three French editions. The work is remarkable for its clear style, excellent illustrations, and admirable choice of subject-matter. The introduction, concerned with the utility of forests, explains their importance in creating industries, in regulating water supply, in preventing erosion of the soil, etc., in a country like Switzerland, where there is so much of what the author calls "absolute forest soil," or land that cannot be put under any other form of cultivation. The forests of Switzerland cover, in fact, 2,300,000 acres, about 23 per cent. of the total area of the country, and are credited with a production of about 42 cubic feet of timber per acre annually.

The first part of the book—forest botany—after some elementary notes on morphology and physiology, deals separately with each forest tree, giving its botanical characters, distribution, reproduction, growth, sylvicultural features, enemies, diseases, wood, and other products. Only one foreign conifer is included, *Pinus strobus*, and it is evident that exotic trees, like Douglas fir, Sitka spruce, and Japanese larch, so much favoured in England for planting at present, are not valued in Switzerland as yet. The next part of the book, concerned with the art of sylviculture, is an excellent summary of the different kinds of forests and how they are created, maintained, and cared for. Much attention is paid to practical subjects, like choice, collection, testing, and sowing of seeds of forest trees, nursery treatment, artificial plantations, natural regeneration, and thinnings.

Other chapters deal with utilisation, a subject which includes felling and transport of timber, and the properties and uses of wood, and with the protection of forests from wind, frost, fire, drought, insects, fungi etc. The conclusion of the work is devoted to the simple engineering and building problems that are handled daily by foresters in Switzerland.

The Principles of Immunology. By Prof. H. T. Karsner and Dr. E. E. Ecker. Pp. xvii + 309 + 2 plates. (London: J. B. Lippincott Company, 1921.) 21s. net.

THE researches of Pasteur on immunisation against fowl cholera, swine erysipelas, anthrax, and rabies, and the discovery by Behring and Kitasato of the antitoxic properties of the blood serum, constituted the beginnings of the science of immunology, which since 1890 has grown to incredible dimensions and in every direction has insinuated itself into the domains of practical

diagnosis and therapeutics. It is no longer within the capacity of one or even two individuals to deal authoritatively with the subject, although this was attempted, and with a fair measure of success, a year or two ago by such a master as Jules Bordet. Naturally many text-books exist on immunity, and the present work of Karsner and Ecker must be ranked as one of the more successful among these. The authors have handled a goodly part of the periodical literature, and have applied to their reading and study a critical acumen which is conspicuous by its absence in most books of this class. Their knowledge is of a most modern kind, and they have thrown over allegiance to the Ehrlich "side chain" hypothesis which dominated immunology for so many years. Naturally in a work of its size Karsner and Ecker's book is highly condensed, and is, in fact, restricted to fundamental principles. They state that it is primarily designed for medical students and busy practitioners. As a text-book for students working for the higher examinations it can be cordially recommended, and it may possibly be read with profit by the more intellectual types of practitioners who have previously prepared themselves for the intricacies of the subject by the perusal of some more elementary work on the subject.

We notice a number of misprints, especially in the names of several of the authorities cited, and it may be said that some of the few illustrations are crude. Otherwise it may be recommended as an accurate guide to those who wish to study the subject with profit in the periodical literature of the day.

W. B.

When Buffalo Ran. By G. B. Grinnell. Pp. 114 + 8 plates. (New Haven: Yale University Press; London: Humphrey Milford, Oxford University Press, 1920.) 10s. 6d. net.

THE supposed autobiography of a Red Indian boy of some seventy years ago, when the veteran author was himself a small boy. The tribe is not mentioned, doubtless with intention; but Mr. Grinnell probably had in his mind the Cheyenne, which he knows so well. Anyhow, the book is not for ethnologists, but for boys, and the one on whom we have tried it pronounces it "topping." Written in the simplest English, without affectation, the story brings out all the noblest features of the tribal life that has passed away. There is abundance of sympathy, but no sentimentality.

High Tension Switchgear. By H. E. Poole. (Pitman's Technical Primers.) Pp. ix + 118. (London: Sir Isaac Pitman and Sons, Ltd., 1921.) 2s. 6d. net.

IN this brief introduction to a large subject, the author contents himself with a summary of the principal features of present practice in the design of oil-break switches for the voltages in common use in this country. A few notes on isolating links, surge arresters, high-tension fuses, and testing pressures have also been inserted.