

difficult to know where the line should be drawn, and that a book of this kind tends to indefinite expansion in successive editions; this objection is to some extent met by the author's smaller book, the "Kleine botanische Praktikum," but since the student can obtain the necessary theoretical matter in the ordinary descriptive text-books, it would appear better to limit the scope of a practical manual to directions for actual laboratory work. The use of the copious index relating to technique is facilitated by its being printed on coloured paper in this edition, which will be welcomed by teachers and students of botanical microscopy as the best and most comprehensive treatise on the subject in existence.

(7) This little book opens up what is to a large extent a new field, and will be of the utmost value to students of geology and plant ecology, as well as palæobotany. Despite its small size it contains an immense amount of skilfully condensed information, and is mainly occupied by concise and clear directions for the examination of fossil and subfossil plant remains in coal, peat, clay, &c. The names of Prof. Potonié and Dr. Gothan are sufficient guarantee of the excellence of the major part of the work, which is concerned with the preparation and examination of fossil and subfossil plant remains generally, but special attention may be directed to the excellent section by Dr. Stoller dealing with the investigation of peat deposits from the ecological and phyto-geographical point of view.

(8) The labour undertaken by Dr. Jongmans in compiling an annual bibliography of palæobotanical literature has evidently secured the approval and support which it deserved, though one may regret the delay in issuing the third volume of this work, containing the titles for the years 1910 and 1911, with a supplementary list of 1909 publications. The mere citation of titles, however, forms a small part of the work, occupying only forty pages of this volume; the remainder (more than 500 pages) is devoted to the indexing of the plants dealt with in some 800 books and papers, a few words being added in each case to indicate the general nature of the communication made concerning the plant named.

(9) The original plan of the "Icones Plantarum Formosanarum" was to publish in a long series of fascicles, extending over some fifteen years, a flora which should contain full descriptions of all plants found in Formosa. However, even in the first fascicle (1911) this plan had to be altered slightly so as not to exceed the grant made by the authorities, and accordingly only the new species were described, with notes on the others; and in the meantime a further reduction of the

grant has unfortunately compelled Dr. Hayata to cut out nearly all references to species in this second fascicle. Even in this somewhat truncated form, the work is of the utmost value; the present instalment contains keys to the families, genera, and species, an enumeration of Formosan plants from Saxifragaceæ to Dipsaceæ, with their localities and geographical distribution, descriptions of new plants, and forty very fine plates. The total number of flowering plant species now known from Formosa is a little more than 3000. For the interesting conifer *Taiwania cryptomerioides* a diagnosis is given of the male flowers, which were first discovered in 1911; in its male flowers this genus shows marked general resemblance to *Cunninghamia*. F. CAVERS.

OUR BOOKSHELF.

Einführung in die Spektrochemie. By Prof. G. Urbain. Uebersetzt von Dr. U. Meyer. Pp. viii+213+9 plates. (Dresden and Leipzig: Theodor Steinkopff, 1913.) Price 9 marks.

THIS book is a translation of the French edition which has already been reviewed in these columns. It is based on a course of spectroscopy given by the author at the Sorbonne, and will be found useful in this country to colleges taking a short course in the subject for advanced students.

The book contains an excellent and up-to-date account of the various methods used in the production of spectra. The descriptions of the methods employed are very clear and well illustrated with diagrams, and contain many laboratory details necessary to know in order to repeat the methods with facility, but which are generally omitted from text-books.

Following this, which occupies nearly half the book, are chapters on phosphorescence and absorption spectra. A final chapter is devoted to the analysis of spectra into series and the laws of series, in which the chief facts of the subject are clearly set forth.

A Galla-English, English-Galla Dictionary. Collected and Compiled by E. C. Foot. (Cambridge University Press, 1913.) Price 6s. net.

THE Galla are people living in Abyssinia from Harrar, on the east, to the Sudan frontier on the west, and from Wollo, in the north, down to the southern frontier. Some, too, live in British East Africa, and a detached tribe to the west of Witu, on the north bank of the Tana river. Mr. Foot describes them as "a most industrious, pastoral and agricultural people, who are also keen traders."

Mr. Foot has been studying their language since he went to Abyssinia first, in 1907, and the volume gives the results of his industry. As Sir John Harrington says in his introductory note, the dictionary should be of service not only in Abyssinia, but also on her frontiers with the Sudan, Uganda, and East Africa.