

A Description of Sherborne Scenery,

its Nature and History in its relation to the Underlying Rocks; the particular Contribution to this Scenery made by the several Outcrops of Limestone, Clay or Sand; the Faults which displace the Rocks and thereby affect the Scenery; the peculiar manner in which the Hills wheel round about Sherborne; the Origin of Dry Valleys; the History of the River Yeo and the Formation of its Valley at Sherborne. By Joseph Fowler. Pp. iv+88+12 plates. (Sherborne: The Author, Sheeplands, 1936.) 6s.

THIS is a capital book written by a geologist for the people about Sherborne in Dorset. The treatment of the different formations is the main object, but it is told in such a manner that everyone can understand; and the make-up is well thought out—not too long and overcrowded.

Mr. Fowler has, in his introduction, described the aims and objects of the geologist. He finds the story that the rocks tell him more romantic than the most thrilling fiction, and to have the great advantage that it is true. The book is full of incident, but it never loses sight of its main geological object. His description of the Vale of Spackford is inimitable. The vale grey with the Lias, and the apple orchards far and wide, are different as possible from the Norman castles and the general hilliness of Dorset. His digressions are numerous, but will have some thread connecting with the main story; and although these digressions have a bearing on a theme which is quite another subject.

It is to this charming break up of the matter that the book owes its distinction, and doubtless Mr. Fowler will find many readers who are attracted by the subject, besides the geologists he caters for. Kestrels, sunken roads, snails, a promenade along the high Oolitic scars with the glorious view below stretching over the greater part of Somersetshire: when we compare this with the painfully accurate geological descriptions the contrast is very great. The print is very clear and well placed, and the reproductions of sketches clean and very charming. In conclusion, we may hope that Mr. Fowler will continue to write. There are plenty more subjects in the West of England which he might well take in hand.

F. J. S.

Leitfähigkeit, Elektroanalyse und Polarographie

Bearbeitet von W. Böttger, J. Heyrovský, G. Jander, O. Pfundt, K. Šandera. Pp. xii+343. (Physikalische Methoden der analytischen Chemie. Herausgegeben von W. Böttger. Teil 2.) (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1936.) 28 gold marks.

THIS volume begins with an account of conductometric titrations by Drs. G. Jander and O. Pfundt. Recent improvements in this field, for example, visual readings instead of telephone sound minima, have extended its applications, and conductometric methods now take their place with potentiometric and volumetric practice.

The second section, by Dr. K. Šandera, is concerned with the application of these conductometric methods to industrial analyses. They are convenient for

testing the purity of organic preparations and of sparingly soluble salts, and for estimating inorganic salts in the presence of such soluble non-electrolytes as sugars.

Prof. Böttger's own contribution on electro-analysis occupies more than half the volume. He is thus able to deal fully with the methods he selects, which are those he recommends from wide personal experience. Many useful points, such as rapid ways of drying electrodes, are mentioned in connexion with individual estimations. Descriptions of the latest means of separating metals by electrolytic deposition will be of special interest to those concerned with these analytical processes.

The last section, on polarography by Prof. J. Heyrovský, gives a comprehensive survey of the researches with the dropping mercury cathode which began some fifteen years ago, and upon which more than two hundred papers have been published. It is stated that so little as 0.005 c.c. of solution can be examined, and that the method is sensitive to something like 10^{-5} gm. mol., per litre. As the utility of polarographic methods comes to be appreciated, they will doubtless find wider applications as a delicate means of analysis.

Practical Bacteriology:

an Introductory Course for Students of Agriculture. By Dr. A. Cunningham. Second edition, revised and enlarged. Pp. viii+203. (Edinburgh and London: Oliver and Boyd, 1934.) 7s. 6d. net.

THE appearance of a second edition of this book affords evidence of the need that exists for a simple laboratory text-book outlining a course of work that will give students of agricultural science some grounding in microbiological methods. On the whole the book succeeds in this object. It seems a pity, however, that the new edition should include so little reference to newer methods of research. Thus, some of the microbiological methods for the estimation of plant nutrients in soil such as Winogradsky's 'plaques moulées' method are eminently suitable for the student, to whom they would give some appreciation of the nutritive requirements of micro-organisms in the soil. It is also no longer true to say (p. 149) that "for the accurate determination of the numbers of micro-organisms in soil, microscopic methods are of little value". A method has now been developed that gives estimates of numbers more reliable than can be obtained by plating methods.

The mere qualitative examination of films of soil suspension, dried and stained with erythrosine, would give the student a useful idea of the appearance of micro-organisms in the soil itself, while the technique needed is simple and much quicker than is the Rossi-Cholodny technique that is given.

Chap. ii gives a clear and useful description of the microscope, but it is unfortunate that the student is not told how to obtain critical illumination. Ignorance on this point is unfortunately widespread, and it is of first importance that students who may later be engaged in research involving the use of high magnification should be taught to use correct illumination.