

p. 238 seems a slip for the "syenite-porphry" of p. 243. On p. 147, for "Skeat" read "Skeats." One or two prominent terms, like *roches moutonnées* and strain-slip cleavage, remain unnoticed in the truly admirable index. GRENVILLE A. J. COLE.

BIOLOGICAL CHEMISTRY.

An Introduction to Bacteriological and Enzyme Chemistry. By Dr. G. J. Fowler. Pp. viii+328. (London: Edward Arnold, n.d.) Price 7s. 6d. net.

IN this work we welcome a valuable contribution to the scanty English literature of a subject of vast and constantly growing importance. A great increase of interest in biological chemistry and a consequent rapid development of the subject along almost innumerable lines have been among the most noticeable features in the history of chemistry during the last ten or fifteen years. Stimulated by the brilliant successes of Fischer and the important researches of Buchner, many workers have devoted themselves to the study of biochemical problems, and especially to the investigation of enzyme action. Accompanying this scientific movement, and no doubt in part responsible for it, there has been a widespread introduction of biological methods into the routine experience alike of the industrial and analytical chemist. The subjects of agricultural and dairy chemistry, water analysis and sewage disposal, to say nothing of the advance in the old-established fermentation industries, at once suggest themselves as instances of this tendency, and an audience has thus been created anxious for authoritative information on the principles underlying the application of biology to all these questions.

It is to this audience that Dr. Fowler has addressed the main portion of his book. Anxious to meet the needs not only of the chemist, but of the engineer and medical officer of health, and even of the general reader, he has, however, included a chapter on general organic chemistry which it is to be feared will be found superfluous by the chemist, and will be "caviare to the general." Apart from this the plan of the book is excellent. The chief types of enzyme action and of the chemical action of bacteria are first discussed, along with the chemistry of the sugars and proteins, substances which play so important a part in all biochemical changes, and the book culminates in three chapters describing the relation of all these matters to agriculture, sewage disposal, and various industries. The treatment throughout is clear and practical, the excellent method being adopted of quoting as far as possible actual experimental results and methods from the original sources, and thus enabling the reader to appreciate the lines on which successful investigation of such problems must be shaped.

As might be expected in a book ranging somewhat lightly over a large field of detailed information, occasional inaccuracies are to be found. Thus the lactic and acetic fermentations (p. 13) have both been obtained by Buchner with cells killed by acetone; the discussion of the mutarotation of glucose might easily be understood to mean that the change is due to equilibrium occurring between the aldehyde and one of the oxide forms of glucose (p. 98). More serious

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fault is to be found with the description of the well-known guaiacum test for peroxidases, along with the typical albumin reactions, as characteristic properties of enzymes in general (p. 104). Peroxidases are now recognised as a distinct and individual class of enzymes and it is at least highly probable that many enzymes are not proteins, and among them diastase itself, in connection with which these tests are quoted. Something, moreover, has gone seriously wrong both with the formulæ and argument on p. 173.

Some of the subjects touched upon are of fascinating interest, a notable example being found in the chapter on the "Cycle of Nitrogen." This is, of course, a matter of the most fundamental economic importance, and one with which the author is specially qualified to deal.

For all who feel any curiosity about biological chemistry this book should serve as an excellent introduction, and it should be difficult for anyone to read it without realising some of that glamour which has attracted so many workers to the investigation of the chemistry of living beings. A. HARDEN.

WEST GREENLAND ESKIMO.

Bei den Eskimos in Westgrönland. Ergebnisse einer Sommerreise im Jahre, 1906. By Dr. R. Trebitsch. Nebst einem ethnologischen Anhang, von Dr. M. Haberlandt. Pp. xxiii+162+map. (Berlin: Dietrich Reimer (Ernst Vohsen), 1910.) Price 8 marks.

DR. TREBITSCH gives a very readable and capitally illustrated account of his twelve weeks' journey in western Greenland. Considering how large was the distance covered in this short time, it is creditable to him how much information was collected. West Greenland, between 73° N. lat., and Cape Farewell, is in the possession of Denmark. The entire trade is in the hands of the Kgl. grönländischen Handel, a Government concern, somewhat similar to our old East India Company, and there are stringent regulations to prevent intrusion by other Powers. Travellers must have a valid pretext for going, must undergo medical inspection, and are not allowed to take intoxicants into the country.

It was only as a collector of phonographic records for the K. Akademie d. Wissenschaften of Vienna that Dr. Trebitsch could get leave at Copenhagen to visit West Greenland. The country is divided into districts, the chief town of each is a "colony," where lives a Government official, who is at the same time the sole trader; other officials, mainly natives, are scattered about at trading centres. The Danish régime is apparently beneficial; for the West Greenlanders have increased from 6,286 in 1820 to 11,790 in 1904, a striking contrast to the state of affairs among the Eskimo of Alaska. The writings of Dr. Boas and others have taught us to expect some degree of uniformity of culture among the Eskimo, despite their vast extension over some 5000 miles of coast line, but the similarity between the seal-hunting appliances of the Alaskan Eskimo and West Greenlanders is none the less striking; the same talent for drawing and the custom of vying with each other in composing songs are met with among both groups.