

during past geological periods is traced, and here we have to notice the same freedom from the stereotyped methods and matter of text-books of geology which we have remarked upon in the earlier portions of the work. Subjects like the cause of the formation of concretionary structures in rocks are treated at considerable length and with much skill, though, it must be confessed, with considerable inequality. On the other hand, many important questions which do not happen to have been made the subject of special research by the author are treated in a superficial manner or altogether passed over, there being little obvious connection between the space devoted to various divisions of the subject and their relative importance.

As a work designed to attract the attention of a general reader and to stimulate the thought of more advanced students, the work is excellent. But it is rather as a supplement to other books on the subject than as an independent treatise that its value is most apparent, for it is wanting in many of those features which are necessary in a work which is designed to give a presentation of the present state of geological knowledge. It is unfortunate that the book is not provided with an index.

*The Student's Handbook to the University and Colleges of Cambridge.* First Edition, Corrected to June 30, 1902. Pp. 468. (Cambridge: University Press, 1902.) Price 3s. net.

In this volume, the editor has brought together in a concise form all the more interesting facts and methods of procedure which every student should desire to know as he proceeds to the University of Cambridge as an undergraduate. There are twenty-three chapters in all, and each is devoted to special items.

After a short and condensed account of the history of each college, with a list of the officials at present in residence, the reader is made acquainted with the conditions of admission to any particular college, the period of residence, discipline, and an excellent survey of the average expenditure necessary.

The next four chapters are devoted to the details of the conditions and value of the entrance scholarships, exhibitions and sizarships, and the various University and college scholarships and prizes, concluding with a general account of the objects for which the several institutions of the University are utilised.

The handbook then gives useful information on the work of teaching as divided between the University and the different colleges, and then proceeds to bring together all the necessary information for those who are about to qualify for the previous, ordinary B.A. degree, and honours examinations.

After two brief chapters on advanced study and research and examinations for medical students, detailed information is given on the subjects of the B.A. and superior degrees, diplomas and fellowships, followed by useful chapters for candidates for Holy Orders, for the Civil Service and Army, and for teachers.

The final chapters show the facilities for the education of women in the University, an account of the more important outside examinations conducted by the University, concluding with a description of the object and work of the scholastic agency and the Appointments Board.

*Bacteriological Technique and Special Bacteriology.* By Thomas Bowhill, F.R.C.V.S. Second Edition. Pp. xvi + 324. (Edinburgh: Oliver and Boyd, 1902.) Price 21s. net.

As might have been anticipated, a second edition of Prof. Bowhill's book has been rendered necessary by the rapid sale of the first edition.

The book is divided into seven parts, as follows:—Part i., principles of bacteriological technique; part ii., the preparation of nutrient media; part iii., special

bacteriology; part iv., the Hyphomycetes; part v., the Blastomycetes; part vi., the Protozoa; part vii., diseases due to undetermined infective agents. The illustrations number 136 and they are all of the highest class. In particular, the photomicrographs, executed by the author and reproduced by the collotype process, are admirable.

The author has the advantage of being, not only a bacteriologist of high repute, but also an acknowledged veterinary expert. It is not surprising, therefore, to find that the diseases of microbial origin, which affect the lower animals as well as human beings, are dealt with in a conspicuously able fashion.

The descriptions of swine fever, swine plague, swine erysipelas, pleuro-pneumonia, contagiosa bovis, broncho-pneumonia bovis, grouse disease, diphtheria and glanders are excellent.

The author has added much new matter to the text, and the book is thoroughly up to date.

Part vii., dealing with diseases due to infective agents of undetermined character, is a specially useful article. As regards rinderpest, the author gives a graphic account of the methods adopted during the recent outbreak of the disease in South Africa. The methods were as follows:—(1) Koch's original bile method; (2) glycerinated bile method (Edington); (3) serum method of Turner and Kolle; (4) defibrinated blood method. Lucid descriptions are given of the best way of preparing the serum, bile and defibrinated blood.

The methods of examining air, water, soil, unsound meat and ice cream are insufficiently discussed, and the bacteriological examination of sewage is apparently not considered at all.

In conclusion, it may be said that no student in veterinary, medical and sanitary science should be without a copy of this excellent manual. That the book will enhance the enviable reputation of the author is beyond question.

*Practical Electricity.* By J. Hope Belcher. Pp. xi + 165. (London: Allman and Son, Ltd., 1902.) Price 2s. 6d.

THIS book is intended to be an elementary manual for a laboratory course in practical electricity. It contains instructions for carrying out a number of experiments designed to illustrate the principles of magnetism and electricity. The course is largely modelled on that given by Prof. Ayrton at the City and Guilds Institute. The experiments are well chosen, and the description and instructions seem to us adequate. The student is shown how to tabulate and set out his results, and some useful hints are given to teachers of elementary science as to the conduct of a laboratory class. We notice in one of the experiments the old fallacy of "proving" Ohm's law by a method in which P.D.'s are measured with an electromagnetic voltmeter; it is remarkable how hard this fallacy is to kill. Apart from this and a few minor blemishes, Mr. Belcher's book is a useful little manual. M. S.

*Acht Vorträge über physikalische Chemie.* Von J. H. van 't Hoff. Pp. 81. (Braunschweig: Vieweg und Sohn, 1902.) Price 2 Mk. 50 Pf.

PROF. VAN 'T HOFF delivered these lectures in June, 1901, on the invitation of the University of Chicago. As they were intended for a mixed audience, they have a more or less popular character, but in places they would be difficult for anyone lacking special knowledge to follow, without the personal influence of the lecturer. Two lectures each are devoted to the influence exerted by physical chemistry on pure chemistry, technical chemistry, physiology and geology. The treatment is necessarily meagre, but many interesting subjects are touched upon, and to students of science these lectures must prove stimulating and suggestive to a degree.