

discussed and various methods of artificial feeding are indicated. A number of diet tables are given, covering the period of childhood up to the age of five. If the physician will remember the authors' reiterated maxim that feeding must be varied to suit the individual, he will find this book a very useful guide in an important branch of his practice.

*Surveying.* By Dr. W. Norman Thomas. Second edition. Pp. viii+548. (London: E. Arnold and Co., 1926.) 25s. net.

THIS second edition differs but little from its predecessor. A few more corrections, a revised section on air survey (or "aerial survey" as the author calls it), and an appendix on pivotal errors in theodolites constitute the changes. The book is written for students of civil engineering. Naturally, therefore, it is a text-book on engineering rather than on topographical surveying, and it lacks the practical hints, and models of computation, which should be included for the latter purpose. The civil engineer will, however, find in it a clear explanation of all the methods he is likely to employ. Unlike many authors of works on surveying, Mr. Norman Thomas is at pains to examine the precision of each method he describes. He does so with conspicuous success, and illustrates his mathematics by examples drawn, in the main, from surveys in Great Britain and in the Empire.

There are one or two odd points in the author's sequence. He refers to maps in the chapter on chain surveying, and none of those referred to save those published by the Ordnance Survey were made with the chain. Again, to most of us surveyors, triangulation is the usual preliminary and the most useful friend. It comes late in the book, and when it comes this chapter does not stress sufficiently the importance, in any type of survey, of the theodolite. British theodolite design is diminishing the lead which some continental manufacturers have been allowed to acquire. It is a pity, then, that in his note on "Recent Developments in the Construction of Surveying Instruments" (included in the appendix on pivotal "Errors in Theodolites") some mention of new theodolites has not been made. Nowadays, when labour and transport are so heavy an item, it is more than ever important to get the best of instruments and to economise in time and weight. These, however, are small points, and every surveyor will be well advised to get and study this volume.

*An Introduction to Practical Biology: a Course of Work based chiefly upon the Plant and arranged for Use without Special Apparatus in either the Class-room or the Home.* By Norman Walker. Pp. viii+224. (London: Sir Isaac Pitman and Sons, Ltd., 1926.) 5s. net.

ONE of the hindrances to the more frequent introduction of science subjects into the schemes of study under the tutorial class movement has been the difficulty of arranging for the practical work necessary to supplement the theoretical side, if the subject is to be at all successfully taught. Dr. Walker, who has had a long experience of the tutorial class movement in the north of England and has a wide knowledge of the needs and difficulties of adult students of this kind, has outlined a series of practical exercises illustrating some

of the elementary principles of biology which can be carried out in the class-room or the home, without any special or elaborate apparatus and at a comparatively trifling cost. The work is based chiefly on plants, but certain exercises involving the use of animals are included. The student is guided, in clear and simple language, through a series of experiments and observations on the structure, physiology, and chemistry of plants and animals, sexuality and fertilisation, inheritance and variation, while the implication of such knowledge on the problems of human society is not overlooked.

The book is admirably conceived and meets a distinct need. It is becoming increasingly necessary that some knowledge of biological principles should form part of the educational equipment of all men and women. Dr. Walker's book shows how this can be acquired in a simple and inexpensive manner, and points the way to a wide dissemination of such knowledge through the medium of tutorial classes for adult students.

*A Monograph of the British Lichens: a Descriptive Catalogue of the Species in the Department of Botany, British Museum.* Part 2. Second edition revised. By Annie Lorrain Smith. Pp. ix+447+63 plates. (London: British Museum (Natural History), 1926.) 20s.

A SECOND edition of Part 2 of the well-known "Monograph of the British Lichens," published by the British Museum, has just appeared. Part 1 of the first edition was prepared by Crombie and published in 1894. Part 2, elaborated by Miss A. Lorrain Smith, was published in 1911. Miss Lorrain Smith then proceeded to the difficult but useful task of revising part 1 (1918): she has now laid lichenologists under a further debt of gratitude by revising and bringing up-to-date her own volume, part 2. She states in an introductory note that there are no fundamental changes in the new edition, though the addition of many species, some rearrangement of genera and species, and other alterations will be noted. Only those who have worked at the small saxicolous lichens can fully appreciate the time, care, and patience which are required in describing and naming this group of organisms. British lichenologists are singularly fortunate in having a flora thoroughly up-to-date, and by an authority such as the author, provided in the excellent series of monographs published by the British Museum.

*Hydrology and Ground Water: a Practical Text-Book for the Use of Civil Engineers, Surveyors, Students, and all those who deal with the Control of Water.* By J. M. Lacey. Pp. viii+159. (London: Crosby Lockwood and Son, 1926.) 12s. 6d. net.

WITHIN about a hundred and fifty pages the author has attempted to condense a treatment of the various phenomena associated with rainfall and ground water. Naturally the treatment is summary in places. The earlier chapters on rainfall, especially the sections on cycles of rainfall, are least satisfactory, and would require to be expanded if the volume were to be of general value. But it is planned chiefly to meet the needs of the water engineer, and for this purpose it is certainly well arranged, clear, and useful. The chapters on wells and water storage are of particular value.