

There are two interesting essays in the volume ; that on the calendar is by Dr. J. K. Fotheringham, and it gives full details both of ancient and modern calendars. We learn that Ptolemy Euergetes anticipated Julius Cæsar in 238 B.C. in trying to introduce a leap day every fourth year ; but the attempt remained unsuccessful until two centuries later. The other essay is on time, and contains the statement that in the 1933 Almanac the short-period nutation terms will be included in sidereal time, which will be given to the third decimal of a second. This is in recognition of the great improvement in clocks in recent years, as a result of which it is considered desirable to be able to obtain mean sidereal time, freed from nutation.

Dr. Cowell ascribes much of the credit of the improvements in the Almanac to the deputy superintendent, Dr. L. J. Comrie.

*The Earth and its History : a Text-book of Geology.*

By Prof. J. H. Bradley, Jr. Pp. vii + 414. (Boston, New York, Chicago and London : Ginn and Co., Ltd., 1928.) 12s. 6d. net.

This book is "written for the general student who desires to be intelligent about the earth", but as a guide with that laudable object it cannot be regarded as wholly satisfactory. It is written in a vigorous and picturesque style, and is copiously illustrated with many excellent illustrations. Unfortunately, the author appears to have lost touch with modern advances in geology. The treatment of isostasy is feeble. The views of T. C. Chamberlin dominate in the discussion of cosmogony and orogenesis, and it is suggested that the belief in a formerly molten earth is fast losing its popularity. This is not the reviewer's experience. The account of the age of the earth is very inadequate, for the author has clearly not yet liberated himself from the former prejudice in favour of a '100 million year' earth. He is sceptical of the validity of radioactive methods—for no good reasons—but compromises with a chart showing 225 million years for the Cambrian and 500 million years for the oldest Archæozoic. Such a compromise is highly unscientific, for there is no evidence whatsoever, and never has been, supporting figures of this order. One would expect a new book on geology to refer to the investigations carried out under the auspices of the Carnegie Institution in the field of vulcanology, but here there is no mention of any such recent work. Despite its attractive features, the book cannot be regarded as other than old-fashioned in its treatment of current problems.

*Radium Treatment of Cancer.* By Stanford Cade. Pp. x + 158 + 13 plates. (London : J. and A. Churchill, 1929.) 15s.

THE author states in the preface that in this book he has tried to illustrate the technique of radium in cancer in various anatomical situations and some of the results obtained by it by quoting selected cases. After a few short chapters on radioactivity, the methods of irradiation and the general principles of radium therapy, the author describes, often with the aid of coloured plates, the surgical methods at

present in vogue in the treatment of cancer by means of radium.

The book will probably prove of much interest to surgeons who require detailed information of this character. They may have some difficulty in the section on p. 6, devoted to units, as some of the statements require correction. The author says that the principle underlying modern radium therapy is that of prolonged irradiation with small doses. It might reasonably be objected that the main principles underlying this therapy are of a much more general character than one aspect of the time factor.

The book is well produced, and some of the coloured plates give good impressions of the local effects which can be got by means of radium inserted into the tissues.

*Field Book of North American Mammals : Descriptions of every Mammal known north of the Rio Grande, together with Brief Accounts of Habits, Geographical Ranges, etc.* By H. E. Anthony. (Putnam's Nature Field Books.) Pp. xxv + 625 + 48 plates. (New York and London : G. P. Putnam's Sons, 1928.) 15s. net.

IN this convenient volume, which the field naturalist can without grumble slip into his holiday baggage, or on occasion into his pocket, are described 1445 species and subspecies of mammals—the full complement of the American continent north of the Rio Grande. It is a masterpiece of condensation, discussing in detail the habits and characters of at least one prominent species in each group, and stating geographical ranges and external characters sufficiently to guide the layman in almost every case to the identity of even related species and subspecies. The task of identification is lightened by 32 plates, each containing from two to thirteen excellent coloured figures, by abundance of lively and characteristic pen drawings and photographs, and by maps illustrating the distribution of geographical races. The author has produced a model of what a field-book ought to be.

*List of the Vertebrated Animals exhibited in the Gardens of the Zoological Society of London, 1828–1927.* Centenary edition in 3 volumes. Vol. 1 : *Mammals.* By Major S. S. Flower. Pp. ix + 419. (London : Zoological Society of London, 1929.) 25s.

DURING the hundred years of its existence the London Zoological Gardens have exhibited no fewer than 949 species of mammals, representing probably most of the forms ever likely to be seen in captivity. This systematically arranged list, however, is much more than a historical catalogue of zoo exhibits. It is a valuable work of reference, giving the standard scientific name of each species, references to the original description and to a figure where such exists, synonyms, and not least interesting, the popular, local, or trade name. The first and last of these items ought to make for the standardisation of popular and scientific names in the exhibits of museum collections, where a lack of uniformity in different institutions tends to confuse the ordinary visitor.