stimulating food for thought in the indications afforded by both Prof. Macmillan and Mr. Hussey that indirect rule is not a magical formula which can be applied to all conditions and circumstances—as, for example, on the Gold Coast—without discrimination.

Astronomy

A Star Atlas and Reference Handbook (Epoch 1920-1950)

For Students and Amateurs. By Arthur P. Norton. The Reference Handbook by J. Gall Inglis and A. P. Norton. Seventh edition. Pp. xii+52+18 maps+xiv–xxii. (London and Edinburgh: Gall and Inglis, 1940.) 12*s*. 6*d*. net.

IN the fifth edition of this work the constellation boundaries were drawn in accordance with the scheme adopted by the International Astronomical Union in 1930, and this plan has been followed in the sixth and present editions. Among the additions to the seventh edition may be noted a revised and enlarged index to contents and also on the last page an index to constellations and charts. Precession tables on p. xvii with an example of their use is another addition which will prove useful. The chief enlargement in the work has been made in a greatly extended list of "Interesting Objects", the number having been increased from 130 in previous editions to 523. The positions of these objects are referred to the equinox of 1950.0, which will be a standard of reference for a considerable time. The first four sections of the "Reference Handbook" at the beginning of the work supply useful information on a large number of astronomical terms, while the fifth and sixth sections give hints to observers and instructions on the use of the telescope. The work is intended primarily for the use of the amateur observer whose telescope is mounted either on an alt-azimuth stand or as an equatorial without graduated circles. It will certainly fulfil its object, and every amateur who is anxious to do useful work should be in possession of this volume. M. D.

An Easy Guide to the Constellations

(Based on the work of the same name by Rev. James Gall). With a Miniature Atlas of the Stars. By J. Gall Inglis. Pp. iv+86. (London and Edinburgh: Gall and Inglis, 1939.) 1*s*. 6*d*. net.

THE original of this book was published more than eighty years ago and was based on illustrated talks given to working lads in Edinburgh. The present author—a grandson of the original author—enlarged and partly rewrote the book many years ago, and now he has extended its scope to include some of the recent developments in astronomy.

A brief outline is given of many useful facts in astronomy in simple language that will prove very helpful to boy scouts especially, but others interested in the elements of astronomy will also find much useful information. The star maps are clearly drawn and with each of these there is a brief description of the times in various months when they south; this will help the amateur to identify them if in doubt. A very important feature is a list of constellations, stars and planets with the pronunciation of their names. The little work will serve a useful purpose. M. D.

Biology

Practical Animal Biology

By T. L. Green. Pp. x+276. (London: Allman and Son, Ltd., n.d.) 4*s*. 6*d*.

A PRACTICAL book in animal biology for use in schools, of a simpler nature than that used by first-year university students, is assured of a welcome. Mr. Green has combined a study of living animal types with investigation of their morphology. Shorter sections deal with chordate embryology, histology and physiology. There are nearly one hundred text figures. The text is fully descriptive and should be adequate for the scholar. Questions to be investigated by him are suggested throughout. The experiments in the physiology section have been well chosen and will certainly interest him.

The book, however, seems to have been hastily put together; there are inaccuracies in the text, and in some places where the text is sound the accompanying figure is at variance with it. For example, Fig. 55 tells the student that the abducent nerve supplies the *superior* rectus muscle, whereas the text and Fig. 56 indicate that this nerve goes to the *external* rectus muscle. As this nerve is usually very difficult to trace, what is the pupil to believe? Or again, the description of the innominate artery (p. 171) is correct; but any observant pupil will soon find out that the figure of it (74) is wrong. In the text the sequence of the factors of the right anterior vena cava in the rabbit (p. 170) should be *b*, *c*, *d*, *a*, *e*, *f*, and not as arranged by the author. In the embryology section, the germinal layers are named ectoderm, mesoderm and endoderm, but thereafter, without explanation, though with occasional lapses, they are called epiblast, mesoblast and hypoblast. Such inaccuracies detract from the value of an otherwise useful book, and illustrate how difficult it is to write a good text-book.

Laboratory Outline for General Zoology

By Prof. George Edwin Potter. Pp. 276. (London: Henry Kimpton, 1939.) 8*s*. 6*d*. net.

THIS sheaf of loose leaves, perforated for filing, comprises notes and hints on dissection, interleaved with sheets for drawings. The type method is employed, the range being somewhat similar to that of a first-year course in zoology in Great Britain, with the notable absence of a mammal. There are questions on each type, and suggestions for demonstrating various points. Outline drawings and schematic sections have been printed, and the student is expected to fill in the detail. How far this will encourage the student to scamp genuine observation is a debatable point, and most zoologists in Great Britain would consider it inadvisable to do too much