

popular customs and calendrical observances which have survived among the folk.

(5) The last book on our list requires little comment. It is an excellent historical survey of the main facts in the history of religions down to modern times, in which the treatment is impartial and objective. It is a marvel of compression.

Maps and Survey

Maps and Survey. By Arthur R. Hinks. Third edition. Pp. xiv+283+28 plates. (Cambridge: At the University Press, 1933.) 12s. 6d. net.

THE first edition of this work was published in 1913; subsequent editions, testifying to its popularity, have followed at intervals of ten years. It is not intended to be a textbook of surveying but "an explanatory introduction, unobscured by much detail, which shall exhibit the general nature of the operations, and the relations to one another of the various parts of the subject". In this respect we think it amply fulfils its object. The first seven chapters treat of maps viewed in their every aspect. Under the head of the history of early maps is collected, in a small space, an amount of information which could not be come by without reference to many original sources.

The modern map, on which no two people thoroughly agree, is fully dealt with. The various methods of representing topographical features are discussed in detail. Judging by the criticism one often hears, the public do not always appreciate the difficulties of the map designer. He has to produce something pleasing to the eye and at the same time a faithful, and easily understood, representation of the ground. This might not be difficult if the topography in each sheet were similar. But he has to deal with an infinite variety of ground covering the same series of maps, and of necessity must employ, if not the same at least a similar set of symbols, for it would be inconvenient to have the method of representation changing from sheet to sheet of the same series. In fact, as in many other things, compromise must largely enter into map design. British official maps and foreign maps, especially those of Europe, are treated in some detail, the chief features being commented on of the maps of each country.

The last six chapters are devoted to modern survey methods and instruments. Most of these are models of popular exposition of sometimes difficult subjects, while others, such as the chapter

on the geometry of air photographs, may rather frighten the non-technical reader. Nevertheless, the ordinary reader who wishes to learn as much as possible about maps and how they are made cannot fail to have his interests immensely widened by one who is a master of the subject.

We recommend this book not only to the student of maps and survey, but also to the Colonial administrator. It would be to his own and his country's advantage if he were to study it, for it is "the truest economy to push forward the survey of a country at the earliest possible moment". This, however, is very often not recognised by those in administrative positions, who frequently display a lack of interest in maps and everything connected with them. The book contains a set of well selected illustrations. H. L. C.

Progress in Enzyme Chemistry

Ergebnisse der Enzymforschung. Herausgegeben von F. F. Nord und R. Weidenhagen. Band 3. Pp. xii+355. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1934.) 28 gold marks.

WORKERS in the domain of enzyme chemistry, the boundaries of which continue to enlarge, have begun to look forward to the appearance of the "Ergebnisse", with its neat summaries of particular branches of research, and we believe they will not be disappointed with this the third issue. As before, it is international, four of the articles being in English; they have been selected to cover sections which have not previously been summarised. It is proposed briefly to indicate the subjects chosen.

W. Frankenburger deals with enzyme reactions from the point of view of heterogeneous catalysis. Dean Burk of Washington discusses azotase, that enzyme system or complex in the aerobic soil organism that catalyses the change of gaseous nitrogen from a free to a fixed state. It differs from the majority of enzyme systems in that its activity is normally limited by the extent of growth, that is, by the amount of cell synthesis. Its nature has so far been investigated by means involving the methods of physical rather than organic chemistry, and as yet knowledge remains vague as to the stages during the conversion of nitrogen into protein.

Under the title of the action of enzymes in the living cell, A. Oparin of Moscow describes experiments dealing with the inactivation of enzymes on adsorption and their reactivation by elution;