

no inconsiderable interest to archaeologists and students of Roman Britain. His criticism of Mr. Belloc is that, while an adept in map reading, his lack of familiarity with the principles of surveying for map construction has led him into numerous errors in tracing the alignments of Stane Street from Chichester to the site of Old London Bridge, sixty yards east of the modern bridge.

Mr. Belloc's theory is that there were four great limbs or sections covering respectively the ground from Chichester (east gate) to Pulborough Bridge, from Borough Hill to Leith Hill, from Leith Hill to Juniper Hill, and from Juniper Hill to the southern end of London Bridge. Capt. Grant examines each of these in detail and demonstrates the errors, while in a further chapter he indicates the true alignments and discusses the general principles upon which Stane Street would appear to have been planned. Capt. Grant is commendably precise in his criticisms, and in two appendices gives long lists, with references, of "Errors due to carelessness or Printers' Errors," and "Errors due to Miscalculation and mis-statements arising therefrom."

*British Museum. Guide to the Maudslay Collection of Maya Sculptures (Casts and Originals) from Central America.* Pp. 94+8 plates. (London: British Museum, 1923.) 1s. 6d. net.

To the small but select band of Americanists in this country it has always seemed little short of a scandal that the Maudslay Collection of Maya Sculptures, after being on exhibition for a short time at the Victoria and Albert Museum, should have been consigned to store, where it has remained for thirty years. Its rescue and display in the galleries of the British Museum pays a tardy tribute to Dr. A. P. Maudslay's pioneer researches and his enthusiastic efforts to preserve a faithful record of the remarkable artistic skill and culture of the ancient inhabitants of Central America. This collection of casts and originals was made by Dr. Maudslay, entirely at his own expense, between the years 1881 and 1894, when he made no less than seven journeys to Central America, visiting the principal sites in Yucatan, Honduras, and Guatemala.

The preparation of the guide to the collection has been in the competent hands of Mr. T. A. Joyce, who, in addition to a detailed description of the exhibits, has written an introduction dealing with the main characteristics of Maya culture and, in particular, with their hieroglyphic and chronological systems. It contains exactly the information necessary to enable the un-instructed visitor to the gallery to appreciate the most striking features of this ancient semi-civilisation.

*Flora of the Presidency of Madras.* By J. S. Gamble. Part 5: Ebenaceæ to Scrophulariaceæ. (Published under the authority of the Secretary of State for India in Council.) Pp. 769-962. (London: Adlard and Son and West Newman, Ltd., 1923.) 10s. net.

THE present part of Mr. Gamble's Madras flora is on the same lines as previously issued parts. The family Ebenaceæ is completed, with an enumeration of the 24 species of Diospyros, several of which are large trees yielding a black heartwood, or ebony; and the treatment of the families of gamopetalous dicotyledons follows in the sequence usually adopted in the British

Colonial floras. The principal families are Apocynaceæ, Asclepiadaceæ, and Convolvulaceæ, and the part concludes about half-way through Scrophulariaceæ. Solanaceæ is poorly represented, but in this family, as in Apocynaceæ, several South American genera, introduced in cultivation, have run wild. Mr. Gamble enumerates eight species of Strychnos, including *Nux vomica*, the source of strychnine, and another species, the seeds of which yield the alkaloid brucine; a third species, *S. potatorum*, derives its name from the fact that the seeds are used to clear muddy water. Of the Convolvulaceæ, the genera *Argyreia* and *Ipomœa* supply many showy-flowered climbers; *I. Batatas*, sweet potato, is in common cultivation as a vegetable.

*Coal and Allied Subjects: a Compendium of the First Ten Bulletins issued by the Lancashire and Cheshire Coal Research Association.* By F. S. Sinnatt. Pp. v+205. (London: H. F. and G. Witherby, n.d.) 15s. net.

MR. SINNATT and his collaborators have prepared a compendium of the first ten bulletins issued by the Lancashire and Cheshire Coal Research Association, and the intention of the publication is "to enable those engaged in the Coal Industry and others to share the knowledge gained in carrying out the work." The bulletins have been well worth collecting and issuing together in this form, which will facilitate ready reference. They vary in content from such a general subject as "Notes of Ten Introductory Lectures on Organic Chemistry, with Special Reference to Coal" (condensed into 32 pages) to the highly specialised brief bulletin on "Hoo Cannel." One of the most interesting describes the examination of the inorganic constituents of coal which deals with those ash inclusions known as ankerites, while "Coal Dust and Fusain" indicates another line of work with which Mr. Sinnatt has identified himself. No very fundamental problems of fuel technology have been attacked, and some of the matter is not original, being simply collected in the bulletins for the convenience of the Research Association, but it is a record of useful work. J. W. C.

*The Phase Rule and its Applications.* By Prof. Alexander Findlay. (Text-books on Physical Chemistry.) Fifth edition. Pp. xvi+298. (London: Longmans, Green and Co., 1923.) 10s. 6d. net.

THE fifth edition of Prof. Findlay's book on the phase rule differs from previous editions in that the whole volume has been re-set, so that in spite of containing additional matter there is a substantial reduction in the number of pages. In the new edition the iron-carbon diagram has been altered in order to include the  $\delta$  form of iron which appears when the pure metal is heated to 1400° or to a somewhat higher temperature in presence of carbon; the  $\beta$  form of iron has also been eliminated as differing only in magnetic properties from  $\alpha$ -iron or ferrite. New material has also been introduced in connexion with the allotropy of sulphur and phosphorus, in view of the fact that these elements can give rise to pseudo-binary systems. In the later chapters of the book, additional space has been devoted to the mineral-forming systems, including both the aqueous deposits of the Stassfurt salt beds and the igneous calcium aluminium silicates.