

days every year is devoted to providing the soot which pollutes our atmosphere."

When one realises that raw coal and coke may and should be burnt in boiler furnaces without smoke, that gas-coke may replace raw coal for domestic use (I use nothing but gas-coke for hot water and heating the living-room), the production of smoke seems a criminal waste of our fuel resources, apart from the heavy cost in health, in the destruction of vegetation, disintegration of masonry and metal work, deterioration, so I am told, of valuable oil paintings, and the outlay in washing and repainting.

J. B. COHEN.

Mammalian Palæontology.

Text-Book of Palæontology. By Karl A. von Zittel. Vol. 3: *Mammalia*. Revised by Dr. Max Schlosser. Translated under the direction of Dr. Charles R. Eastman by Lucy P. Bush and Marguerite L. Engler. Translation revised, with Additions, by Sir Arthur Smith Woodward. Pp. viii + 316. (London: Macmillan and Co., Ltd., 1925.) 25s. net.

THE completion, after twenty-five years, by the issue of a volume dealing with mammals, of that translation of v. Zittel's "Grundzüge der Paläontologie" for which the late C. R. Eastman was responsible, is creditable to its publisher, and may, we hope, be a symptom of a renewed interest in palæontology in Britain.

The "Grundzüge" is the one essential book to the working palæontologist, because it lists the great majority of genera of fossil vertebrates, indicating the more important synonyms and referring them to families. Of these families, and all larger groups, short and usually excellent diagnoses are provided; only those who have never endeavoured to draw up similar condensed statements of the characters which define groups will complain that some of the animals do not really exhibit the 'diagnostic' characters of the groups within which they are included. To these descriptions are added more detailed accounts of the structure, in the main naturally of the skeleton, and sometimes indications of phylogeny; and the book ends with an excellent general account of the distribution in space and time of the more important mammals.

The title adopted for the English edition, a "Text-Book of Palæontology," neither correctly translates the German title nor expresses the character of the book. Consisting as it does of a mass of facts with no indication either of methods of work or of the general theory of the subject, it is by itself of little use to the beginner, and requires to be supplemented in some way, either by a teacher or by some, as yet unwritten, introduction.

Of the German version, four editions have appeared, the last in 1918 and 1923, and a fifth is in preparation. The present translation, which was left nearly all in type, though unrevised, at the death of Dr. Eastman in 1918, has been to some extent brought up-to-date by Sir Arthur Smith Woodward. This long delay has, however, resulted in the omission of many important discoveries recorded in the German edition of 1923. Of these the most serious is that of all reference to the work of Dr. Pilgrim, work which is fundamental in that it gives us an understanding of the age of the successive faunas of India, and for the first time enables us to use them in discussion of phylogeny and of migration.

There are many other omissions of important finds: Broom's account of the skull of *Polymastodon*; Dr. Matthew's *Eodelphis*, *Palæoryctes*, *Zanyrictes*; Stehlin's so-called *Chiromyids*; Osborn's skulls of *Bathyopsis* and *Eotitanops*, all things of first-rate importance published before 1923, are not referred to. The American and Swedish work on the fossil mammals of China and Mongolia is perhaps too recent to expect. Finally, it may be pointed out that the German volume containing the lower vertebrates in addition to the mammals costs 18s., whilst the two corresponding English volumes are 50s.

D. M. S. WATSON.

Our Bookshelf.

Principles and Practice of Farm Book-keeping: a Text-Book for Agricultural Students. By Leonard F. Foster. Pp. viii + 476. (London: Gee and Co. (Publishers), Ltd., 1925.) 15s. net.

THE time has come when farmers and accountants must study each other's requirements, for the business of farming cannot now be conducted by the free and easy methods of the past. The farm requires special consideration in its book-keeping department, for in that, as in many other things, it differs widely from the ordinary undertakings of commerce. Farmers who have sought the aid of accountants in coping with their book-keeping problems have very often been unable to obtain that meed of help which they may have expected, because the ordinary cut-and-dried methods of account have not been varied to meet their special need. It is probable that the demand for special agricultural accountancy is only now becoming strong enough to make itself felt, and Mr. Foster's book is one of the first serious attempts by a qualified accountant to expound the principles of book-keeping as applied to the farm departments.

It is a welcome book, because there are a large number of people, students and practising farmers alike, who are looking for something of the sort. It is a good book, because it covers the subject with which it professes to deal, and develops it in easy and definite stages from the first broad principles to the special technical applications found in agriculture. It contains a wealth of illustration in the form of specimen accounts,