

40 *Blätter der Karte des Deutschen Reiches* 1 : 100,000 ausgewählt für Unterrichtszwecke. Erläuterungen bearbeitet von Dr. W. Behrmann. Veröffentlicht von der Gesellschaft für Erdkunde zu Berlin. Zweite Auflage. Size 17 in. × 15 in. Handbook, Pp. 62. (Berlin : R. Eisenschmidt, 1921.) Germany, 60 marks ; England, 180 marks.

THE portfolio of forty maps under notice consists of reprints of German surveys on the scale of 1 to 100,000. The first edition, published some nine years ago, was essentially the same except for three sheets, Metz, Gebweiler, and Oltingen, which have been omitted since the regions they cover are now outside German territory. Three other sheets have been substituted. The collection has been made for educational purposes, and with this end in view illustrates as many types of land forms and geographical features as possible within the limits of the country. The sheets, which are in black and white, are finely printed and leave no ground for criticism as regards reproduction. Surface features of relief are shown by hachures only. This method, excellent as it may be for a general impression, gives no absolute information and precision of detail. It has also the disadvantage of making the map so dark on the steeper slopes that other symbols, and particularly the names, are almost illegible. In fact, if these sheets have any great fault, it is one common to most German maps, namely, the attempt to show more than the scale will allow. In spite of this, however, the collection should prove extremely useful, and might well be imitated for the British Isles by the Ordnance Survey. A pamphlet giving a description of the sheets accompanies the portfolio.

*Physical Map of England and Wales*, 1 : 1,000,000. Size 34½ in. × 26 in. (Southampton : Ordnance Survey Office, 1922.) 2s. (Not less than 20 copies for educational purposes, 1s. each.)

THE Ordnance Survey has produced a beautifully printed map which leaves little to be desired in the way of cartographical skill and excellence in reproduction. Surface relief is shown by layer colouring in green and brown. The contours are at 200, 400, 800, 1200, and 2000 feet. Rivers, lakes, and water names are in blue ; other names are in black. No submarine relief is shown. The addition of this would improve the map for educational purposes. Some criticism may be offered with regard to the names. These are comparatively few in number ; this is certainly an advantage, but a few more names of physical features might have been inserted. The fine black type used for these names does not obscure the map, and we miss such names as Charnwood Forest, Solway Plain, Fenland, Forest Ridges, or Aire Gap. The system on which the town names, printed in heavy black, have been selected is not very apparent. Such towns as Oldham, Sunderland, Gainsboro', Yarmouth, and Goole, to mention only a few large places, are omitted while many relatively unimportant names are to be found. The nearest towns to Manchester to be found on the map are Buxton, Liverpool, and Northwich, while in other less populated parts of the country the names are more crowded. No administrative names and no communications are marked. The low price is noteworthy.

NO. 2739, VOL. 109]

*Contribution à l'Étude de la Flore du Katanga*. Par E. de Wildeman (Comité Spécial du Katanga). Pp. viii + cxliv + 264. (Bruxelles : D. Reynaert, 1921.) n.p.

THE large district of Katanga forms the south-eastern corner of that part of Africa which is now under Belgian rule. It is governed by the Comité Spécial du Katanga, under the auspices of which this account of the vegetation of the country has been prepared and published. Four districts are recognised in considering the flora, namely, the Kasai, the middle Katanga or Upper Congo, the district of the great lakes, or the Tanganyika region, which forms the eastern limit, and the Upper Katanga district. A sketch is given of the botanical geography of the two last-mentioned districts ; and Dr. de Wildeman dissents from Scott Elliot's view that the Tanganyika basin forms botanically merely a part of the great western Congo-Niger area, but regards it as an area with very special characters.

The Upper Katanga is described in greater detail, and some features of its vegetation are illustrated by a number of photographic reproductions. Dr. de Wildeman insists on the importance of the conservation of the forests ; the number of useful species at present known is not great, but forestry investigations will probably reveal others. A large portion of the volume is occupied with a systematic enumeration of the flowering plants already known from the area ; these number about 1900, but probably represent less than half the actual flora. A map of the whole district, indicating its relation to surrounding districts, would have been a useful addition.

*Technique des Pétroles*. By R. Courau. Pp. 406 + 19 Plates. (Paris : Octave Doin, 1921.) Price 16 francs.

PRACTICALLY every phase of petroleum technology is covered by this volume, and as a general text-book it will be of considerable utility. Much of the subject matter is treated somewhat summarily, particularly in the geological section ; in fact this suffers from undue brevity when contrasted with the engineering and chemical aspects of the science.

The arrangement of the text is systematic, and it is primarily divided into two books, the first dealing with the geology and economic development of petroleum, and the second with its chemical and physical properties, methods of refining, storage, and transport. Unlike many books of this description, there is no overcrowding with tables of constants, statistics, etc., and space is therefore available for a consideration of certain technical operations which either receive scanty treatment or are omitted altogether from similar publications elsewhere. We should have preferred, however, the inclusion of the figures in the text rather than in their less convenient form of plates at the end of the book, while the omission of a detailed index is also rather unfortunate. Apart from this and the fact that the present rate of exchange makes the book an extremely cheap purchase in this country, it is well worth reading, if only to obtain the French view of current oilfield development and refinery technique.

H. B. MILNER.