

ture of certain pottery ovens (c. 1150°–1200° C.) have a white or nearly white colour. The name refers only to the original method whereby the clay was obtained in Dorset and Devonshire, and not to any particular property. The memoir gives a complete account of the geological relations, mineral and chemical characters, and physical properties. There are numerous analyses and results of tests and a glossary of terms used by the clay miners.

Continuing the county series of memoirs in which the sources of underground waters are described in detail, the Derbyshire memoir⁹ has been issued. It gives an admirable short account of the geology of the county, illustrated with a clear map and sections. Details are given of the local sources of supply from springs and wells, with many particulars of the strata recorded from wells and borings. A number of analyses of Derbyshire waters are supplied, and reference is made to the medicinal waters of Buxton and Matlock Bath.

¹ Summary of Progress of the Geological Survey of Great Britain and the Museum of Practical Geology for the Year 1928. Part I. Pp. iv+99. 2s. net.

² Summary of Progress of the Geological Survey of Great Britain and the Museum of Practical Geology for the Year 1928. Part. II. Pp. vi+128. 3s. net.

³ Explanation of Sheet 137: The Geology of the Country around Oswestry. By C. B. Wedd, Dr. B. Smith, W. B. R. King, and Dr. D. A. Wray. With contributions by T. C. Cantrill and Dr. H. H. Thomas. Pp. xix+234+4 plates. 5s. 6d. net.

⁴ Explanation of Sheets 320 and 321: The Geology of the Country near Hastings and Dungeness. By H. J. Osborne White. Pp. xii+104+6 plates. 3s. net.

⁵ Explanation of Sheet 285: The Geology of the Country around Aldershot and Guildford. By H. G. Dines and F. H. Edmunds. With a Chapter on Palaeontology by C. P. Chatwin. Pp. xiv+182+5 plates. 4s. 6d. net.

⁶ Explanation of Sheet 206: The Geology of the Country around Sudbury (Suffolk). By Prof. P. G. H. Boswell. Pp. x+74+2 plates. 2s. net.

⁷ Attrition Tests of British Road-stones. By E. J. Lovegrove. With notes by J. Allen Howe and Sir John Fleet. Pp. viii+84+5 plates. 3s. net.

⁸ Special Reports on the Mineral Resources of Great Britain. Volume 31: Ball Clays. By Dr. Alex. Scott. Pp. x+73. 2s. 6d. net.

⁹ Wells and Springs of Derbyshire. By J. V. Stephens. Pp. viii+155. 4s. net.

London: H.M. Stationery Office.

Descendants of the *Bounty* Mutineers.

IN 1923, Dr. Harry L. Shapiro visited Norfolk Island for the purpose of making a series of observations on the Pitcairn Islanders, the descendants of the English sailors who survived from the mutiny of the *Bounty* in 1790 and the Tahitian women with whom they settled on Pitcairn. The Islanders removed to Norfolk Island in 1856, but some of them afterwards returned to Pitcairn. These latter Dr. Shapiro was prevented from visiting by stress of weather. The results of his observations on Norfolk Island, together with a summary of previously recorded observations of the settlement, have been published in Vol. 11, No. 1, of the *Memoirs of the Bernice P. Bishop Museum of Honolulu*.

The special interest of the anthropometric measurements depends upon the fact that they represent hybrids of two well-distinguished stocks with a long history of inbreeding. In stature the male hybrids are distinctly taller than either parent stock. The women, however, reach but do not exceed the mean for Tahitian and English. Both male and female have inherited the longer head-length of the English; in head-breadth both have inherited a head mid-way between English and Tahitian, the latter being the greater by 6.7 mm. in the male. In face breadth both sexes again show an intermediate position, the male being

slightly more than the English average. In face height the males are not significantly different from the Tahitians; the females are intermediate. The hybrid males have inherited a narrow forehead which resembles the Tahitian. Other features in which the Islanders show an intermediate position are nose height (males), nose width, fronto-parietal index, and zygomatico-frontal index. The cephalic index is much nearer the English than the Tahitian, which is prominently brachycephalic, and the nasal index, though distinctly greater than the English index, approximates more nearly to it than to the Tahitian.

In eye colour, the pigmented eye of the Society Islander is dominant over the unpigmented eye, but the males have a greater percentage of blue eyes than the females. The epicanthic fold is rare among the hybrids. The unexposed skin colour of the hybrids is intermediate to the medium dark-skinned Tahitians and the relatively fair-skinned English. The exposed skin colour among the hybrids is as dark as the exposed skin of the Society Islanders. The dark hair of the Tahitian is dominant over the light hair of the English, and curved hair over straight hair. The males are also more hairy than the Tahitians. The variability of the Islanders is less than in either parent stock.

Recent Work on Vitamin D.

III.

OCURRENCE.

ALTHOUGH cod-liver oil is the richest natural source of vitamin D, it is clear that most animals must obtain their supply from other food or by the exposure of their body surface to the sun's rays. E. M. Hume, N. S. Lucas, and H. H. Smith (*Biochem. J.*, vol. 21, p. 362; 1927) have shown that irradiated 'cholesterol' can cure rickets in the rat or rabbit when lightly rubbed into a small area of depilated skin almost as efficiently as direct irradiation of a similar small depilated area. These results afford experimental proof that exposure of the skin to a suitable source of light will result in the production of vitamin D in the exposed area, whence it will be transferred to the body tissues to exert its function.

J. L. Leigh-Clare (*ibid.*, vol. 21, p. 368; 1927) has examined the diatom *Nitzschia closterium* for vitamin D and has found it to be absent even when the organism was grown in sunlight. Up to 0.4 gm. was

given as a daily dose to rats maintained on the rachitogenic diet. It appears, therefore, that the cod must obtain its vitamin D from plankton or smaller fish, since it is unlikely to be sufficiently exposed to sunshine itself (unless, of course, it possesses the power of synthesising it in the absence of the sun's rays). The absence of vitamin D from this organism may be compared with the poverty of green land plants in it. M. H. Roscoe (*ibid.*, vol. 21, p. 211; 1927) has found small amounts in spinach: its effect was more obvious in rabbits than rats, since relatively larger amounts could be consumed by the former animal. S. G. Willimott and F. Wokes point out, however, that administration of spinach involves at the same time an increase in the consumption of calcium and phosphorus: they therefore examined an ether-acetone extract of the dried leaves (*ibid.* p. 887). Twenty-five mgm. of the extract, equivalent to 6 gm. fresh spinach, were sufficient to prevent xerophthalmia