

for old age pensions, the Government chemists were asked if possible to ascertain the date of entries made in family Bibles, old letters, and certificates. In some cases they were able to show, from the nature of the ink employed, that the writing was comparatively recent, and that the entries had been made for the purpose of manufacturing evidence in support of the claim.

The total number of analyses and examinations made during the year at the two main laboratories (Clement's Inn and Custom House) was 170,033, the greater number being in connection with dutiable articles. Legal proceedings were taken in 223 cases for contraventions of revenue laws, and the total amount of fines paid was 2877l.

THE ARCHÆOLOGICAL SURVEY OF NUBIA.

THE last Bulletin of the Archæological Survey of Nubia describes excavations in the cemeteries and buildings of the ancient district of Pselchis, which will become submerged when the new Nile barrage is completed. The results are to some degree unsatisfactory, owing to the prevalence, even from ancient times, of the practice of *sebakh*-digging by agriculturists in order to obtain fresh supplies of rich soil to re-fertilise the land, which is periodically covered by a layer of fine sand drifted by the prevailing wind. This results in the destruction of many interesting remains; and treasure hunters have also done much damage, but the operations of the latter can be easily distinguished from the ruder methods adopted by the farmers.

The anatomical reports by Prof. G. Elliot Smith and Dr. D. E. Derry are, as usual, exhaustive, and present much valuable information. They disclose the advance in the Byzantine-Pagan period, between the second and fourth centuries A.D., of a group of negroes from the south with distinctive physical characteristics, customs, and arts. Their occupation of these new settlements was certainly not altogether peaceful, many skeletons showing evidence of death by wounds, and one, in particular, with such extensive cranial injuries that it is difficult to understand how the victim could even for a short time have survived. One of the negroesses whose remains were discovered in this cemetery displays an extremely abnormal type of prognathism. While the alveolar index of adult Europeans is 96.2, and that of African negroes 104.4, this specimen gives an index of 123.3, which is little below that of the chimpanzee, 128.8. It would be interesting to identify this abnormal type with that of some modern race; and a clue may be found in the fact that the negroes whose remains were found here practised the custom of filing the teeth, which, with removal of some of the incisors, still prevails among the Masai and some of the Kavirondo Bantus.

It seems to be generally believed that the latter races derived this custom from the Dinka and other allied Nilotic peoples, some of whom may have supplied the individuals whose remains have now, in such strange circumstances, been subjected to scientific examination. The question of the ancient prevalence of tuberculosis is also advanced by the fact that many of these people suffered from spinal disease due to this malady. It must have been common among them, because the high average of cases found in these cemeteries cannot be accounted for by the supposition that this site was used as a sanatorium for this class of disease.

MANGANESE ORE DEPOSITS.

THE paper referred to below gives an elaborate and interesting account of the occurrence of manganese ore in Sandur, one of the States of the Presidency of Madras; its value lies mainly in the abundance of detail given respecting this one particular occurrence, and it thus lacks the broader economic interest that attaches to that recent admirable memoir dealing with the manganese deposits of the whole of India, "The Manganese-ore Deposits of India," by Dr. L. L. Fermor, Mem. Geol. Surv. India, xxxvii., which appeared at the commencement

¹ "Manganese-ore Deposits of the Sandur State." By A. Ghose. Excerpt from the Transactions of the Mining and Geological Institute of India, vol. iv., pp. 155-204+21 plates. Part 3, February, 1910.

of the present year, and which has given so much valuable information regarding the occurrence and distribution of this ore. Mr. Ghose gives no figures at all to show the output of manganese from the State of Sandur, and thus avoids directing attention to its relative unimportance; it may therefore be as well to make up here for his shortcomings in this respect:—

Production of manganese ore during 1908 in the State of Sandur, 23,413 tons.

Production of manganese ore during 1908 in the Presidency of Madras, 513,845 tons.

Production of manganese ore during 1908 in the whole of India, 2,584,525 tons.

The production of ore, of which the paper treats, is therefore less than 1 per cent. of the output of India, and may be looked upon as economically negligible; it would accordingly be difficult to justify the concluding sentence of Mr. Ghose's paper, in which he characterises these Sandur deposits as "among the largest and most remarkable manganese-ore deposits of the world." Such exaggeration of language is out of place in a scientific paper, especially seeing that, as a matter of fact, the Sandur deposits are considerably smaller than those of Nagpur or Balaghat, whilst the ore is also apparently of inferior quality. In the same way, the estimates of the probable ore reserves may be dismissed as resting on very slight foundation.

The interest of the paper centres essentially in the geological description of the occurrences, and in the author's views as to their formation, which differ entirely from those put forward by the India Geological Survey authorities. Dr. Fermor looks upon these manganese deposits as having "been formed by the replacement at the surface of Dharwar schists, phyllites, and quartzites" in such a manner as to form a capping approaching to laterite in its character, and he accordingly designates these ores as "*lateroid* replacement masses"; this view appears, moreover, to be endorsed by Sir Thomas Holland. Mr. Ghose, on the other hand, considers that these "deposits primarily owe their origin to sedimentary deposition from magmatic solution. Their economic value has been enhanced by secondary enrichment." It should be noted that he does not use the term "magmatic solution" in the sense in which it has generally been employed by writers on ore deposits, but means in this case hot solutions containing iron and manganese, flowing in horizontal currents over the floor of an ocean.

Apart from all other considerations, it is obvious that these two theories would assign widely different economic values to the ore deposits in question. If the former is correct, the extension of the ore bodies in depth is strictly limited, whereas the latter theory, according to which the deposits are syngenetic, would impose no such limits upon their extension, and the suspicion cannot be avoided that the author's promulgation of his theory may have been unconsciously influenced by his desire to magnify the economic value of ore deposits, in the opening up of which he has taken a leading part. Seeing that the result of future mining operations will demonstrate without doubt which of these two conflicting theories is the correct one, whilst at present decisive evidence is lacking, it is hardly worth while to examine critically the bases upon which they rest, and the question may well be left for the future to settle, it being sufficient to record here that, whether his theories are right or wrong, the author has produced a full and interesting description of this system of deposits, and has thus contributed to our knowledge of the occurrences of ores of manganese.

H. L.

ZOOLOGICAL WORK IN INDIA.

IN vol. ii., No. 8, of the entomological series of the Memoirs of the Department of Agriculture, the Government entomologist, Mr. H. Maxwell-Lefroy, commences a lavishly illustrated account of the life-history of Indian insects, dealing in this instance with beetles. Hitherto, it is stated, little definite information has been recorded with regard to the life-histories of the beetles of India, and entomologists will therefore welcome the particulars given by the author in the case of eight of the commoner species. In seven out of the eight, the egg, larva, pupa, and imago are illustrated by coloured plates, executed in first-class style by the Calcutta Phototype Company.