

occipital bone which he had found in the middle gravels of the 100-ft. terrace of the Thames at Swanscombe, Kent. The bone was associated with Acheulean flint implements, and is mineralised in the same way as the bones of the Pleistocene mammals occurring with it. The fossil was submitted to the Geological Survey, and Mr. Henry Dewey confirmed the determination of its geological age. Mr. Marston now writes that he has made an endocranial cast of the specimen and has consulted Sir Grafton Elliot-Smith, who expresses the opinion that "the exceptional size and form of the visual territories upon the two hemispheres of the endocranial cast, even if they suggest left-handedness, are definitely Simian and point to a much more primitive stage than *Eoanthropus*". The bone differs considerably from the occipital of *Eoanthropus*, and further discoveries to reveal the characters of the skull to which it belongs will be eagerly awaited.

Ancient Ruins in East Africa

AN archaeological reconnaissance with the view of further investigation has been made recently by Dr. L. S. B. Leakey on two sites in East Africa. Of these, one, the ruins of Gedi, an ancient city of considerable extent, sixty-five miles north of Mombasa, is already scheduled under the Ancient Monuments Preservation Ordinance; the other is the large assemblage of stone-built dwelling-places and tombs at Engaruka in the Great Rift Valley in Tanganyika, to which attention was directed as a new discovery in June last of Mr. T. E. Wetherell. The ruins at Gedi, though situated at no more than fifty yards from the Mombasa-Malindi road at their nearest point, are so obscured by a tangle of tropical vegetation as almost to escape notice. Trees of considerable size growing on or in the ruined structures afford some gauge of the antiquity of the ruins. According to Dr. Leakey's report (*The Times*, October 11) future investigation will reap a rich harvest. Town walls, buildings and tombs alike afford evidence of at least two, and possibly three, distinct periods of construction. The materials used consist of dressed blocks of coral, built up with a hard mortar and plastered to a smooth surface. In places, where the dressing is unplastered, as on the arches over doors and windows, it is extremely fine. It is Dr. Leakey's opinion that the ruins may be those of an Arab or Persian settlement of considerable antiquity, the first settlement possibly dating so far back as the beginning of the Christian era.

DR. LEAKEY'S investigations at Engaruka confirm previous reports of the extent of the site, though the limits at present are unknown. He estimates that the buildings in the North and South Ruins on the slope number five to seven thousand; and there are further structures in addition to the tomb mounds below in what he terms the Valley Ruins. The ruins are not entirely a new discovery, as recently reported. They had been visited by Dr. Hans Reek on his way to Oldoway in 1913, when he excavated one or two mounds; and more recently a little digging has been done by British administrative officials. Dr. Leakey

carried out one or two exploratory excavations of mounds and buildings, but failed to obtain any material, either skeletal or cultural, which throws light on the dating of the site. It is evidently not of high antiquity. The buildings are entirely of dry stone-walling, without mortar, and show no real skill in stone building. Inquiry among the Masai elicited the tradition that the ruins had been abandoned about one hundred years ago when the Masai drove out the ancestors of the present-day Wambulu. A further tradition of a Portuguese leader or king at Engaruka may, it is thought, afford an explanation of how a people who do not now build in stone, nor live in towns or even villages, came to erect these stone structures in such numbers.

Linguistic Research in Kashmir

IT is reported that Colonel D. L. R. Lorimer, whose studies in Indo-Iranian linguistics are well known, accompanied by Mrs. Lorimer, has recently returned to Srinagar from an expedition of linguistic research among the mountain tribes of Hunza and the area to the north, upon which he has been engaged during the last fifteen months. The chief object of the expedition was to extend and complete Colonel Lorimer's studies of Burushaski, the language of the Burusho of Hunza; but he has also devoted attention to Wakki, a language of the Iranian group spoken in Wakkan and also by Wakkan settlers in northern Hunza. Colonel Lorimer, it is stated in a dispatch from Srinagar in *The Times* of October 9, has succeeded in obtaining a record of a language, Boma, hitherto unknown, spoken by a tribe of musicians and metal workers who have been settled in Hunza for many generations. According to their own tradition, they are a people of Badakhshari origin, who at some period were transferred to the rule of the Mir of Hunza for services he had rendered the ruler of Badakhshan. They have remained an exclusive group and still do not intermarry with the Burusho, although they, like the other peoples of Hunza, are Moslems. Hence while they speak Burushaski fluently, they have retained their cultural and linguistic individuality intact. Their language, which is said not to resemble the Badakhshani of their traditional place of origin, appears to be more closely related to the Sanskrit than to the Iranian members of the Indo-Iranian linguistic group. If this be confirmed by further study, it would agree with the character of other languages of the so-called Dards of Hunza. Colonel Lorimer is now about to return to England for the purpose of studying the large amount of ethnographical and linguistic material he has collected among the less well-known mountain peoples of the area.

Marine Research at Millport

THE report for 1933-34 of the Scottish Marine Biological Association, Millport, shows that much work has been done during the year. The director, Mr. R. Elmhirst, has studied specially the conditions under which shore algae live, and subdivides the

littoral area into three natural algal belts correlated with the run of the tide. This tidal flow theory also fits closely to the observed distribution of various animal species inhabiting the sandy and muddy areas of the tidal zone. Mr. A. C. Stephen, following up his previous reports on molluscan ecology, has found that in 1933 the density of population of *Tellina tenuis* was far in excess of any previously met with, on an average 8214 per square metre. This was largely composed of a very abundant spat. The closely related *T. fabula* was also very successful in its spatting, but the conditions were evidently not so favourable for the common cockle, *Cardium edule*, very little spat of this species occurring. Dr. Orr, Dr. Marshall and Dr. Nicholls, in continuing their co-operative work on the plankton with special reference to *Calanus*, have shown that the success or failure of a brood depends on the presence or absence of diatoms during the early stages of development. A study of the chemical composition of *Calanus* showed that the fat content followed the changes in weight, and that the protein content also followed in general the changes in weight. Spent females were rarely found, which indicates that they die soon after spawning. An unusual occurrence was noted in the behaviour of Stage V *Calanus* on one occasion, when they swarmed actually on the surface of the water for two or three days, remaining in the upper few metres nearly all the time and only showing a tendency to seek deeper water during the darkest part of the night, which is a complete reversal of the normal migration. This subject is undergoing further investigation.

Public Health in England and Wales, 1934-35

THE sixteenth annual report of the Ministry of Health, 1934-35, has recently been issued, and deals under six sections with the whole subject of the public health and its administration in England and Wales (Cmd. 4978. H.M. Stationery Office, 1935. 5s. 6d. net.). Sir Kingsley Wood, the Minister of Health, in his introduction, contrasts mortality rates for the years 1910 and 1933. Thus, the death rates per 1,000 living for these two years were, respectively, 13.2 and 9.3; the infant mortality rates were 105 and 64, the death rates per million from pulmonary tuberculosis were 988 and 639, and for typhoid fever, 53 and 5. Maternal mortality, however, in spite of the development of maternity services in recent years, has not yet begun to fall. Statistics of vaccination show a slight but steady decline, from 42.6 per cent of total births in 1928 to 37.0 in 1933. Samples of food and drugs analysed during 1934 numbered 140,583, a small increase over the previous year, of which 7,451 or 5.3 per cent were reported against. It is mentioned that in some districts there are signs of revival and expansion of canal traffic, and there is evidence that motor traction of canal boats is continuing to develop, for many motor-propelled boats are on order, such boats being notable for improvements in design as regards ventilation and sanitation compared with the old type of boat.

Destructive Earthquakes in 1935

IN a recent number of the *Matériaux pour l'Étude des Calamités* (No. 35, 82-86; 1935), M. Charles Bois continues his record of destructive earthquakes. During the first six months of this year, there were 16 such earthquakes, four of them resulting in considerable loss of life, namely, the Persian earthquake of April 11 (480 deaths), the Formosa earthquake of April 20 (3,065), the Caucasian earthquake of May 1 (600) and the Quetta earthquake of May 30 (40,000). The latter number is probably too high, the latest estimate being about 30,000. On the other hand, the number of deaths (2,000) given by M. Bois for the Bihar earthquake of January 15, 1934 (*NATURE*, 136, 472, September 21, 1935), is too low, the number given in the official report on the earthquake being more than 10,000.

Third World Power Conference

THE third World Power Conference will be held in Washington, U.S.A. on September 7-12, 1936. This will be the third plenary meeting of the World Power Conference, the first plenary meeting having taken place at Wembley in 1924, and the second at Berlin in 1930. There have, in addition, been a number of sectional meetings. The Chemical Engineering Congress of the World Power Conference, to be held in London next June, ranks as one of these series of sectional meetings. The general subject to be discussed at the Third World Power Conference is "National Power Economy". Among the aspects to be treated are the following: physical and statistical bases; technical, economic and social trends; organisation of fuel industries and of gas and electric utilities; public regulations; national and regional planning; conservation of fuel and water resources; rationalisation of distribution; national power and fuel policies. The second Congress of the International Commission on Large Dams of the World Power Conference will be held in Washington at the same time. Further particulars regarding the plenary meeting of the World Power Conference and the second International Congress on Large Dams will be issued in due course. British participation will be organised by the British National Committee of the World Power Conference, 36 Kingsway, London, W.C.2.

Work of the Medical Research Council

IN a pamphlet by Miss Norah Dacre Fox, issued by the London and Provincial Anti-Vivisection Society, an attempt is made to criticise the work carried out under the Medical Research Council. Reference is made to the dominating influence of the late Sir Walter Fletcher, to vested interests, to a suppressed report, etc. It is stated: "The public is the Master, the Medical Research Council its servant. Is it not entitled to assert itself and to require from those it remunerates so lavishly, an account of this stewardship?" Needless to say, an account of this stewardship is available to all who desire it in the annual report and in the numerous research reports issued by the Council.