Earliest Monumental Remains in Iraq

THE joint expedition of the American School of Oriental Studies and the University of Pennsylvania, in continuing the excavation of the mound site of Tepe Gawra in Mesopotamia, upon which it has been engaged now for several seasons, has uncovered some remarkable remains of a monumental character in the level of stratification now being explored. This level is the thirteenth from the surface in the series of some twenty strata of deposits of which preliminary exploration showed the mound to be composed before virgin soil was reached. Its culture is that of the 'painted pottery' people, of which evidence has been found wide-spread over early western Asia and the ancient East, from southern Russia to China, and dated at approximately 4000 B.C. and later. In a recent report from Prof. E. A. Speiser, field director of the expedition, according to a communication circulated by Science Service, Washington, it is stated that the expedition has discovered the acropolis of the city. It consists of a northern temple, eastern shrine and central temple, which with other buildings surround an open square, or court, paved with gravel covered with stamped clay. In the central temple, all the rooms show traces of a purple-red paint. The buildings are of an imposing character, and being the earliest known of their kind, carry back the practice of monumental architectural art to a much earlier phase of civilization than had hitherto been thought, while Tepe Gawra is shown to be the centre of an organized civic life, on a scale and of a kind for which hitherto there had been no evidence in connexion with the presumedly primitive people of the stone age to whom the painted pottery had been ascribed.

Soil Drift in South Australia

MR. F. N. RATCLIFFE, of the Council for Scientific and Industrial Research, Melbourne, has sent a long communication, for which space cannot be found, discussing an article in NATURE of December 19, based on his recent report on wind erosion (drift soil) in the arid pastoral belt of South Australia. Mr. Ratcliffe appears to hold the opinion that the processes taking place in that part of the world differ from the causes which have, and are, producing the man-made desert in other regions. The factors responsible for the destruction of the vegetation in Australia are drought, overgrazing by stock and the rabbit. The extension of the Sahara and the dust bowl in America are (omitting the rodent) being brought about by the same causes—excessive cultivation or grazing, or both combined. But the word 'drought' as used in Australia and America requires definition. This is the chief factor in the case. The actual results of the over-utilization are the same, whether the land is actually covered up by sand, or the top soil is blown away, or the soil deteriorates *in situ*: the spring water-level is lowered in the soil, not by *drought* as ordinarily understood by that word, but by the desiccation brought about by the acts of man. The end is a desert, and the water disappears from the surface and sinks to varying depths in the soil. As regards wind erosion, that is, dust storms, few travellers or inquirers who have studied desert regions, many of them man-made, can have failed to become acquainted with desert clouds of that type, whether consisting of sand or blown soil of valuable types. Mr. Ratcliffe has conceived the idea that the erosion or drift in Australia is something apart. It would appear to be only a type.

Oceanography in New South Wales

THE seasonal fluctuations in nutrient salts in European coastal waters and their bearing on the production of phytoplankton and ultimately on the fertility of the sea are now well understood. However, there are still huge areas of the waters of the world, including those adjacent to civilized countries carrying on original research, about which nothing whatever is known. Off the New South Wales coast, W. J. Dakin and A. N. Colefax ("Observations on the Seasonal Changes in Temperature, Salinity, Phosphates, and Nitrate Nitrogen and Oxygen of the Ocean Waters on the Continental Shelf off New South Wales and the Relationship to Plankton Production", *Proc. Linn. Soc. New South Wales*, **60**, 303–314; 1935. Sydney University Reprints, Ser. XIII (Zoology), **3**, No. 8; 1936) have now found complete exhaustion of both phosphate and nitrate by spring and autumn phytoplankton outbursts. The depletion of nitrate persists through the summer as in the seas around Great Britain, but phosphate is replenished more quickly. On the whole, nutrient salts are less than were found in the English Channel in the nineteen twenties but are not very different from the reduced quantities found there now. It is to be hoped that the investigations will be continued for a number of years to discover whether similar long-period fluctuations take place in Australian temperate waters, and further, that a well-found ship may be obtained to permit of investigations over a wider area unhandicapped by the difficulties of carrying on exact scientific work in the open ocean from the decks of a small yacht such as that at present in use.

Electricity Supply Tariffs

THE question of the standardization of electricity supply tariffs is of interest to many. A recent paper read by J. F. M. Mellor to the Students' Section of the Institution of Electrical Engineers on the basis on which those tariffs are founded is both a timely and a useful one. There are many difficulties in the way of getting an equitable solution to some of these problems. Take the case, for example, of an 'isolated consumer', that is, one who is at a considerable distance from the supply mains. In this case it is quite customary to charge the consumer the whole or part of the interest and depreciation on the capital cost of the mains extensions to his premises. It is reasonable, therefore, to expect that in the event of other consumers being connected on to these extensions, some refund should be made to the original consumer, and this should be mentioned in his agreement. The difficulty arises as to the period of time after the laying of the mains before the