

## Neanderthal Man in Malta.

AT a meeting of the Royal Anthropological Institute on March 4, the president, Prof. C. G. Seligman, in the chair, a paper by Sir Arthur Keith on "The Discovery of Neanderthal Man in Malta, with an account of the Survey of the Cave in which the evidence was found (Ghar Dalam), by Mr. George Sinclair," was presented by Dr. A. Burkitt, of the University of Sydney, in the absence of the author. The discovery was made in 1917 by Mr. G. Despott, curator of the Malta Natural History Museum, who in digging a trench across the deposits on the floor of Ghar Dalam found two human teeth of a remarkable character. They lay in the second stratum of the cave—a deposit of red cave earth, which varies in depth from 6 to 8 feet. Over the cave earth is a superficial stratum varying from  $1\frac{1}{2}$  to  $2\frac{3}{4}$  feet in depth and of neolithic date, while under the cave earth is the third stratum, a bone breccia 3 feet in thickness, made up chiefly of rolled fragments of fossil bones belonging to two species of hippopotamus and three species of extinct elephants. The two teeth were found  $1\frac{1}{2}$  feet and  $2\frac{1}{2}$  feet deep in the red cave earth with remains of stag, elephant (*E. Mnaidrensis*), and hippopotamus (*H. pentlandi*). These bones and the teeth were in the same state of fossilisation. At the same levels and mingled with the above were found chards of neolithic pottery, teeth, and also other remains of neolithic man. Men of the neolithic period and of later dates had lived in the cave and wrought some degree of confusion in the upper levels of the cave earth. In spite of extensive excavations carried out under the auspices of the British Association, no trace of the culture of palæolithic man has been found—neither of the Mousterian period, which is that of Neanderthal man, nor of the later Aurignacian period. All that can be assigned with certainty to palæolithic man are the two molar teeth.

Through the courtesy of the Rector of the University of Malta, Prof. T. Zammit, Sir Arthur Keith was given an opportunity of examining all the teeth found in the floor of the cave. In the condition of fossilisation and in their morphological characters, the two molars differ altogether from the other human

teeth, and in size and form are duplicates of molar teeth found in Jersey and at Krapina in Croatia, which are undoubtedly those of Neanderthal man. Teeth possessing such characters have never been seen in the jaws of men of the modern type; they are known only in that anomalous Neanderthal type or species which became extinct in Europe in the last phase of the so-called ice-age. So far, the remains of Neanderthal man have been discovered in only one locality of southern Europe—Gibraltar. Mr. Despott's discovery in Malta carries the type into the old land bridge which—in Pleistocene times—united Tunis to Italy.

The two molars represent the second and third of the upper series of the right side, and although found 7 feet apart, undoubtedly belong to the same set—that of a young man, for the crown of the second is unworn and the third incompletely developed, and must have been in process of eruption. Mr. Sinclair obtained 2250 teeth of neolithic Maltese, of the same date as those buried in the hypogeum at Hal-Safteini, and a close examination of this collection shows no trace of taurodontism, this being the special feature which distinguishes the two fossil molar teeth.

The survey throws a new light on the age and order of the deposits of Ghar Dalam, and makes possible a comparison with the famous palæolithic deposits in the caves of Grimaldi, at Mentone. The original rock floor of Ghar Dalam lies at the same level above the Mediterranean as do some of the original floors of the caves of Grimaldi. On this floor at Grimaldi are the deposits of a raised sea-beach belonging to the Monastirian series of the Mediterranean shores. The rolled stratum of bone breccia in Ghar Dalam apparently also represents this old raised beach. Over the old beach at Grimaldi are deposits of the Mousterian and Aurignacian periods of culture. We may therefore infer that the deposit of cave earth in Ghar Dalam, which contained the Neanderthal teeth, the remains of *Hippopotamus pentlandi* and *Elephas Mnaidrensis*, also represents a pleistocene deposit of a corresponding date. It will thus be seen that the red cave earth represents the geological horizon at which Neanderthal man should appear.

## The West Indian Agricultural Conference.

THE ninth West Indian Agricultural Conference was successfully held at Kingston, Jamaica, under the auspices of the Imperial Department of Agriculture on January 28–February 1, Sir Francis Watts, Imperial Commissioner of Agriculture, being the president.

The last conference was held in Trinidad in January 1912, and it will be remembered that the former conference in Jamaica in 1907 was abruptly terminated on the opening day by the disastrous earthquake which destroyed the greater part of Kingston and seriously damaged other parts of the island.

The conference was attended by delegates from Jamaica, Trinidad, British Guiana, Barbados, Grenada, the Leeward Islands, British Honduras, the Bahamas, Bermuda, and by members of the staff and of the governing body of the Imperial College of Tropical Agriculture, Trinidad, and three delegates from England, who were present at the request of the Secretary of State for the Colonies. These were Dr. A. W. Hill, Director of the Royal Botanic Gardens, Kew; Dr. S. A. Neave, Assistant Director of the Imperial Bureau of Entomology; and Mr. S. P. Wiltshire, of the Imperial Bureau of Mycology. In

addition to the official delegates, Sir Arthur Shipley, chairman of the governing body of the Imperial College of Tropical Agriculture, Trinidad, was also present at the conference, and took part in its deliberations.

The conference was opened by His Excellency the Governor of Jamaica, and after his speech the president delivered his address, which dealt with the present position of the more important agricultural industries in the West Indies. He outlined some of the directions in which investigation and research were needed, and pointed out the way in which such work could be carried out at the newly established college in Trinidad. Subsequent papers by members of the professorial staff of the College on the research work that is being undertaken—on breeding experiments with bananas in connexion with the Panama disease; on the fertilisation of cacao; on cotton, both as regards genetical work and its insect pests; and on the sugar cane and its diseases—showed the methods by which these many problems are being investigated at the Imperial College, and indicated that the results already achieved give good promise of final success in their solution.