

time formed part of a continental deposit, and perhaps to discover much more than this. Such an undertaking might be carried out in conjunction with other investigations of the highest interest, such as the attempt to obtain a record of the swing of a pendulum at the bottom of the ocean.

E. B. POULTON.

(*To be Concluded.*)

SECTION H. ANTHROPOLOGY.

THE Liverpool session of the Anthropological Section will long be remembered as one of exceptional interest. The President, Mr. Arthur J. Evans, keeper of the Ashmolean Museum at Oxford, had long previously arranged for a discussion on the origin of the Mediterranean race and culture, and numerous distinguished archæologists and anthropologists had been invited to attend and join in the discussion, among others may be mentioned Prof. Sergi, M. Salomon Reinach, Dr. P. Topinard and Prof. D. G. Brinton, but these four were at the last unfortunately unable to be present. In the course of his able address the President touched on many points that were coming on for discussion during the meeting, and he thus, as it were, struck the keynote of the proceedings. Taking it as a whole the meeting was distinctly archæological in character, and it will probably be found that the giving of a distinctive character to a meeting will ensure a higher average of excellence in the papers than if the communications offered are left to chance. There is more likelihood of a number of distinguished men interested in a comparatively limited subject gathering to meet with one another by prearrangement, than the same number of equally competent men in various departments of Anthropology; but at the same time no department of Anthropology should be entirely unrepresented.

The range of the subjects dealt with at

the meeting will be evident from the following summary, in which no attempt is made to retain the order in which the papers were read.

Mr. Seton Karr exhibited a selection of the paleolithic implements he discovered in Somaliland, these form a remarkable series taken in conjunction with the types from India and Western Europe, and suggest either the extension of an associated people or a migration. Recent numerous finds of flint implements in North Ireland appear to throw back the age of man in Ireland further than the typical Neolithic period which is the limit usually acknowledged, but it is not yet generally accepted that the striæ on some of these implements are really of glacial origin. Mr. W. J. Knowles brought forward evidence to show that at Whitepark Bay, County Antrim, Neolithic settlers carried away to sites among the sand hills, the weathered cores and flakes of palæolithic age from the raised beach and worked them up into fresh implements, which still show the older flaked surfaces; their newer surfaces, however, are still fresh. A lantern exhibition of photographs taken by Prof. W. A. Herdman, of the dolmens of Brittany, led to a discussion of their age. Most speakers dated them as being neolithic, but perhaps in some cases of later date, Prof. Boyd Dawkins, however, claimed them as belonging to the Bronze age. Mr. F. T. Elworthy recorded the very recent discovery of a cist burial in Somersetshire, of which he exhibited photographs. The man, judging from his skull, certainly belonged to the Roundbarrow or Bronze race, but the interment and the earthen vessel were more neolithic in character; perhaps he was a pioneer. The ancient forts or *brochs* of Scotland formed the subject of a paper by Miss Maclagan.

The occurrence of an European Copper age was more than once alluded to. Dr.

Munro denied its existence and regarded the copper implements as 'starved' bronze, owing to a temporary scarcity of tin. Prof. Flinders Petrie placed the first employment of copper tools in the Mediterranean basin at from 3,500 to 3,000 B. C. Dr. Montelius referred to the early copper implements of north and central Italy having the same form as the antecedent stone types, and Dr. J. H. Gladstone presented a series of analyses of implements which demonstrated a transition from pure copper, through copper hardened with sub-oxides of copper and natural alloys of copper with antimony and arsenic to tin bronze. When the latter was hit upon it quickly superseded the others.

The great debate on the Mykenæan civilization was opened in a brilliant, slashing speech by Prof. W. Ridgeway. The discovery of Mykenæan remains in various parts of the Greek world from Asia Minor and Cyprus to Sicily makes it desirable to re-examine the question of the origin of these remains. It is generally conceded that the choice lies between the Pelasgians and the Achæans. When Schliemann discovered the Mykenæan finds, scholars at once rushed to the conclusion that these belonged to the Achæan culture as sung by Homer. This involves many difficulties: (1) the age of Mykenæ is that of bronze, that of Homer's Achæans is distinctly of iron; (2) engraved gems are characteristic of Mykenæ, but such engraved gems, used either as signets or as ornaments, are unknown to Homer; (3) No fibulæ have been found in the Acropolis of Mykenæ, but Homer's Achæans used them to keep on their dress; (4) the Mykenæans had a peculiar shield, like the figure 8, they had no breast-plate, no greaves of metal, and wore their hair in three locks behind; whilst the Achæans had round shields, bronze breast-plates and greaves, and wore their hair flowing. To obviate such difficulties Reichel, followed by Leaf, would make

wholesale excision of passages from the Homeric poems. The Greeks themselves thought that Mykenæ and Tiryns were built before the Achæans entered Peloponnese, and by the Pelasgians. The Greek historians declared that Attica was never inhabited by any other race than the Pelasgians, and Mykenæan remains have been found in abundance in Attica. The Mykenæan culture is that of the Bronze age and Pelasgian in origin. It was supplanted by the Iron age which was introduced by the Achæans into Greece. Prof. Petrie offered as an additional argument the continuity in Attica of artistic preeminence from Mykenæan times to the highest period of Greek art. Dr. Beddoe adduced craniological evidence in support of the Pelasgian origin of some of the most noted Greeks. Various speakers continued the discussion, some of whom combatted Prof. Ridgeway's conclusions, but the general impression was that he had established his main contentions, and he maintained that he was justified in laying stress on traditional history as this was so largely supported by archaeological finds. The physical characters and migrations of the Mediterranean race according to Sergi were laid before the meeting by Mr. Myres.

The chronology of the Bronze Age in northern and central Italy formed the subject of a learned and beautifully illustrated paper by Dr. Montelius, the renowned Swedish archæologist. He distinguished four divisions of the Bronze Age dating from 2100 to 1100 B. C.; and in central Italy two Protetruscan Periods from 1100 to 900 B. C., and two Etruscan Periods from 900 to 700 B. C. Associated with this group of subjects was an erudite paper by Mr. J. L. Myres on Cypress and the trade routes of southeast Europe.

The starting-point of the Iron Age in Europe, formed the subject of a communication by Prof. Ridgeway. He stated that

Scandinavia cannot be its place of origin, for there the Iron Age began later than the Christian era. It is admitted that the Iron Age comes *per saltum* in Swiss lake dwellings, in Italy, Greece, France and Britain. Iron is found going with the Kelts into these various regions.

Hallstatt, in Austria, is the only place in Europe where articles of iron are found gradually replacing those of the same kind made in bronze. It has not been hitherto pointed out that within a very short distance of the Hallstatt cemetery lies one of the most famous iron mines of antiquity, that of Noreia. From this center iron spread into Italy, Switzerland, Gaul, Spain, Greece and eastern Germany. He suggested that the old bronze workers came across an outcrop of volcanic iron, such as that known in at least one place in Greenland. Man would thus find ready to hand masses of wrought iron, and there is no need to suppose that meteoric stones first supplied him with that metal. This view was discussed but it did not find much acceptance. Prof. Flinders Petrie referred to his recent discovery in Egypt of various iron tools of such a character that they must have been made by a people long acquainted with iron. They occurred in company with an Assyrian helmet. He put them down to about 670 B. C. This is the oldest datable iron find.

Various other papers bore upon the primitive civilization of Europe. The president, for example, read one on 'Pillar and Tree worship in Mykenæan Greece,' in which he showed the great part played by these objects in the religion of that epoch. On a gold ring from the early Mykenæan period (about 1500 B. C.), a dual cult of a male and female divinity in their pillar shape is illustrated, and an armed sun-god is being brought down on to his obelisk, or Bethel, by ritual incantation; other signets show pillars and trees enclosed in

small shrines. The cult of the sacred fig tree and the early sanctity of the dove were alluded to. This ancient pillar and tree worship largely survived in the rustic cult of classical Greece.

Another important paper on ceremonies which date back to prehistoric times was read by Mr. G. L. Gomme as an appendix to the Report of the Ethnographic Survey of the United Kingdom. It was entitled 'On the Method of Determining the Value of Folklore as Ethnological Data.' He dealt with the traces of fire worship in the British Islands, and by a process of analysis and synthesis arrived at the conclusion that the fire, obtained in a sacred manner, was maintained within a group connected by common descent, whose welfare is dependent upon the performance of the ceremony and the continual possession of the fire. This is equated with the early tribal system of the Aryans. By connecting by lines all the places in a country where more or fewer of these customs occur, a diagram is obtained the contour of which forms what Mr. Gomme calls an 'ethnological test-figure.' He has previously suggested that water-worship customs are non-Aryan in origin, and therefore belongs to the pre-Celtic people of these islands, and it is noteworthy that the 'ethnological test-figure' produced from water customs differs radically from that produced by the fire customs.

Other interesting communications were a beautifully illustrated account of the Swedish boat-graves from 600 to 1000 A. D., by Dr. H. Stolpe. Mr. G. Coffey brought forward additional evidence in support of his view that the spirals and some other devices of the incised stones of New Grange, Dowth and Loughcrew, in Ireland, had been derived from Scandinavia, one important piece of evidence being the discovery of a second drawing of a boat similar to those of the well known rock-scribings of Sweden. Mr. R. A. S. Macalister carefully

described an important prehistoric settlement in Kerry. These, as well as several other papers, were fully illustrated by lantern slides.

The centenary of the birth of A. Retzius, the pioneer of some of the modern methods of craniological research was suitably commemorated by Sir William Turner, Mr. Brabrook and the President. Mr. A. W. Moore and Dr. J. Beddoe described the anthropology of the Isle of Man, and Dr. Garson illustrated the mean bodily proportions of the members of the British Association from measurements which had been taken at numerous meetings. Dr. D. Hepburn gave a very elaborate comparison of the femur of *Pithecanthropus* with numerous femora of various races. He found, as Dr. Manouvrier had already done, that all the peculiarities could be matched in recent bones.

The elaborate report on the north-west tribes of Canada was read, and Prof. E. Adlum gave a very interesting account of the Coast Indians of British Columbia. Graf von Pfeil described from personal experience the Duk-duk, Eineth and Marawot ceremonies of the Bismarck Archipelago. Mr. C. H. Read, of the British Museum, strongly urged the formation of an Imperial Bureau of Ethnology analogous, but not necessarily similar to the splendid Bureau at Washington; this idea was warmly supported by several speakers. Prof. A. C. Haddon drew attention to the necessity for the immediate anthropological investigation of Oceanic Islands and other districts where the natives are disappearing before or becoming modified by the white man. Mr. S. H. Ray pointed out that British New Guinea was at the present moment a very favorable field for such research.

The problem of storehousing anthropological and archaeological collections formed the subject of an animated discussion. Prof. Flinders Petrie proposed the erection in a

country site, not too far from London, of long, low well-lighted stores, which would be capable of indefinite extension and where associated objects of any number or size could be kept together for reference. Some of the details of his scheme appeared impracticable to several speakers, but there was a general feeling that this is a question that must be faced sometime or other. No satisfactory scientific work can be done unless there are long series of specimens for comparison and we must also consider the needs of posterity.

The general interest in anthropology was increased by Prof. Flinders Petrie's evening lecture on 'Man before writing.' In Prof. W. H. Goodyear's lantern demonstration at one of the conversationales, the false perspective of numerous mediæval Italian churches was abundantly proved. A novel feature in connection with the meeting was a loan exhibition in which numerous objects referred to in the papers were exhibited.

A. C. HADDON.

CAMBRIDGE, ENGLAND.

THE INTERNATIONAL PSYCHOLOGICAL CONGRESS.

THE Third International Congress for Psychology was held at Munich, August 4-8. Of the 550 who registered as members, nearly 400 were present. Germany was naturally represented by the greatest number, but France and the other neighboring countries also sent large delegations. From England there were twelve, and from the United States there were twenty-six present.

The Congress began with an informal reception on August 3d, at the Café Luitpold, thus giving the members an opportunity of meeting each other before the sessions. The other social arrangements were numerous and varied, and made an interesting and pleasing commentary on the hospitality and the customs of the German people.