

Besides these papers, reports were presented by various committees nominated by the section. Owing to the plethora of papers, these, as a rule, were taken as read, printed copies being distributed to members present.

The committees presenting reports were those denoted by their well-known abbreviated names of "electrical standards," "kites," "Ben Nevis," "Bessel functions," "teaching of elementary mechanics," "Falmouth," and "seismology." An account was given of the last by Prof. Milne.

### ANTHROPOLOGY AND THE BRITISH ASSOCIATION.

THE most noticeable feature about the proceedings of the Anthropological Section was the great predominance of papers of an archæological character, those on physical anthropology and general ethnography being far fewer in number than usual. The general level of the papers was, however, quite up to the usual standard, and several of the communications were of the first importance.

As the archæological papers were so much the more numerous, it may be advisable to deal with them first. On the Monday morning an important discussion on the Iron age was initiated by Prof. Ridgeway in a paper on the beginnings of iron. He argued that Central Europe was the true centre of the use of iron as a metal, and that it was first diffused from Noricum. He considered that the general opinion as to the early knowledge and use of iron in Egypt is explained by the fact that hæmatite was known and used, but that it was not treated as a metal, but as a stone. That iron was worked from a remote period in Central Africa he considered unlikely, as it only became known for the first time in Uganda some five hundred years ago, and there was no reason to suppose that it was worked much earlier in the more central part of the continent. As it was also certain that the peoples beyond the Caspian and along the shores of the Indian Ocean did not use iron until a late date, it seemed clear that its use as a metal was due to Central Europe.

In the discussion which followed Prof. Edouard Naville drew a distinction between the knowledge of iron and its general use. Referring to the two or three cases of iron being found of the time of the Old Empire, he pointed out that, in spite of this, it did not seem to be in common use under the New Empire, and that no iron tools were discovered in the Deir el-Bahari excavations. His own feeling was that the general use of iron in Egypt was not anterior to Greek times.

Prof. Petrie emphasised the necessity of keeping clearly in view the distinction between the general and sporadic use of iron. Iron was known for 4000 years before its use became general, and this sporadic use strongly supported Prof. Ridgeway's views of the use of iron in its native state, as, had processes of reduction been known, it was unlikely that it would have taken 4000 years for its adoption to have become general.

Prof. J. L. Myres argued that there was no logical connection between Prof. Ridgeway's view that the knowledge of iron, as a useful metal, spread from a centre in Noricum and his assumption that the question of the early Iron age in Europe was that of the first use of iron at all. He pointed out that materials, for example tobacco and gunpowder, were not infrequently looked upon as mere curiosities in one area, and that their real utility was not discovered until they were transferred to another district. He also dwelt on the effect which the introduction of the blast furnace from the north must have had upon the output.

Mr. Arthur Evans considered that the great objection to Prof. Ridgeway's theory was the comparatively late date of the Iron-age civilisation of Hallstatt. Earlier phases are seen in southern Bosnia, and still earlier in the geometrical and sub-Minoan tombs of Greece and Crete. He considered that the general adoption of iron in the countries of the Ægean corresponded with the break-up of the earlier Minoan and Mycenaean type of culture.

Prof. Bosanquet felt that a great difficulty in the way of accepting the views of Prof. Ridgeway was the impossi-

bility of testing the theory that the general use of iron had made its way into Greece from the north, owing to the very little available evidence as to Bronze-age culture in Macedonia and Epirus.

Mr. Crooke considered that India may have been the seat of an independent discovery of the metal.

As usual, Egypt took a prominent place in the proceedings, and the section had the advantage of numbering Prof. Naville among those who read papers. Besides giving a descriptive account of the excavations at Deir el-Bahari, which have now been brought to a satisfactory conclusion, Dr. Naville read an important paper on the beginnings of Egyptian civilisation. The conclusion at which he arrived was that the Egyptians were a nation formed of a mixture of Hamitic conquerors from Arabia settling among an indigenous stock of Hamitic-African origin, an amalgamation made the easier as both races were of the same stock and had no religious differences. Prof. Petrie also gave a paper to the section describing the excavations carried out by the British School of Archæology, under his direction, at Gizeh and Rifeh. In this communication he described the interesting series of pottery soul-houses, found on the latter site, which are of great importance apart from their religious significance as showing the design and evolution of the ordinary Egyptian house, about which little had previously been known.

Greek archæology was dealt with in papers by Prof. Bosanquet and Mr. R. M. Dawkins. Both of these papers dealt with the work now in progress at Sparta, but while Mr. Dawkins gave a general description of the excavations, Mr. Bosanquet dealt especially with the scourging of the Spartan boys before the altar of Artemis Orthia, which was shown by the excavations to have occupied the same position for more than a thousand years. Prof. Bosanquet traced the history of the scourging festival, and showed that the cruel whippings described by Roman writers are an artificial revival of an old discipline which apparently originated in a rough game played by the Spartan youths, in which at first there was no element of passive endurance so characteristic of the later ordeal. This game itself seems possibly to have originated in a still earlier custom, in which the lads hit each other, for luck, with boughs cut from the sacred tree, the *Agnus castus*.

The recent expedition undertaken by the University of Liverpool to northern Syria and Asia Minor was described by Prof. Garstang. The work done was of very great interest, the most important find being what is apparently an altar of dedication, similar to those discovered in Crete. Many inscriptions were also found, as well as a large sculpture of an eagle standing on three lions.

In English archæology Dr. Auden described a series of objects, referable to the Viking age, recently discovered at York. Several of the objects have not previously been reported as occurring in England, and amongst these the brass chape of a sword scabbard, with an interlacing zoomorphic design, is of peculiar interest. The general consensus of opinion is that the finds may be referred to the first half of the tenth century, at which time Scandinavian influence in York was at its height.

The progress of the excavations at Caerwent, including the discovery of the Forum and Basilica, was described by Dr. Ashby, who also, in a paper on Sardinia, directed attention to the *nurhagi* or stone towers and their resemblance to the brochs of Caithness.

Another important archæological paper, dealing, however, with a very different area, was one in which Dr. Seligmann and Mr. Joyce described a series of prehistoric objects from New Guinea. The objects described consisted of stone weapons, engraved shells, and pottery, and are truly prehistoric, inasmuch as the present natives do not know who made them, and in some cases cannot even say for what purpose they were made. It is interesting to note that some of this prehistoric pottery is superior both in make and ornament to that now in use among the natives.

The most important papers on physical anthropology were those by Mr. Gray and Dr. Shrubbsall, which opened the discussion on anthropometrics in schools. This discussion was held conjointly with Section L (Educational

Science), and will be found fully reported in the account of the proceedings of that section. Apart from these two papers, the most noteworthy contribution was one by Messrs. James and Fleure, giving an account of the progress of the University of Wales Ethnographical Survey. It is hoped to extend the survey to all the purely Welsh people, but at present only a limited area has been examined. Still, the results, although purely tentative, are very striking, and the population of the district examined may be said to fall into four distinct groups, of which two may be provisionally identified with *Homo mediterraneus* and the "Northern Race." The survey which has been so auspiciously started is one from which most important and valuable results may be expected, and it is to be hoped that the work will be energetically pushed forward, as the population is rapidly changing, and in a comparatively few years it may be too late.

In papers dealing more or less with ethnography, Mr. J. W. Crowfoot directed attention to the importance of the Anglo-Egyptian Sudan as a field for anthropological research. A great part of the district is virgin soil, and only waits the advent of the anthropologist to produce most important results, while in the northern Sudan the dervish rule has completely changed the conditions, whole tribes having been devastated, transplanted, or mixed with foreign blood. Still, the three main language groups remain, but the problem of the origin of the people using them still awaits solution. It is a matter for regret that Dr. Pirrie was unavoidably prevented from giving his promised account of the Buruns, as his observations would have had an important bearing on Mr. Crowfoot's paper.

Apart from the president's address, on "Religious Survivals," which has been reported in NATURE, the only paper dealing purely with religions was Dr. Farnell's criticisms of Dr. Usener's theories concerning Sonder-Götter and Augenblick-Götter. The divinities of which Dr. Usener treats are those which have no proper personal names, but mere appellatives, to express their functions. Such divinities are found in the Roman and Greek cults, and a few examples have been noted among savage peoples. The system may be regarded as a peculiar form of animism. Dr. Usener's theory assumes that these divinities are relics of a very primitive period, when imagination had not created concrete personal divinities, and that the Greek Pantheon was deeply indebted to this system. Dr. Farnell argued that the Greek evidence did not support these assumptions, and that many of these Greek appellative *numina* may be creations of personal polytheism, mere emanations of concrete divinities.

The subject of totemism was dealt with by Mr. G. L. Gomme in a paper on its origin. Mr. Gomme was of opinion that totemism must have arisen from conditions of human life which are universal, and which are probably supplied by migration. Sex cleavage was produced by the fact that woman was the stationary animal, and in this way became more closely associated with friendly animals, plants, &c., to which she looked for protection and food rather than to the male, who constituted a migratory element; women thus influenced the totem names. Mr. Gomme's conclusion was that totemism began as an artificial association of groups of people, and was not based on a kinship society.

Sociology was also dealt with in two papers by Dr. Rivers, one criticising Morgan's Malayan system of relationship, and the other offering some most valuable suggestions for the definition of the technical terms used by anthropologists, especially with regard to the divisions of society and marriage and descent. He urged the importance of the terms used being strictly defined, and also the necessity of some general agreement in their use being obtained.

A most suggestive technological paper was one by Prof. J. L. Myres on a terminology of decorative art. The necessity of arriving at a terminology was strongly emphasised, as persons would thus be enabled to describe by some recognised terms the arrangement and *motif* of any pattern in the same way as the herald is able to describe, without graphic illustration, the colours and component parts of any coat of arms, however complicated. The basis of any such system must be strictly technological; it must be a description of what the artist did,

of the order in which he did it, and of the effect produced, and all minor elements in the design must be located by reference to the major element on which they are based. Such a terminology must, of course, be elaborated gradually, but Prof. Myres's valuable suggestions should serve as an admirable basis on which the work may be built up, and it is to be hoped that all persons interested in decorative art will assist him in his efforts to arrive at a sound scientific terminology, the practical value of which cannot be overestimated.

Attention was directed by Mr. Newbery and Dr. Bryce to what is practically an unworked field, namely, the so-called "door-step" art of the west of Scotland. The patterns, which are drawn solely by women, are of great variety, are purely geometrical and conventional, and are used to decorate doorsteps, hearths, &c. The drawings are very primitive, and represent an early stage of artistic evolution. Mr. Newbery was of the opinion that the designs were the expression of a primitive art instinct, but since they are traditional in character, being handed down from generation to generation, it seems more likely that they are a survival. However this may be, there can be no question as to their interest, both in themselves and as a field for research. Another paper of interest to which passing reference may be made was one in which Prof. Ridgeway sought to identify the origin of the crescent as a Mohammedan badge, not with the young moon, but with the well-known amulet of two boar's or other animal's claws or tusks set base to base in crescent form.

Amongst the reports of committees, reference should be made to that appointed to excavate the Lake Village at Glastonbury, which hopes to be able to complete its long work this month (August), and to the Stone Circles Committee. This committee was able to make the announcement that it had received permission to conduct excavations in the Avebury Stone Circle, from which important results cannot fail to be obtained, results which should go far towards accomplishing the object of the committee, namely, to ascertain the age of these structures.

#### UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

LONDON.—University College: In consequence of the removal of University College School to Hampstead, the south wing of the college buildings has been set free for university purposes, enabling the following developments to take place, beginning with the new session:—In the mechanical engineering department a new hydraulic laboratory will be provided in the basement, and also additional space for experimental work in mechanical engineering during the second and third years. A separate laboratory will be set aside for research work, thereby leaving the main laboratory entirely free for undergraduate work. In the department of electrical engineering, the present lecture-room will be replaced by a large new lecture-room with a small demonstration class-room adjoining it. The old lecture-room will be fitted up as an experimental room for advanced students. The electrical engineering department will also contain a research laboratory with apparatus and preparation rooms adjoining. The department of applied mathematics will also receive considerable extensions, providing two special research laboratories and ample accommodation for the work being carried on in the Galton Eugenics Laboratory. New accommodation will be provided for the department of geology, and include a museum, with a research room, and a lecture-room suitably equipped with lantern apparatus. Applications for the prospectus should be made to the secretary of the institution.

LORD KELVIN will open the new science buildings of Queen's College, Belfast, on September 26.

A COMMITTEE has been formed to promote the raising of a memorial to the late Major D. M. Moir, I.M.S., professor of anatomy at the Medical College, Calcutta, who died of septicaemia contracted in the execution of his public duties. It is hoped that sufficient money will be obtained to found a prize or to endow a bed, after providing for a tablet and portrait in the college hospital. The