

rations. One remarks, among other wise provisions, the practice of setting up lines of signs across the line of march for some distance on either side of some of the depôts, so that if, on the return, a deviation had been made, the depôts could still have been found. During the depôt-laying journeys a minimum temperature of -50° F. was observed.

The expedition was extraordinarily favoured by the weather conditions. During the year of the sojourn in the south only two moderate storms were encountered; otherwise the wind was mostly light and easterly. During five months temperatures below -56° F. were observed, and on August 13 -74.2° F. was recorded. These low temperatures delayed the start for the pole, and even occasioned a false start and an enforced return early in September. It was not until October 20 that settled weather justified the journey being finally undertaken.

In 83° S. high mountains—10,000 to 15,000 ft.—were observed to the south-west (the travellers' course lying due south). These probably belong to the South Victoria land range, and were found to be met, about 86° S., 163° W., by a much lower range trending east and north-east. The junction of the ice-barrier and the land was reached on November 17 in 85° S., 165° W. No very grave difficulties were encountered in ascending to the polar plateau between the great peaks of the above range. The greatest height, attained on December 6, was 10,750 ft., from which the plateau was found to continue flat to $88^{\circ} 25'$ S., and thence to slope slightly down. Progress was easy, and even leisurely. Beautiful weather was experienced; the region seemed to be one of constant calm, and even the absolutely plain surface of snow strengthened this impression. At the latitude last mentioned the last good azimuth observation was obtained. On December 14 and 15 close observations gave the latitude as $89^{\circ} 55'$. On December 16 the camp was removed the remaining distance to the pole, and observations were taken hourly by four men through twenty-four hours. The plateau was given the name of King Haakon VII.

So far as concerns the Antarctic land-mass, the main geographical importance of the expedition seems to lie in the observations of the great mountain-range mentioned above, which, with clear weather on the return journey, was observed from 88° S., where it was lost on the horizon, to the junction-point in 86° S., and has been given the name of Queen Maud. But three of the party, including Lieut. Prestrud, who did not accompany the southward expedition, carried out topographical work in the vicinity of the Bay of Whales, and east of it as far as Scott's King Edward Land, while Captain Nilsen, in the course of cruising which extended from Buenos Aires on one hand to Africa on the other, made oceanographical observations at sixty stations, and by navigating the *Fram* to a point further south than any known vessel had reached before, set the crown on the fame of that ship in polar exploration.

ANTHROPOLOGY AT THE BRITISH ASSOCIATION.

NOTWITHSTANDING the unfortunate overlapping in the dates of the meetings of the Association and the International Congress of Prehistoric Archaeology at Geneva, which seemed likely at one time to affect seriously the attendance of anthropologists at Dundee, the proceedings of Section H (Anthropology), which met this year under the presidency of Prof. G. Elliot Smith, F.R.S., were, if anything, of even greater interest than usual, and in-

cluded several communications of considerable importance. The attendances throughout were good, and if, in the first half of the meeting, the discussions were a little below the customary standard, this was due to lack of time rather than to lack of interest, and was more than counterbalanced in the second part of the meeting, when the problems of Mediterranean archaeology and the President's views on the origin and distribution of megalithic monuments gave rise to animated interchanges of opinion.

In any detailed review of the papers presented to the section it would be necessary, on more grounds than one, to give a prominent place to the two communications by Prof. Anthony, of Paris, who attended the meeting as the distinguished guest of the section. These dealt respectively with the suprasylvian operculum in primates with especial reference to man, and the brain of La Quina man, one of the earliest and the finest of the brains of Palæolithic man yet known, and now described for the first time. With these two papers must be included Prof. Keith's exhibit of the brain of Gibraltar man, the three forming a group pendant to the President's address, and affording further evidence in support of his conclusions as to the evolution of the human brain, and in particular of the association areas.

Other communications also dealt with early types of man. Dr. Duckworth's description of the fragment of a human jaw of Palæolithic age found in Kent's Cavern, Torquay, in 1867, but previously undescribed, in the absence of the author was appropriately presented to the section by Prof. Boyd Dawkins, who was a member of the committee appointed to explore Kent's Cavern which recorded the discovery in a report presented to the Association at the Dundee meeting in 1867. On anatomical grounds, Dr. Duckworth considers the jaw to belong to the Neanderthal type. Dr. Ewart gave an account of an important find of human remains in a raised beach at Gullane, the skeletons being described by Prof. Keith. When the results of this discovery are published in full, they will be found to have an important bearing upon the prehistory of the Scottish area. In the discussion which followed the reading of the paper, Prof. Bryce stated that, in his opinion, the skeletons found in association with the very early types of Neolithic implements represented the earliest type of man yet discovered in Scotland, antedating the men whose remains have been found in the cairns of Tiree.

Other papers dealing with the physical side of the study of man were Dr. Duckworth's contributions to Sudanese anthropometry based upon measurements made in the south-eastern Sudan by Dr. Atkey; Dr. Wood Jones's papers on the lesions caused by judicial hanging, in which injuries received by criminals executed in Egypt in Roman times were contrasted with those received in modern instances, and on the ancient and modern Nubas, in which he suggested an origin for the foreign immigrants into Nubia in the early Christian era whose remains have been discovered by the Archaeological Survey of Nubia; Mr. D. E. Derry's description of a macrocephalous skull from Egypt; and a highly interesting paper by Mr. L. Taylor on the Bontoc Igorots now exhibited at Earl's Court, based upon measurements which suggest that these people may not be of such unmixed Indonesian stock as has usually been supposed.

Two organised discussions were largely attended and aroused much interest. The discussion on the ethnological aspects of Scottish folklore was opened by Mr. Crooke with a paper on customs connected with the Scottish calendar, followed by Mr. Hartland with a paper on folklore as an element in history. Canon J. A. McCulloch, after a reference to features in

Scottish folklore common to other countries, contrasted the form taken by the fairy belief in the Highlands and the Lowlands, and Mr. Brodie-Innes, in a paper covering a wide range of fact and theory, adduced data for distinguishing Celtic, Saxon, and Scandinavian elements in Scottish beliefs and practices. Miss Burne urged the importance of the collection of evidence, especially in border counties, before it should be too late.

It would be unfair to attempt to summarise in a few words the arguments put forward by Prof. Elliot Smith in opening the discussion on megalithic monuments and their builders in support of his views that this form of sepulchral monument originated in Egypt at about the time of the first utilisation of copper implements, and spread thence as a religious idea to the remaining parts of the world in which megalithic monuments are found. Mr. Peet, in a paper which, in the absence of the author, was presented to the section by the President, while assigning a single origin at some one centre to these monuments, ascribed their distribution to a racial migration. These views were sharply criticised in the discussion which followed, strong exception being taken to a theory which derived the round form of megalithic monument from the square Egyptian tomb. Among the speakers were Prof. Boyd Dawkins, Prof. Ridgeway, Prof. Myres, and Prof. Bryce.

Communications dealing with the archaeology of Egypt and the Sudan were numerous. Prof. Petrie described his excavations during the last season on an early dynastic cemetery near the village of Tarkharn, thirty-five miles south of Cairo, which in his opinion is the earliest site as yet discovered so far north. Mr. Quibell described the excavation of second and third dynasty tombs at Sakkara, which led to the re-discovery of the tomb of Hesy and revealed a style of mural decoration previously unknown. Prof. Elliot Smith gave the results of his examination of the bodies found in these excavations, carrying back the evidence for an alien population in Egypt to the second dynasty. One of the bodies examined showed an attempt at mummification. This is the earliest evidence for this method of preserving the body which has yet been discovered. He also described the work of the Boston Museum and Harvard University expedition in Egypt from material provided by Prof. Reisner, who is in charge. Mr. Ogilvie gave an account of Prof. Reisner's work under the Archaeological Survey of Nubia, and showed slides of his own sketches, recently made, of the ruins of the temples at Philae, which are shortly to be submerged by the irrigation works. It would be difficult to praise too highly Mr. R. Mond's coloured slides of the Theban tombs excavated by Mr. Alan Gardner, which were greatly admired, both for their exquisite beauty and their value as accurate records of the objects discovered.

An important communication by Mr. H. S. Wellcome described for the first time the result of two years' work on a site containing remains of primitive Ethiopian races in the southern Sudan, from which he has obtained a large quantity of implements, pottery, ornaments, and other Ethiopian and Egyptian objects, ranging in date from the neolithic age to the Ptolemaic period. Dr. Derry discussed the phenomenon of the red pigment found on ancient bones, and came to the conclusion that in the Nubian and Egyptian examples it was due to a red pigment applied to the grave wrappings and afforded no evidence of mutilation after death.

The interest in the problems of Mediterranean archaeology shown by the members of the Association who attend this section has been so marked in the

past that it was gratifying to find this subject again becoming prominent in the proceedings. Mr. Wace gave an account of the excavations carried out by himself and Mr. Thompson in tombs and a tumulus belonging to the early Iron age at Halos in Achaia Phthiotis, which contained "geometric" pottery, bronze fibulae, and swords, knives, and long spears of iron. Prof. Ridgeway described a group of bronze and iron javelins found together in Caria, and now in his possession, which illustrate the overlapping of the use of bronze and iron. Prof. J. L. Myers presented the report of the Committee on Archaeological and Ethnological Investigations in Crete, which contained a further instalment of Dr. Duckworth's report on the measurements made when he visited the island some years ago on behalf of the committee. Dr. Ashby gave an account of recent excavations of the prehistoric monuments of Malta, Gozo, and Sardinia, which was in part a supplement to the discussion on megalithic monuments from the point of view of the evidence furnished by these islands.

The papers dealing with the archaeology of Britain were few in number, but of considerable interest. Mr. Willoughby Gardner described the excavation of an interesting hill fort in Parch-y-Meirch Wood, near Abergele. The fort was evidently British in origin, but showed signs of three occupations, one being by the Romans. Miss Leslie-Paterson exhibited a series of pigmy flints from the Dee Valley, the first examples of the actual implements to be found north of the Forth, and the Rev. Father Blundell presented the report of the Committee on the Artificial Islands in the Lochs of the Highlands of Scotland. The committee, which was appointed at the Sheffield meeting, has now completed two years' work; a considerable number of these islands has been recorded, and much interest in them has been aroused locally. Papers by Mr. Marett on a Neolithic cemetery on the islet of La Motte, in Jersey, and by Dr. Irving on further investigations on a prehistoric site in the Valley of the Stort were presented to the section, but, in the absence of the authors, were not discussed.

Two important technological points were raised by Dr. Rivers, the first being the disappearance of useful arts, and the second "conventionalisation" in art. In regard to the former, he entered a caution against over-hasty conclusions as to the character and extent of a primitive culture, by pointing out that it was possible, as he had found in Melanesia, for a useful art to die out of everyday life and leave no trace of its existence in the technology of the people by whom it had been practised. In the second of his papers, to explain the problem which is not completely solved on any of the current theories of the development of decorative art, namely how it comes about that a realistic representation should become a geometrical figure, he offered the hypothesis that in the clash of cultures of two races with different art motives and forms there may result the retention of the motive from one side and of the form from the other. In another branch of the study of primitive art, Dr. C. S. Myers's phonograph records of Sarawak music were greatly appreciated by a large audience.

Among other ethnographical papers, mention must be made of Mr. Amaury Talbot's description of tribes of the West and Central Sudan with numerous illustrations of racial types, implements, and ornaments, Mr. MacRitchie's paper on the magic drum of the northern races, and Miss E. B. Lindsay's paper on an undescribed totem post of stone from British Columbia.

In conclusion, two statements made to the section may be placed on record. Dr. George Bryce sent a

report on the first eighteen months' work of the ethnographical department of the Geological Survey of Canada, which, it will be remembered, was a direct outcome of the visit of this Association to Winnipeg in 1909, and Dr. Hrdlička, in a letter from Siberia addressed to the President, announced that he had discovered in north-eastern Asia living representatives of the ancient race which gave North America its Indians.

BIRD NOTES.

IN an article on the food of nestling birds published in the Journal of the Board of Agriculture for September, 1912, Mr. W. E. Collinge commences by referring to the fact that in the early stages of life birds daily consume more than their own weight of food. It is also mentioned that since nearly all birds except pigeons feed their young upon an animal diet, and that the nesting season occurs when insects are most abundant, the value of birds as insect-destroyers is self-apparent.

In *Witherby's British Birds* for October an instance of one cuckoo laying in the nest of a marsh-warbler and of a second in that of a rock-pipit are recorded. Only about five instances of a similar event have been previously recorded in the case of each species.

To *The Zoologist* for October Mr. Harvie Brown contributes the first part of an article on the past and present distribution of the fulmar petrel on both sides of the Atlantic, and its recent spread in northern Britain.

For about a century naturalists were content with the name *Strix flammea* for the barn-owl. The late Prof. Newton proposed to replace the generic name by *Aluco*, but this usage was recently stated by Mr. G. M. Mathews to be invalid. In No. 4 of *The Austral Avian Record*, after referring to a couple of alternative generic designations, the same writer brings forward the name *Flammea vulgaris* as one to which no objection can be taken. It seems a pity to try to displace a name which has become almost a household word. This replacement of long-accepted names of British birds by others of earlier date forms the subject of an editorial article in the September number of *The Scottish Naturalist*, where it is remarked that "though our sympathies are strongly in favour of the British Association's rules, yet we are willing to view the present situation in a liberal spirit. There must, however, be concessions, and we regard it as essential that a number of time-honoured names must be conserved."

In the above-mentioned issue of *The Scottish Naturalist*, Mr. Eagle Clarke describes, with an illustration, a male hybrid between an eider drake and a wild duck, which was shot early in 1912 in the Orkneys. What appears to have been a fellow-hybrid was seen on the Pentland Skerries in the following May. No other instance of a similar hybrid appears to be on record.

We are indebted to Mr. W. Junk, of Berlin, for a copy of a sale catalogue of ornithological literature.

R. L.

REPORT OF THE METEOROLOGICAL COMMITTEE.

THE report of the Meteorological Committee for the year ended March 31, 1912, shows that several important matters were dealt with during that period, e.g. the reconsideration of the relations with the Post Office as regards weather telegraphy, the incorporation in the official network of stations which

had previously sent their observations to the Royal Meteorological Society, the publication of results of various classes of observations, and the revision of rules under which the increasing number of telegraphic reports from health resorts can be accepted for communication to the Press.

The present capabilities of international and wireless weather telegraphy are well illustrated by the frontispiece synoptic chart for April 1 of the distribution of weather phenomena over a large part of the northern hemisphere compiled from data received within ten days of the date of the chart. One great advantage has been conceded by the Post Office at the request of H.M. Treasury in allowing priority of transmission to certain classes of meteorological telegrams and to storm warnings; but very much still remains to be effected in the way of facilitating the telegraphic distribution of forecasts to all parts of the United Kingdom by some financial arrangement by which the Meteorological Office would be placed on a better footing in carrying out its important public work than that accorded to a "private person."

The percentage of complete success and the sum of successes (complete and partial) of the 8h. 30m. p.m. forecasts for the year 1911 were both higher than in any year since 1879, when the present service of daily forecasts was inaugurated. The "further outlook" frequently appended to the forecasts for twenty-four hours has also been remarkably successful. Want of space precludes special mention here of the useful work carried on in other departments of the office.

THE METALS IN ANTIQUITY.

THE Huxley memorial lecture was given by Prof. W. Gowland, F.R.S., on Tuesday, November 19, at the Royal Anthropological Institute, the subject being "The Metals in Antiquity." After pointing out the sources whence our knowledge of the use of metals by man in prehistoric and protohistoric times was derived, the lecturer gave an account of the primitive metallurgy of copper, tin, gold, lead, silver, and iron, the conditions under which they were extracted from their ores, and the localities in which they were first obtained.

The origin of the smelting furnace was traced to the camp fire, in which, if by chance a lump of ore either of copper carbonate, tin-stone, or brown iron ore or hæmatite, had been one of the ring of stones surrounding the camp or domestic fire and had accidentally become embedded in its embers, it would undoubtedly be reduced to metal.

The metals which occur—native copper, gold, and iron—were undoubtedly the first to be known to man in the localities in which they occurred, but until the art of smelting metals had been invented, the discovery and use of the native metals was insufficient to affect to any great extent the old Stone age culture.

Gold, although doubtless the first metal to be known in many localities owing to its wide distribution in the sands of rivers, was useless for any practical purpose.

Copper, however, or an alloy of the metal with tin, antimony, or arsenic, was extracted from ores at a very remote period, and it or its alloys was the first to be applied to practical use. In fact, the first metal to be obtained by primitive man by smelting copper ores depended on their composition, and in the localities where tin did not occur it was a more or less impure copper.

The extraction of gold from its ores on a large scale in the earliest times was attributed to the Sudan