

by Mr. J. W. Firth; four Harvest Mice (*Mus minutus*), British, presented by Mr. G. T. Rope; a Greater Sulphur-crested Cockatoo (*Cacatua galcruta*) from Australia, presented by Mr. George Wood; a Great Grey Shrike (*Lanius excubitor*), British, presented by Master Arthur Blyth; two American Flying Squirrels (*Sciuropterus volucella*) from North America, presented by Mr. F. S. Mosely, F.Z.S.; a Cape Adder (*Vipera atropus*) from South Africa, presented by Mr. C. B. Pillans; a Black Tanager (*Tachyphonus melaleucus*), a White-throated Finch (*Spermophila albigularis*), a Tropical Seed Finch (*Oryzoborus torridus*), a Common Boa (*Boa constrictor*), a South African Rat Snake (*Spilotes variabilis*) from South America, a Cheela Eagle (*Spilornis cheela*) from Ceylon, two Illiger's Macaws (*Ara maracana*) from Brazil, a Common Guillemot (*Lonvia troile*), British, purchased; two Brown-tailed Gerbilles (*Gerbillus erythrus*), born in the Gardens.

GEOGRAPHICAL NOTES

THE first report of Prof. Hull, dated from Gaza, January 1, has been received. It is necessarily brief, the details being reserved for the full report to follow, but it announces the success of the expedition so far. The professor has made a complete geological survey of the Wady Arabah and the Dead Sea, with a traverse across Southern Palestine. Capt. Kitchener, R.E., who accompanied him, has made a trigonometrical survey. Akabah he found to be laid down too far south; the south part of the Dead Sea as shown on the maps, is quite out of its true shape and position, and the Lisan has to be shifted three miles. From Gaza, when the rest of the party were in quarantine, Capt. Kitchener rode back to Egypt, accompanied by four Arabs only. He took a previously unknown route, particulars as to which will follow, and arrived at Ismailia after a ride of 200 miles. He was everywhere well received by the Arabs, who took him for a cousin of Sheikh Abdullah (the late Prof. Palmer), whose memory is still revered among them, and whose murder they still deplore. They are also reported to be deeply impressed with the energy and pertinacity of Sir Charles Warren's pursuit of the murderers. As regards the other members of Prof. Hull's party, Mr. Hart is reported to have made large additions to the flora; Mr. Lawrence has kept a continuous series of meteorological observations, and Mr. Gordon Hull has obtained a hundred photographs, large and small. Prof. Hull had still to execute two traverses of the country, in which he is no doubt at present engaged. The complete reports, both of himself and Capt. Kitchener, will be extremely important. They will probably be published in the journal of the Society.

WE have received the ninth issue of the *Geographisches Jahrbuch*. In the present volume, the reports which appeared in the first six publications on the additions successively made to our knowledge of extra-European parts of the earth are resumed; the new African annexations to geography being disposed of by Prof. K. Zöppritz, the Asiatic by Dr. Hans Lullies, and the Polar by Herr W. Wichmann. Two important departments in geography find for the first time distinct places assigned them in the present number; geographical onomatology and theoretic cartography. The former has indeed but very recently been recognised as the independent and important province of geography it really is. The first and as yet only comprehensive scientific work on the subject is that by its reviewer in the present *Jahrbuch*, Prof. J. J. Egli, "Versuch einer Allgemeinen Geographischen Onomatologie" (Leipzig, 1870-72), essay towards a general geographical onomatology. The name of a place is either immediately descriptive of its physical features ("nature-names," as Prof. Egli calls this class) or descriptive of some historical or other connection between the place and its earlier or later inhabitants or discoverers ("culture-names"), in either and every case is significant and interesting and an organic part of its geography.—Prof. Sigismund Günther, in his masterly review of theoretic cartography, first gives a brief yet clear and comprehensive "history of the development of geometrical cartography," taking notice more particularly of modern works on the subject, and then estimates recent works on projection.—Prof. von Oppolzer, reporting the progress made in European measurement of degrees, summarises the transactions

of the sixth General Conference held on the subject at Munich, September 13-16, 1880. He calls special attention to the results deduced by von Bauernfeind from taking the measurement of the zenith simultaneously at Dobra and Kappellenburg, in which the same anomalies came to light as those pointed out years before by von Bayer. These anomalies are entirely parallel with those which appear in taking barometrical measurements of heights, and von Bauernfeind attributes them to the circumstance that the registered temperatures at given places form no correct criterion of the temperatures of the intermediate air-strata, the temperatures at the given places being to a certain extent determined by purely local influences. These conclusions are confirmed by Oppolzer's studies in astronomical refraction, in which analogous anomalies are to be explained by the fact that the universal law of diminution of temperature with ascent is modified in the lowest air-strata by local causes. In clear nights, e.g., the temperature in the lowest atmospheric strata invariably rises with ascent up to a certain moderate height. During the day, on the other hand, in corresponding conditions, temperature diminishes with ascent at a rate considerably above the average. These facts afford Oppolzer a very simple explanation of hitherto puzzling phenomena.—In the review of geographical meteorology by Prof. J. Hann is presented a great treasure of data as to rainfall, nebulosity, atmospheric pressures, winds, &c.—In a map by Remon of the nebulosities of different parts of Europe and North Africa, the extremes are given at 20 in the Algerian Sahara, and 68° in the north-west of Europe. Cloudiness in general diminishes southwards and eastwards, as compared with the centre of Europe.—Space allows only of the bare mention of the review of the geography of plants by Prof. Drude; of animals, by Prof. Schmarda; of ethnology, by Prof. Gerland; of deep sea exploration, by Prof. von Boguslawski; of the structure of the earth's surface, by Prof. von Fritsch; and of the method of geography, by Prof. Wagner.

WE understand that the expedition with which Mr. Wilfrid Powell has undertaken to explore New Guinea will leave this country about the beginning of March. It will consist of Mr. Powell, with four or five Europeans, including a naturalist and a geologist, and the work of traversing the thousand or twelve hundred miles which have been mapped out for the route is likely to occupy over a year. Mr. Powell has chartered a small screw steamer, in which the party will proceed up the Ambemoli river, a large stream in Dutch territory, on the north coast. The explorers will proceed up this river in a steam launch as far as they can get. The launch will then return to the steamer, and the party will strike in a south-westerly direction across the high central range of mountains which runs from east to west, called the Snow Mountains, or the Finisterre Mountains. When this difficult task has been accomplished, Mr. Powell will march to the east coast, where he will hope to find his screw steamer in Astrolabe Bay. After refitting, he will again strike westwards, across the south-east corner of the island, to Port Moresby. Mr. Powell will thus explore the country from north to south, avoiding the Fly River, or any other portion which has been visited by Europeans.

THE *St. Petersburger Zeitung* has received news from Khartoum about Dr. Junker. Herr Bohndorf, Dr. Junker's companion, has arrived at Khartoum, and reports that Junker is still in the Niam Niam country, and that his researches are favourably progressing.

THE last issue of the *Bulletin* of the St. Petersburg Academy of Sciences contains a letter of M. Bunge, the medical officer of the Lena polar meteorological station. The country around the station is but little fitted for collecting. It is a flat region, periodically covered by the tide, and there may be no question about sea-flora or sea-fauna to be found in the creeks that intersect the ground. The ice bear sometimes makes his appearance, as also the wolf, the fox, especially *Canis lagopus*, of which the neighbouring Yakuts catch about 300 every year; the *Mustela herminea* is not very rare. The Yakuts do not know lemmings, but one species at least, the *Myoxos torquatus*, inhabits the delta. The reindeer come in large flocks in the summer, returning to the forest region in the autumn. They are killed when passing the streams, shooting being prohibited by the Yakut community. One *Ægocerus montanus* has been perceived, from a great distance, within the delta. Walruses, sometimes seals, and dolphins also enter the mouth of the Lena. As to the birds, M. Bunge gives a list of 101 species he has observed or shot during his journey. The water invertebrata are

very poorly represented in the Lena. As M. Bunge gives great attention to the collecting of skulls of animals, his collection promises to be of great value, as also his collection of human skulls taken from the coffins that dot the *tundra*—the Yakuts merely putting them on the surface between a few rough planks. It is worthy of notice that, whilst having many opportunities for visiting the sick Yakuts in the neighbourhood, M. Bunge has not yet noticed a single case of scurvy; it is quite unknown among them.

WE have received a separate copy from the forthcoming number of the *Izvestia* of the Russian Geographical Society of a notice of the remarkable Russian expeditions to the Pamir, carried on during last summer. It is sufficient to cast a glance at the map that accompanies this note to ascertain that "the Roof of the World" has now been quite deprived of the veil of mystery that covered it for centuries past. Many years since Russian travellers penetrated into it, and studied detached portions as they followed the course of the rivers which led to these gigantic plateaux, inclosed between still higher mountains. Pursuing his researches for several consecutive years, Dr. Regel and his companions have explored the valleys of the Panj and of its numerous tributaries, penetrating as far south as Sist (37° N. lat.) and as far east as the sources of Shakh-dere, 72° 50' E. long. An immense bend to the west of the Panj River beneath Kala-vamar, due to the presence of a high chain of mountains running north-east, and a wide lake, Shiva, 11,000 feet high, situated to the west of this bend, discovered by Dr. Regel, considerably modify our former maps of the western part of the Pamir region. But the expedition of last summer, which consisted of MM. Putiata, of the general staff, Ivanoff, geologist, and Bendersky, topographer, throws quite a new light on the still less known eastern Pamir. The expedition has literally covered with a network of surveys the whole of this region from 39° 30' N. lat. to the sources of the Vakhn-daria, in 37° 10', and from 72° 10' to 75° 20' E. long., penetrating thus twice to the foot of the Mustag-aga, or Tagarma Peak. The great Pamir chain, between the Shakh-dere and the Upper Panj has been crossed at four places, 100 miles distant, and the Russian surveys have been brought into connection with those of the pundit M. S. The expedition seems to have established that the pundit M. S. was misled, and that the Ak-ku is really the upper part of the Murghab. The other results of this expedition are also very important: not only a map on the scale of five vers's to an inch of the whole of this wide region has been drawn, but also the heights of a very great number of points have been determined by barometrical and trigonometrical measurements; large geological and botanical collections have been brought in, as well as many drawings, and a dictionary of the Shughnan language. Detailed reports will follow, the foregoing information being due to a preliminary letter of M. Ivanoff.

A TELEGRAM from Nerchinsk, in Siberia, states that M. Joseph Martin, the French traveller, passed through that place recently on his way to Irkutsk. M. Martin has (says a Reuter's telegram) explored the country from the Lena to the Amur, and has crossed the intervening Starovi Mountain range. He has collected a large amount of geographical and geological information concerning the region which he has traversed.

MR. SCHUVER, the Dutch African explorer, has been murdered at Bahr Gazal, in South Kordofan.

ACCORDING to the latest number of the *Annalen der Hydrographie und maritimen Meteorologie* the greatest depth of the Atlantic is 8341 metres; this was found in 19° 39' 10" N. lat., and 60° 26' 5" W. long. The next greatest depression of the sea bottom is in 19° 23' 30" N. lat., and 66° 11' 45" W. long., where 7723 metres were found.

THE AIMS AND PROSPECTS OF THE STUDY OF ANTHROPOLOGY¹

THOSE who are present at this meeting need scarcely be reminded of the importance of the subject which is our common bond of union, that which is defined in the prospectus of the Institute as "the promotion of the science of mankind

by the accumulation of observations bearing on man's past history and present state in all parts of the globe."

But those present are a very small fraction indeed of the persons in this country to whom this great subject is, or should be in some one or other of its various divisions, a matter of deep interest, and as it is possible that the words which it is my privilege and duty as your president to address to you on this occasion may be read by some who are not yet so much conversant with the aims of anthropology and the means for its cultivation which this Institute affords as those who have taken the trouble to come here this evening, I hope that you will pardon me if I bring before you some general considerations, perhaps familiar to all of you, regarding the scope and value of the science the advancement of which we have at heart.

One of the great difficulties with regard to making anthropology a special subject of study, and devoting a special organisation to its promotion, is the multifarious nature of the branches of knowledge comprehended under the title. This very ambition, which endeavours to include such an extensive range of knowledge, ramifying in all directions, illustrating and receiving light from so many other sciences, appears often to overleap itself and give a looseness and indefiniteness to the aims of the individual or the institution proposing to cultivate it.

The old term ethnology has a far more limited and definite meaning. It is the study of the different peoples or races who compose the varied population of the world, including their physical characters, their intellectual and moral development, their languages, social customs, opinions, and beliefs, their origin, history, migrations, and present geographical distribution, and their relations to each other. These subjects may be treated of under two aspects—first, by a consideration of the general laws by which the modifications in all these characters are determined and regulated; this is called general ethnology; secondly, by the study and description of the races themselves, as distinguished from each other by the special manifestations of these characters in them. To this the term special ethnology, or, more often, ethnography, is applied.

Ethnology thus treats of the resemblances and differences of the modifications of the human species in their relations to each other, but anthropology, as now understood, has a far wider scope. It treats of mankind as a whole. It investigates his origin and his relations to the rest of the universe. It invokes the aid of the sciences of zoology, comparative anatomy, and physiology; and the wider the range of knowledge met with in other regions of natural structure, and the more abundant the terms of comparison known, the less risk there will be of error in attempting to estimate the distinctions and resemblances between man and his nearest allies, and fixing his place in the zoological scale. Here we are drawn into contact with an immense domain of knowledge, including a study of all the laws which modify the conditions under which organic bodies are manifested, which at first sight seem to have little bearing upon the particular study of man.

Furthermore, it is not only into man's bodily structure and its relations to that of the lower animals that we have to deal; the moral and intellectual side of his nature finds its rudiments in them also, and the difficult study of comparative psychology, now attracting much attention, is an important factor in any complete system of anthropology.

In endeavouring to investigate the origin of mankind as a whole, geology must lend its assistance to determine the comparative ages of the strata in which the evidences of his existence are found; but researches into his early history soon trench upon totally different branches of knowledge. In tracing the progress of the race from its most primitive condition, the characteristics of its physical structure and relations with the lower animals are soon left behind, and it is upon evidence of a kind peculiar to the human species, and by which man is so pre-eminently distinguished from all other living beings, that our conclusions mainly rest. The study of the works of our earliest known forefathers, "prehistoric archæology," as it is commonly called, although one of the most recently developed branches of knowledge, is now almost a science by itself, and one which is receiving a great amount of attention in all parts of the civilised world. It investigates the origin of all human culture, endeavours to trace to their common beginning the sources of all our arts, customs, and history. The difficulty is what to include and where to stop; as, though the term "prehistoric" may roughly indicate an artificial line between the province of the anthropologist and that which more legitimately belongs to the archæolo-

¹ Address delivered at the anniversary meeting of the Anthropological Institute of Great Britain and Ireland, January 22, 1884, by Prof. Flower, LL.D., F.R.S., P.Z.S., &c., President.