

trustworthy signs of bedding in these rocks. Cropping out in the lower third of the hills—from the cliffs and the slopes immediately above them—are beds of a highly micaceous rock—greisen—and a gneissose rock sometimes approaching in its characters the typical gneiss; these beds are inclined at an angle of 15° to the east-north-east. Veins of quartz are observed to traverse both these rocks, whilst occasionally a layer of quartz—an inch in thickness—separates contiguous beds.

I had no opportunity of landing on any other islands of the archipelago, many of which in their general appearance resemble that of the Island of Mackau.

H. B. GUPPY

NOTES

THE International Medical Congress which it is proposed to hold in London in the beginning of August will be the seventh of its kind. The previous meetings have been held biennially in the principal university towns of the Continent. At the last meeting in Amsterdam in 1879, a general wish was expressed that the next should be in England, and the wish having been informally communicated to the Presidents of the College of Physicians and the College of Surgeons, they called a meeting of presidents or other delegates of all the Universities, Medical Corporations, Public Medical Services, and the Medical Societies. The proposal to hold the Congress in London was heartily agreed to, and an Executive Committee was appointed under whose direction, and, especially, by the energy of the General Secretary, Mr. MacCormack, a very large scheme has been arranged for the discussion of the most interesting questions in all the divisions of the Medical Sciences. The Meetings will be held in fifteen sections, in rooms of most of which the use has been granted by the University of London, the Royal Academy, and all the learned Societies at Burlington House. Others have been engaged at Willis's Rooms. The officers and councils of the several sections include, with very few exceptions, all the chief and most active teachers and workers in the several subjects of medical science and practice, not in London alone, but in all the universities and great towns in the United Kingdom. In so far as general consent to the design of the Congress may be regarded as a promise of success, all looks well, and the agreement of our own countrymen is well matched by the assurances of co-operation already received from a large number of the most distinguished medical investigators and practitioners in both the Old World and the New. About 4000 invitations were issued, and it is expected that the roll of members will include at least 2000 names. Of course there are large arrangements for receptions and various hospitalities, and for making London as agreeable and instructive as may be in August; but if the design in the programme of the Congress be fairly fulfilled, a great quantity of hard and useful scientific work will be well done.

At a meeting of the American Academy of Arts and Sciences held in Boston, Massachusetts, on January 12, the Rumford medal was conferred on Prof. Josiah Millard Gibbs, of Yale College, for his researches on Thermodynamics.

WE regret to hear of the death of Prof. James Tennant, F.G.S., the well-known mineralogist. Mr. Tennant was the assistant and afterwards the successor of Mr. Mawe, author of "Travels in Brazil," and of a "Treatise on Diamonds," and by adding to the series obtained by Mr. Mawe many fine specimens from every part of the globe, succeeded in thus forming a very large and valuable collection of minerals. Mr. Tennant was an excellent authority on gems, and his advice was taken by the Government with respect to the cutting of the Koh-i-Noor and other crown jewels. Besides holding the office of "Mineralogist to the Queen," Mr. Tennant was for many years Professor of

Geology and Mineralogy in King's College, London, and after he resigned the professorship of the former science, still retained the post of Professor of Mineralogy, which he held at the time of his death. Mr. Tennant, in conjunction with the late Prof. Ansted and the Rev. W. O. Mitchell, wrote the treatise on Geology, Mineralogy, and Crystallography for Orr's "Circle of the Sciences," and he was also the author of some smaller educational works. Mr. Tennant did much useful work in preparing collections of minerals and fossils suitable for educational purposes; and by popular lectures and in other ways he aided in disseminating a knowledge of those sciences in which he was so greatly interested. Mr. Tennant had reached the age of seventy-three at the time of his death.

PROF. MARTIN DUNCAN, F.R.S., has been elected president of the Royal Microscopical Society.

THE *Daily News* Naples correspondent writes with reference to the Zoological Station at Naples that the average number of naturalists working in the laboratory was formerly about twenty-five, but this year it will be above thirty, adding to which the permanent staff of the station, there are altogether nearly forty naturalists bent upon promoting original research into marine zoology and botany, while enjoying the most unusual facilities and elaborate technical arrangements that have ever yet been contrived. The use of the diving apparatus has enabled the naturalists to find marine plants hidden in cracks and crevices and on the undersides of overhanging rocks, which otherwise would never have been brought to light, for the ground-net cannot reach them. By this means many interesting botanical problems have been brought nearer to a solution.

COLONEL PREJEWALSKI has just returned to St. Petersburg with a fine botanical collection he has made in Kansu. Dr. Maximowicz states that upon a cursory examination his previous impression is strengthened that we have to do here not with the flora of China, but with an altogether different one, belonging to the border of the great Central Asiatic plateau. There are no Chinese forms of trees or shrubs whatever, not even an Acer. The general character is entirely high alpine and cold. Dr. Maximowicz thinks that this Central Asiatic plateau has a flora with a distinct individuality of its own, and proposes to call it the Tangut flora, from the name applied by its first European explorer, Marco Polo, to the people inhabiting this inclement and inaccessible region.

THE arrangements for the international medical and sanitary exhibition of the Parkes Museum of Hygiene, which is to be held at South Kensington from July 16 to August 13, are now complete. The exhibition is to comprise everything that is of service for the prevention, detection, cure, and alleviation of disease.

THE Clarendon Press is about to issue a new edition of the late Admiral W. H. Smythe's "Cycle of Celestial Objects," a book which by universal consent has done more to promote popular astronomy in England than any other work of the kind. The new edition has been edited by Mr. G. F. Chambers, F.R.A.S., whose "Handbook of Astronomy," another Clarendon Press book, is well known. This volume, though professedly only a new edition, may be regarded as almost a new work. Whereas the original edition comprised only 850 objects, the new one comprises no fewer than 1604. But it is not merely in the number of the objects dealt with that the usefulness of the new edition will consist. It will be found that Mr. Chambers has cut down here, expanded there, and revised everywhere, Admiral Smythe's printed matter, so as to embody the progress of the science down to the year 1880. What this means in the case of hundreds of double-stars annually undergoing re-measurement, and many of them annually undergoing change, can only be

understood by those who have been called upon to perform similar literary work. But this is not all. Admiral Smythe's observations having been made in England, his labours only extended to those stars and nebulae which were visible in England; but Mr. Chambers, by means of materials gathered from various sources, has extended the book to the whole of the southern hemisphere, and has thus made it an observer's handbook for the large English-speaking populations of India and the Australian and American continents. The New "Cycle" will be found to contain a great number of double-star measures by Burnham and others, many of them as recent as 1880. The places of the objects have been uniformly set out for the epoch of 1890, so that in this respect the book will be up to date for many years to come. A chromolithograph of twenty four typical star disks in different shades of colour intended for the methodical record of star colours forms an appropriate frontispiece.

WE have received a very satisfactory report from the Sunday Lecture Society. It refers to an interesting experiment in Edinburgh of a Sunday Science School, in which ninety-two pupils were enrolled, with an average attendance from November to July of sixty. The pupils were mostly of the artisan class and youths who, owing to late business hours, could not avail themselves of evening classes.

MEASUREMENTS of the "Midgets" who have lately been to Buckingham Palace and Marlborough House are being taken by Quarter-Master Sergeant Riordan, under the direction of the Anthropological Society. Successful casts of the mouths, showing an apparently abnormal dentition, have been obtained by Mr. F. S. Mosely, and were exhibited in the library of the Royal Institution last Friday evening.

AT a meeting of the Electricity Exhibition Commission in Paris on Monday, M. Berger announced that arrangements had been made for the Palace of Industry being lighted up during the exhibition by all the French and foreign systems concurrently. This will involve 800 horse-power, and more than 50 kilometres length of wire. There will be six classes, viz. :—1. Production de l'électricité; 2. transmission de l'électricité; 3. électro-métrie; 4. applications de l'électricité; 5. mécanique générale dans ses applications aux industries électriques; 6. bibliographie et histoire. A proposal will be made to the Municipal Council of Paris to grant to Herr W. Siemens the concession of an electrical railway to the Hippodrome, in the Bois de Boulogne, in consideration of the expenses incurred by the construction of the railway from Place de la Concorde to the Exhibition Palace. The railway being constructed on a viaduct, the expense is estimated at 300,000 francs, and it is impossible to expect it will be recovered during the 107 days of the exhibition. The transmission of force at a distance by electricity will be tried in the Palais de l'Industrie during the Electrical Exhibition. Currents generated in the ground-floor will be utilised to work electro-magnetic machines, which will do various kinds of work. The Publishers' Union, under the direction of MM. Hachette, will establish an exhibition of electrical publications, and a reading-room, into which will be admitted all the scientific papers of the world, irrespective of their language.

THE difficulties in the way of taking the census of our vast and heterogeneous Indian Empire have been sometimes very curious. In Burmah the census operations in the interior created no little consternation among the Karens, who were doing all they could to evade enumeration. The native officials employed to collect statistics seem to have shown their zeal in a curious way. The *Pioneer* declares that a census enumerator in the Central Provinces put down in his book a certain old tomb as a "house with one inhabitant." The phrase "to be numbered with the dead" will henceforward bear a new and vital meaning; and death will be robbed of his majority. Another anecdote

states that when the census commissioner entered a certain compound with the forces of enumeration in his train, an ayah who had been taken account of by enumerator and supervisor both, ran excitedly to her mistress and warned her that there would be certainly some mistake in the hisab, for that the sirkar had counted her twice already and was going to count her again!

IN a note on the Russian and Siberian varieties of the *Gaunnarus pulex* (*Memoirs of the St. Petersburg Society of Naturalists*, vol. xi. fasc. 1) M. Semenovskiy shows that the representatives of this species in Lake Baikal and in Lake Gokcha of High Armenia, 6400 feet above the sea-level, are quite identical, and most akin to the Norwegian typical representative of this species, described by Prof. Sars. On the contrary, the *G. pulex*, which inhabits the lakes of the Taimyr tundras of Northern Siberia, that of the Baraba Steppe in Western Siberia and of the Ural region, belongs to another variety. A second variety, very different from the two preceding, was discovered in two salt lakes of the Government of Orenburg, notwithstanding the close proximity of one of these lakes to those of the Ural region. A third variety inhabits the northern lakes of European Russia and those of the Valdai Hills, whilst a fourth variety, being most like to that which is known from the lakes of Savoy, was discovered in the lakes near St. Petersburg.

IT is known that the young horns of the *Cervus maral* (Severtzoff), when they are filled with blood and not yet ossified, are very much prized by the Chinese, who purchase them at the Siberian frontier, paying as much as six to twenty pounds the pair. A very active chase of the maral has therefore always been carried on in Siberia, and since it became rather rare, the Cossacks in the neighbourhood of Kiakhta have domesticated this stag. Now we learn from a communication by M. Polakoff that its domestication has greatly extended in Western Siberia, so that there are herds of seventy head; but the horns of the domesticated deer, as might be expected, have lost a good many of their original qualities.

IN a recently-discovered stalactite cave at Kirchberg, near Kremsmünster (Austria), a jaw-bone of a man with well-preserved teeth was found among numerous remains of *Ursus spelæus*.

IT is reported from Stuttgart (Wirttemberg) that bones of mammoth and rhinoceros have been brought to light by digging in a cellar on loamy ground. Dr. Fraas has recognised, besides tusks (60 cm. and 200 cm. long), two pieces of a jaw-bone belonging to a mammoth, and parts of mandibles, scapula, and maxilla of a rhinoceros.

THE Mineralogical Museum at Breslau University has received a large number of bones belonging to the woolly-haired Rhinoceros (*Rhinoceros tichorhinus*). They were found near Skarsine in Silesia. The complete skeleton was found in a marl-pit at a depth of sixteen feet. Unfortunately the skull and several bones were broken through inattention on the part of the workmen. This is the fifth skeleton of the kind found in Silesia.

ON February 20 a slight shock of earthquake occurred at Agram at 2h. 15m. a.m., and a more severe one at 6h. 15m. a.m., accompanied by a subterranean noise. During the last week wave-like motions were also felt.

THE *Daily News* Lisbon correspondent, telegraphing on February 23, states that thirty-six successive shocks of earthquake have been experienced at St. Michael's in the Azores. "The church and 200 houses fell in. Several people were killed. A religious and penitential procession had taken place, the Civil Governor at the head. A volcanic island has been formed. At latest advices slight shocks continued. Many people were in tents outside the town."

THE Khedive of Egypt has nominated M. Gaston Maspero to the directorship of the museums in the place of the late archaeologist, M. Mariette. To the latter a monument is to be erected at Cairo. A committee has already been formed, of which the Foreign Minister is president.

A NEW Italian serial will shortly be published at Naples. Its title will be *Rassegna critica di opere scientifiche e letterarie*, and its editor Prof. Andrea Angiulli. It will appear six times a year.

LAST Thursday the Hackney Microscopical and Natural History Society held their annual *soirée*, always a very successful event. Many other similar London societies were represented at the meeting.

AN elaborate report upon the opening up of two of the pyramids at the boundary of the Libyan Desert near Sakkara is now published by Prof. Brugsch. The learned professor estimates the matter to be of the most important and valuable kind. At the close of 1880 the entrances to the sepulchral chambers of the three pyramids were laid bare. The ceilings were taken off, and only the two sides, all covered with hieroglyphics, rose from the *débris*. The hieroglyphics point to the reign of Pharaoh Apappus.

THE additions to the Zoological Society's Gardens during the past week include a Bactrian Camel (*Camelus bactrianus*) from Afghanistan, presented by Col. O. B. C. St. John, R.E., F.Z.S.; a Punjaub Wild Sheep (*Ovis cycloceros*) from Afghanistan, presented by Capt. W. Cotton; a Mona Monkey (*Cercopithecus mona*) from West Africa, presented by Mr. W. Macmillan Scott; two Common Peafowls (*Pavo cristatus*) from India, presented by Mrs. Edward Brown; a Roseate Cockatoo (*Cacatua roseicapilla*) from Australia, presented by Miss Mary J. Richardson; a Stump-tailed Lizard (*Trachydosaurus rugosus*) from Australia, presented by Mr. F. O. Maitland; a Horsfield's Tortoise (*Testudo horsfieldi*) from Cabul, deposited; two Globose Curassows (*Crax globicera*) from Central America, a White-browed Amazon (*Chrysotis albifrons*) from Honduras, purchased.

GEOGRAPHICAL NOTES

WE take the following from the March number of the *Proc.* of the Royal Geographical Society:—The eminent Russian traveller and *savant*, Col. Prejevalsky, intends, we are informed, to devote himself for some time to the preparation in retirement of a great work on the results of his travels, including, besides his recent expedition to Tibet, his previous journey to Lob-nor, of which he was prevented, by want of time, from giving more than a bare outline. The work is to consist of eight volumes, and to be entitled "Travels in the Deserts of Central Asia." Volumes i. and ii. will contain the narrative and an account of the physical geography and ethnography of the countries he has visited, and will include also his surveys, the pictorial illustrations being from original sketches by his companion, Lieut. Robarofsky. Vol. iii. will be devoted to the mammalia of Central Asia; vol. iv. to the birds; vol. v. to the reptiles, amphibia, and fishes; vol. vi. to the flora of Mongolia; and vol. vii. to that of Tibet. Vol. viii. and last will contain the geology and mineralogy as far as materials will permit. The first two volumes, each containing 500 pages, and perhaps more, will be written by the traveller himself, and will appear towards the close of 1882. The ornithology will also proceed from his pen, as well as that portion of the zoology which treats of the antelope, buffalo, and a few other of the more important animals. The remainder will be written by the Academicians Strauch and Maximovitch, Professors Kepler, Inostrantsef, and Bogdanof and will be issued in parts. The whole will not be completed for several years. The work will be brought out under the auspices of the Geographical Society, and a special grant for the purpose will be asked for from H.M. the Emperor.

AT the Geographical Society on Monday evening Sir Richard Temple delivered a lecture on the lake-region of Sikkim on the frontier of Tibet, which, in point of fact, was a description of

the impressions acquired during a tour which he made as Lieut.-Governor of Bengal. Sir R. Temple told his audience that the fact of any part of Sikkim being British territory was due to the imprisonment of Sir Joseph Hooker and Dr. Campbell by the Rajah; and he then gave a geographical sketch of the whole region. Possibly the most important matter dealt with was the construction of the politico-commercial road from Darjiling to the Jyalap Pass into the Chumbi Valley, which Sir R. Temple considers the frontier-line between British and Chinese territory. Sir R. Temple is apparently sanguine that the Tibetans will continue the road on to Lhasa, but he did not say when they were likely to do so. Mr. W. T. Blanford, who had also visited Sikkim, afterwards explained to the meeting that he believed these lakes to be due to glacial action, and that the Bidan Tso was a beautiful specimen of this kind of lake. Mr. Blanford also called attention to the opening afforded for exploration in Northern Sikkim, which has not as yet been visited by Europeans.

WE understand that Mr. Joseph Thomson has been elected a life-member of the Royal Geographical Society, in further recognition of his eminent services to geography during the recent East African expedition. The Council of the Society have presented to the British Museum the collection of shells which he made during his journey.

THE *Oesterreichische Monatschrift für den Orient* of this month contains a highly interesting paper by Prof. H. Vambéry, on the proposed Hyrkanian railway, a valuable description of the roads and land communications of Persia by Baron Gödel-Lannoy in Tcheran, a paper on the coffee districts of Yemen by Baron Schweiger-Lerchenfeld, besides two well-written historical papers.

AT the last meeting of the Berlin Geographical Society Prof. W. Förster, the director of the Berlin Observatory, made an interesting communication regarding one of the most important tasks of travellers in unknown regions, *i.e.* the exact determination of latitude, longitude, and elevation above sea-level. With several of the results of recent German expeditions serious errors in this regard were detected. Prof. Förster stated that the Berlin Observatory staff would shortly be in a position to undertake the practical and theoretical instruction of travellers and to superintend the selection, testing, and packing of the necessary scientific instruments for the various expeditions before starting.

THE last number of the *Tour du Monde* contains an instalment of Dr. Crevaux's account of his journey from Cayenne to the Andes, the present part dealing more particularly with the exploration of the River Parou. The illustrations are from original sketches, and are admirably drawn.

IN a recent issue *Les Missions Catholiques* publishes a letter from a missionary among the Kakhyens, which contains some interesting notes concerning that comparatively unknown people.

A SYDNEY telegram states that a bushman named Skulthorpe has telegraphed from Blackall asserting that he has found the explorer Leichhardt's grave, and has recovered the diary of the whole of his last expedition, together with other relics. Skulthorpe refuses to show any of the articles until his arrival in Sydney.

THE last number of *Le Globe* contains part of a paper entitled "Tartarie," by M. F. de Morsier, in which the writer proposes to deal with the Tartar, Turcoman, and Kirghiz steppes.

BY a telegram from Brisbane we learn that the Queensland Government expedition for the survey of the projected Transcontinental railway started on January 14, presumably from Blackall. A previous survey, it will be remembered, was made by a party under Mr. Favene, despatched by the proprietors of the *Queenslander*, but so far as we are aware no detailed account of his explorations has ever been made public, and possibly the new expedition has been sent to endeavour to find a better line of route.

THE Wellington correspondent of the *Colonies and India* states that the Southern Alps and other of the principal mountains of New Zealand are to be explored next year by members of the Alpine Club, who will find ample scope for their energies. The top of Mount Cook, the loftiest peak in New Zealand, between 13,000 and 14,000 feet in height, has not yet been reached.

THE International Alpine Congress will meet at Salzburg in 1882. The committee is now being formed.