

Among the principal finds recorded may be mentioned remains of a huge proboscidean, including two femurs each over a meter in length, a fine series of excellently preserved skulls and other bones of rhinoceros; *Mesopithecus*, an old-world monkey, remains of which are rarely met with in any part of the globe as fossils; several almost complete skulls of *Mastodon*; skulls, teeth, and bones of *Machærodus*, the great saber-toothed tiger, remarkable for the great development of the canine teeth, and also for its wide geographical distribution. Remains of this animal have been met with in England in Kent's Cavern, Torquay, in Creswell Crag Caves, Derbyshire, and in the Norfolk forest-bed. Dr. Woodward also reports the discovery of innumerable bones of *Hipparion*, the three-toed and most immediate predecessor of the horse of the present day, hyæna and other carnivores, antelopes, giraffe with limb-bones very long and slender; *Helladotherium*, a short-necked giraffe allied to the *Okapi*, the new ruminant mammal recently brought home by Sir Harry Johnston from the Semliki forest in the Congo State; and *Samotheirus*, a large ruminant, first discovered, it is believed, by Dr. Forsyth Major in the lower Pliocene beds of the Island of Samos, off Asia Minor, and said to connect *Helladotherium* and the giraffe with some of the ancient aberrant antelopes of Pikermi. Traces of *Chalonians* were abundant and include, as one of the prizes of the explorations, remains of perhaps the largest tortoise ever found in Europe. Very few bones of rodents were met with, and birds do not seem to have been numerous; but a considerable collection of land shells was obtained. It is curious that no traces of plant life were observed.

The bones occur on definite horizons in immense numbers, and the marly material is quite soft until it is dried, when it hardens. In places the remains are so jammed together that it is difficult to extract or to separate them. The carcasses appear to have been buried entire, with the flesh and integument, in vast numbers, probably by torrential action, a great number having had their limbs sharply broken, evidently at the time of death. It is worthy of note that the extinct animals found in this

late Tertiary deposit at Pikermi mostly relate to the present African fauna.

Dr. A. S. Woodward, it will be seen, has carried out the official mission entrusted to him in a most creditable manner. By his exertions and careful superintendence the national collection of paleontology at South Kensington will be immensely enriched. Before returning home Dr. Woodward, at the request of Sir Edwin Egerton, has arranged to inspect another ossiferous deposit on the island of Eubœa.

SCIENTIFIC NOTES AND NEWS.

THE permanent secretary of the American Association, Dr. L. O. Howard, asks us to state that those who have responded to his invitation to send in their names and dates for special Association Pullman accommodation are so divided in their choice of route that it will be impossible for him to arrange to bring parties together on the journey in the way proposed. The Pennsylvania limited, which leaves New York at 9:55 A. M. and Philadelphia at 12:20 P. M., reaching Chicago at 8:55 A. M., was not included in the time-tables published recently in this journal. Neither were there given time-tables of the trains on the New York Central road, though for those living in New York and New England this is probably the most convenient route, as it is cooler than those further to the south. We may take occasion to call attention to the excursion to the Grand Canyon of Arizona arranged to follow the meeting, of which an advertisement will be found in this issue of SCIENCE. We are also requested to state that the meeting of the Council will be held at 3 o'clock on Saturday, August 24, instead of at 12.

THE seventy-third meeting of German Men of Science and Physicians will, as we have already stated, be held at Hamburg, from the twenty-second to the twenty-eighth of September. Professor R. Hertwig, of Munich, is president of the meeting, while Professor van't Hoff is president of the scientific sections and Professor Naunyn of the medical sections. There are in all twenty-seven sections for the medical sciences and eleven in the natural and exact sciences. The latter sections correspond in general with

those of our own Association, except that there are sections for applied chemistry, for geophysics and for geography, while there is none for social and economic science. Among the special lectures promised are the following: Dr. E. Lecher on 'Hertzian Waves,' Professor T. Boveri on 'Fertilization,' and Professor W. Nernst on 'Electro-chemistry.'

PRINCE HENRI D'ORLÉANS, who has made important geographical discoveries in Asia and Africa, died at Saigon, China, on August 9, aged thirty-three years.

WE also regret to record the death of Professor August Tenne, curator of the mineralogical collections of the University of Berlin; of M. David Dickson, director of the practical School of Agriculture, at Berthonval, France, and of Mr. Carsten Hothouse, at one time lecturer on anatomy at the Aldersgate School of Medicine and the senior fellow of the Royal College of Surgeons, who was in his ninety-first year.

THE steamship *Discovery* of the British Antarctic Expedition, sailed from Cowes on August 6, and the *Gauss*, of the German Expedition, sailed from Kiel on August 11. The *Discovery* should reach the Cape about September 12 and Melbourne about a month later. It will proceed thence to Littleton, New Zealand, which place it will leave about the middle of December and will probably come in contact with the ice pack about the first of January.

MR. WILLIS L. MOORE, chief of the Weather Bureau, will leave Washington early in September for the Yellowstone National Park to make an inspection of that region with a view to the establishment of a meteorological observatory.

PROFESSOR LUCIEN M. UNDERWOOD, of Columbia University, and Mr. O. F. Cook, special agent for tropical agriculture for the Department of Agriculture, have returned from a botanical expedition to Porto Rico.

DR. PETER A. JODER has been appointed assistant chemist at the Utah Agricultural College and Station, and Mr. W. T. Shaw has been appointed assistant entomologist at the Iowa Station.

PROFESSOR H. C. WILSON, according to a telegram to the Harvard College Observatory, observed Encke's comet on August 5.

MR. A. L. ROTCH, director of the Blue Hill Observatory and the American member of the International Aeronautical Committee, made a balloon ascension from Strasburg, Germany, with his colleague, Professor Hergesell, on July 4, in connection with the eighteenth series in Europe. They reached a height of about 14,000 feet. The meteorological observations will be published in the United States *Monthly Weather Review*.

It is reported in *Nature* that the French Minister of War has asked the Paris Academy of Sciences to give an opinion as to the possibility of danger arising from the establishment of wireless telegraphy stations in the neighborhood of magazines containing powder or other explosives. It is suggested that the nature of the cases containing the explosive may be an important matter for consideration in connection with the subject.

THE British Institution of Mechanical Engineers held its summer meeting at Barrow-in-Furness, under the presidency of Mr. W. H. Maw, beginning on July 30.

MR. JAMES ANGUS, of West Farms, N. Y., who has given a valuable collection of butterflies to the American Museum of Natural History, and more recently a collection of Indian implements to the Providence Museum, has given to the latter institution his collection of corals and agates.

MR. J. EWING MEARS, of Philadelphia, has presented the George W. Mears Memorial Medical Library of Indianapolis with 4,000 medical books. The library was established as a memorial to his father, who practised medicine in Indianapolis.

ANDREW CARNEGIE has offered Montreal \$150,000 for a library, provided the city will contribute a site and spend \$15,000 yearly in maintenance.

THE secretary of the Marine Biological Association of the West of Scotland, Mr. John A. Todd, 190 West George St., Glasgow, has sent a notice stating that the General Committee of

the Association offers the following prizes, to be called the *Fred. P. Pullar Memorial Prizes*, provided by Sir John Murray, the honorary president of the Association, in memory of the late Fred P. Pullar, who was associated with him in the Bathymetrical Survey of the Scottish Fresh Water Lochs, who took much interest in the Millport Marine Station, and who lost his life in the unfortunate ice accident on Airthrey Loch, Bridge of Allan, on the 15th of February, 1901.

1. A prize of £50 for a paper on 'The Seasonable Distribution and Development in the Pelagic Algæ in the Waters of the Clyde Sea Area.'

2. A prize of £50 for a paper on 'The Reproduction, Development and Distribution of the Clyde Sea Area of the Genera *Nyctiphanes* and *Boreophausia*.'

3. A prize of £50 for a paper on 'The Formation and Distribution of Glauconite in the deposits of the Clyde Sea Area and the adjacent seas of Scotland.'

These prizes are open to investigators from any part of the world who conduct observations in the several subjects at the Millport Marine Station, and who produce, at any time before January 1, 1905, papers which, in the opinion of a committee of three scientific men, to be nominated by the committee of the Association and by Sir John Murray, shall be deemed of sufficient value to merit publication. Those proposing to work for any one of these prizes should make known their intention to the secretary of the Association in order that the necessary arrangements may be made.

At the last session of Congress the medical corps of the Army was increased from 192 to 321, and examinations for appointments as assistant surgeons in the U. S. Army will be resumed in Washington on September 2. The salary is \$1,600 per year, gradually increasing until after twenty years it amounts to \$2,500 and may be more if promotion to the position of lieutenant-colonel follows. The medical officers of the Army are also allowed free quarters, traveling expenses, instruments, books, etc. Candidates must have had a year's hospital experience or two years of private practice and must not be more than twenty-nine years of age. Details in regard to the examination can be obtained from the Surgeon-General's office, Washington.

THE United States Civil Service Commission announces that the examination which was announced to be held on September 3 for the position of computer in the Coast and Geodetic Survey has been cancelled, for the reason that the position for which the examination was to have been held has been filled by the transfer of a person already in the classified service.

THE organizing committee of the fourteenth International Medical Congress, which meets at Madrid next April, held a meeting on June 11, at which plans were discussed and promises of support given on behalf of the government and the municipality. The work of the Congress is to be divided into sixteen sections, as follows: (1) Anatomy (anthropology, comparative anatomy, embryology, descriptive anatomy, normal histology and feratology); (2) physiology, biological physics and chemistry; (3) general pathology, pathological anatomy and bacteriology; (4) therapeutics, pharmacology, and materia medica; (5) internal pathology; (6) neuropathology, mental diseases and criminal anthropology; (7) pædiatry; (8) dermatology and syphilography; (9) surgery and surgical operations; (10) ophthalmology; (11) otology, rhinology and laryngology; (12) odontology; (13) obstetrics and gynæcology; (14) military and naval medicine and hygiene; (15) epidemiology and technical sanitary science; (16) forensic medicine.

THE foreign trade of the United States during the fiscal year ended June 30 aggregated in value \$2,310,413,077, being an increase of \$65,988,811 compared with that of the previous year. Of this total the exports comprised \$1,487,656,544, exceeding those of the previous year by \$97,173,462, and the imports aggregated \$822,756,533, being \$27,184,651 less than those for the fiscal year 1900. The balance of trade in favor of the United States for that period reached a total of \$664,900,011, being an increase of \$120,359,113 over the balance for the previous year. Under the new relations with Hawaii and Porto Rico the commerce with those islands is no longer included in the regular statement of the foreign commerce of the United States. Had they been so included, as has been the case in former years, the total exports would have exceeded \$1,500,000,000,

as the exports to those islands during the year have aggregated about \$25,000,000.

THE St. Petersburg *Novoe Vremya*, as reported by Reuter's Agency, learns from Yeniseisk that Lieutenant Kolomütseff, in command of the steamer *Zaria*, which has on board the members of the Russian Polar expedition, under Baron Toll, has just arrived at that place to re-coal. Lieutenant Kolomütseff reports that the *Zaria* wintered in the Bay of Taimyr in $76^{\circ} 8'$ north latitude, and $95^{\circ} 6'$ east longitude, and that the winter passed fairly well except for some cases of scurvy among the crew. Lieutenant Kolomütseff twice endeavored to reach Kamchatka by land, but without success. He started on his first attempt on February 2, but was obliged to return at the end of 18 days, owing to lack of food for his dogs. His second fruitless attempt cost him 26 days, in the course of which he was able to explore the whole of the coast of Taimyr Bay. On April 18 he again left the *Zaria*, and arrived at Goldchik after a march of 40 days, during which he lived on the flesh of bears and reindeer. From Goldchik he proceeded with reindeer to Doudinki, and from there by boat to Yeniseisk. His present object is to establish coaling stations for the *Zaria* in Dickson Bay and on the islands of New Siberia.

PROFESSOR W. A. HERDMAN, as *Nature* learns, has received letters and natural history notes from Mr. Nelson Annandale and Mr. H. Robinson, who left Liverpool University College a short time ago for a year's exploration in the Siamese Malay States. Some of the observations made and material collected will be described at the forthcoming meeting of the British Association at Glasgow. Meanwhile, it is interesting to read the following notes from the naturalists: "We have obtained what is either a second species of *Periophthalmus* or a genus closely allied to it, and we have to-day ourselves collected a series of young specimens, which show that in extreme youth the eyes are normally placed on the sides of the head, and only migrate to the top later in life. We also got in water less than a fathom a most interesting case of commensalism, in which a small crab, with a very soft back, has the two last pairs of legs specially modified for holding on

a sea-anemone, which it grasps by the foot. * * * A good many cases of mimicry between different orders and families, principally between spiders and ants, homoptera and beetles, were noted—in at least ten cases the mimicked animal being an ant.

UNIVERSITY AND EDUCATIONAL NEWS.

MRS. CAROLINE STANNARD TILTON, of New Orleans, has given \$50,000 for a Tilton memorial library at Tulane University.

By the will of the late Herbert B. Adams, professor of history in the Johns Hopkins University, that University is made the residuary legatee. Amherst College is given \$2,000 for the library and the American Historical Association is given \$5,000.

WE are requested to state that in spite of the damage the building of the College of Physicians and Surgeons, Chicago, the medical school of the University of Illinois, suffered recently from fire, the administration of the College has suffered no serious disturbance and the institution will in the autumn be housed and equipped better than ever before.

DR. CHARLES BURTON THWING, professor of physics in Knox College, has been called to the same chair in Syracuse University.

PROFESSOR W. S. McCORMACK, of University College, Dundee, has been appointed secretary of the endowment for the Scottish universities, established by Mr. Carnegie.

THE Council of University College, London, has appointed Mr. J. D. Cormack, B.Sc., of Glasgow, to the chair of mechanical engineering vacant by the resignation of Professor Hudson Beare on his appointment as regius professor at Edinburgh, and Mr. Edgar Walford Marchant, D.Sc., to the lectureship in electro-technics vacated by Mr. Alfred Hay's appointment to a professorship at Coopers Hill.

DR. R. T. HEWLETT, of the Jenner Institute of Preventive Medicine, has been appointed professor of general pathology and bacteriology at King's College, London.

MR. R. C. PORTER, now lecturer in engineering at the government school at Cairo, has been appointed lecturer of mechanical engineering at Birmingham University.