

plums exhibited by the Iowa and Minnesota stations illustrate varietal differences; and an exhibit of saltbush from the California Station shows species of *Atriplex*, which have proved of value on strongly alkaline soils. Electrical devices for determining the salt content, temperature and moisture content, and a series of samples illustrating the typical agricultural soils of the United States, represent the soil work of the Division of Soils of the U. S. Department of Agriculture. The California Station sent six typical soils of that State, and specimens showing the results of mechanical analyses of each type of soil, and Hilgard's soil elutriator for mechanical analysis.

The California Station furnished an olive exhibit, consisting of fifty samples of olive oils and more than two hundred samples of olive pits used in the classification of varieties of olives; and the Alabama Station, a collection of mounted specimens of cotton, showing seventy-two selected and crossbred varieties.

Several pieces of original apparatus for investigations in vegetable physiology are shown, including an auxanometer for experimental work on the rate of plant growth; an apparatus for determining the rate of transportation of plants, from the West Virginia Station; and a centrifuge, used to study the effect of gravity and centrifugal force upon germinating seeds, from the Indiana Station.

Samples of animal and vegetable fats, a collection of chemically pure proteids separated from the seeds of various plants, a collection of one hundred weed seeds, an insect cabinet, a gas desiccator for drying hydrogen gas used in moisture determination, models of round and stave silos, an apparatus for the rapid cooling of wines, a pressure apparatus for experiments with solution under very high pressure, a model of the Atwater-Rosa respiration calorimeter and a full-sized bomb calorimeter are included in the exhibit.

The dairy exhibit is larger than that in any other line. It includes a series of cheese models from the New York State Station, showing the effect of the fat content of the milk on the size of cheese produced; a collection of forty-eight cultures of dairy bacteria, from the Connecticut Storrs Station; the original Bab-

cock milk tester, two more modern forms of the apparatus for hand and power operation, together with a complete collection of the various forms of apparatus used in the Babcock test. The Scovell milk-sampling tube, Wisconsin curd test, Marshall rennet test, acid bottles and other minor apparatus are also included.

The irrigation exhibit of apparatus and models contains a hydrophore to determine the amount of silt carried by water; a nilometer used to measure the amount of water passing through streams, flumes and ditches; a current meter, water register, etc.

A small exhibit from the Hawaiian Experiment Station consists of samples of rocks, lavas, lava products, soils, varieties of sugar cane and samples of agricultural products, such as coffee, rice and sugar.

There is a large number of charts and enlarged pictures showing the results of experiment station work on a wide range of subjects, a complete set of bound bulletins and reports numbering several hundred volumes, and many miscellaneous publications of the stations, together with over one hundred books on agricultural subjects written by station officers.

The arrangement and shipment of the exhibit was in charge of Dr. W. H. Evans, of the Office of Experiment Stations, who also supervised the preparation of the charts and photographs exhibit.

Especially interesting attaches to this exhibit from the fact that it shows the great progress made by our stations since the Paris Exposition of 1889, when the stations made only a small showing, as they were just beginning active operations under the Hatch Act.

SCIENTIFIC NOTES AND NEWS.

DR. A. A. MICHELSON, professor of physics at the University of Chicago, has been elected a corresponding member of the Paris Academy of Sciences.

DR. C. HART MERRIAM has been elected a foreign member and Mr. Samuel Scudder a corresponding member of the Zoological Society of London.

THE philosophical faculty of the University

of Göttingen has given the prize of the Wohlbrecht's foundation for works on natural science of the value of 12,000 Marks to Professor Gegenbaur the eminent Heidelberg zoologist.

PROFESSOR J. K. REES, of the Department of Astronomy of Columbia University, has been appointed an international juror in the department of the Paris Exposition, which is in charge of instruments of precision.

THE Government of India has decided to assign Captain Robert M. Elliot to the special duty of investigating on the nature and action of snake venom.

THE University of Edinburgh on April 14th, conferred its LL.D. on Dr. A. Stuart, professor of physiology in the University of Sydney; on W. R. Sorley, professor of philosophy in Aberdeen University, on Dr. C. D. F. Phillips, the pharmacologist, and on Miss Eleanor Ormerod, known for her contributions to entomology. On conferring this degree, Professor Grant remarked that it was the first time that the degree had been conferred by the University on a woman.

THE University of Glasgow, on April 17th, conferred the degree of LL.D. on Mr. A. Smith Woodward, of the Geological Department of the British Museum, and on Mr. Robert Caird, president of the Scottish Institution of Engineers and Shipbuilders.

IN honor of the twenty-fifth anniversary of Dr. Daniel Coit Gilman's election as President of the Johns Hopkins University, his colleagues in the faculty have presented to the University a three-quarter life-size oil portrait. It has been hung in McCoy Hall.

A BUST of the late Professor Egleston and a bronze tablet will be given to Columbia University by students of the School of Applied Science.

THE death is announced of M. Planchon, since 1886 director of the Paris School of Pharmacy at the age of sixty-seven years. He was a brother of the celebrated botanist Émile Planchon.

SIR WILLIAM PRIESTLEY, a well-known London physician and member of parliament, a grand-nephew of the discoverer of oxygen, died

in London on April 11th at the age of eighty-one years.

RODNEY G. KIMBALL, since 1869 professor of applied mathematics in the Brooklyn Polytechnic Institute, died on April 25th.

THE death is announced of Mrs. Lankester known for her writings on botany and other scientific subjects, her best known work being the text of Sowerby's British botany.

THE death is also announced of M. Philippe Salmon, assistant director of the School of Anthropology, Paris, also president of the commission of megalithic monuments and member of the commission on historic monuments.

THE Senate has passed the agricultural appropriation bill, which carries \$4,120,000, retaining the item of \$170,000 for the purchase of seeds for distribution.

THE bill creating a National Department of Commerce and Industry will probably not be considered for lack of time during the present session of Congress, but special efforts will be made on its behalf next year.

By the will of Charles E. Smith, formerly president of the Philadelphia and Reading Railway company, the Philadelphia Academy of Natural Sciences receives one-sixth of an estate valued at nearly \$500,000, as also a collection of botanical books and a herbarium. His books on technical science are left to the Franklin Institute.

THE preliminary arrangements have been completed for taking the official observations in Mexico of the total eclipse of the sun on May 28th. These observations will be made by the National Observatory, under direction of the Federal Government. The places selected are Montemorelos and Santa Helena, both near Monterey. The astronomers appointed to perform the work are Francisco Rodriguez Rey, Manuel Morenoy Landa, Manuel Pasirana, Fernandez de Lindro, Augustin Aradon and Pedro Sanchez. Miss Rose D. Fallorend, of California, secretary of the Astronomical Association of the Pacific Coast, will also take observations of the eclipse from Santa Helena.

HERR MENCKE, of Hanover, is undertaking in his yacht a scientific expedition to the Ger-

man Islands in the South Seas. He will himself pay special attention to ethnology and will be accompanied by Dr. Heimroth, assistant in the Zoological Garden.

Nature states that Messrs. W. Goodfellow and C. Hamilton have lately returned from a successful expedition in the Colombian and Ecuadorian Andes, during which they made a collection of upwards of 5000 bird-skins, comprising examples of many rare species. The travellers landed at Buenaventura, on the Pacific Coast, in April, 1898, and thence crossed the Andes into the valley of the River Cauca. This was ascended, and, passing through Popayan, Messrs. Goodfellow and Hamilton entered the Republic of Ecuador, at Tulcan, proceeding thence to Quito, where a lengthened stay was made. From Quito excursions were effected to Pichincha, and to the low country on the Pacific Coast near Santo Domingo. Leaving Quito on March 1st, last year, Messrs. Goodfellow and Hamilton crossed the Andes to the upper waters of the Napo, and descended that river in canoes to Yquitos, in Peru, whence the journey home was effected by steamer. Mr. Goodfellow is preparing an account of the birds collected during this remarkable journey for the *Ibis*.

PROFESSOR JOHN M. MACFARLANE, of the University of Pennsylvania, has returned from an expedition to North Carolina, where he succeeded in obtaining a number of specimens.

FOUR zoological lectures have been arranged before the Zoological Society of London to be given on Thursday afternoon as follows:

April 19th—'The Animals of Australia,' MR. A. SMITH WOODWARD, F.Z.S.
 May 17th—'The Freshwater Fishes of Africa,' MR. G. A. BOULENGER, F.R.S., F.Z.S.
 June 21st—'The Gigantic Sloths of Patagonia,' PROFESSOR E. RAY LANKESTER, F.R.S., F.Z.S.
 July 19th—'Whales,' MR. F. E. BEDDARD, F.R.S., F.Z.S.

THE following are among the lecture arrangements at the Royal Institution after Easter: Dr. Hugh Robert Mill, three lectures on studies in British geography; Dr. Alexander Hill, two lectures on brain tissue considered as the apparatus of thought; Professor Dewar, four lectures on a century of chemistry in the Royal

Institution; Dr. Alfred Hillier, two lectures on South Africa, past and future. The Friday evening meetings will be resumed on April 27th, when a discourse will be given by the Right Hon. Lord Kelvin on 19th century clouds over the dynamical theory of heat and light; succeeding discourses will probably be given by Professor T. E. Thorpe, Mr. Sidney Lee, Professor J. A. Ewing, Mr. Francis Fox, Sir Henry Roscoe, and others.

THE Springfield Zoological Club has arranged a series of lectures on some of the divisions of the animal kingdom, to be given in the Art Museum on Friday evenings. They will be given by Messrs. Chas. B. Wilson, F. F. Smith and Dr. Geo. Dimmock.

THE position of assistant geologist in the U. S. Geological Survey, with a salary of from \$900-\$1200 per annum will be filled as the result of a civil service examination on May 22d and 23rd. The subjects and weights are:

(1) Essay on a geologic topic.....	10
(2) English composition (rated on subject one).....	10
(3) Geology.....	40
(4) Drawing (rated on required work in subjects one and three).....	5
(5) French and German	5
(6) Physics, chemistry, mineralogy and mathematics	10
(7) Education and experience.....	20
Total.....	100

NOTICE has been received at the Swedish and Norwegian consulate, in this city, that the King of Sweden and Norway has decided to reward persons who have found objects belonging to the Andrée Polar Expedition, and that a fund has been set aside for rewards for persons who may hereafter find objects from the expedition.

THE 'Kaiserliche Gesundheitsamt' at Berlin, has established a biological section for the study of micro-organisms and other influences favorable or harmful to cultivated plants. The first publication from the section has recently been issued.

THE annual general meeting of the Society of Chemical Industry will be held in London in July. Professor C. F. Chandler, of Colum-

bia University, the president and a number of American chemists expect to be present.

THE first meeting of the International Conference for the Protection of Wild Animals in Africa was held at the British Foreign Office on the 24th of April. The British representatives were the Earl of Hopetoun, G.C.M.G., Sir Clement Hill, K.C.M.G., C.B., head of the African department of the Foreign Office, and Professor Ray Lankester, director of the Natural History Museum.

THE twenty-ninth annual congress of German surgeons convened at Berlin on April 18th, under the presidency of Professor von Bergmann.

THE Jacksonian prize of the Royal College of Surgeons of England has been awarded to Dr. H. S. Lack for an essay on the 'Nasal fossæ.' The subject for next year is 'Bullet wounds of the chest and abdomen.'

THE first volume of the *Annals of the South African Museum* is completed with the issue of part 3, its 456 pages making a substantial contribution to our knowledge of the natural history of South Africa. The first article, Chap. XI. of the present instalment on 'New and Little Known South African Solifugæ in the Collection of the South African Museum,' by W. F. Purcell, contains descriptions of ten new species of *Solpuga* and of five little known species of the genus; four new species of *Dæsia* and three of *Ceroma*, these genera being recorded from S. Africa for the first time; also a new *Hexisopus* and the first description of a male of this genus. Chap. XII., also by W. F. Purcell, is devoted to descriptions of 'New South African Scorpions in the Collection of the South African Museum,' and Chap. XIII. contains 'Descriptions of Twelve New Species of the Genus *Mutilla* (Order Hymenoptera) in the South African Museum' by L. Péringuey. The final paper, Chap. XIV. is 'On Two New Species of Dicynodonts,' by R. Broom. The title page and index for the volume are issued with this part.

THE Council of the Zoological Society has given instructions for the publication of an index-volume to the new generic names mentioned in the *Zoological Record*, Vols. xvii.-xxxvii. (1880-1900). The volumes previous to

Vol. xvii. have been indexed in the 'Nomenclator Zoologicus' of Scudder, published by the Smithsonian Institution in 1882. The contemplated index-volume of the *Zoological Record*, in order to increase its usefulness, will include names omitted from Scudder's list and from the volumes of the *Zoological Record*. Thus zoologists may have at their disposal (in the 'Nomenclator Zoologicus' and the new index together) a complete list of all the names of genera and subgenera used in zoology up to the end of 1900. It is requested that anyone who knows of names omitted from Scudder's 'Nomenclator,' or from the volumes of the *Zoological Record*, will forward a note of them, together, if possible, with a reference as to where they have been noticed or proposed, so that the new list may be made practically complete. Such information should be addressed to the editor of the *Zoological Record*, 3 Hanover Square, London, W.; or to C. O. Waterhouse, Esq., British Museum, Natural History, S. Kensington, London, who is engaged in compiling the list.

UNIVERSITY AND EDUCATIONAL NEWS.

GENERAL THOMAS H. HUBBARD has given \$150,000 to Bowdoin College to be used for a new library building.

PRINCETON UNIVERSITY and Lafayette College each receive about \$45,000 by the will of Joseph Eastburn Smaltz.

MR. MICHAEL CUDAHY, of Chicago, has subscribed \$50,000 toward the million dollars which Archbishop Keene is trying to collect for the Catholic University of America at Washington.

MISS ELIZA T. BRYSON, a generous benefactor of Teachers College, Columbia University, has bequeathed to the College \$2500 for a scholarship.

VANDERBILT UNIVERSITY will celebrate with special ceremonies, in October next, the twenty-fifth anniversary of its opening.

THE University of the State of New York will hold its annual convocation on June 25th, 26th and 27th. Among the subjects to be discussed are manual training and libraries. It is