

a plan for the conducting of scientific forestry in the tract of 30,000 acres in the Adirondacks which the state had assigned to the College of Forestry for that purpose. The plan grew out of the actual condition of the tract in question. It was a scheme to substitute valuable soft woods for old and rotten hard woods. This meant denudation and replanting. But there is a general prejudice against cutting even old trees and an impatience to wait as long as fifty years for new ones to take their place. Both feelings have been invoked by critics of Director Fernow's work in the Adirondacks. And without going into further detail, the result now is that the state, speaking through its organized authority, desires to have the work stopped. The university stands by its expert. But the university has not the means, even if it had the power, in the absence of state appropriation, to carry on the work of the College of Forestry.

"What is to be done under these circumstances? The President believes that the wishes of the state in regard to the Adirondacks tract which it has placed in charge of the college should be observed as soon as these wishes can be officially ascertained. All that the university need insist upon is indemnity against liability assumed as agent of the state in the contract with the Brooklyn Cooperage Company. If the state, on mature consideration, disapproves of the plan of forestry adopted by Director Fernow, the university has no interest in attempting to force that plan upon the state, however excellent it may be in itself or however extensively it may be practised in Europe or America. Not a cent of state money has inured to the benefit of Cornell University, though the state work in forestry has entailed heavy burdens and anxieties upon the president, treasurer and trustees. It is a hardship to deprive so many students of the opportunity of completing their course, and a matter of regret that the first college of forestry in the United States should be suspended or discontinued, but the action of the state authorities seems to give the trustees no alternative."

SCIENTIFIC NOTES AND NEWS.

DR. CARL GEGENBAUER, the eminent anatomist, since 1863 professor at Heidelberg, died on June 15, at the age of seventy-seven years.

A MONUMENT in honor of Pasteur was unveiled on June 7 at Chartres, near which Pasteur carried on his experiments on anthrax. Addresses were made by M. Chauveau, representing the Paris Academy of Sciences and M. Chamberland, representing the Pasteur Institute. The monument is by Dr. Paul Richer, who is both a sculptor and physician.

PROFESSOR J. H. VAN'T HOFF and Professor Robert Koch, of Berlin, have been elected honorary members of the Vienna Academy of Sciences, and Sir William Ramsay and Professor Georg von Neumayer corresponding members.

M. MUNIER CHALMAS has been elected a member of the Paris Academy of Sciences in the section of mineralogy in the room of the late M. Hautefeuille. Professor H. A. Lorentz, of Leiden, has been elected a correspondent of the academy in the section of physics.

THE HONORABLE ARTHUR BALFOUR, the British premier, has accepted the presidency of the British Association for the meeting to be held in Cambridge in 1904.

DR. D. C. GILMAN, president of the Carnegie Institution, gave the address at the recent convocation at the University of Chicago. The university conferred its LL.D. on Dr. Nicholas Murray Butler, president of Columbia University.

TUFTS COLLEGE has conferred its LL.D. on Dr. Carroll D. Wright, U. S. Commissioner of Labor.

RUTGERS COLLEGE has conferred the degree of LL.D. on Dr. C. M. Ellenwood, president of the Cooper Medical School, San Francisco, and the degree of D.Sc. on Joseph F. Hills, professor of agricultural chemistry in the University of Vermont.

THE degree of Sc.D. was conferred by the Western University of Pennsylvania upon Mr. William Harris Ashmead, the curator of the entomological collections of the United

States National Museum, in recognition of his distinguished contributions to the literature of hymenopterology.

THE alumni of the College of the City of New York gave a dinner on June 15 to Professor Alfred G. Compton, acting-president of the college and professor of mathematics. Professor Compton was a member of the first graduating class in 1853, and has for fifty years served the college as instructor and professor.

THE Observatory Syndicate of Cambridge University recommends that a pension of £200 per annum be granted to Mr. Andrew Graham, M.A., on his retirement from the position of chief assistant at the observatory, which office he has held for a period of thirty-nine years. Mr. Graham began his work in astronomy at Mr. Cooper's observatory in Markree, county Sligo, in 1842.

MR. GEORGE WHITEHOUSE, engineer-in-chief of the Uganda Railway, has been knighted.

THE Harveian Lectures of the Harveian Society of London, will be delivered by Dr. D. B. Lees, next November, his subject being the treatment of some acute visceral inflammations.

PROFESSOR H. L. FAIRCHILD, secretary of the Geological Society, sails for Europe on June 27. He will attend the International Geological Congress in Vienna, the last of August, and join the excursion through the Austrian Alps. The time previous to the congress he will spend in geological study in Italy and Switzerland.

DR. F. H. HERRICK, professor of zoology at Western Reserve University, will spend next year abroad.

DR. HOWARD S. ANDERS, instructor in physical diagnosis of chest diseases at the Medico-Chirurgical College, Philadelphia, has been re-elected president of the Pennsylvania Society for the Prevention of Tuberculosis, which meets in the Academy of Natural Science in Philadelphia.

DR. ELIHU THOMSON has been appointed president of the committee of organization of the International Congress of Electricity,

which meets at St. Louis in the week beginning September 12, 1904. The other members of the committee are: vice-presidents, Professor H. S. Carhart, C. F. Scott, Professor W. E. Goldsborough, Dr. W. S. Stratton; general secretary, Dr. A. E. Kennelly; treasurer, W. D. Weaver; advisory committee, B. J. Arnold, B. A. Behrend, C. S. Bradley, J. J. Carty, A. H. Cowles, Professor F. B. Crocker, Dr. L. Duncan, H. L. Doherty, Professor R. A. Fessenden, W. J. Hammer, C. Hering, L. B. Stillwell, C. P. Mathews, R. D. Mershon, K. B. Miller, Dr. W. J. Morton, Dr. E. L. Nichols, Professor R. B. Owens, Dr. F. A. C. Perrine, Professor M. I. Pupin, Professor J. W. Richards, Professor H. J. Ryan, William Stanley, Professor C. P. Steinmetz and A. J. Wurts.

ON June 15 Professor G. Jesup, from 1877 to 1899 professor of botany in Dartmouth College, died in Hanover, N. H.

WE regret also to announce the deaths of Mr. Alfred Haviland, known for his work on the geographical distribution of disease in Great Britain, at the age of seventy-eight years; of M. Eugen Demarcay, the French chemist, at the age of fifty-one years; of Dr. Stanislao Vecchi, professor of geometry at the University of Parma; of Dr. Dirk Huizinga, professor of physiology at the University of Groningen, and C. L. J. X. de la Vallée Poussin, professor of mineralogy and geology at the University of Löwen.

REUTER'S AGENCY has received the following particulars of the operations of the Danish literary expedition, which consists of M. Mylius-Erichsen, the author; Count Herald Moltke, the painter; Dr. Bertelsen, and a student, M. Knud Ramassen. Last summer they made a voyage in boats along the west coast of Greenland from the colony of Godthaab to the colony of Jacobshavn, where the expedition wintered. In February the expedition started on sledges drawn by dogs for Upernivik (lat. 73 deg. north), the most northerly Danish settlement in West Greenland, which was reached in March. By March 24 the preparations for leaving Upernivik were complete, and some members of the ex-

pedition were about to proceed in a northerly direction along the coast with the intention of reaching Cape York by way of Melville Bay, the shores of which are quite uninhabited, and which have never yet been explored. The object of the journey was to study the tribes of Esquimaux. Dr. Bertelsen was starting southwards through the Danish districts of Umnak, Godthavn and Egedesminde in order to collect material for his book on the diseases of Greenland. He purposed meeting the Cape York expedition on its way home in South Greenland this summer. Several months' provisions for six men and one month's food for six teams of dogs (ten or twelve dogs to a team) were deposited last summer at the most northern point of the Danish coast. All the members of the expedition were well when the letters left.

A CABLEGRAM from Cape Colony to the daily papers says: The German Antarctic steamer *Gauss* has arrived here and will remain about three weeks to refit and then will proceed homeward. The vessel shows outward signs of her experiences in the ice. The expedition has been a great success and not a single casualty occurred among those on board throughout her stay in the Antarctic regions. After sailing from Cape Town, December 7, 1901, the *Gauss* called at Kerguelen Island, where a party was landed. The vessel reached floating ice on February 14, 1902, and was icebound on February 22. The expedition discovered a new land, which they named Emperor William II. Land. It was covered with ice, with the exception of an inactive volcano. The expedition was icebound here for almost a year, the ship being fast in pack ice. The crew went into winter quarters, and many scientific investigations were carried out during this period. Several expeditions with dogs and sleighs left the winter quarters, but found the season too advanced, and their progress was hampered by fearful snow storms and darkness. The *Gauss* made her way out of the ice with northward flowing currents, and, leaving the ice April 8 of this year, she proceeded to Durban, passing Kerguelen Island and calling at St. Paul and New Amsterdam

Islands. The expedition enjoyed good health, and there was no sickness, accident or death among its members. Professor Drygalski speaks in the highest terms of the vessel both at sea and in the ice and as regards its equipment. There were enough provisions on board to last the expedition another two years. There was no trouble with the dog teams. The results of the expeditions are briefly: The discovery of a new land in the polar circle and many special investigations. Specimens will be sent on ahead to Berlin. The expedition did not sight the British Antarctic expedition steamer *Discovery*, now icebound in the Antarctic regions, nor the ship *Morning*, which was sent to the *Discovery's* assistance.

THE Philadelphia College of Physicians has passed a resolution requesting its fellows to subscribe for the *Index Medicus*, published by the Carnegie Institution. The Carnegie Institution has appropriated \$10,000 annually for its support, but this sum and the subscriptions so far received will not suffice.

THE fourteenth annual meeting of the Museums Association will be held in Aberdeen, Scotland, during the week beginning July 13, under the presidency of Dr. F. A. Bather, of the British Museum, who opens the conference with an address at 10 A.M., on Tuesday, July 14. Meetings for the reading and discussion of papers will occupy the mornings of Tuesday, Wednesday and Thursday, while there have been arranged excursions to Balmoral and Dundee, visits to the Art Gallery and Museums of the city, and various social festivities. A special attempt is being made to induce museum officials from the continent of Europe to attend the meeting, and it is particularly hoped that some American visitors to Great Britain may find it possible to be present. Some museum curators may be passing through on their way to the International Geological Congress at Vienna, and we are requested to state that the presence of those or any others interested in museum questions would be warmly welcomed at Aberdeen. Any who propose to avail themselves of the invitation should, if possible, communicate beforehand with the secretary of the

association, Mr. E. Howarth, Public Museum, Sheffield, England.

THE English electrochemical society, to the steps for the organization of which we have already referred, will be known as the Faraday Society, and will hold its first meeting on June 30.

THE Lake Laboratory buildings at Cedar Point, Sandusky, Ohio, will be formally opened on July 2. Addresses will be made by Professor Herbert Osborn, director of the laboratory and professor of zoology in the Ohio State University, by Professor C. J. Herrick, president of the Ohio Academy of Sciences and professor of zoology at Denison University, and others.

THE whaling ship *Gjoa*, with an expedition under the command of Captain Ammundsen, has left Christiania to study the conditions about the magnetic North Pole.

REUTER'S AGENCY is informed of the arrival on June 11 at Obbo, to the southeast of Gondokoro, of Major Powell-Cotton, Northumberland Fusiliers, who for the past year has been traveling in Central Africa. When last heard of he had been studying the cave dwellers at Mount Elgon and was proceeding towards the Upper Nile. He then expected to reach Wadelai in February.

Nature reports that in the House of Commons Mr. Austen Chamberlain, speaking on the vote for the telegraph services, referred at some length to the relations between the post-office and the Marconi Wireless Telegraph Co. He said that the postoffice had no desire to check the progress of wireless telegraphy, nor could they have done so had they wished, as their monopoly did not extend beyond the three-mile limit. The Marconi Co. had, however, asked for too much; in the first instance they asked to be given a permanent and exclusive right to work wireless telegraphy in this country, which he could not grant, especially after the postoffice's experience with the telephone system. He had, however, granted them a private wire to Poldhu on the ordinary terms as soon as they asked for it, but before undertaking to act as their agents for the collection of messages, as was done for

the cable companies, the postoffice required that certain conditions should be fulfilled in order to safeguard the admiralty, and also asked that their experts should be satisfied that the company were able to carry on their business and transmit messages across the Atlantic commercially. He was still waiting an answer to this request, which was made last March.

THE *Experiment Station Record* states that the legislature of Hawaii at its recent regular session provided for a reorganization of the office of the commissioner of agriculture by placing the duties of that office under the control of a non-salaried board of five commissioners. The new law defines the duties of the board and provides for the enforcement of its regulations. Under the new arrangement particular attention of the board is given to forestry, entomology and inspection of plants, fruits, etc., to prevent the admission of injurious fungi and insects. For this work paid superintendents and assistants are provided. For the development of general agriculture, cooperation with the experiment station established by the U. S. Department of Agriculture is to be sought.

WE learn from the *New York Times* that as the result of plans that have been developed since early in the spring the American Museum of Natural History has arranged to loan to the biology departments of as many of the public schools of Greater New York as may make proper application collections of invertebrate specimens for use in connection with the school biological work. It was found that two sets of collections could be prepared, one, known as the duplicate collection, consisting of about forty-five specimens, covering between thirty and forty species and illustrative of general characteristics, and the other, a specialized collection of from one hundred to one hundred and fifty specimens, collected and arranged with a view to showing typical forms of different species, and wherever possible, bring out some essential fact in the development of the type. Ten schools have applied for the first of the collections, now ready for distribution.

A REPORT on technical high schools in Germany by Dr. Frederick Rose, British Consul in Stuttgart, has been issued by the British Foreign Office. According to an abstract in the London *Times* Dr. Rose begins by referring to his previous report on chemical instruction and the chemical industries in Germany (No. 561 in the same series), in which he demonstrated that by means of thorough chemical education in the universities and technical high schools Germany had in the course of half a century risen to the front rank in the nations of the world in chemical industry, so that her chemical products are now valued at about 50 millions sterling yearly—a sum which is considered as the interest accruing from the capital invested by the country in chemical education. The present report deals with the technical high schools of the country generally, as their part in the industrial progress of the country has been very important. At present there are nine of these institutions in Germany—at Aix, Berlin, Brunswick, Darmstadt, Dresden, Hanover, Karlsruhe, Munich and Stuttgart, while one at Danzig is to be opened shortly, and one at Breslau in the course of three or four years. Most of them date from the years succeeding the fall of Napoleon, when they were founded as small trade or technical schools; then they passed into the stage of polytechnic schools, and during the last quarter of a century into that of technical high schools, while they now grant degrees and rank with the older universities. They are all in towns of 100,000 inhabitants and upwards, and their growth and progress are coincident with the transformation of Germany from an agricultural to an industrial state. The German universities have always taught some branches of pure and applied science, but they have always regarded the economic application of science as inferior to research in pure science; chemistry is an exception to this rule, but the idea of technical education has never been able to assert itself as equal with the pursuit of knowledge and science, and hence the necessity for the technical schools.

WATER-SUPPLY Paper No. 80, now in press, United States Geological Survey, by Mr. George W. Rafter, deals with the subject of the relation of rainfall to run-off. Some of the many conclusions of the paper are here given. Mr. Rafter holds that there is no general expression giving accurately the relation of rainfall to run-off, every stream being, in effect, a law unto itself. The cause of rainfall, beyond the cooling of the air below the dew point, is not very well understood; and it is uncertain whether rainfall is in any degree increasing. Rainfall and run-off records are conveniently divided into storage, growing, and replenishing periods, a large percentage of the total water supply running off during the storage period. The run-off of streams has been generally overestimated. Evaporation is a persistently uniform element, and streams with large evaporation are, so far as known, always deforested. Ground water must be taken into account in order to understand all peculiarities of stream flow, and a very important effect of forests is in increasing the ground-water flow, so that it may be said that the removal of forests notably decreases minimum stream flow. It is uncertain whether forests in any way influence the quantity of rainfall. As a broad proposition merely it may be said that catchment areas from which municipal water supplies are drawn should be heavily forested. Nevertheless, Mr. Rafter thinks that it would not be a good investment for the city of New York to undertake to reforest the Croton catchment area; and for this opinion he assigns the following reasons: To acquire the entire watershed—a necessary prerequisite—and to plant it in trees would cost, on a very conservative basis of estimate, about \$24,000,000. There would be some consequent increase of water supply after about 30 years, but 120 years would be needed to realize the full effect of forestation and to produce the estimated resulting additional supply of about 75,000,000 gallons per day. By the expiration of the 120 years, however, the original cost compounded at three per cent. interest would

amount to about \$780,000,000, a sum out of all proportion to the resulting daily increase of water supply. Hence the attempt to increase the water supply by forestation of the Croton catchment area is inexpedient.

UNIVERSITY AND EDUCATIONAL NEWS.

ANNOUNCEMENT of a gift of \$150,000 from Mr. J. Ogden Armour was made at the convocation exercises of the Armour Institute of Technology on June 19.

THE committee appointed by the Columbia University council to prepare a report on 'what celebration, if any, should be held on the one hundred and fiftieth anniversary of the foundation of the corporation,' which occurs on October 31 next, has made the tentative suggestion that the commemoration last from October 25 to November 1. On October 25, 26, 27, 28, a series of colloquies, conferences and lectures is proposed to be delivered by eminent European and American scholars. On October 31 there will be a luncheon and reception in honor of the guests, and an address, historical in character, by the president of the university.

ARRANGEMENTS have been made between the Western Reserve University and the Case School of Applied Science permitting students to complete their academic and engineering courses in five years.

COLGATE UNIVERSITY has given up its degree of Ph.B. and will hereafter give the B.A. degree without required Greek.

CHARTERS have been approved incorporating independent universities at Manchester and Liverpool to be known as the Victoria University of Manchester and the University of Liverpool.

ON June 18 the corporation of Brown University voted to establish a graduate department and elected Professor Carl Barus as dean.

DR. LE BARON RUSSELL BRIGGS, professor of English and dean of the Faculty of Arts and Sciences at Harvard University, has been elected president of Radcliffe College to fill

the vacancy caused by the resignation of Mrs. Agassiz.

PROFESSOR M. E. COOLEY, of the engineering department of the University of Michigan, has been offered the deanship of the Engineering School of the University of Wisconsin.

DR. FREDERICK E. BOLTON, professor of education in the University of Iowa, was offered the presidency of a normal school at Manila, Philippine Islands, but has declined the position.

THE Rev. Dr. Smith, for the past twenty years president of Trinity College, has resigned. Dr. F. S. Luther, Jr., professor of mathematics and dean of the faculty, is acting president.

DR. J. J. R. McLEOD, assistant demonstrator of physiology at the London Hospital, has been appointed professor of physiology at Western Reserve University, occupying the chair made vacant by the removal of Professor G. N. Stewart to Chicago.

PROFESSOR C. H. ROBINSON has resigned the chair of physics at Rochester University.

H. C. IVES, instructor in Worcester Polytechnic Institute, has accepted an assistant professorship of civil engineering in the University of Pennsylvania.

THE three scholarships available for members of the Harvard summer course in geology in the Rocky Mountains open to general application have been assigned to Chas. W. Brown, of Rhode Island, graduate of Brown University and instructor; W. S. Tower, of Massachusetts, student in Harvard University, and P. H. Cormick, of Texas, student in the University of Tennessee.

MR. ALFRED HUGHES has been appointed professor of education at Birmingham.

MR. CARVETH READ has been appointed to the Grote professorship of philosophy of mind and logic at University College, London, in succession to Professor James Sully.

M. DANIEL has been elected to a newly-established chair of agricultural botany at the University of Rennes.