

by these last means. Such grantors may, in their deed, provide 'a trust of the lands so deeded in favor of the State University or State Agricultural College, or both, whereby all income and revenue from the lands so deeded shall be paid to the beneficiary named in such deed, as a permanent endowment * * * for the purposes of its work in the line of forestry.'

The possession, care, control and management of the State Forest Reserve lands are vested in the Forestry Commission, as well as the administration of the trust lands, and ample powers and legal authority are given to the Commission to secure the greatest benefit from the Reserves. It shall not only investigate modern forestry methods, etc., but has power to cut, remove, sell and contract away any timber it deems desirable, opening the way to a rational forest management.

For the purpose of carrying on this practical forestry work, provision is made for a Chief Forest Warden with a salary of \$2,000, which is rather small for a really efficient man; he is made superintendent of all Forest Reserve Lands, with a number of deputy forest-wardens, with salaries not to exceed \$3.00 per day, and the fire-wardens to assist.

The conferment of sheriff's power upon the forest officers, the provision of penalties for various acts of trespass and methods of procedure are prescribed in greatest detail, and the sum of \$25,000 for the first two years is set aside to carry out the program.

This legislation is undoubtedly the most comprehensive and carefully drawn which has so far been introduced in any of the states. Under it a properly constituted Commission, properly supported with appropriations, should certainly make a successful beginning in establishing a permanent State Forest Policy. A provision which would make the administration independent of annual appropriations later on, and make it rely on its income, in part at least, would be the next desirable step. The present Forest Commission, as is evident from the care with which these bills are drawn, would seem most excellently fitted for its task.

B. E. FERNOW.

SCIENTIFIC NOTES AND NEWS.

At a meeting of the American Geographical Society, on February 20th, the Cullum Medal was conferred on Dr. T. C. Mendenhall in recognition of his services as Superintendent of the United States Coast and Geodetic Survey and as a member of the Alaskan Boundary Commission.

THE gold medal presented by the Royal Astronomical Society to Professor E. C. Pickering, director of Harvard College Observatory, on February 8th, was received by the United States ambassador, Mr. Choate, who made a speech in acknowledgment.

THE students of the University of California celebrated the 77th birthday of Professor Joseph Le Conte on February 26th. Professor Le Conte has just returned to Berkeley from a visit to Georgia.

THE Senate of the University of St. Andrews has resolved to confer the degree of LL.D. on Mr. Alexander Agassiz, of Harvard University, and on Dr. J. A. Ewing, professor of applied mechanics in Cambridge University.

MR. ALEXANDER AGASSIZ was entertained at a banquet given by the French Zoological Society on February 1st. Speeches were made by MM. Perrier, Delage and Blanchard, to which Mr. Agassiz replied.

THE University of Pennsylvania has conferred the degree of LL. D. on President Henry S. Pritchett, of the Massachusetts Institute of Technology, and the degree of D.Sc. on Rear-Admiral George W. Melville, engineer-in-chief of the United States Navy.

DR. J. K. REES and Professor H. M. Howe, of the departments of astronomy and metallurgy of Columbia University, have been decorated as Chevaliers of the Legion of Honor by the President of the French Republic for services in connection with the Paris Exposition.

At the convocation of the University of Oxford, on February 12th, the degree of D.Sc., *honoris causa*, was conferred upon Oliver J. Lodge, LL.D., F.R.S., principal of the University of Birmingham. He was presented by Dr. Love, Sedleian professor of natural philosophy, who briefly sketched his career, his distinctions and his investigations.

THE fourth banquet of the Paris *Scientia* was given to M. Marey on January 14th. Speeches were made by MM. de Parville, D'Arsonval and Richet. M. Marey made a reply, in the course of which he called attention to the progress of the plans for the standardization of physiological instruments. It appears that the City of Paris has set aside a building where the commission may carry on tests.

THE Adams Prize for 1901, open to the competition of all persons who have at any time been admitted to a degree in Cambridge University, has been awarded to Hector Munro Macdonald, M.A., fellow of Clare, for an essay on 'Electric Waves.'

PROFESSOR A. D. MEAD, of Brown University, has been appointed a member of the Inland Fish Commission of Rhode Island, in succession to Professor H. C. Bumpus who resigned, owing to his removal to the American Museum of Natural History, New York City.

AT the meeting of the Paris Academy of Medicine on January 29th, M. Jaccoud was elected to the post of permanent secretary, vacant by the death of M. Bergeron.

PROFESSOR DAVID P. TODD, of Amherst College, will sail next week for Singapore, to observe the total eclipse of May 18th in the Island of Sinkop. Mrs. Todd will accompany the expedition to accumulate material for revising her work on 'Total Eclipses of the Sun,' a new edition of which was published by Little, Brown & Co. a year ago. A botanist, also possibly an anthropologist, will be attached to the expedition, which is expected to return in August.

WE learn from the *Electrical World* that Professor R. A. Fessenden and his corps of assistants, sent out by the Government to establish wireless telegraph stations down the coast, have completed the first installation off Roanoke Island, N. C. The station is not far from Cape Hatteras.

DR. FREDERICK A. COOK has returned to New York after having attended a meeting at Brussels of those interested in the publication of the reports of the Belgian Antarctic expedition.

PROFESSOR M. I. PUPIN, of Columbia University, delivered an address on February 13th be-

fore the Scientific Association of Johns Hopkins University, his subject being 'Recent Improvements in Long Distance Telephony.'

WE learn from *Nature* that Professor J. A. Ewing, F.R.S., has been elected a member of the Athenæum Club under the provisions of the rule which permits of the election of persons of 'distinguished eminence in science, literature, the arts or for public service.'

DR. J. W. L. GLAISHER, F.R.S., has been elected president of the Royal Astronomical Society of Great Britain.

THE following members of the Paris Academy of Sciences have been elected officers of the Bureau des Longitudes for the year 1901: *President*, M. le commandant Guyon; *Vice-President*, M. le général Bassot, and *Secretary*, Professor G. Lippmann.

THE following were elected president and members of the council of the Physical Society of London for the ensuing year at the annual general meeting held on the 8th inst.: *President*, Professor S. P. Thompson, F.R.S.; *Vice-Presidents*, Mr. T. H. Blakesley, Mr. C. Vernon Boys, F.R.S., Professor J. D. Everett, F.R.S. and Mr. J. Walker; *Secretaries*, Mr. H. M. Elder and Mr. W. Watson, Physical Laboratory, South Kensington; *Foreign Secretary*, Professor R. T. Glazebrook, F.R.S.; *Treasurer*, Professor H. L. Callendar, F.R.S., University College, Gower-street; *Librarian*, Mr. W. Watson, Physical Laboratory, South Kensington; *Other Members of Council*, Professor H. E. Armstrong, F.R.S., Mr. W. R. Cooper, Mr. G. Griffith, Mr. E. H. Griffiths, F.R.S., Mr. R. A. Lehfeldt, D.Sc., Mr. S. Lupton, Professor J. Perry, F.R.S., Mr. A. W. Porter, D.Sc., Mr. W. A. Price and Mr. R. Threlfall, F.R.S. Professor Willard Gibbs, of Yale University and Dr. Rudolph Koenig, Paris, were elected honorary fellows of the Society.

DR. JACOB GEORG AGARDH, the eminent Swedish phycologist, died at Lund, Sweden, on January 17th, aged eighty-eight years.

FRANCIS KENNEDY, PH.D., since 1898 professor of philosophy in the University of Colorado, died on February 19th of heart failure. Although but 26 years of age, Dr. Kennedy had done much research work, and

his last illness was brought on by too close study and attention to the work of his department.

THE House of Representatives has agreed to the Senate amendments to the Agricultural Appropriation Bill, reorganizing the Department of Agriculture in the direction explained in recent issues of this JOURNAL.

THE following amendment to the General Deficiency Appropriation Bill was introduced into the House of Representatives on February 21st, by Mr. Ray, of New York:

That facilities for study and research in the Government Departments, the Library of Congress, the National Museum, the Zoological Park, the Bureau of Ethnology, the Fish Commission, the Botanic Gardens and similar institutions hereafter established shall be afforded to scientific investigators and to duly qualified individual students and graduates of institutions of learning in the several States and Territories, as well as in the District of Columbia, under such rules and restrictions as the heads of the Departments and Bureaus mentioned may prescribe.

A joint resolution to the same effect was introduced in the Senate on February 18th, by Mr. Perkins and referred to the Committee on Education and Labor.

MME AZOULAY has endowed, at the University of Lyons, a lectureship for foreign men of science. Professor Forel, of the University of Zurich, lectured on this foundation on January 27th, and Professor Schreiner, director of the observatory at Potsdam, is expected to lecture next month.

GIFTS for public libraries, conditional on their maintenance, have been made by Mr. Andrew Carnegie, to the following towns: Schenectady, N. Y., \$50,000; Marion, Ind., \$50,000; Galesburg, Ill., \$50,000; Mount Vernon, N. Y., \$35,000; Cumberland, Md., \$25,000 and Port Jervis, N. Y., \$20,000.

THE Royal Institution, London, has received gifts of £50 each from Sir Frederick Abel and Professor Dewar for the fund for the promotion of experimental research at low temperatures.

A TELEGRAM was received at the Harvard College Observatory, on February 22d, from Dr. T. D. Anderson, at Edinburgh, stating that a

new star had been discovered by him in the constellation Perseus. The position is R. A. $3^{\text{h}} 24^{\text{m}} 24^{\text{s}}$ and Dec. $+43^{\circ} 34'$. Its magnitude on February 21st was 2.7 and its color bluish-white. This star was observed at the Harvard College Observatory through clouds on February 22d. It was then first magnitude. A photograph of this region taken on February 19th showed that it was then fainter than the magnitude 10.5. This result was confirmed by photographs taken on February 2, 6, 8 and 18, 1901.

WHILE making an examination of the copper deposits in the vicinity of La Barranea, Sonora, Mexico, Mr. J. Owen, assistant to Dr. E. T. Dumble, found two deposits of turquoise. They occur in what is regarded as the equivalent of the volcanic complex described as 'Trincheras.' The deposits at Turquoise, Ariz., are in similar rocks.

MICHIGAN has long been known as a producer of copper and iron, and, more recently, as a source of salt supply for the West and the middle West. Still more recently large quantities of the secondary product of salt—caustic soda, soda ash and sodium carbonate have been sent out from the various plants in the neighborhood of Detroit. This has stimulated the search for coal, and Michigan coal, mainly from the Saginaw Valley, is now largely used. Within the past year attention has been called to the numerous deposits of marl and clay suitable for the manufacture of Portland cement, in Southern Michigan, and this interest is being rapidly developed.

THE seventy-third annual meeting of the German Men of Science and Physicians will be held this year at Hamburg from the 27th to the 29th of September.

THE French Association for the Advancement of Science will hold its annual meeting this year at Ajaccio, in Corsica, probably about the middle of September, and will be presided over by Dr Hamy.

THE *British Medical Journal* states that an Italian Society of Biology has recently been founded on the initiative of Professors Albertoni, Antonelli, Bizzozero, Bonome, Borzi Briosi, Bufalini, Camerano, Celli, Cervello, Chiarugi,

DeGiaxa, Delpino, Di Vestea, Emery, Fano, Ficalbi, Foà, Fusari, Gaglio, Giacosa, Golgi, Grassi, Guarnieri, Luciani, Lustig, Marcacci, Marchiafava, Martinotti, Mattiolo, Mosso, Pagniani, Pavesi, Pirotta, Romiti, Roster, Schrön, Stefani, Tizzoni and Todaro. The first meeting of the Society will probably be held in Rome during the coming Eastertide. The object of the Society is to promote the study of the biological sciences and everything relating to the advancement and teaching of these. The Society will publish a bulletin giving an account of its proceedings. It is divided into eight sections as follows: anatomy, physiology, pathological anatomy, general pathology, pharmacology, hygiene, zoology and botany.

THE February meeting of the Faculty Science Club of Wellesley College was held in the library of the Whitin Observatory, the paper being by Dr. Eleanor Gamble, of the Department of Psychology, on 'Certain Data for the Classification of Smells.'

THE Royal Geographical Society held a meeting on February 12th in commemoration of the reign of Queen Victoria, who was for sixty-three years the patron of the Society. The chair was taken by the president, Sir Clements Markham, who read the first paper on 'Her Majesty's Connection with the Society and Interest in Geography and on Polar Exploration during her Majesty's Reign.'

PROFESSOR WILLIAM H. BREWER, of the Yale Scientific School, lecturing at New Haven on the Antarctic Continent on February 15th, said, according to the report in the *New York Times*, that "This, the seventh and last continent of the world, which for several hundred miles extends parallel to the Antarctic circle, offering an effectual barrier to further navigation south, a New Havener had the honor of discovering. He was Lieut. Eld of the United States Navy. The memorial tablet to Lieut. Eld, which now stands in the Grove Street Cemetery, reads that he was born in New Haven in 1814 and died of yellow fever on board the U. S. S. *Ohio* in 1850. He was a member of the exploring expedition sent into the Antarctic regions by the United States Government in 1838-42 under command of Capt. Wilkes." "At 10 A.M. on

January 16, 1839," so reads the tablet, "Lieut. Eld cried out 'Land.' Turning to Lieut. Reynolds who stood by he pointed out the range of icebound cliffs, along which the expedition afterward skirted for several hundred miles before it was compelled to turn back homeward. The peak which Eld first discovered was named Eld's Peak. The Antarctic continent which has never been penetrated goes by the name of Wilkes Land." The date of the tablet, which reads January 16, 1839, was discovered to be erroneous by Professor Brewer, while he was preparing this lecture. In looking through the ship's log of the expedition he found the true date to be January 16, 1840.

REUTER'S Agency gives out the following interview with Captain Joseph C. Bernier, of Quebec, regarding his proposed polar expedition: "I have two plans to lay before the Canadian Government on my return, each of which are based upon my long personal acquaintance of Arctic seas and have been approved by the best Arctic authorities. My first plan is to start by way of Behring Straits, follow the coast of Siberia and enter the ice between 165 and 170 degrees of longitude East. I shall then push north as far as the ice will permit. When my ship gets into the ice I shall then place myself in the hands of nature. If she gets into a better position than the track of the *Jeannette* I shall expect to reach the Pole, and return in between three and four years. This will not be so difficult as in the case of the *Jeannette*, because the polar basin at the present time has more openings than in past years, this being due to the changed climatic conditions. My second plan, which has already been privately submitted to the Quebec Geographical Society, is to start from Franz Josef Land with a large number of dogs and reindeer and travel during the summer to the Pole by sleighs, taking with me concentrated provisions and killing my reindeer day by day for food. Elaborate calculations have been made as to the number of dogs and reindeer required for sleighing and for food. Traveling at an average of six miles per day the journey to the Pole should occupy 150 days, at the end of which time I should still have enough provisions to return towards Spitzbergen before winter set in. The point of

the whole thing is that I intend to reach the Pole—I say I ought to get there in 150 days, but I have allowed 180 for the purpose. If I leave Franz Josef Land when the sun rises this would still leave (allowing 180 days for the journey), ten days of remaining light for me to travel towards Spitzbergen. At the expiration of this time I should put myself in winter quarters on the ice, kill the remaining reindeer for food and all the dogs not required for the rest of the homeward journey in the spring.

UNIVERSITY AND EDUCATIONAL NEWS.

PRESIDENT FAUNCE has announced that Mr. John D. Rockefeller has offered to give \$250,000 to Brown University if a million dollars is collected. It will be remembered that a million dollars has already been obtained for Brown University, of which Mr. Rockefeller gave \$250,000.

MRS. ANNA C. HOUGH, of Los Angeles, has offered \$25,000 to the University of Southern California in case an additional sum of \$75,000 be collected.

THE proprietors of the Baldwin Locomotive Works have subscribed \$25,000 towards a new engineering building for the University of Pennsylvania.

A BILL has just passed the Senate granting the North Dakota Agricultural College one-fifth mill on all taxable property, thus ensuring the continuous support of the Agricultural College in place of the uncertain biennial appropriation. Plans are being prepared for a new chemical laboratory and for a science hall to be built during the present year, also for a new barn to replace the one recently destroyed by fire; loss \$18,000, insurance \$12,000.

THE legislature of Wyoming has made an appropriation to complete the Science Hall of the University of Wyoming and to enlarge the campus. The new building will contain the geological museum and preparation rooms, the botanical and chemical laboratories and a large lecture room. A central heating plant for all the buildings will also be built.

BEGINNING with June of the present year the

University of Michigan will confer but one degree, that of bachelor of arts, on graduates from the undergraduate courses. The degrees of bachelor of philosophy, bachelor of science and bachelor of letters, which have been conferred for more than twenty years, are to be dropped. This change is brought about by the following resolution, which was passed by the literary faculty on February 18th and by the Board of Regents on February 21st:

Beginning in June of 1901, the degree of bachelor of arts shall be conferred on any student who has satisfied any one of the four sets of requirements for graduation now in force in the department of literature, science and the arts.

THE annual commemoration day exercises at Johns Hopkins University on February 22d, were unusually impressive, as they marked the quarter centennial of the founding of the university and the formal announcement of the resignation of President Daniel Coit Gilman. The address was made by the Hon. David Jayne Hill, Assistant Secretary of State and formerly president of the University of Rochester.

THE following memorial on the subject of Coopers Hill College has, as we learn from the *London Times*, been signed by some 374 leading men of science and others interested in education:

The correspondence regarding Coopers Hill College which has been published in the *Times* of January 3, 1901, which includes Sir Horace Walpole's letter to Colonel Otley of December 14, 1900, and Colonel Otley's letter of December 17, 1900, has caused a painful shock to those engaged in higher education throughout the United Kingdom, and to all who are interested in the training of engineers.

This correspondence relates to the sudden and arbitrary dismissal of able and distinguished scientific teachers who have been doing duty in the college for periods of from nine to thirty years, and the value of whose past services is at the same time officially recognized.

Such arbitrary dismissal is likely to affect adversely the cause of scientific teaching in the United Kingdom. It cannot fail to injure the future of the college. During the correspondence which has ensued it has become apparent that the teaching staff have no voice in the educational policy of the college and are not consulted when any change in the curriculum