

college teachers of the fine arts was maintained at a cost of \$48,000.

A feature of the corporation's year was in connection with the income of its smaller fund of \$10,000,000 to be expended in Canada and the British Colonies. From this source the corporation embarked on a five-year program in British Africa, following a visit to Africa and a report to the trustees made by the secretary and president of the corporation.

## SCIENTIFIC NOTES AND NEWS

DR. H. H. TURNER, Savilian professor of astronomy at the University of Oxford, accompanied by Mrs. Turner, is coming to the United States in order to represent the British Association for the Advancement of Science at the New York meeting of the American Association. Dr. Turner will give a lecture on "The Scientific Retrospect."

DR. L. L. VAN SLYKE, for thirty-eight years chemist at the New York State Agricultural Experiment Station at Geneva, is retiring from active service with the close of the year.

DR. ELMER A. SPERRY, president of the Sperry Gyroscope Company, has been elected president of the American Society of Mechanical Engineers. Announcement of Dr. Sperry's election has been made following a canvass of a national mail ballot of approximately 20,000 members of the association. He succeeds Mr. Alex Dow, of Detroit.

ARTHUR J. WOOD, professor of mechanical engineering at the Pennsylvania State College, was elected president of the American Society of Refrigerating Engineers at the recent New York meeting.

DR. J. J. SEDERHOLM, director of the Geological Commission of Finland, has been awarded the Penrose medal of the Geological Society of America. The award will be made at the society's annual meeting which will be held in New York from December 26 to 29. It is the second award of this medal, it having been conferred the first time on the late Professor T. C. Chamberlin, of the University of Chicago.

DR. W. T. BOVIE, head of the department of biophysics at Northwestern University and pioneer in the field of electro-surgery, was awarded the John Scott medal and a premium of \$1,000 by the City of Philadelphia at the annual banquet of the American Radiological Society on December 6.

THE French government has awarded the Legion of Honor, grade of officer, to Professor Augustus Trowbridge, dean of the graduate school of Princeton Uni-

versity. This is a promotion from the grade of chevalier awarded for war services in 1918.

DR. RAYMOND PEARL, director of the Institute for Biological Research of the Johns Hopkins University, has recently been made a foundation member of the Morphological Society of Paris.

At the ceremony on the occasion of the opening of the term at the University of Paris, the degree of doctor *honoris causa* was conferred on Sir Charles Sherrington, Waynflete professor of physiology at the University of Oxford and president of the Royal Society. As was recently reported in SCIENCE, the honorary doctorate was conferred also on Dr. W. S. Thayer, of Baltimore, formerly professor of medicine in the Johns Hopkins University.

THE American Society of Mechanical Engineers medal has been awarded to Julian Kennedy, of Pittsburgh, Pennsylvania, for his services to the iron and steel industry. The student prize went to Clarence C. Franck, of the Johns Hopkins University, for a paper on "Condition Curves and Re-heat Factors for Steam Turbines." The junior award of the society was won by M. D. Aisenstein, of Berkeley, California, for his paper on "A New Method of Separating the Hydraulic Losses in a Centrifugal Pump." Robert M. Meyer, of the Newark College of Engineering, received the Charles T. Main prize for his paper on "Scientific Management and its Effect on Manufacturing."

LIEUTENANT-COLONEL A. E. HAMERTON has been appointed pathologist to the Zoological Society of London, in succession to Dr. H. H. Scott, who has taken up an appointment under the Colonial Office.

ARTHUR S. COGGESHALL, curator of paleontology at the Carnegie Museum, Pittsburgh, has resigned to accept a museum post at St. Paul.

DR. MERRILL E. CHAMPION has resigned as director of the division of hygiene of the Massachusetts State Department of Public Health. He will be succeeded on January 1 by Dr. Luiz Diez, of the New York State Department of Health.

DR. LEVERETT D. BRISTOL, who has served the Milbank Memorial Fund health demonstrations in New York as executive officer for six years, has resigned to accept an appointment in industrial health work.

DR. HANS MOLISCH, professor of plant physiology of the University of Vienna, has a year's leave of absence from the university, which he will spend as investigator and lecturer at the Bose Institute at Calcutta.

DR. Y. ISHIWARA, professor of pharmacology in the Tokyo Jikeikai Medical College, who has been with

the Rockefeller Institute in America since April, 1926, has returned to Tokyo. He visited Europe on his way home.

DR. CONSTANTIN DUMBRAVA, the meteorologist, who recently arrived in this country after spending fourteen months in Greenland as head of the Rumanian Greenland Expedition, gave an illustrated lecture on the results of his expedition in New York City on December 9. The lecture was under the auspices of the French, Belgian and Philadelphia Geographical Societies. Dr. Dumbrava was introduced by Vilhjalmur Stefansson.

PROFESSOR KIRTLEY F. MATHER, of Harvard University, recently gave an illustrated lecture before the University of Chicago Club of Massachusetts, of which he is president, on the geological excursion that he conducted in Europe during the summer.

ON November 24 Dr. G. Clyde Fisher, curator in the department of astronomy of the American Museum of Natural History, delivered an address before the Royal Canadian Institute on "Earth and Neighbor Worlds."

THE University of Illinois College of Medicine announces that Dr. Robert T. Frank, New York, delivered the Charles Sumner Bacon lectures for 1928 on December 12 and 13 in the library of the Research and Library Building of the Medical School. The subject of the lectures was "Sex Hormones."

JOHN HOWE HALL will deliver the 1929 Henry Marion Howe memorial lecture of the American Institute of Mining and Metallurgical Engineers. This lecture is given every year in memory of the late Henry M. Howe.

THE annual Biggs Memorial lecture was given November 22 at the New York Academy of Medicine, under the auspices of the New York County Medical Society and the New York Tuberculosis and Health Association by Professor C.-E. A. Winslow, of Yale University School of Medicine, on "Contributions of Hermann M. Biggs to the Public Health Campaign."

THE fourth annual Norman Lockyer lecture was given in London under the auspices of the British Science Guild by Professor J. Arthur Thomson, of the University of Aberdeen, on November 28, the subject being "The Culture Value of Natural History."

IN memory of the first woman graduated from the Massachusetts Institute of Technology, a bas-relief of Mrs. Ellen H. Richards, who for more than 30 years was an instructor in sanitary chemistry at the institute, was unveiled on the afternoon of December 3. Mrs. Richards was the wife of Robert H. Richards,

professor emeritus, formerly head of the department of mining and metallurgy, and it was he who unveiled the memorial in the presence of a large gathering of her former students and colleagues on the faculty. The bronze is the work of Miss Bashka Paeff and is the gift of the alumni.

DR. BASHFORD DEAN, professor of zoology in Columbia University and of fine arts at New York University, honorary curator in the American Museum of Natural History, honorary curator of arms and armor of the Metropolitan Museum of Art and trustee of the museum, died suddenly in the Battle Creek Sanitarium on December 6, at the age of sixty-one years.

JOSEPH SILAS DILLER, geologist of the U. S. Geological Survey from 1883 until his retirement from active duty in 1924, has died at the age of seventy-eight years.

DR. ALEXANDER MAXIMOW, professor of anatomy in the University of Chicago, prior to the Russian revolution professor in St. Petersburg, died suddenly on December 3, at the age of fifty-four years.

DR. JOSEPH McDOWELL MATHEWS, of Los Angeles, formerly president of the American Medical Association, died on December 3, at the age of eighty-one years.

DR. ESAIAS H. W. TEGNER, a member of the Swedish Academy and a former professor of chemistry at the University of Lund, has died at Stockholm at the age of eighty-five years.

SIR HECTOR C. CAMERON, an authority on children's diseases, emeritus professor of clinical surgery at the University of Glasgow, died on November 22, at the age of eighty-five years.

DR. ARNALDO PIUTTI, professor of organic chemistry at the University of Naples, died at Conegliano, Italy, on October 19.

THE new library and assembly building of The Rockefeller Institute for Medical Research will be opened in December in time for the New York meetings of the American Association for the Advancement of Science. A new laboratory unit is also under construction and when completed will add nearly half again as much laboratory space as is now available.

THE educational exhibit displayed at the Electric and Radio Show at the Commercial Museum, Philadelphia, will be placed in the keeping of the trustees of the Smithsonian Institution, Washington. The exhibit includes kites and various experimental devices used by Marconi and the first radio receiving

set. It is owned by the Radio Corporation of America.

AN Associated Press dispatch reports that Dr. Fridtjof Nansen has left for Berlin, where he expects to meet Dr. Hugo Eckener, builder of the Graf Zeppelin, regarding a North Pole flight in 1930. Dr. Nansen has been chairman of a committee that has been planning for some time to make a flight from Europe to the United States by way of the Arctic regions, to determine the practicability of that route. It was announced on October 13 at Königsberg, Germany, that the airship used on such a flight would be commanded by Captain Walter Bruns, secretary general of the Society of Arctic Research.

THE U. S. Civil Service Commission announces the following open competitive examinations for the position of physical chemist (qualified in ferrous metallurgy) at a salary of \$3,800 a year and associate physical chemist (qualified in ferrous metallurgy) at \$3,200 a year. Applications must be on file with the commission at Washington, D. C., not later than January 16. The examinations are to fill vacancies in the Bureau of Mines, Department of Commerce, for duty in Washington, D. C., or in the field. The entrance salaries for these positions in the departmental service, Washington, D. C., are as indicated above. Higher-salaried positions are filled through promotion. For appointment outside Washington, D. C., the salary will be approximately the same. Competitors will not be required to report for examination at any place, but will be rated on their education, training and experience, and publications, reports or theses, to be filed by the applicant.

THE University of Denver was host to the Colorado-Wyoming Academy of Science which met on November 30 and December 1, under the presidency of Dr. Aven Nelson, of the University of Wyoming.

THE executive committee of the eastern section of the Seismological Society of America has accepted the invitation extended by the president of Fordham University, New York City, that the fourth annual meeting of the section be held under the auspices of that university, at a date to be announced later.

THE Pasteur Society of Central California held its fourth and final meeting of the calendar year at the Hotel Whitecomb, San Francisco, on December 4. Dr. John A. Marshall, professor of biochemistry in the college of dentistry of the University of California, spoke on "Dental Aspects of Deficient Diets." His paper was discussed by Dr. Nina S. Estill. Dr. T. D. Beckwith, associate professor of bacteriology of the University of California, spoke on the "Invasion

of the Periodontal Tissues by Bacteria." His paper was discussed by Miss Adrienne Williams and by Dr. W. C. Fleming. Forty-five new members were elected, bringing the total membership to 181.

THE South Dakota section of the department of chemical education of the American Chemical Society met at Mitchell from November 26 to 28, inclusive. "Content Plus Method in Teaching Science" was the general theme of the meeting. Papers dealing with this topic occupied the first two days. Industrial excursions were taken on the third, followed with a business luncheon. Officers elected for the coming year are: *President*, Carl G. Watson, Rapid City; *vice-president*, J. H. Clouse, Sioux Falls; *secretary-treasurer*, Ralph E. Dunbar, Mitchell; *executive committee*, A. L. Haines, Vermillion, and David L. Cook, Madison.

THE first meeting of the financial supervisory committee, appointed in accordance with the recommendations of the Imperial Agricultural Research Conference, 1927, to consider the establishment of further Imperial Bureaus and Correspondence Centers in connection with agricultural research has been held at the Dominions Office in London. The members were received by Mr. Amery, who announced that the governments of the Empire had accepted the principle of the establishment of these bureaus and centers, and the committee had now assembled to consider detailed schemes for their creation.

UNDER the auspices of the Istituto di storia delle scienze, an exhibit of apparatus, instruments and prints illustrating the history of the development of science will be held in Florence in 1929. The exhibit will be divided into five sections: natural sciences, medical and pharmaceutic sciences; mathematical, physical and chemical sciences; astronomical and geographic sciences and technology.

AN Associated Press dispatch reports that a gift of \$50,000 has been made to the Cuban Sanitation Department by President Machado, to be used in extension work at the Carlos Finlay Institute, which is named after the discoverer of the origin of tropical malaria in the female mosquito. The object of the donation is to start a movement in Cuba which would perpetuate the memory of Dr. Finlay.

THE Crane Pacific Expedition, financed and sponsored by Mr. Cornelius Crane, who accompanies the expedition, and under the scientific direction of the Field Museum of Chicago, set sail from Boston on November 16, for a year's cruise in the Pacific. The itinerary includes Hayti, Panama, Galapagos, Marquesas, Tahiti, Cook, Harvey, Fiji, the Solomons, the

New Hebrides, New Guinea, the Moluccas, Celebes, Borneo, Komodo, Lombok, Bali, Java, Singapore, Saigon, Bangkok, Canton, Formosa and Japan. Karl P. Schmidt, of the Field Museum, is scientific leader and herpetologist; Dr. Albert W. Herre, curator of the museum of zoology, Stanford University, is marine biologist and will also collect some plants; Dr. W. L. Moss, of Harvard University Medical School, will study anthropology, and take samples of blood for comparative studies; Walter A. Weber, of the Field Museum, is artist and ornithologist; Frank C. Wonder, also of the museum, is taxidermist; Sidney Shurtleff, of Boston, is photographer. Mr. Charles R. Peavy, of Mobile, Alabama, and Murray Fairbank, of Boston, friends of Mr. Crane, accompany the expedition. The expedition travels in Mr. Crane's brigantine yacht, *The Illyria*, just built and specially fitted for the purpose.

THE *Journal* of the American Medical Association reports that for the best articles on certain subjects, the Società Italiana di Oftalmologia will confer thirteen prizes. Among them, the following are the most important: the international Cirincione prize of 20,000 lire and two gold medals, to be bestowed for the best original article written in 1928 on any ophthalmologic subject, and a prize of 5,000 lire offered by the Ente per la profilassi delle malattie oculari, for the best monograph on the geographic distribution of trachoma. The latter prize is likewise of international scope and is open to the scientific men of all nations, provided they are under forty-five years of age and are not head professors of the scientific departments with which they are connected.

ACCORDING to information issued by the Bureau of Education the engineering schools of the United States offer 41 courses. Twenty of these courses are some form of engineering and 21 are allied subjects. The enrolments in the 20 engineering courses including graduate students are as follows: Electrical engineering, 20,210; civil, 14,073; mechanical, 11,273; chemical, 5,987; architectural, 3,256; mining and metallurgy, 2,143; industrial and commercial, 2,135; aeronautical, 614; general, 438; petroleum, 372; textile, 320; agricultural, 214; geological, 211; gas, 101; electro-chemical, 99; railway, 49; sugar, 44; sanitary and municipal, 33; marine, 16, and flour mill, 9. Of these 149 engineering colleges, there were 12 enrolling 1,400 or more students in 1927-28. The following institutions fall in this class: Georgia School of Technology, 1,596; University of Michigan, 1,593; Ohio State University, 1,546; University of Cincinnati, 1,565; Lehigh University, 1,510; Northeastern University, 1,471; Pennsylvania State College, 1,414;

Agricultural and Mechanical College of Texas, 1,441; Rensselaer Polytechnic Institute, 1,414.

A TRACT of more than 4,000 acres in the Coronado National Forest in Arizona has been set aside in its wild state in an effort on the part of the Forest Service to study the relationships between living things in the natural environment. G. A. Pearson, of the Forest Service, states that the tract will not be logged or grazed, but will be preserved in its natural condition. No effort will be made to increase its productivity, because in a managed forest the natural relationships between various factors are altered. It will not produce as much timber or as much forage as neighboring areas that have been placed under forest management. On it trees will live longer than in commercial forests which are cut before nature checks the growth of the trees and allows decay and insects to make way with the finished product. This natural area will be preserved so that foresters can study the ways of nature, learning how to work with rather than against her. This natural area will be an example of the natural processes of "waste," so far as direct usefulness to man is concerned, but it is believed that the lessons science can learn from such an area will lead to much greater gains elsewhere.

ACCORDING to the *Journal* of the American Medical Association, a continuous fall in the birth-rate of London since 1921 is shown in the annual report of the London County Council. Although the population has remained at about four and one half millions, the child population has decreased considerably, the proportion under 15 having fallen from 30 per cent. in 1901 to 26 per cent. at the last census. On the other hand, the proportion of persons over 35 has increased from 32 per cent. to 40 per cent. "There is no sign of arrest in the accelerated rate of decline in births," says the report, "and, assuming the present decrease both of births and of infantile mortality to continue until the next census, the children under 15 will then form less than 20 per cent. of the total population, while the proportion at higher ages will still further be increased. The effect of these changes in the age constitution of the population upon housing requirements in London is to increase the demand for tenement and part-houses." Assuming that the number of married and widowed women may be taken as a broad indication of the number of family units, there has, since 1901, been an increase in the number of units of over 110,000 in a practically stationary population." The births in London during 1927 numbered 73,263, as compared with 78,825 in the preceding year. The birth-rate was 16.1 per thousand, as against 17.1 for 1926 and 17.9 in 1925. The lowest birth-rate recorded in London was that for 1918, when the effects of the war were at their maximum. In that year there were

70,976 births, this being only 2,287 less than in 1927. In the last quarter of 1927 the births fell below the lowest number recorded for this quarter even during the war. The decrease in the number of births in London since 1921 has averaged about 4,000 annually. In 1901, when the population was about the same, the births exceeded those of last year by 57,829.

### UNIVERSITY AND EDUCATIONAL NOTES

THE University of Cambridge has been offered £50,000 by the British Exchequer and a further £50,000 from the Empire Marketing Board toward the sum required to enable the university to accept the conditional grant of £700,000 from the Rockefeller Foundation, to provide new facilities for the study of agriculture, biology and physics, and to build a new university library.

THE Imperial University Library, Tokyo, built by a gift of four million yen from Mr. John D. Rockefeller, Jr., has been dedicated, the American and British ambassadors and the minister of education participating. The building replaces that destroyed in the 1923 earthquake. It contains 600,000 volumes, largely gifts from America and Great Britain.

DR. RUTH WHEELER, professor of physiology and nutrition at Vassar College, has been appointed director of the Summer Institute of Euthenics at Vassar to succeed Professor Annie MacLeod, now dean of the college of home economics at Syracuse University.

PROFESSOR ANDREW HUNTER, of the University of Toronto, formerly on the faculty of Cornell University, has been appointed to the Gardner chair of physiological chemistry at the University of Glasgow.

DR. KARL HERMANN SCHEUMANN, of Berlin, has been called to a professorship of mineralogy and petrography at the University of Leipzig.

PROFESSOR A. FRAENKEL, of Kiel, has been invited to become the head of the Mathematics Institute of the Hebrew University of Jerusalem which was opened in October. He will begin his work in 1929. In the meanwhile Dr. Michael Fekete is the acting director of the institute.

### DISCUSSION AND CORRESPONDENCE ON THE GENERAL STANDING OF ENTOMOLOGISTS AMONG MEN OF SCIENCE IN EUROPE

IN past years the attitude of men of science towards entomology has not been all that we entomologists could have wished. While this fact has not driven many of us into an inferiority complex, it has been a condition that has not altogether pleased us. With

this thought in my mind, about a year ago I went into the library one day and spent an hour or so studying the records of the Royal Society of London and of the Académie des Sciences. I then wrote the three paragraphs that follow, and I am sure that they will be of interest to all biologists.

A very good way of judging the standing of entomologists among other scientific men from an early date to the present is to be gained by consulting the lists of members of the Royal Society. I have gone through the alphabetical list of the membership from 1663 to 1901, as published in the *Record of the Royal Society*, 1901. There are approximately 5,575 names in this list, and of these I recognize nineteen as entomologists. They are, in order, Valisnieri, 1703; Réaumur, 1738; Kirby, 1818; Spence, 1834; James Rennie, 1845; Lubbock, 1858; Siebold, 1858; Van Beneden, 1875; Salvin, 1875; MacLellan, 1877; Godman, 1882; Trimen, 1883; Meldola, 1886; Pickard-Cambridge, 1887; Poulton, 1887; Walsingham, 1887; Sharp, 1890; Miall, 1892, and Elwes, 1897.

With the new century, however, there seems to have been more or less of a change, much of it due to discoveries in medical entomology. Of the 450 living members recorded in the *Yearbook of the Royal Society* for 1927, there are thirteen names of men who have done work with insects. Of these, Ross (1901), Alcock (1901), Shipley (1904), Nuttall (1904), Pocock (1911), Newstead (1912), Graham-Smith (1919) and Christophers (1926) all probably owe their election to their work connected with medical entomology. The remaining five are Meyrick (1904), Dixey (1910), Rothschild (1911), G. A. K. Marshall (1923) and Tillyard (1925). Of these, of course, Marshall, as director of the Imperial Bureau of Entomology, and Tillyard, as entomologist of the Cawthron Institute in New Zealand and now of the Department of Agriculture of Australia, should be ranked in some degree as economic entomologists.

It would be difficult to get a better view of the relative standing of the sciences among the scientific men than that afforded by a cursory study of the list of members and correspondents of the Académie des Sciences of France. I have gone through this list and find that from 1795 to 1927 there were apparently 1,025 such members and correspondents, and the list covers the whole scientific world. Of these approximately 1,025 names, there are those of fourteen who have done work in entomology, but, of these, four, namely, Bouvier, Giard, Henneguy and Siebold, were surely elected more for their work in other fields of biological science. Of the remaining ten entomologists, it is interesting to note that four have been elected since the beginning of the present century, namely, Auebury, Lameere, Marchal and Simon.