

engaged in research at £6,000. These grants will be distributed by a committee of the privy council, on the recommendation of the advisory council, to promote the development of scientific and industrial research in the United Kingdom, and will be subject to such conditions as the committee may think necessary. The £1,000,000 grant in aid of industrial research will be paid to the account of the Imperial Trust for the encouragement of scientific and industrial research. The expenditure of the trust will be audited by the comptroller and auditor-general, but any balance remaining on the account will not be surrendered at the close of the financial year. Grants will be made by the directions of the committee of the privy council over an agreed period to approved trade associations for research, to supplement the funds of the associations, and payments in respect of such grants will not be liable to surrender by the grantees at the end of the financial year. We understood from Lord Crewe's remarks on December 1 that for the next five years or so about £200,000 a year would be available for scientific and industrial research, so that apparently the grant of £1,000,000 is the sum which is to be drawn upon for this purpose. The amount estimated for salaries, wages and allowances in the new department is £7,250, which includes £1,500 for the secretary and £850 for the assistant secretary. Travelling and incidental expenses are estimated to amount to £800.

#### SCIENTIFIC NOTES AND NEWS

THE annual meeting of the British Association for the Advancement of Science, arranged to be held at Bournemouth in September next, has been cancelled. The two main considerations which have led to this decision are the restriction of railway communication and difficulties of accommodation on account of buildings being required for various national purposes. There will probably be a meeting of the general committee of the association in London to receive reports and transact other business. The annual meeting

will therefore be intermitted for the first time in the history of the association since 1831.

ACCORDING to a cable from Paris received at Washington on March 29, the Gaudry prize has been awarded by the Geological Society of France to Dr. Charles D. Walcott, secretary of the Smithsonian Institution. This medal was established by the will of the late Professor Albert Gaudry.

PROFESSOR C. S. SHERRINGTON, Waynflete professor of physiology in the University of Oxford, has been elected a corresponding member of the Bologna Academy of Sciences.

PROFESSOR FREDERICK E. CLEMENTS has resigned the chair of botany at the University of Minnesota to accept a position with the Carnegie Institution of Washington.

PROFESSOR ALBERT SAUVEUR, professor of metallurgy and metallography of Harvard University, has been given leave of absence for the first half of 1917-18.

DR. J. F. ILLINGWORTH, professor of entomology, College of Hawaii, Honolulu, has been granted a leave of absence for three years, in order that he may carry on investigations for the Queensland government. His headquarters will be at Gordonvale, Cairns, North Queensland, in the midst of the sugar growing section. An experiment station is to be developed, primarily for the study of the grubpest, which is such a scourge in certain cane-growing areas.

It is announced that Mr. A. D. Hall has been appointed permanent secretary to the British Board of Agriculture in succession to Sir Sydney Oliver, K.C.M.G., now resigned.

PROFESSOR W. J. CROOK has resigned from the South Dakota State School of Mines to engage in practical work.

MR. ALESSANDRO FABBRI has been appointed to the post of research associate in physiology in the American Museum of Natural History.

SIR W. E. GARSTIN and Major-General Sir G. K. Scott-Moncrieff have been elected honorary members of the Institution of Civil Engineers of Great Britain.

DR. DOUGLAS W. FRESHFIELD, president of the Royal Geographical Society, has been

elected an honorary member of the Russian Geographical Society.

SIR ERNEST RUTHERFORD, professor of physics, University of Manchester, has been elected a member of the Athenæum Club for eminence in science.

At a recent meeting of the Royal Geographical Society the president (Mr. Douglas Freshfield) announced that the king had approved of the award of the Royal Medals for the present year as follows:

The Founders' Medal to Commander D. G. Hogarth, for his explorations and other geographical work in Asiatic Turkey, 1887-1911.

The Patrons' Medal to Brigadier-General Rawling, for his explorations in western Tibet and Rudok, 1903; his journey from Gyanste to Simla via Gartok, and his exploration in New Guinea, 1908.

The Victoria Medal is awarded to Dr. J. Scott Keltie for his eminent services to geography during his secretaryship of the society.

The other awards are as follows:

The Murchison grant to Rai Bahadur Lal Singh for his devoted work as surveyor to the expedition of Sir Aurel Stein.

The Back grant to the Rev. Walter Weston for his travels and explorations in the Japanese Alps—a district previously unknown to Europeans.

The Cuthbert Peak grant to Dr. A. M. Kollas for his explorations and ascent of new peaks in Sikkim and his investigation of the effects of high altitude.

The Gill Memorial to Mr. E. C. Wilton for his geographical work in southwestern China.

MR. HUBERT JARVIS, assistant entomologist of Queensland, made a trip to Hawaii during February. In spite of the brief time that Mr. Jarvis spent in the islands he was very successful in his mission, which was the securing of a considerable stock of the lantana *Agromyzid* flies for his government. The signal success of these flies in Hawaii, in preventing the seeding of this most troublesome weed, has led other countries to seek similar relief. This *Agromyzid*, which apparently is an unnamed species, was introduced into the Hawaiian Islands by Mr. Albert Koebele, many years ago.

THE directors of the Fenger Memorial Association have made a grant of \$400 to Pierce

McKenzie for support of chemical and other work under the direction of Dr. E. R. LeCount. He will study the brain and other tissues from cases of heat stroke in order to determine, if possible, better than now known, the cause of the high temperature in this condition.

THE Lane Medical lectures at Stanford University for the year 1917 will be delivered by Dr. Simon Flexner, director of the laboratories of the Rockefeller Institute for Medical Research, during the week beginning on October 8. There will be five lectures in all and they will be given on consecutive evenings, at 8 o'clock. The subject of the series will be: "Physical Basis and present Status of Specific Serum and Drug Therapy."

PROFESSOR MARTIN H. FISCHER, of the University of Cincinnati, addressed the New York Section of the Society of Chemical Industry, on April 13, on "Some Technical Aspects of Colloid Emulsion Chemistry."

ON March 20 Dr. David D. Whitney, of the University of Nebraska, delivered an address before the Science Club of the Kansas State Agricultural College on "The Determination of Sex." This address is the first of a series of addresses on scientific subjects of popular interest planned by the club this spring.

DR. ALEXANDER SCOTT, the retiring president of the British Chemical Society, delivered an address entitled "The Atomic Theory" at the annual meeting on March 29.

SIR J. WOLFE BARRY will deliver the "James Forrest" lecture before the British Institution of Civil Engineers on May 2, taking as his subject, "The Standardization of Engineering Materials and its Influence on the Trade and Prosperity of the Country."

LECTURES to be given at the Royal Institution, London, include two by Professor C. S. Sherrington, on "Tetanus: Its Prevention, Symptoms and Treatment," and on "Rhythmic Action in Muscle and in Nerve." Professor D'Arcy W. Thompson will give two lectures on laws of growth and form; and Professor William Bateson two on "Heredity." Among the Friday discourses will be one on the organs of hearing in relation to war by

Dr. Dundas Grant, another on the complexity of the chemical elements by Professor Soddy, and one on breathlessness by Mr. J. Barcroft.

A MEMORIAL tablet to the late Sir William Huggins and Lady Huggins, executed by Henry Pegram, has been placed in the crypt of St. Paul's Cathedral, and was unveiled on March 29. The president of the Royal Society and the president of the Royal Astronomical Society were the speakers.

DR. JOHN K. MITCHELL, noted as a neurologist and author, died at Philadelphia on April 10. He was fifty-seven years old, and was a son of the late Dr. S. Weir Mitchell.

THE death is announced of Professor Angelo Battelli, the distinguished Italian physicist. He was born at Macerata Feltria (Pesaro) in 1862, and held chairs successively at Cagliari, Padua and Pisa. He was a member of the Chamber of Deputies.

DR. H. F. E. JUNGENSEN, professor of zoology in the University of Copenhagen and director of the department of vertebrates in the university museum, died on February 6, aged sixty-three years.

J. RIEDINGER, professor of orthopedics at the University of Würzburg, has died at the age of fifty-two years.

THE death is also announced of G. Argento, professor of surgery at the University of Palermo, aged seventy. He took a prominent part in public health matters and the hygiene of the hospitals throughout Sicily.

It is reported from San Antonio that there is widespread infection from hookworm among the troops from Alabama, Mississippi and Texas, but that the disease is now under control.

At the recent St. Louis conference of agricultural experts looking to production of greater crops as an emergency measure, it was recommended that the congress appropriate \$25,000,000 for use by the Secretary of Agriculture in such a campaign. Because of the world shortage of food, it is scarcely possible that the production of staple crops by the farmers of the United States can be too great

this year, and it is recommended that boys under military age and men beyond the age and those physically disqualified should be enrolled in the national army for labor and production of food, munitions and supplies. Other recommendations are for creation of an agricultural body under the Council of National Defence to supervise agricultural matters and for the vesting of wide authority in the secretary of agriculture to regulate and standardize food production and distribution. The subcommittees and their chairmen were: Production and Labor, Dr. Henry J. Waters, president of Kansas State Agricultural College; Distribution, Clarence Ousley, of Texas; Organization, President W. O. Thompson, of Ohio State Agricultural College; Economy, J. M. Hamilton, of Montana.

THE report of the Philosophical Institute of Canterbury, New Zealand, for the year 1916, as abstracted in *Nature*, records that the council has recognized the importance of furthering the national movement to advance scientific research and extend the application of scientific knowledge. Addresses on "Education and our National Requirements" and "The Importance of Research to Industry and Commerce," by Mr. G. M. Thomson and Professor T. H. Easterfield, respectively, were arranged with these ends in view. In order that matters connected with research and the chemical application of science should be constantly watched, the council set up a special committee, with Dr. C. C. Farr as honorary secretary. The New Zealand Board of Industries, having invited the institute to send delegates to confer with the board on matters affecting post-war reconstruction, the council appointed the president, with Dr. Farr and Dr. Hilgendorf, to act. Application has been made for part of the £250 granted by the government for research; and investigations are being arranged on the phosphate rocks of Canterbury, the deterioration of apples in cold storage and the electrical prevention of frosting in orchards.

MR. CHARLES BAILEY, formerly connected with the firm of Messrs. Ralli Brothers in Manchester, has presented his herbarium of

British and foreign plants to the University of Manchester. The acquisition of this collection added to the existing herbarium of the Manchester Museum, and more particularly to the large and valuable collection of non-European plants presented to the university in 1904 by Mr. Cosmo Melvill when he retired from business in Manchester, places the university among the foremost of British institutions in respect of this necessary instrument of botanical study and research. The comprehensiveness of the collection may be gathered from the fact that the British portion contains no less than 87,000 separate sheets of mounted plants, while the European portion amounts to 295,000 sheets. Mr. Bailey has made generous provision for the cost of transference of his herbarium to Manchester, and also towards the expenses of completing the mounting of the specimens, so that it may be available for study and reference.

ANNOUNCEMENT is made of the establishment for the year 1917-18 in Nela Research Laboratory, National Lamp Works of General Electric Company, of two fellowships in physical research to be known as the "Charles F. Brush Fellowships." One fellowship, extending over the nine-month period of the academic year 1917-18 carries with it an honorarium of \$600 and is open to men who have either completed a course of graduate work leading to the doctorate degree or who have had equivalent work, particularly in original research. The other fellowship, extending over the three-month summer period of 1917, carries with it an honorarium of \$200, and is open to men who, having completed their academic work, and having begun to teach, desire to spend a summer in original research in Nela Research Laboratory. These fellowships are offered for the coming year through the generosity of Mr. Brush who desires thereby to stimulate interest in industrial physics and to make it possible for young men to undertake research work in physics in the environment of an industrial plant. The Nela Research Laboratory will provide space and all necessary facilities, and will have general supervision over

the investigations, which must be consistent with the normal activities of the laboratory. Candidates for these fellowships are requested to apply to the director, Nela Research Laboratory, Nela Park, Cleveland, Ohio.

THE State Microscopical Society of Illinois has adopted the following resolution:

*Resolved*, That the State Microscopical Society of Illinois hereby approve the representations made on its behalf by our Mr. Henry F. Fuller at the federal hearing on the subject of the proposed Dunes Park, on October 20, 1916, stating the attitude of this society in favor of such establishment; and now, since an interested and active opposition to the proposal has been developed in certain quarters from land speculators, be it further

*Resolved*, That this society most earnestly urge upon the United States Department of the Interior, upon the United States Congress, soon to be in session, and upon the senators and representatives from Illinois and Indiana in particular, the prompt passage of a bill for the establishment of the Sand Dunes region on the southern shores of Lake Michigan as a United States national park; with provision for its proper maintenance, that this rare and wonderful bit of nature so close to the great centers of population may be preserved for our own and coming generations as a place for study and for recreation, a sanctuary of safety for the birds and beasts and insects, the flowers and trees, and all the wild free life of field and brook and forest and beach forever.

ALBERT MCCALLA, *Chairman*,  
HENRY F. FULLER,  
LESTER CURTIS, M.D.

THE Ecological Society of America has issued a handbook giving information relative to the scientific activities, travels, field and instrumental experience, laboratory and experimental work, and taxonomic specialties of the 307 members of the society. Copies can be secured by addressing the secretary-treasurer, Dr. Forrest Shreve, Tucson, Arizona.

THE completed laboratory building and plant houses of the Brooklyn Botanic Garden will be dedicated on April 19-21. There were planned formal exercises followed by a reception on Thursday evening, the 19th, sessions for the reading of scientific papers on Friday morning and afternoon, and on Saturday morning;

a popular scientific program on Friday evening, and a conference on Saturday afternoon with teachers in Brooklyn schools to consider how the Botanic Garden may become most useful to the schools in connection with their teaching of botany, nature study and geography. About fifty papers have been offered for the scientific programs. The principal address on Thursday evening was delivered by Professor John M. Coulter.

THE D. O. Mills Expedition to the Southern Hemisphere, sent from the Lick Observatory and maintained at Santiago, Chile, for a number of years past by recurring gifts from the late D. O. Mills and Mr. Ogden Mills, is now to be continued for another five years, subscriptions for this purpose of one thousand dollars per annum each having been made for five years by Mr. Ogden Mills, Mr. William H. Crocker, Mr. F. W. Bradley, Mr. A. B. Spreckles and Mrs. William H. Crocker, and of one thousand dollars each for 1917-18 by Mr. W. B. Bourn and Mr. Gordon Blanding.

WE learn from *Nature* that the agricultural institute of Alnarp proposes to devote a plot of its land and about £4,000 to the erection of a building for studies in heredity, under the direction of H. Nilsson-Ehle, the recently appointed professor at Lund. It will also provide a maintenance grant of £200 per annum. It is felt that such studies are of the greatest importance at this time, when Sweden is thrown on its own resources in the matter of food production, and the institute is convinced that any material sacrifices it may make for this purpose will be more than repaid by the economic results of the research, on which the institute will naturally have the first claim.

#### UNIVERSITY AND EDUCATIONAL NEWS

THE new laboratory for chemistry at the University of Cincinnati was opened on April 7. The ceremonies took place at McMicken Hall, Judge Rufus B. Smith presiding. Mr. Emil Pollak made the formal presentation of the building. Dr. Lauder W. Jones replied on behalf of the department of chemistry, Dr.

John Uri Lloyd on behalf of the American Chemical Society. The main address was made by Dr. Chas. E. Herty, who spoke on "The Swing of the Pendulum in Chemistry." A dinner, arranged by the Cincinnati Section of the American Chemical Society, was given at the Gibson.

THE valuable engineering library of the late Robert Gillhan, of Kansas City, Mo., has been donated by his sister-in-law, Mrs. Albert Marty, to Drury College, Springfield, Mo. Among the collection of books are complete files of the chief engineering journals of America, handsomely bound in three-quarter Russian.

SEVERAL teaching fellowships in anatomy (including histology and embryology) and physiology (including physiological chemistry) have been authorized in the University of Minnesota, Minneapolis. These fellowships are renewable for a three years' term, with successive annual stipends of \$500, \$600 and \$700, and lead to the degrees of M.A. and Ph.D. in the graduate school.

THE trustees of Toledo University in special meeting on April 10 refused to accept the resignation of Professor Scott Nearing, dean of arts and sciences, formerly of the University of Pennsylvania.

THE necessary alterations have been made to enable the department of anatomy at University College, London, to be opened for the reception of women medical students next October.

THE George Washington University Medical Society, composed of the alumni and faculty of the medical school, at a recent meeting elected Dr. W. Ashby Frankland, president; Dr. Coursen B. Conklin, vice-president; Dr. Thomas Miller, secretary, and Dr. Edward G. Seibert, treasurer.

DR. WILLIAM DUANE, physics, and Dr. Walter F. Dearborn, psychology, have been promoted to full professorships in Harvard University.

DONALD FRASER McLEOD, assistant professor of civil engineering at the University of Mis-