

animals for a study of anterior-hypophyseal activity and effects.

Professor Rachel E. Hoffstadt, the University of Washington, \$250, in further support of a study of the virus of infectious myxomatosis of rabbits and of related viruses.

Professor Norton A. Kent, of Boston University, \$500, for assistance in further measurements of the wavelengths of molecular spectra of hydrogen isotopes.

Professor Donald H. Menzel, the Harvard Observatory, \$950, toward the cost of fabrication of an electric coronagraph of original design, for the study of the solar corona outside of total eclipse.

Dr. John Rock, the Free Hospital for Women, Brookline, Mass., and Dr. Austin H. Brues, Harvard Medical School, \$1,000, for continuation of a study of the electrical disturbances associated with human ovulation, and attempt to recover, fertilize and culture human ova.

Felix Saunders, the University of Chicago, \$200, for materials to continue studies of the relation between configuration of carbohydrates and their utilization by bacteria.

Professor Joseph H. Simons, the Pennsylvania State College, \$500, for technical assistance in continuing a study of the physical and chemical properties of the fluorocarbons.

Dr. Irwin W. Sizer and Dr. Bernard S. Gould, the Massachusetts Institute of Technology, \$300, toward the cost of a Barcroft-Warburg apparatus in a further study of bacterial dehydrogenase.

Professor Carl G. Vinson, the University of Missouri, \$500, for special apparatus for use in further investigations of active crystalline virus fractions.

Income from the Permanent Science Fund of the American Academy of Arts and Sciences, according to agreement and declaration of trust, shall be applied to such scientific research as shall be selected, in "such sciences as mathematics, physics, chemistry, astronomy, geology and geography, zoology, botany, anthropology, sociology and economy, history and philology, engineering, medicine and surgery, agriculture, manufacturing and commerce, education and any other science of any nature or description whether or not now known or now recognized as scientific; and may be applied to or through public or private associations, societies, or institutions, whether incorporated or not, or through one or more individuals."

Applications for grants under this indenture are considered by a committee of the academy on stated dates only. The next such meeting will be to consider applications received in proper order on blank forms furnished by the committee on October 1. Corre-

spondence, including requests for application forms, should be addressed to the chairman of the committee on the Permanent Science Fund, Professor John W. M. Bunker, Massachusetts Institute of Technology, Cambridge, Mass.

COLLOID CHEMISTRY AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

THE fifteenth Colloid Symposium of the Division of Colloid Chemistry of the American Chemical Society is being held at the Massachusetts Institute of Technology on June 9, 10 and 11. An attendance of five hundred is expected. Twenty-five reports from leading college and industrial laboratories are to be presented.

Dr. Karl T. Compton, president of the Massachusetts Institute of Technology, delivered the opening address on Thursday morning. The first scientific paper was presented by Dr. Wolfgang Ostwald, of the University of Leipzig. His subject was "Colloid Coagulation and Electrolyte Activity."

Among those who are taking part in the symposia are: Dr. Wanda K. Farr, of the Boyce Thompson Institute for Plant Research; Professor William D. Harkins, of the University of Chicago; Professor James W. McBain, of Stanford University; Professor Arthur W. Thomas, of Columbia University; Dr. Alfred J. Stamm, senior chemist of the U. S. Forest Products Laboratory, Madison, Wis.; Dr. Maurice L. Huggins, of the Eastman Kodak Company, Rochester, N. Y.; Professor Wesley G. France, of the Ohio State University; Dr. Harry B. Weiser, of the Rice Institute, Houston, Texas, chairman of the Colloid Symposium Committee; and Professor Warren K. Lewis and Dr. Ernst A. Hauser, of the Massachusetts Institute of Technology. Dr. Hauser is secretary of the Colloid Division.

Following the symposium, the third special summer program in theoretical and applied colloid chemistry and physics will be opened on June 13 at the Massachusetts Institute of Technology under the direction of Dr. E. A. Hauser, associate professor of chemical engineering. This is offered to men actively engaged in industry or in research. It will last for five weeks and will consist of lectures, round table discussions and laboratory investigations. Guest speakers from various industries, as well as experts in the field of colloid chemistry and physics, will address the group during the course.

SCIENTIFIC NOTES AND NEWS

DR. VANNEVAR BUSH, vice-president and dean of engineering of the Massachusetts Institute of Technology, was elected on June 2 president of the Carnegie Institution of Washington, the appointment to

take effect on January 1, 1939. He succeeds Dr. John C. Merriam, who was elected president in 1921 and will become president emeritus.

A DINNER in honor of Dr. Ross G. Harrison, since

1927 Sterling professor of biology at Yale University, who will retire from active teaching at the end of the academic year, was given on May 29 at the Obsorn Zoological Laboratory, of which he is director. Dr. Harrison has served as a member of the faculty for thirty-one years.

At the annual commencement of Columbia University on June 1 the honorary doctorate of science was conferred on Alfred Chester Beatty, London, mining engineer; on Gano Dunn, electrical engineer, president of J. G. White and Company, Incorporated, New York City, and on Thomas Parran, Jr., surgeon general of the U. S. Public Health Service.

THE degree of doctor of laws was conferred on June 4 by the University of Maryland on Dr. Gilbert H. Grosvenor, president of the National Geographic Society.

FRANKLIN AND MARSHALL COLLEGE at its commencement on June 1 conferred the degree of doctor of science on Dr. Robert Franklin Mehl, director of the Bureau of Metallurgical Research at the Carnegie Institute of Technology, Pittsburgh.

At the seventy-seventh annual commencement of the Louisiana State University the doctorate of science was conferred on Dr. Lee A. Strong, chief of the Bureau of Entomology and Plant Quarantine of the U. S. Department of Agriculture.

THE honorary degree of doctor of engineering was conferred at the commencement exercises on May 27 of the Colorado School of Mines on Director William R. Chedsey, of the Missouri School of Mines and Metallurgy "for distinguished service in engineering education."

THE University of Oxford will confer the honorary doctorate of science on Dr. Geoffrey Ingram Taylor, Yarrow research professor of the Royal Society.

At the seventy-fifth annual commencement at the Kansas State College on May 30 honorary degrees were awarded as follows: *Doctor of science*—Miss Lita Bane, head of the department of home economics, University of Illinois; Ula May Dow, of the class of 1905, head of the department of foods, Simmons College; David Fairchild, of the class of 1888, formerly in charge of Foreign Seed and Plant Introduction, U. S. Department of Agriculture; Merritt F. Miller, dean-elect of the College of Agriculture, University of Missouri; and William A. Hagan, of the class of 1915, dean of the New York State Veterinary College; *Doctor of engineering*—William L. Enfield, of the class of 1909, manager of the Edison Laboratories at Nela Park; *Doctor of laws*—William M. Jardine, formerly Secretary of Agriculture, and now president of the University of Wichita.

THE Isaac Adler Prize of \$2,000 for 1938 has been awarded by Harvard University to Dr. Wendell M. Stanley, of the Rockefeller Institute for Medical Research, Princeton, N. J., for his work on the isolation of crystalline forms of the filterable viruses. The Adler Prize was founded in 1934 by a bequest of \$20,000 made by Mrs. Frida Adler, of New York City, in memory of her husband.

PROFESSOR E. T. BELL, of the California Institute of Technology, has been awarded the gold medal of the Commonwealth Club of California for his book entitled "Men of Mathematics." The medal is awarded for "the best scholarship and research work published during 1937."

ZETA BETA TAU, national college fraternity, has awarded the New Orleans Trophy for 1938 to David Dietz, science editor of the Scripps-Howard Newspapers, in recognition of his newspaper writings during 1937. The trophy has been awarded annually since 1931 to "the member of the fraternity whose record for the past year is most outstanding."

THE Lister Medal for 1939, which is awarded in recognition of distinguished contributions to surgical science, has been granted to Professor René Leriche, professor of clinical surgery in the University of Strasbourg. He will deliver the Lister Memorial Lecture in 1939 at the Royal College of Surgeons of England. This is the sixth occasion of the award, which is made by a committee representative of the Royal Society, the Royal College of Surgeons of England, the Royal College of Surgeons in Ireland, the University of Edinburgh and the University of Glasgow.

DR. EUGENE F. DuBOIS, professor of medicine at the Cornell University Medical College, New York City and physician-in-chief at the New York Hospital, was elected president of the Association of American Physicians at the recent Atlantic City meeting.

At the annual meeting of the Mining Association of Great Britain, held in London recently, Sir Evan Williams was reelected president for the twentieth successive year.

PROFESSOR HENRY R. FRANCIS, of the New York State College of Forestry at Syracuse University, has resigned after serving for twenty-four years.

DR. EARL C. MCCracken, assistant professor of physics at the Iowa State College, has been appointed head of the department of physics at Teachers College, Columbia University. He has been a member of the Iowa State College staff for fifteen years.

DR. WILLIAM MASON HALE, who has been on leave of absence from the department of bacteriology of

Yale University, has been appointed professor and head of the department of bacteriology of the College of Medicine of the State University of Iowa.

DR. LELAND WILBUR PARR, bacteriology, and Dr. Benjamin Douglass Van Evera, chemistry, have been promoted to full professorships in the George Washington University.

DR. RALPH P. AGNEW, who has since 1925 been associated with the department of mathematics of Cornell University, has been promoted to a professorship in mathematics, not in physics, as stated in a recent issue of SCIENCE.

PROFESSOR H. H. READ has been appointed from January 1, 1939, to the university chair of geology tenable at the Imperial College of Science and Technology, University of London. Since 1931 he has been George Herdman professor of geology in the University of Liverpool.

THE Peiping Union Medical College has announced the appointment of Dr. I. Snapper to its chair of medicine. Dr. Snapper, who has been professor of medicine in the University of Amsterdam and director of the clinic for internal medicine in the Wilhelmina Hospital since 1919, expects to arrive in Peiping for the opening of the college session in September.

DR. ALEŠ HRDLÍČKA, of the Smithsonian Institution, left Washington on May 26 for his seventh expedition to Alaska and the Aleutian Islands.

DR. HARRY PLOTZ, of the Pasteur Institute, Paris, arrived in New York City on May 30 and attended the twenty-fifth reunion of his class at the College of Physicians and Surgeons of Columbia University. He will spend the summer here, working in laboratories and visiting friends. Dr. Louis Martin, director of the Pasteur Institute, who has been visiting the United States, sailed for France on June 1.

DR. SIGMUND FREUD, founder of psychoanalysis, who is now eighty-two years of age, has left Vienna and has gone to London. According to press reports, Dr. Freud was allowed to take his manuscripts with him, but his other property has been confiscated.

DR. F. C. MANN, director of the Institute of Medical Research of the Mayo Foundation, has been invited by the Royal College of Surgeons, London, to deliver a special lecture in July of this year on "The Aetiology of Peptic Ulceration."

DR. A. C. CHIBNALL, of the University of London, will give the Silliman Lectures at Yale University, beginning on October 12. His subject will be "Metabolism of Protein in the Green Plant." Dr. Richard Goldschmidt, director of zoology at the University of California, has been appointed Silliman lecturer for

the year 1939-40. The series, the title of which is not yet announced, will begin on December 4.

DR. ARTHUR H. COMPTON, professor of physics at the University of Chicago, will deliver the commencement address at the forty-fifth annual graduation exercises of the Drexel Institute of Technology, Philadelphia, on June 20. Dr. Compton will take as his subject "Some Implications of Science."

DR. DAVID RIESMAN, professor of the history of medicine of the University of Pennsylvania, delivered the Shattuck lecture before the Massachusetts Medical Society on May 31. The subject of the lecture was "American Contributions to Nosography."

THE first session of the council at the Ottawa meeting of the American Association for the Advancement of Science will be held at 2 P. M. on Monday, June 27, in the Tudor Room of the Chateau Laurier. Subsequent sessions of the council will be held in the same room at 9 A. M. on days to be determined at the first session. The business to be placed before the council is normally first presented to the executive committee for its consideration and recommendation. If there are any matters of general policy or wide interest that members desire to present to the council, they should be transmitted, if possible, before the meeting, to the permanent secretary, Dr. F. R. Moulton, Smithsonian Institution Building, Washington, D. C.

THE International Astronomical Union will meet at Stockholm from August 3 to 10. The preliminary announcements state that owing to the large number of tourists visiting Stockholm in August it will be advisable for members to reserve their lodging through the intermediary of the local committee. The Swedish railways will give members a reduction of 25 per cent. on railway tickets in Sweden. The Swedish Lloyd Company gives members a reduction of £1 on first-class return tickets from London to Göteborg.

THE International Conference on New Theories in Physics opened in Warsaw on May 30 under the auspices of the International Institute of Intellectual Cooperation of the League of Nations. Delegates from ten countries were in attendance. Those from the United States included Professor Samuel A. Goudsmit, of the University of Michigan; Professor John von Neumann, of Princeton University, and Professor Eugene P. Wigner, of the University of Wisconsin.

A GROUP of college teachers of geology from Beloit, Coe, Cornell, Knox, Drury and Augustana Colleges met recently at Augustana College to discuss problems of common interest. After a day of meeting, the group organized under the name of the "Association of College Geology Teachers." The following officers were elected: *President*, Dr. F. M. Fryxell, Augustana

College; *Vice-president*, Dr. Miner, Cornell College; *Secretary-treasurer*, Professor Edward L. Clark, Drury College. The next meeting will be held in the autumn under the auspices of Cornell College, with Dr. Miner as host. Dr. W. H. Norton, of Cornell College, professor emeritus, will be a special guest of the meeting. It is hoped that all colleges offering major study in geology will find it possible to send representatives to this meeting.

FROM Library of Congress originals, under the editorial direction of Colonel Lawrence Martin, chief of the division of maps in that institution, the United States Constitution Sesquicentennial Commission is publishing a series of maps depicting the thirteen original States from New Hampshire to Georgia at the time of the formation of the Constitution. There will be at least 18 maps in the series, including Maine, Kentucky and Tennessee (formerly portions of Massachusetts, Virginia and North Carolina, respectively) as well as two maps of the United States of that period. These maps are printed in brown and red, or in brown and green, or in black and green, on sheets twenty inches by twenty-six. It is understood that these colored maps are sold for ten cents a sheet, or eighteen maps for \$1.50. The maps show the roads, the mineral resources, the mills, the cities, villages, counties and other evidences of administrative control that existed in the United States 150 years ago. The commission is also preparing a series of simplified, black-and-white maps which appear in newspapers. For information regarding the distribution of these maps, those interested should write to The United States Constitution Sesquicentennial Commission, Washington, D. C., Sol Bloom, Director General.

MORE than 58,000 plants, collected in all parts of the world, were received during the academic year 1936-1937 at the Gray Herbarium of Harvard University. Of these, more than 32,000 mounts were added to the organized collection, bringing the number of specimens to about 950,000. The collection of North and South American flora represents more than a hundred years of continuous, carefully directed growth. Field parties went out from the herbarium during the year to make collections in Virginia, Cuba, Canada and Alaska. Collections were received in the course of the year from the following foreign countries: Cuba, Colombia, Costa Rica, Brazil, the Aleutian Islands, Jamaica, Mexico, Quebec and Ontario. In the same period, 265 series, amounting to 26,732 duplicates, were sent in exchange to 90 herbaria in 22 different countries, and 68 loans of about 6,000 technically important specimens were sent to specialists in this country, Argentina, Great Britain, Germany, Holland and Sweden.

THE *London Times* states that the Grand Council of the Federation of British Industries has decided to support the proposals of the Advisory Council of the South Kensington Science Museum for the substantial development of the museum, and a letter has been sent on behalf of the federation to the president of the Board of Education supporting the Advisory Council's recommendations. In 1910 a committee appointed by the government recommended the erection of three blocks for the museum, but it was not until 1928 that the block which at present houses the Science Museum was completed. The Advisory Committee now considers that the 1910 proposals are not adequate and recommends that the whole of the site bounded by the eastern wall of the existing museum, and by Exhibition Road, Imperial Institute Road and Queen's Gate, be finally allocated to the Science Museum.

THE *Bulletin* of the American Society for Testing Materials reports that a Federal laboratory for the testing of materials is being established in Caracas, by the Minister of Public Works, Venezuela. It will provide for Venezuela a laboratory functioning much as does the National Bureau of Standards or the British National Physical Laboratory. This laboratory is now virtually complete and most of the equipment, of which the larger part was supplied by firms in the United States, is installed. A new building, single story, of modernistic design has been built to house this equipment. Offices for personnel are provided and plans are being made for the acquisition of data on strengths and other properties of materials found in Venezuela.

THE *London Times* reports that the King Edward Hospital Fund for London has purchased a special car for the conveyance of radium in connection with the Central Radium Pool which it has established for the benefit of London hospitals. Although never more than a gram of radium will be carried, the car has a specially designed safe, surrounded by 2 cwt. of lead, to protect the driver. Every day portions of the radium, which is lodged at the Middlesex Hospital, will be carried from one hospital to another as required.

A COMMITTEE of study on the determination of molecular and atomic weights of gases through physico-chemical methods assembled on December 17 and 18 in Neuchâtel. It was organized by the International Institute of Intellectual Cooperation assisted by the International Council of Scientific Unions and by the International Unions of Physics and Chemistry. Two reports were the basis of the discussion, the first on the method of limiting-pressure, established by Professors Whytlaw-Gray and Cawood, the second on the method of limiting-densities, established by Professor E. Moles. Professor Jaqueroed presided over the assembly, which was attended by Professors Whyt-

law-Gray (Leeds), Moled (Madrid), Lepape (Paris), Klemene (Vienna), Timmermans (Brussels), Keesom (Leyden) and Cawood (Leeds). The committee called attention to the international features of the laboratories of Leeds (Whytlaw-Gray) and of Madrid (Moles), owing to the results they obtained, as well as to their equipment and specialization of their staff.

The reports will be published by the International Institute of Intellectual Cooperation. At the assemblies of the committee to be held during the present year, the following questions will be discussed: "New Vitamines"; "Nomenclature of Genetics"; "New Theories of Modern Physics"; "Coordination of Scientific Terminologies" and "The Double Electric Couch."

DISCUSSION

AN INVITATION TO TEACHERS OF SCIENCE

A BRIEF account of the first meeting of the committee appointed by the American Association for the Advancement of Science to consider the improvement of science in general education has already appeared in *SCIENCE*, May 20. This report was prepared by Professor Caldwell, as chairman of the older committee on The Place of Science in Education, which has sponsored this newer committee, and which assisted in its organization at Columbus on April 30 and May 1.

The new committee will require the active cooperation of many teachers of science at the college and university level if it succeeds in unearthing the information with the discovery of which it has been charged. It is hoped that such cooperation will be stimulated by a brief statement of the present objectives.

It is generally agreed that the training of professional scientists has reached a high degree of effectiveness in the United States. But there is increasing evidence, from many quarters, that the present contribution of science to the general education of the bulk of our citizens is not what it should be. To analyze this problem, to secure adequate information about what is already being done to improve matters and to develop a program of investigation which will lead to more wide-spread improvement, is the task of this committee. More immediately, the committee has at its disposal sufficient funds to enable it to do preliminary work, in the hope that by the middle of 1939 a program of sufficient value to warrant further support can be developed and presented.

To accomplish this preliminary work effectively the widest cooperation from the scientific professions is necessary, and it is the purpose of this note to invite such assistance. Waiving any less direct considerations and placing the matter on the plane of enlightened self-interest, this cooperation ought to have a very practical outcome. For example, scientific work was the first to feel the pressure of retrenchment a few years ago, just when it should have been extended. With a public more adequately aware of the value of science there would be less danger of the repetition of such folly. There are other considerations of a more serious kind, but this one should suffice.

We have decided as our first step to invite the co-

operation of individuals and societies as well as of teaching departments and divisions in our work. In carrying forward our preliminary work we should like to have submitted to us a detailed and precise statement of the aims that individuals, departments or institutions are seeking to achieve in general science courses in so far as these go beyond preparation for technical and vocational training.

It should perhaps be mentioned that techniques have been developed to measure with considerable accuracy the degree to which any explicit aims are achieved by teaching. It is hoped that eventually the committee may be able to place facilities for such evaluation at the disposal of those who are interested. But obviously the first task is that of acting as a center for comparing and finding the common factors in the various objectives in science teaching for general education, taking due cognizance of the wide variation in local conditions and searching, for whatever common aspects there may be back of all this inevitable variety.

In addition, information as to studies already under way towards the coordination of science instruction, syllabi, special instructional methods including visual education, testing and teacher preparation, will be welcomed.

Such material may be sent directly to the chairman of the committee or to any of its members.

Tentatively the committee has phrased its immediate task as follows: "In connection with a preliminary survey, to request information concerning experimental modifications of general courses in the sciences at college level. A general course is defined as a course open to students without college prerequisites, which utilizes material from a considerable portion of the science in question; which should make a contribution to the general education of the student; and which is not primarily a preparation for further work in the subject."

L. W. TAYLOR,
Chairman

OBERLIN COLLEGE

R. W. TYLER,
Vice-chairman

OHIO STATE UNIVERSITY

A. C. KINSEY,
Secretary

INDIANA UNIVERSITY