

men intimately acquainted with local problems. It is understood that greatly reduced fares will be available on the transcontinental railways, and that local accommodations, both in Berkeley and on the excursions, will be provided at moderate cost. Plans should be made soon. A circular with more complete detail will be available shortly. Only one other meeting of somewhat similar character in the history of the society has been held in California. This was held at Berkeley and at Stanford University in August, 1915. One point of present interest in the record is the fact that the number of fellows attending was almost equally distributed between the Atlantic seaboard, the central region and the Pacific coast, with the advantage to the East coast. The Paleontological Society, the Seismological Society of America and the Society of Economic Geologists expect to meet in Berkeley at the same time.

Because of overlapping time, attention is called to the announcement of the Pan-Pacific Science Congress, which will hold meetings in the San Francisco Bay Region in July and August (Berkeley, from July 24 to August 5, and Stanford, from August 6 to 12). To avoid conflict no geological program will be arranged by the congress on August 8, 9 and 10, in order that those attending may participate in the Geological Society meetings. The excursions arranged for these meetings will also be made available to registrants of the Science Congress.

The Geological Society calls special attention also to the seventh triennial assembly of the International Union of Geodesy and Geophysics, which will be held in Washington, D. C., from September 4 to 15, under the auspices of the American Geophysical Union in cooperation with the National Research Council, and with support from other sources.

The council has accepted an invitation extended by the University of Minnesota, supported by local educational and scientific organizations, to hold the 1939 annual meeting in Minneapolis. The dates will be December 28, 29 and 30. This will be the first meeting of the society to be held in Minnesota, and the fifth held west of the Mississippi River.

Meetings of the council are regularly held in April and October and at the time of the annual meeting. Matters to come before the council should be in hand well in advance of these dates. It is expected that

the April, 1939, council meeting will be held on the fifteenth of the month.

A series of addresses under the general theme "Frontiers of Geology" is being organized for broadcasting during March and April through the facilities of the National Broadcasting Company.

THE DIVISION OF THE BRITISH ASSOCIATION FOR THE SOCIAL AND INTERNATIONAL RELATIONS OF SCIENCE

It is announced in the London *Times* that the Division for the Social and International Relations of Science, formed within the British Association last August, is arranging a program of meetings at which topics of immediate interest and importance will be discussed. The purpose of the division is to study the relationship between science and the community and to encourage the application of science to promote the well-being of society.

The first meeting will be held on March 28 at the University of Reading, by permission of the University Council and in cooperation with the National Institute for Research in Dairying, and two sessions will be devoted to discussion on milk in its nutritional and allied aspects. Sir Richard Gregory, chairman of the division, and Sir Daniel Hall will preside at the sessions, and other speakers will deal with deficiencies of diet, health aspects, pasteurization, production, cost, economic and social implications.

It is also proposed to arrange meetings in the early summer in London and Manchester for review of the social relationships of science and for discussion with special reference to pressing problems in industry and agriculture. In connection with the Manchester meeting, Professor H. Levy has been appointed to deliver the Alexander Pedler memorial lecture, in which he will explain the method of approach in the study of the social problems of science, with particular illustrations of the application of scientific discoveries to industry.

During the forthcoming meeting of the British Association in Dundee (August 30-September 6) the division will hold three sessions at which it is proposed to consider the coordination of scientific research, population movements and nutrition. Sir Richard Gregory will deliver an address on "Science and Social Ethics."

SCIENTIFIC NOTES AND NEWS

THE William Withering Lectures of the University of Birmingham will be given in late March by Dr. Peyton Rous, of the Rockefeller Institute for Medical Research. The subject will be "Present Aspects of the Cancer Problem."

DR. E. S. RUSSELL, director of research in the British Ministry of Agriculture and Fisheries, will give a series of five DeLamar Lectures at the School of Hygiene and Public Health of the Johns Hopkins University on successive days from March 20 to March 24. The

subject will be "Fish Populations and the Effect of Fishing."

PROFESSOR AUGUST KROGH, of the University of Copenhagen, Nobel laureate in 1920, will deliver a series of lectures at Swarthmore College under the auspices of the Cooper Foundation, on March 16 and 23, and April 6, 13 and 20, at 8:15 P.M. The subject will be "The Comparative Physiology of Respiratory Mechanisms."

MASARYK UNIVERSITY, Czecho-Slovakia, has conferred on Dr. Francis E. Lloyd, professor emeritus of botany, McGill University, the degree of doctor of science, *honoris causa*.

THE honorary doctorate of the University of Greifswald has been conferred on Dr. V. F. K. Bjerknes, professor of physics at the University of Oslo.

M. EMMANUEL DE MARGERIE has been elected a member of the Section of Mineralogy of the Paris Academy of Sciences in succession to the late L. de Launay.

DURING the dedication ceremony incident to the opening of the new buildings of the Pasteur Institute at Garches, a suburb of Paris, the minister of public health conferred the rank of commander of the Legion of Honor on Professor Gaston Louis Ramon, director of the branch, in recognition of his work during the past fifteen years in immunology, especially the more recent contributions, such as vaccination against diphtheria and tetanus.

PROFESSOR W. H. HOFFMANN, of the Finlay Institute, Habana, has been elected an honorary member of the Robert Koch Institute, Berlin.

THE 1938 Lamme Medal of the American Institute of Electrical Engineers has been awarded to Marion A. Savage, designing engineer of the General Electric Company, "for able and original work in the development and improvement of mechanical construction and the efficiency of large high-speed turbine alternators." The medal and certificate will be presented to him at the annual summer convention of the institute, which is to be held in San Francisco from June 26 to 30.

A BRONZE bust of Professor Fred Conrad Koch, chairman of the department of biochemistry at the University of Chicago, was presented to the university on February 8 by a group of alumni and friends. At the unveiling ceremony, the speakers were Dr. Howard M. Sheaff, a 1919 Ph.D. from the department, and President Robert Maynard Hutchins. The bust is mounted in the lecture room of the Biochemistry Building and is a companion to the bust of Professor A. P. Mathews, first chairman of the department.

At the opening clinic for a six weeks graduate course in medicine sponsored by the Medical School and the

Extension Division of the University of North Carolina, a luncheon was given in honor of Dr. Alfred Stengel, vice-president for medical affairs at the University of Pennsylvania.

At the annual election of the California Academy of Sciences held on February 15 the following officers were elected: *President*, Dr. F. M. MacFarland; *1st Vice-president*, The Hon. Herbert Hoover; *2nd Vice-president*, Dr. E. P. Meinecke; *Recording Secretary*, Dr. Olaf P. Jenkins; *Corresponding Secretary*, Dr. Charles L. Camp; *Treasurer*, Francis P. Farquhar; *Trustee for five-year term*, Mrs. Alexander F. Morrison.

DR. MAX JENNINGS PLICE has been appointed associate professor of agronomy at the University of Oklahoma, and Dr. Michel Afanasiev, associate professor of horticulture. Other appointments include the following assistant professors: Dr. Gladys Marie Kinsman in home economics research, Dr. William Winfield Ray in botany and plant pathology and J. Lee Brown in horticulture.

DR. W. M. BEESON, assistant professor and assistant in animal husbandry in the University of Arizona, has returned to the University of Idaho as associate professor of animal husbandry, in charge of animal nutrition and judging.

DR. ARTHUR L. BENTON, of the New York Hospital and the department of psychiatry, Cornell University Medical College, has been appointed instructor in the personnel bureau of the City College of the College of the City of New York.

DR. HAROLD C. BRYANT, who has been assistant director in Washington of the National Park Service, in charge of the Branch of Research and Information, has been transferred to Grand Canyon National Park as acting superintendent.

BRADFORD WASHBURN, of Cambridge, geographer and explorer, has been appointed executive director of the New England Museum of Natural History. Dr. Edward Wigglesworth will remain as scientific director.

DR. WALDO G. LELAND, secretary of the American Council of Learned Societies, recently became a member of the committee of the National Resources Committee to study the relations of the Federal Government to scientific research.

M. N. SHAFFNER, of the Pennsylvania Topographic and Geologic Survey, will serve as secretary-treasurer of the Field Conference of Pennsylvania Geologists, to succeed Dr. Arthur B. Cleaves, who recently left the survey.

LINCOLN ELLSWORTH plans an expedition into the Antarctic in 1941, during which he proposes to camp

for the entire winter at the South Pole with "not more than two companions, to carry on continuous observations of importance in several branches of scientific research."

DR. GEORGE H. H. TATE, assistant curator of South American mammals of the American Museum of Natural History, sailed on February 23 for Paris to arrange for an expedition to the Ivory Coast of Africa to collect chimpanzees and mandrill monkeys for habitat groups in the museum. He will be joined in Paris by Robert Kane, of the department of arts and preparation, who has been in East Africa for the last year.

DR. L. C. GRATON, professor of mining geology at Harvard University, has returned from a journey of eight months to islands and bordering countries of the South Pacific, where he investigated volcanoes, hot springs and fumaroles from the aspect of their connection with the origin of deep-seated ore deposits. He was invited to address scientific audiences in Honolulu, Hawaii; Nouméa, New Caledonia; Sydney, Australia, and Baguio, Philippines.

PROFESSOR K. LINDERSTRØM-LANG, of the Carlsberg Laboratory, Copenhagen, will deliver the sixth Harvey Society Lecture of the current series at the New York Academy of Medicine on March 16. He will speak on "Distribution of Enzymes in Tissue and Cells." Dr. Linderstrøm-Lang will also give at Harvard University the Edward K. Dunham Lectures for the current academic year.

DR. CHARLES H. BEST, professor of physiology and associate director of the Connaught Laboratories of the University of Toronto, gave a lecture on "Heparin and Thrombosis" on March 8 before the Yale Medical Society.

THE Pennsylvania State College is celebrating the two hundred and sixth anniversary of the birth of Joseph Priestley with the presentation of the thirteenth annual series of Priestley Lectures on March 20 to 24. The lectures, a series of five, will be given each evening at 7:30 P.M. by Dr. Kenneth S. Cole, associate professor of physiology at the College of Physicians and Surgeons, Columbia University. He will discuss the interrelationships between physical chemistry and cell membranes.

THE Section of Physics and Chemistry of the New York Academy of Sciences sponsored a conference on kinetics in solution on February 24 and 25, 1939, under the chairmanship of Professor Victor K. LaMer, Columbia University. The speakers included Professors Henry Eyring, Princeton University; J. C. Warner, the Carnegie Institute of Technology; S. H. Maron, the Case School of Applied Science; P. D. Bartlett, Harvard University; L. P. Hammett, Colum-

bia University, and Drs. Irving Roberts, Columbia University, and F. H. Westheimer, Chicago.

THE fiftieth anniversary of the foundation of the Pasteur Institute of Paris will be commemorated on March 15, when it will be presided over by the President of the French Republic.

THE biennial assembly of the International College of Surgeons will be held in New York at the Hotel Roosevelt from May 21 to 24, under the presidency of Dr. Andre Crotti, of Columbus, Ohio.

AN International Congress on Magnetism will be held in Strasbourg from May 21 to May 25, under the auspices of the International Institute of Intellectual Cooperation and the Service Central de la Recherche scientifique de France. Fifteen reports will be presented on paramagnetism, ferromagnetism and magneto-optics. The American representatives to the congress are Professor J. H. Van Vleck, of Harvard University, and Professor S. J. Barnett, of the University of California.

THE fifth International Congress for the Unity of Science will be held at Harvard University from September 5 to 10. The subject of the congress is "The Logic of Science." Information in regard to it can be obtained from Professor C. W. Morris, University of Chicago.

IN accordance with the results of a poll recently taken of the membership of the American Society of Zoologists, the 1939 annual meeting of the society will be held next December in Columbus, Ohio, in conjunction with the meeting of the American Association for the Advancement of Science.

THE Association of Southeastern Biologists will hold its annual meeting on April 14 and 15 at Duke University. Titles and abstracts of papers should be sent to Donald C. Boughton, Secretary-Treasurer, University of Georgia, Athens, before March 15.

A BIOPHYSICS symposium will be held in connection with the annual meeting of the Southeastern Section of the American Physical Society at the University of Georgia, on March 31 and April 1. Dr. Detlev W. Bronk, director of the Johnson Foundation for Medical Physics of the University of Pennsylvania, has been invited to give a paper on "The Physical Basis of Biological Organization." A series of shorter invited papers also included on the program are: "Applications of Nuclear Physics to Biology," J. B. Fisk, University of North Carolina; "The Present Status of the Electron Microscope," Otto Stuhlman, Jr., University of North Carolina; "Applications of Photography to Medical and Biophysical Problems," Gilford G. Quarles, University of Alabama; "Purification of Biological Materials by Centrifuging," J. W. Beams, Uni-

versity of Virginia. In addition there will be a program of contributed papers. Dr. Clyde B. Crawley, University of Alabama, is chairman of the Biophysics Symposium.

THE 1939 annual summer term of the American School of Prehistoric Research will open in Paris on July 1 and close in France on September 9. The tentative program includes laboratory work and visits to the museums in Paris and Saint-Germain-en-Laye; visits to the principal museums and excursions to important prehistoric sites in various parts of France, and practice in excavating at two or more sites. The Abbé H. Breuil, an authority on Old World prehistory, will be in charge of the course, assisted by Harper Kelley, a former student of the school. They will have the cooperation of various French specialists. Prospective students should apply for enrolment as soon as possible. Applications for enrolment and for further information should be addressed to George Grant MacCurdy, director, American School of Prehistoric Research, Old Lyme, Conn.

WE are requested to state that all reprints of the work of the late Professor George Barger have been

deposited in the department of chemistry of the University of Glasgow, and that copies can be obtained by application to the secretary of that department.

THE Office National des Universités et Ecole Françaises has offered a graduate fellowship of 18,000 francs for the study of science at a French university. Two fellowships of a similar amount are being offered for study in Paris by the Société des Amis de l'Université de Paris; one for a graduate student to undertake scientific research and one for a graduate student specializing in the study of international relations. Application blanks may be secured from the Institute of International Education at 2 West 45th Street, New York City. The closing date for filing applications with complete credentials is April 1.

A GIFT of \$100,000 has been made by Bertram J. Cahn, of Chicago, toward the fund being raised by Northwestern University for the erection of Scott Hall, as a tribute to President Walter Dill Scott, who will retire next autumn to become president emeritus. The sum of \$200,000 has been given for the Hall by the Woman's Building Association of the University Guild and the sum of \$85,500 has been received from various sources.

DISCUSSION

MICROFILM COPYING OF SCIENTIFIC LITERATURE

SCIENTIFIC research may in certain rare cases be pursued for personal gain, but its publication is practically always solely for the benefit of others. The real problem is to insure its widest possible dissemination to those best able to make use of it for the advancement of science.

By far the largest part of scientific research is published under the auspices of institutions, societies, associations, governmental agencies, academies or other organizations having for their object either the advancement of learning or the industrial applications of scientific discoveries. The supplementary diffusion of scientific literature by means of microfilms is, accordingly, in entire accord with the aims of those who are principally responsible for its publication.

There are, however, a small number of scientific periodicals which are published by private initiative, and some of these are copyrighted or prescribe restrictions in regard to copying their contents. It is this relatively small number of journals which give rise to the question as to the legality of microfilm copying of scientific periodicals.

In the case of these, as with research periodicals in general, the contributors are very rarely paid and of course do not participate in the profits, if any, derived from their publication. It may, therefore, be asked whether it is the contributors or the publishers who are

entitled to the protection afforded by copyright. It is evident that the contributors do not desire such protection and it is certainly rarely possible for the publishers to benefit from it. It is, therefore, not clear why any publication of scientific research is ever copyrighted.

Although it was believed that a very small proportion of scientific periodicals are copyrighted it was decided to make a survey to ascertain approximately what proportion are so protected. For this purpose 101 periodicals received in the field of biological and agricultural chemistry in the library of the Pasteur Institute of Paris were examined, and only 15 found to bear the copyright mark or make any reservation in regard to copying their contents. Of the latter several prohibited complete or partial reproduction except by authorization. It is probable that many of the copyrighted ones would also grant permission for microfilm copying if requested. It may be concluded, therefore, that the proportion of current scientific periodicals restricted in regard to microfilm copying is very small.

In this connection it may be mentioned that Bibliofilm Service has been operating in the library of the U. S. Department of Agriculture for four years and has now attained a monthly distribution of more than 20,000 pages of scientific literature copied from several hundred periodicals, for more than a thousand research workers in the United States and elsewhere, and has never had a complaint of copyright infringement. This