

credited almost exclusively to lime-secreting animals, the corals. Recent investigations show that in many parts of the world the plants have played a greater part in land-building than have the corals.

Dr. Howe has long taken an active personal interest in horticulture, specializing particularly in dahlias, irises and peonies. The dahlia border at the Botanical Garden, under his direction for the eighteen years of its existence, with four or five hundred of the newer and better varieties as well as a few of the older ones, attracts thousands of visitors each season, and has done much to educate amateurs and professionals in the advances in this field.

He has been editor of *Torreya*, *The Bulletin of the Torrey Botanical Club*, the monthly *Journal* of the New York Botanical Garden and of various other publications of the garden. He is a fellow and at the present time president of the New York Academy of Sciences, a member of the National Academy of Sciences and of various other scientific societies. In 1919, his alma mater conferred upon Dr. Howe the honorary degree of doctor of science. It is expected that under his directorship the advances made by Dr. Merrill on the substantial foundations laid by Dr. Britton during his thirty-three years of leadership will be effectively conserved and continued.

SCIENTIFIC NOTES AND NEWS

DR. IVAN PAVLOV, professor of physiology at the University of Leningrad, is host to the 850 foreign physiologists and biologists, representing thirty-seven countries, who are expected to attend from August 8 to 17 in Moscow and Leningrad the International Congress of Physiology, of which he is president. Dr. Pavlov attended the International Neurological Congress, which opened in London on July 29. Last year, on the occasion of his eighty-fifth birthday, the Soviet Government awarded to him an annual pension of 20,000 rubles. A fund of 1,000,000 rubles was also made available for extensions to his laboratories in Leningrad.

DR. H. S. REED, professor of plant physiology in the Citrus Experiment Station of the University of California, has been awarded the Bronze Medal of the Société Nationale d'Acclimatation de France, in recognition of his work in botany and of collections of plants he has made for the Paris Museum of Natural History.

DR. OSKAR BAUDISCH, research chemist and technical consultant of the Saratoga Springs Commission, who has been carrying on a series of investigations at the Biochemical Institute, University of Stockholm, Sweden, of which Dr. H. von Euler is director, has recently been awarded the gold Scheele Medal for outstanding biochemical research by the Swedish Chemical Society. This is the second time this medal has been awarded to a United States citizen. The late Professor Otto Folin was awarded the medal some years ago.

DR. LEROY U. GARDNER, director of the Saranac Laboratory for the Study of Tuberculosis, Saranac Lake, N. Y., received the Trudeau Medal of the National Tuberculosis Association at the annual meeting in Saranac Lake on June 24. The award was made for his work on the pathology of tuberculosis, notably that dealing with the relation between tuberculosis and silicosis.

THE Medal of Achievement of the Poor Richard Club of Philadelphia was recently awarded to Dr. John A. Kolmer, professor of medicine at Temple University, in recognition of his work on poliomyelitis vaccine.

W. T. ASTBURY, of the department of textile physics at the University of Leeds, has been awarded the Actonian Prize of 100 guineas. This award of the Royal Institution is made every seven years for the best essay "illustrative of the wisdom and beneficence of the Almighty in some department of science."

THE honorary degree of doctor of science was conferred on Dr. Walter Robert Parker by the University of Michigan at its recent commencement. For twenty-eight years Dr. Parker was professor of ophthalmology at the university; since 1933 he has been professor emeritus.

HONORARY degrees were conferred recently by the University of Belfast on Professor T. G. Moorhead, regius professor of physics, Trinity College, Dublin; on Dr. T. Carnwath, senior medical officer, Ministry of Health; and on Major-General W. P. Macarthur, deputy director general, Army Medical Services. The degree of D.Sc. was conferred on J. B. Parke for work on the viscosity of emulsions.

DR. GUY W. SMITH, associate professor of mathematics at the University of Kansas, has been promoted to a full professorship.

ROWLAND J. CLARK has been appointed associate professor of milling industry at the Kansas State College. His principal work will be in testing wheats and flours for their various characteristics as influenced by varietal factors, environmental conditions, milling procedure, and to relate these to their utilization by the milling and baking industries.

DR. IVES HENDRICK, of the Harvard University Medical School, has been invited by the Graduate School of

Duquesne University, Pittsburgh, Pa., to give a course for graduate social workers from August 1 to September 4 on "The Psychoanalytic Approach in Social Work." The course consists of lectures, colloquia and conferences.

W. WARREN LONGLEY, a graduate student at the University of Minnesota, has been elected to an instructorship in geology at Dartmouth College. Mr. Longley has charge of a prospecting party in the Canadian north country this summer.

D. ANANDA RAO, principal of the Agricultural College, Coimbatore, India, has been appointed director of agriculture in succession to S. V. Ramamurthi.

THE following appointments were recently made in the University of Sheffield: J. MacD. Croll, to be lecturer in bacteriology; Mansergh Shaw, to be assistant lecturer in mechanical engineering, and Dr. Edward S. Duthie, to be a demonstrator in pathology.

Nature reports that the following appointments have been made at the University of Cambridge: E. Farmer, of Trinity College, reader in industrial psychology; E. G. Chalmers, of Clare College, assistant director of research in industrial psychology; P. Graffa, of King's College, assistant director of research in economics; Dr. J. K. Roberts, of Trinity College, assistant director of research in colloid science; Dr. W. A. Wooster, of Peterhouse, lecturer in mineralogy and petrology; E. T. C. Spooner, of Clare College, lecturer in pathology; G. C. Grindley, lecturer in experimental psychology; N. Dean, of Trinity Hall, lecturer in estate management; C. Culpin, of St. John's College, demonstrator in agricultural engineering; Dr. J. D. Cockcroft, of St. John's College, lecturer in physics; P. I. Dee, of Sidney Sussex College, lecturer in physics; Miss A. C. Davies, of Newnham College, lecturer in physics; Dr. M. L. E. Oliphant, of St. John's College, assistant director of research in physics; Dr. W. B. Lewis, of Gonville and Caius College, demonstrator in physics.

DR. Z. P. METCALF, professor of zoology at the North Carolina State College of Agriculture, has been elected visiting professor of zoology at Duke University for 1935-36.

DR. ESMOND R. LONG, director of the laboratory of the Henry Phipps Institute of the University of Pennsylvania, has been made director of the institute. Dr. Charles J. Hatfield, formerly director, will be associate director and chairman of the board of directors in charge of the institute. Dr. Henry R. M. Landis will have the title of associate director in charge of the clinical and sociological departments.

As has already been reported in *SCIENCE*, Dr. Marshall Avery Howe was elected director of the New

York Botanical Garden at a special meeting of the Board of Managers. At the same meeting Dr. H. A. Gleason was appointed as deputy director, though retaining his present title of head curator. H. de la Montagne, assistant treasurer and business manager, was appointed assistant director.

DR. THOMAS C. GRUBB has been appointed a member of the professional staff of the Illinois State Department of Health and will conduct research in the control and prevention of disease.

THE Council of the Royal Society, London, has awarded Dr. M. N. Saha a sum of £150 for research on the thermal ionization of gases. Dr. Saha, who has also been awarded the Carnegie Research Scholarship for the year 1935-36, will leave for America in September. He expects to undertake a world tour before returning to India.

THREE members of the staff of the College of Natural Science of Yenching University, China, have received grants from the China Foundation of \$500 each toward the support of research projects. These are: Dr. Tsai Liu-sheng, for continuing his work on the preparation of activated charcoal from Chinese raw materials; Chang Tso-kan, for research on the herpetology of Kiangsi and Chekiang, and Chang Tsung-ping, for a study of the insects of the pear tree in Ting Hsien.

THE Committee on Scientific Research of the American Medical Association has awarded to Dr. Frederick A. Fender, of the department of surgery of the Stanford University School of Medicine, a grant to be used for the further study of the effects of prolonged electrical experimental stimulation of certain components of the nervous system. Dr. Wallace M. Yater, professor of medicine, Georgetown University School of Medicine, has received a grant to carry on research on the histopathologic basis of "bundle-branch block."

WALLACE FETZER, Ph.D. (Minnesota, 1934), has gone to Colombia, South America, where he will work on gold projects for the Colombian government, with whom Dr. Philip Merritt, of Columbia University, is also doing geologic work.

DR. G. W. MARTIN, professor of botany in the University of Iowa, has sailed for the Panama Canal Zone. He is planning to join Dr. Woodson, of the Missouri Botanical Garden, at Balboa, and thence to explore sections of the island and mountain areas of Panama, the Canal Zone and the Santa Marta Mountains in Colombia. The expedition will be devoted to collecting Myxomycetes and Basidiomycetes.

DR. VICTOR E. LEVINE, of the Creighton University School of Medicine, is now in the Arctic on his third

trip for the purpose of continuing his medical and biological studies of the Eskimo. He will confine his observations to the region north of Nome, to Teller, Cape Prince of Wales, Deering, Kiwalik, Shishmaref, Kotzebue, Point Hope, Point Lay, Wainwright and Point Barrow. At Wainwright and Point Barrow he will take the opportunity of determining the extent and severity of the recent epidemic of influenza among the Eskimos.

DR. ELMER D. MERRILL, director of the New York Botanical Garden, president of the section of taxonomy and nomenclature of the sixth International Botanical Congress to be held at Amsterdam from September 2 to 7, will sail for Europe on August 16. He will serve as an official delegate representing the United States Government and chairman of the delegation, and will also represent the National Academy of Sciences, the American Association for the Advancement of Science, the New York Academy of Science, the New York Botanical Garden and the Bishop Museum of Honolulu.

DR. B. A. HOUSSAY, professor of physiology at the University of Buenos Aires, has, according to the *Journal* of the American Medical Association, been invited to deliver the Dunham lecture at Harvard University, the Hanna lecture at Cleveland, the Harvey lecture at New York and other lectures at the Academy of Medicine of California and at Stanford University.

THE fifth Congress of Biological Chemistry will be held at Brussels from October 23 to 25. The general secretary is M. R. Fabre, 149 rue de Sèvres, Paris.

THE annual meeting of the American Association of Agricultural College Editors will be held at Cornell University on August 20, 21 and 22. Delegates are expected to attend from nineteen states and from the Department of Agriculture at Washington.

THE *Journal* of the American Medical Association reports that the first Congress of Human and Animal Brucellosis met in Avignon, on June 11, to discuss the relations between the different forms of brucella infections in man and those of animals. The subjects discussed were prophylaxis and treatment of undulant fever, differentiation of the various types of brucella infection, epidemiology of brucella infections in relation to the dairy industry, and legislation on the subject of undulant fever.

THE Alpha Chi Sigma banquet, at the American Chemical Society convention in San Francisco, meeting from August 19 to 23, will take place on Tuesday, August 20, at 7 p. m., at the Capri Italian Restaurant, Oakland. Wm. Higburg, in charge of the professional branch of the fraternity, will be present. The convention program calls for a trip to the campus of

the University of California on Tuesday afternoon, making the fraternity dinner site quite convenient for all who cross the bay for the inspection. Advance reservations should be sent to R. K. Witt, 2535 LeConte Street, Berkeley. Arrangements for reservations will also be available at the registration desk of the American Chemical Society. The dinner will be under the auspices of the San Francisco professional chapter of the fraternity. The third semi-annual professional conference of the branch will be held either preceding or following the banquet.

ORGANIZATION of the Oceanographic Society of the Pacific was effected recently at a meeting at the Scripps Institution of Oceanography. The meeting was attended by about sixty scientific men from many points along the Pacific Coast. Following the meeting a series of twelve communications on oceanographic activities along the coast was read. Dr. T. Wayland Vaughan, director of the Scripps Institution, was named president of the new organization; Dr. C. McLean Fraser, of the University of British Columbia, vice-president; Dr. C. L. Utterback, of the oceanographic laboratories of the University of Washington, secretary-treasurer; while the members-at-large are W. L. Scofield, California Fisheries Laboratory, Terminal Island, and Beno Gutenberg, California Institute of Technology. The meeting was held under the joint auspices of the Committees on the Oceanography of the Pacific of the United States and of Canada.

THE one hundred and third annual meeting of the British Medical Association was held in London from July 19 to 23 and will continue in Melbourne in September. The scientific discussions, many of which are said to be of considerable public importance, will be held in Melbourne under the presidency of Lieutenant-Colonel Sir James Barrett, deputy chancellor of the University of Melbourne and consulting surgeon to the Victorian Eye and Ear Hospital. Many social functions will take place during the meeting. The annual representative meeting at which specially appointed representatives from each local unit of the association throughout the empire attended and which deals with the business affairs of the association and with matters of general medico-political interest, was held at the house of the association in Tavistock Square, London.

PRESIDENT ROOSEVELT has recently ordered the Science Advisory Board to be continued until December 1, 1935. The board was originally appointed on July 31, 1933, for a two-year term to advise the President and departmental secretaries in regard to scientific matters. It now consists of fifteen members.

THE United States Civil Service Commission announces open competitive examinations for the positions of principal engineering draftsman, \$2,300 a year; senior engineering draftsman, \$2,000 a year; engineering draftsman, \$1,800 a year; assistant engineering draftsman, \$1,620 a year. Optional branches include architectural, civil, electrical, mechanical and structural engineering.

THE Rockefeller Foundation has appropriated for work at the University of Michigan for study of the application of spectroscopic methods to medical problems, under the general direction of Professor L. H. Newburgh and Professor H. M. Randall, the sum

of \$14,000 and funds not to exceed \$5,000 annually for a five-year period to end June 30, 1940, for special research in the physiology of respiration, under the direction of Dr. Robert Gesell.

GEORGE H. DERN, Secretary of War, has announced approval by the National Forest Reservation Commission of 949,804 acres of land for purchase for the national forests at a cost of \$3,493,328. The approved purchases include 407,462 acres in the southern forest service administrative region, 217,373 in the north-eastern region, 324,679 acres in the Lake and Upper Mississippi states and 200 acres in California.

DISCUSSION

GRANTS IN SUPPORT OF RESEARCH ON THE BIOLOGICAL EFFECTS OF RADIATION

IN previous statements in this journal,¹ indications have been furnished regarding grants in support of research on the effects of radiation on organisms. During the period of somewhat more than five years, the Radiation Committee of the National Research Council has been able to make these grants as a result of contributions made by the General Education Board, the Commonwealth Fund and certain manufacturers of radiation equipment and scientific apparatus and materials. Through a contribution made recently by the Rockefeller Foundation to the National Research Council, the Radiation Committee announces a continuation of a limited program in support of research on the biological effects of radiant energy. The new program becomes effective after July 1, 1935, and it is hoped that in this new program the projects supported may be those directed primarily toward obtaining a broader basis of quantitative data in this field, that is, studies along such lines as the fundamental physiological and developmental responses of cells and tissues, metabolism in the broadest sense, significant biological products, relevant absorption and emission spectroscopy. Grants will be made annually. In making these grants, stress will be placed upon the fundamental scientific promise of the project and the facilities and cooperation available for the work. Funds totaling \$75,000 are available for this purpose during a three-year period. This includes a special allotment for mitogenetic radiation research during 1935-36, and it also provides for the continuation of a few projects begun during the previous five-year period. The possibility also exists, through the cooperation of interested industrial corporations,

for the loan of certain types of apparatus. Applications for grants should include an adequate statement of the status of the problem or project, the extent of the support received or promised by the university or institution with which the applicant is associated, and the character of the apparatus available or obtainable for the work.

The conditions under which grants of money or apparatus may be made are essentially the same as those made by the Committee on Grants-in-Aid of the National Research Council, and are in general, as follows:

1. Grants will cover such expenses as apparatus, materials and supplies, technical assistance, and, to a limited extent, field expenses.
2. Ordinarily, grants will not be made for any part of the personal salary of the grantee, for expenses of publication, for the purchase of books or for travel in attendance upon scientific meetings.
3. In general, preference will be given to the support of investigations, (a) requiring a moderate allotment, (b) from which definite results may be expected with the aid of the grant, (c) which are supported in part by the institution with which the applicant is associated, and (d) for which it is reasonably certain that the facilities are available or procurable, or in which cooperation is arranged between the biological and physical interests.

It is expected that allotments for 1935-36 will be made in late August. Those planning to apply for grants should request application forms from the Division of Biology and Agriculture, National Research Council, 2101 Constitution Ave., Washington, D. C. The applications, together with any supporting documents, should be sent promptly, preferably by August 10, to the Division of Biology and Agriculture.

B. M. DUGGAR,

Chairman, Committee on Radiation.

¹ W. C. Curtis, *SCIENCE*, 73: 643-645, June 12, 1931; *SCIENCE*, 69: 9-10, January 4, 1929.