

society will hold sessions for the presentation of regular papers on Tuesday and Thursday morning and afternoon in Emerson Hall.

The Tercentenary Conference has arranged several evening lectures (titles tentative). Besides that of Professor Hardy on Monday evening, there will be on Wednesday evening an address by Professor Étienne Gilson, of the Collège de France, on "Scholastic Philosophy," on Thursday evening by Professor Edward Joseph Dent, of the University of Cambridge, on "Some Aspects of Music," and on Friday evening by Professor John Dewey, of Columbia University, on "Authority and Resistance to Social Change." Ad-

mission will be either by ticket issued by Harvard University or by registration badge of the mathematical organizations.

An informal joint dinner of the mathematicians and their guests will be held on Thursday evening in Lowell House and Winthrop House. These houses adjoin one another and the after-dinner program of addresses will take place in Lowell House to which those dining in Winthrop House may adjourn. Professor J. L. Coolidge, master of Lowell House, will be toastmaster, and there will be addresses by President Conant, of Harvard University, by some of the guests of the university and by others.

SCIENTIFIC NOTES AND NEWS

DR. HARLOW SHAPLEY, director of the Harvard College Observatory, has been elected a member of the Norwegian Academy of Sciences.

DR. CALVIN B. BRIDGES, of the Carnegie Institution of Washington, who has been working in association with Dr. T. H. Morgan, at the California Institute of Technology, on the heredity and cytology of *Drosophila*, has been elected a corresponding member of the Academy of Natural Sciences of Philadelphia.

M. V. GRÉGOIRE, professor of botany at the University of Louvain, has been elected a correspondent of the Paris Academy of Sciences in the section of botany. He takes the place of the late Hugo de Vries.

THE following have been elected foreign members of the Linnean Society of London: Professor M. L. Fernald, curator of the Gray Herbarium of Harvard University; Dr. B. A. Fedtschenko, professor of botany at the University of Leningrad; Professor P. Pelse-neer, permanent secretary of the Royal Academy of Sciences, Belgium; Dr. K. F. von Tubeuf, professor of the anatomy, pathology and physiology of plants at the University of Munich, and Dr. W. M. Wheeler, professor of entomology, emeritus, at Harvard University.

THE Royal Medals of the Royal Geographical Society have been awarded as follows: The Founder's Medal to G. W. Murray, director of desert surveys, Egypt, for his long-continued explorations and surveys in the deserts of Sinai and eastern Egypt, for his studies of Badawin tribes and his unstinted help to desert expeditions, and the Patron's Medal to Major R. E. Cheesman, C.B.E., for valuable service to geography during nine years' residence in N. W. Ethiopia, including reconnaissance and surveys of the course of the blue Nile and exploration of Lake Tana and its islands. The Victoria Medal has been awarded by the council to Dr. Stanley Kemp, for his work in sur-

veys of the Southern Ocean; the Murchison Grant to Michael Leahy, for his explorations of Central New Guinea; the Back Grant to Muhammad Ayub Khan, for his surveys on three expeditions under the leadership of Sir Aurel Stein, in East Persia, 1931-34; the Cuthbert Peek Grant to T. H. Harrison, to assist him in his proposed expedition to New Guinea, and the Gill Memorial to Lieutenant A. L. Nelson, R.N.R., for his charts of the South Sandwich Group, South Orkneys and South Shetlands.

AT the recent convocation of the University of Toronto, honorary degrees were conferred on seven graduates of the university. Those conferred in the sciences were the doctorate of laws on Dr. George Fred Kay, professor of geology and dean of the College of Liberal Arts of the State University of Iowa, and the doctorate of science on Dr. William Henry Collins, director of the Geological Survey of Canada; on Dr. Ralph S. Lillie, professor of general physiology in the University of Chicago, and on Thomas Reeve Rosebrugh, who retires this year from the chair of electrical engineering in the University of Toronto, after serving on the staff since 1890.

MIDDLEBURY COLLEGE conferred on June 15 the doctorate of laws on Dr. Karl T. Compton, president of the Massachusetts Institute of Technology, who gave the commencement address, and on Dr. William Otis Hotchkiss, president of the Michigan College of Mining and Technology. The degree of doctor of science was conferred on Dr. Eugene C. Bingham, professor of chemistry at Lafayette College, and on Dr. Philip Wheelock Ayres, forester of the Society for the Protection of New Hampshire Forests.

THE degree of doctor of science was conferred on Ira N. Gabrielson, chief of the U. S. Biological Survey, at the sixty-seventh annual commencement exercises of the Oregon State College at Corvallis on June

1. Dr. W. J. Kerr, chancellor emeritus of higher education of Oregon and formerly president of the institution, in conferring the honorary degree read the following tribute: "Ira Noel Gabrielson—Biologist, naturalist, original contributor of scientific literature, authority on alpine plants, for twenty years a trusted representative of the United States Department of Agriculture in charge of rodent control in Oregon, executive of large resources and scientist of wide recognition, long cherished as one of Oregon's leading citizens and recently honored by being advanced to the high post of chief of the United States Bureau of Biological Survey, with headquarters at the national capital."

J. W. FINCH, director of the U. S. Bureau of Mines, received an honorary degree of doctor of laws at the commencement exercises of the University of Alabama following the dedication of the new Southern Experiment Station of the bureau at Tuscaloosa.

At the commencement exercises of the John B. Stetson University on June 8 the honorary degree of LL.D. was conferred on Dr. John Joseph Kindred, consulting physician to the River Crest Mental Hospital at Astoria, Queensboro, New York City. Dr. Kindred has been for several years professor of medical jurisprudence in the law department. He was for ten years a member of the U. S. House of Representatives from Queensboro.

THE Stacey Award of the College of Medicine of the University of Cincinnati, consisting of a medal and an honorarium of \$100, has been awarded to Dr. Bernard Langdon Wyatt, of Tucson, Ariz. The award is given for a significant contribution in the field of focal infection.

DEAN EMBURY A. HITCHCOCK, of the College of Engineering of the Ohio State University, will retire from active service at the end of the summer quarter. In recognition of his long-time membership on the university faculty he has been voted the rank of dean emeritus by the board of trustees. Pending the selection of a permanent dean, Junior Dean William D. Turnbull has been named acting dean and acting director of the Engineering Experiment Station. Associate Professor John M. Weed, assistant director of the experiment station, has been designated acting junior dean.

DR. SAM Z. LEVINE, of Cornell University Medical School, has been promoted to be professor of pediatrics and head of the department.

DR. KASIMIR FAJANS has been appointed professor of general and physical chemistry at the University of Michigan and will assume this position in September. Dr. Fajans has been associated with the University of

Munich since 1917, serving as professor of physical chemistry from 1925-1934 and recently as director of the Physical-Chemical Institute. He is the author of contributions in the fields of radioactivity, isotopes, crystal structure, atomic structure, chemical forces and refractometry.

DR. C. E. MARSHALL, of the University of Leeds, England, has been appointed visiting professor in the department of soils at the University of Missouri for the coming academic year. He will temporarily occupy the position held by Dr. Hans Jenny, who has accepted an appointment at the University of California at Berkeley. Dr. Marshall is known for his work in soil colloids.

DR. RALPH K. STRONG, head of the department of chemistry at Reed College, has been appointed to succeed Dr. John White as head of the department of chemistry at the Rose Polytechnic Institute.

At Vanderbilt University promotions from assistant professor to associate professor in the Medical School include Dr. George Summers Johnson, surgery; Dr. Thomas D. McKinney, clinical surgery; Dr. Alvin E. Keller, preventive medicine and public health; Dr. C. C. McClure, radiology. From instructor to assistant professor, Dr. Thomas C. Butler, pharmacology, and Dr. Nathaniel Sehorn Shofner, clinical surgery.

DR. CARL EUGEN GUTHE, director of the Museum of Anthropology, lecturer in anthropology and chairman of the Division of the Social Sciences at the University of Michigan, has been made director of the University Museum.

DR. GERALD WENDT, editor of *Chemical Reviews*, formerly assistant to the president of the Pennsylvania State College, has been elected director of the American Institute of the City of New York, succeeding L. W. Hutchins, who has resigned to devote himself to his business interests.

NEW appointments at the Psychopathic Clinic of the Recorder's Court of the City of Detroit are: assistant director, Dr. John A. Larson, formerly assistant criminologist for the State of Illinois and assistant professor of psychiatry at Rush Medical College; junior sociologist, Dr. Stuart Lottier, formerly teaching fellow in sociology at the University of Michigan, and junior psychologist, Dr. Dwight Chapman, formerly instructor in psychology at Harvard University.

Industrial and Engineering Chemistry reports that Raymond M. Fuoss, for the past three years assistant professor of chemistry for research at Brown University, has become a member of the chemical staff in the Research Laboratory of the General Electric Company, Schenectady, N. Y.

THE following students are carrying on their work at the Marine Biological Laboratory at Woods Hole this summer with the assistance of *The Collecting Net* scholarships which were awarded last fall: Walter E. Martin, instructor in zoology, Purdue University; Virginia Mayo, chairman of the department of science, Dana Hall School; John R. Pappenheimer, research assistant in physiology, Harvard University; Daniel McQ. Lilly, instructor in biology, Providence College, and Jay Smith, assistant embryologist, the Johns Hopkins University. *The Collecting Net*, a weekly journal devoted to marine biological laboratories, has awarded thirty-seven such scholarships since its foundation in 1926.

DR. E. M. K. GEILING, chairman of the department of pharmacology of the University of Chicago, has left for the whaling station at Rose Harbor, Queen Charlotte Island, in order to obtain a supply of the pituitary gland of the whale. Dr. Geiling has been carrying on his work at Rose Harbor, four hundred and fifty miles northwest of Vancouver, during the past two summers. On this trip he will be accompanied by Dr. Robert Walmsley, of the University of Edinburgh, fellow of the Rockefeller Foundation, who is making the trip primarily to study the vascular system, and Lewis L. Robbins, research assistant.

ROBERT W. HODGSON, professor of subtropical horticulture and assistant director of the branch of the College of Agriculture of the University of California at Los Angeles, has gone to India to conduct a horticultural mission in one of the native states in the Punjab region. He has been granted six months' leave of absence. On completion of his work in India he expects to visit the date-growing regions of Arabia, Iraq and Egypt and the principal fruit experiment stations in the Orient.

DR. WILLIAM D. HARKINS, professor of chemistry at the University of Chicago, has been elected George Fisher Baker non-resident lecturer in chemistry at Cornell University for the first term, 1936-37.

DR. J. VON NEUMANN, professor of mathematical physics at Princeton University, gave recently four lectures at the University of Paris.

THE Board of Scientific Directors of the Rockefeller Institute for Medical Research announces the following appointments and promotions on the scientific staff to take effect on or after July 1, 1936: Promotions: *Associate to associate member*, Dr. Irvine H. Page. *Assistant to associate*, Dr. Alexandre Rothen, Dr. John M. Steele and Dr. Robert S. Tipson. *Fellow to assistant*, Dr. W. Halsey Barker, Dr. Rollin D. Hotchkiss, Dr. Hubert S. Loring and Dr. George L. McNew. New appointments: *Associate*, Dr. Rafael Lorente

de N6. *Assistants*, Dr. Robert D. Baird, Dr. George K. Hirst, Dr. Horace L. Hodes, Dr. Austin L. Joyner, Leonard C. Kreider, Dr. Charles L. Mehlretter, Dr. Benjamin F. Miller, Dr. Carl G. Niemann and Dr. John A. Saxton, Jr. *Fellows*, August A. Di Somma and Dr. Carl G. Harford.

ACCORDING to *Museum News*, at a meeting held at Kimberley on April 23, the South African Museums Association was organized. A constitution was adopted and officers elected for the current year as follows: *President*, C. J. Swiestra, director of the Transvaal Museum, Pretoria; *Secretary-Treasurer*, E. C. Chubb, curator of the Durban Museum and Art Gallery, Durban; *Councilors*, E. L. Gill, director of the South African Museum, Cape Town; J. Hewitt, director of the Albany Museums, Grahamstown; E. C. van Hoepen, director of the National Museum, Bloemfontein, and P. Thatcher, keeper of the South African National Gallery, Cape Town.

A MEETING of the Australian and New Zealand Association for the Advancement of Science is to be held in Auckland, New Zealand, from January 12 to 19.

THE fifteenth Japanese Congress of Physiology will be held in August at the Ohara Institute of Kurashihi, Oyama.

THE Smith College field studies in geology will be continued in the Black Hills of South Dakota and the Bear Lodge Mountains of Wyoming during the present summer. The faunal and stratigraphic investigation of the Deadwood formation will be continued, with the collaboration of Dr. Christina Lochman, of Mount Holyoke College; the study of the Mississippian-Pennsylvanian contact will be concluded; and an analysis of the region's erosional landforms will be started. The work will be under the general direction of Professor H. A. Meyerhoff.

THE American Pharmaceutical Association announces the award of a grant or grants amounting to \$1,000, which will be available on October 1, for research on medicinal substances. Applications should be addressed to Professor H. V. Army, chairman of the Committee on Research, American Pharmaceutical Association, 115 West 68th Street, New York City.

THE Edison Industries Exhibition at the New York Museum of Science and Industry in Rockefeller Center opened on June 27. It includes demonstrations of the evolution of telegraphy, telephony, light, power, the phonograph, motion pictures, talking pictures, the radio and other fundamental factors of modern civilization from the early experiments and basic discoveries of Edison through successive stages of progress to the most advanced developments. In

organizing the exhibit, the museum has been aided by the Thomas Alva Edison Foundation and a number of leading industrial concerns.

Museum News reports that deeds have been accepted by the Secretary of the Interior to 22,817 acres and surface and cave rights to 4,743 acres of the Mammoth Cave area, sufficient to give it National Park status. The deeds were turned over to the Government by the Kentucky National Park Commission. Recreational development of the new park will await the acquisition of a major portion of the remainder of the authorized maximum of 70,618 acres.

At a recent congregation of the University of Oxford, Sir Farquhar Buzzard, Regius professor of medicine, introduced a statute creating an Institute of Experimental Psychology in the university. He said that the need for such a foundation had long been felt, and a committee of the General Board drew up seven years ago a report, which the council approved but could not put into effect because of financial stringency. An anonymous donation of £10,000 and an allocation from the Rockefeller trustees of £500, together with £150 per annum for the next five years have been received. Under the terms of the donation the first director of the new institute would be the Wilde reader in mental philosophy, Dr. William Brown.

FIVE South African mining and finance houses, the Anglo-American Corporation of South Africa, the Central Mining and Investment Corporation, the Consolidated Goldfields of South Africa, the New Consolidated Gold Fields and the Union Corporation have each made a donation of £1,000 to the Cavendish Laboratory to be devoted to any purpose of the Cavendish Laboratory which those in charge of the administration may decide.

THE general board of the University of Cambridge

proposes to establish a post of assistant director of research in medicine. He will work in Addenbrooke's Hospital and the laboratories of the university under the direction of the Regius professor of physics, and if the university approve the proposed post the appointment will be for an initial period of three years at £700 a year.

THE twenty-fifth annual report of the Brooklyn Botanic Garden, for the year 1935, comprises a brief survey of the first quarter century of the garden. During this period the City of New York has appropriated a total amount of \$2,039,664 for permanent improvements and maintenance, and the Board of Trustees has provided private funds amounting to \$1,618,056 for the same purpose. The contract between the city and the board obligated the board to provide only \$50,000 of private funds. During 1935 the board of trustees provided nearly 52 per cent. of the maintenance budget so that the city, as the report points out, secured two dollars worth of public service for every dollar it appropriated. The total registered attendance for the year exceeded 1,624,000, with a record week-end attendance on May 11 and 12 of more than 43,000. The attendance at regular Botanic Garden classes was nearly 66,000 and visiting classes from city schools of more than 49,000. Thirty-three pages of the report are devoted to summaries of the research work of the garden's personnel for the year. Plant material was supplied to 10,891 teachers in 297 schools and colleges in all five boroughs of Greater New York for the instruction of 470,855 students. More than one million packets of seeds were supplied to school children for the planting of school and home gardens. Reports of progress in research projects are given as follows: Plant pathology, leguminous tubercles, types of algae, regeneration and polyploidy, iris, forest pathology (chestnut blight), systematic botany, coffee and tobacco pharmacology.

DISCUSSION

ORIGIN OF THE SUPPOSED METEORITE SCARS OF CAROLINA

THE Coastal Plain of the Carolinas and northeastern Georgia exhibits a vast number of elliptical depressions partially surrounded by rims of sand. Such depressions, as well as others more irregular in form, are locally called "bays." Attention was first directed to their peculiarities some forty years ago by Glenn,¹ but not until Melton and Schriever² ascribed to them

an extra-terrestrial origin did they attract wide popular as well as scientific attention. The two authors last named, in a paper giving an excellent account of the major characteristics of the bays, advanced the hypothesis that the oval depressions were produced by the impact of a great shower of meteorites. It was suggested that the meteoritic shower may have represented the nucleus of a comet which collided with the earth and that the direction of approach was from the northwest.

C. Wythe Cooke,³ Erwin Raisz,⁴ Fletcher Watson,

¹ L. C. Glenn, *SCIENCE*, n. s., 2, 472-475, 1895.

² F. A. Melton and William Schriever, *Geol. Soc. Amer. Bull.*, 44: 94, 1933; *Jour. Geol.*, 41, 52-66, 1933. F. A. Melton, *Discovery*, 15: 151-154, 1934; *Jour. Geol.*, 42: 97-104, 1934.

³ C. Wythe Cooke, *Jour. Geol.*, 42: 88-96, 1934.

⁴ Erwin Raisz, *Jour. Geol.*, 42: 839-848, 1934.