with those of the Gulf Coast of the North American mainland, chiefly at the Cushman Laboratory for Foraminiferal Research at Sharon, Massachusetts.

DR. LUIS HOWELL RIVERO, assistant in anthropology, University of Havana, Havana, Cuba: Continuation of taxonomical and biological studies of West Indian fishes, chiefly at the Museum of Comparative Zoology, Harvard University. The fellowship now awarded to Dr. Rivero is a renewal of a fellowship granted a year ago.

DR. ATILIO MACCHIAVELLO VARAS, chief of the Sanitary Inspection Service of the Northern Sanitary Zone of Chile, Antofagasta, Chile: Continuation of studies in the fields of preventive medicine and public health, with especial reference to typhus, at Harvard University. The grant now made to Dr. Varas will enable him to spend a second year at work on problems of typhus in Chile, in collaboration with Professor Hans Zinsser, of the Harvard Medical School.

DR. TEÓFILO ORTIZ Y RAMÍREZ, professor of clinical medicine, Faculty of Medicine, National University of Mexico, Mexico, D.F.: Clinical studies in the field of cardiac physiology, at Harvard University.

DR. ENRIQUE SAVINO, bacteriologist in the Bacteriological Institute of the National Department of Hygiene, Buenos Aires, Argentina: Studies in the field of public health, with emphasis on epidemiology, chiefly at Harvard University.

The Committee of Selection which met in New York consisted of President Frank Aydelotte, Swarthmore College, *chairman;* Dr. Thomas Barbour, professor of zoology and director of the Museum of Comparative Zoology, Harvard University; Dr. Elmer Drew Merrill, director of the New York Botanical Garden; Dr. Antonio G. Solalinde, professor of Spanish in the University of Wisconsin, and Dr. Richard P. Strong, professor of tropical medicine in the Harvard University Medical School.

SCIENTIFIC NOTES AND NEWS

AMONG the honors awarded on the occasion of the seventieth birthday of King George and the twenty-fifth year of his reign, the Order of Merit was conferred on Sir Frederick Gowland Hopkins, Sir William Dunn professor of biochemistry at the University of Cambridge and president of the Royal Society.

THE trustees of the Humane Society of the Commonwealth of Massachusetts have awarded the gold medal of the society to Dr. George R. Minot and Dr. William Parry Murphy, in recognition of their successful discoveries in the treatment of pernicious anemia. The medals were presented by Charles P. Curtis, president of the society, at the Peter Bent Brigham Hospital on May 23. The awarding of the medal to Drs. Minot and Murphy marks a change in the policy of the society, which for a hundred and fifty years has awarded the medal for heroic rescues, where the life of the rescuer was at stake.

MEMORIAL tablets to Samuel F. B. Morse and to Professor John W. Draper were unveiled at the Washington Square Center of New York University on May 28. The tablets were erected by the State Education Department and the Greenwich Village Historical Society to mark the site of the original New York University building, where Morse sent the first message by electric telegraph and Draper made the first photographic portrait of a living person. The tablets were presented by Catherine Parker Clivette, founder and president of the Greenwich Village Historical Society. Granddaughters of the two inventors, Clara Morse and Dorothy Draper Nye, unveiled the plaques. Chancellor Harry Woodburn Chase made the dedicatory address.

THE honorary degree of doctor of engineering was conferred on May 30 by the South Dakota School of Mines on Dr. Lyman J. Briggs, director of the National Bureau of Standards, who gave the commencement address. Degrees were also conferred on the Honorable George H. Dern, Secretary of War; Dr. Gilbert H. Grosvenor, president of the National Geographic Society; Dr. John Oliver La Gorce, vice-president of the National Geographic Society, and Captain Albert W. Stevens, U. S. Army, leader and scientific observer of the stratosphere flight. The ascent from Rapid City, S. D., of the stratosphere balloon under the auspices of the National Geographic Society and the U. S. Army corps is planned to take place as soon as weather conditions are favorable.

HONORARY degrees were conferred by McGill University on May 30 on Dr. A. S. Eve, retiring professor of physics at the university; on Dr. O. T. Avery, of the Rockefeller Institute for Medical Research; on Adelard Godbout, Quebec Minister of Agriculture, and on Abbé Georges Lemaître, professor of astrophysics at the University of Louvain.

AT the seventy-second annual commencement of Kansas State College on May 27 the honorary degree of doctor of science was conferred on James T. Jardine, chief of the Office of Experiment Stations, U. S. Department of Agriculture. The honorary degree of doctor of engineering was conferred on George W. Wildin, of the class of 1892, consulting engineer, of Pittsburgh, Pa., and on Ernest H. Freeman, of the class of 1895, professor of electrical engineering at the Armour Institute of Technology.

OGLETHORPE UNIVERSITY, Atlanta, Ga., at its com-

mencement exercises held on May 26, conferred the degree of doctor of science on Dr. Annie Jump Cannon, assistant astronomer and curator of astronomical photographs at the Harvard College Observatory, and on Dr. Florence Rena Sabin, member of the Rockefeller Institute for Medical Research.

THE honorary degree of doctor of laws was conferred on Arthur Gibson, Dominion entomologist, by Queen's University, Kingston, Ontario, at the spring convocation.

THE presentation of the Herty Medal for this year was made on May 18 at the Georgia State College for Women to Dr. Francis Perry Dunnington, of Charlottesville, Va., at a dinner given by the Georgia Section of the American Chemical Society. Dr. Dunnington has served as professor of chemistry at the University of Virginia for forty-eight years.

THE Lucien Howe Medal in ophthalmology of the University of Buffalo has been awarded to Dr. Joseph H. Globus, associate neurologist at Mount Sinai Hospital, New York City, and to his associate, Dr. Sidney Silverstone, a member of the house staff, for their work on the diagnostic value of visual defects in brain tumors.

ARTHUR H. YOUNG, vice-president in charge of industrial relations of the United States Steel Corporation, received the Henry Laurence Gantt Medal for his work in industrial relations at a dinner in New York City, on May 24, of the Institute of Management of the American Management Association. Professor Sumner H. Slichter, of Harvard University, was the principal speaker.

THE Lister Medal for 1936, which is awarded in recognition of distinguished contributions to surgical science, has been granted to Sir Robert Muir, professor of pathology in the University of Glasgow, who will deliver the Lister Memorial Lecture in 1936 at the Royal College of Surgeons of England. This is the fifth 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. It is now seventy-five years since Lister became professor of surgery in the University of Glasgow.

AT the annual meeting of the Medical Society of London, on May 13, the president, Lord Horder, presented the Fothergillian Gold Medal, awarded by the society every three years, to Sir George Newman, who retired in March from the posts of chief officer of the British Ministry of Health and of the Board of Education.

AT a recent meeting of the Paris Academy of Medicine, Professor Crouzon, of Paris, was elected a fellow, and Professor Johannsen, of Sweden, and Lord Moynihan, of England, were elected non-resident fellows.

AT the recent meeting of the Royal Society of Canada at Hamilton, Ontario, Dr. R. W. Brock, dean of the faculty of applied science at the University of British Columbia, formerly director of the Canadian Geological Survey, was elected *president;* L. J. Burpee, *vice-president* and *honorary secretary;* G. A. Young, *honorary treasurer* and *librarian,* and John Patterson, *honorary editor.*

DR. G. J. HUCKER, chief in research in bacteriology at the New York State Agricultural Experiment Station at Geneva, was elected chairman of the Central New York Branch of the Society of American Bacteriologists at the annual meeting held in Ithaca on May 25.

DR. MERRITT L. FERNALD, for twenty years Fisher professor of natural history at Harvard University, has been appointed curator of the Gray Herbarium. He succeeds Dr. Benjamin Lincoln Robinson, who retires at the close of the present academic year after having served for forty-three years as curator of the herbarium.

HERBERT E. IVES, of Montclair, N. J., for many years in charge of research in television and color-photography at the Bell Telephone Laboratories in New York City, has been appointed honorary fellow for research in color science at the Fogg Art Museum of Harvard University.

DR. JOHN L. BRAY, professor of metallurgy at Purdue University for the last twelve years, has been placed at the head of the School of Chemical Engineering to succeed the late Professor H. C. Peffer.

DR. RUTH MARSHALL will retire in June from the faculty of Rockford College, where she has served as professor of zoology for twenty years. She will be succeeded by Dr. Dorothy Richardson, of Mt. Holyoke College. Miss Marshall plans to continue her work on the taxonomy of the water mites.

AT the London Hospital Professor William Bulloch has resigned from the Goldsmiths' Company's chair of bacteriology and has been succeeded by Dr. S. P. Bedson. A new chair of chemical pathology has also been instituted, to which Dr. J. R. Marrack has been appointed.

DR. H. N. GREEN, at present lecturer in pathology in the University of Cambridge, has been invited to succeed Professor Florey in the chair of pathology at the University of Manchester.

DR. ROBERT M. PETRIE, of the department of astronomy of the University of Michigan, has resigned to accept the position of astronomer at the Dominion Astrophysical Observatory at Victoria, British Columbia.

DR. A. C. SEWARD, master of Downing College, professor of botany, has been appointed to represent the University of Cambridge at the sixth International Botanical Congress, to be held at Amsterdam from September 2 to 7, and Dr. G. H. F. Nuttall, Magdalene College, emeritus professor of biology, will represent the university at the tercentenary of the French Academy from June 17 to 20.

AMONG the delegates from Great Britain present at the centenary celebration of the Royal Observatory of Brussels on May 14 were Professor F. J. M. Stratton, director of the Solar Physics Observatory, Cambridge; L. J. Comrie, superintendent of the British Nautical Almanac Office, Royal Naval College, and J. H. Reynolds, of the Royal Astronomical Society, London.

DEAN CHARLES H. LAWALL, of the Philadelphia College of Pharmacy and Science, will sail on July 3 for Copenhagen to attend a meeting of the Committee upon Uniform Method of Opium Assay, which has been working under the auspices of the Health Committee of the League of Nations since 1931. The chairman of the committee is Dr. L. Van Itallie, of the University of Leiden. Other members are Dr. Yasuhiko Asahina, of Tokio; Dr. H. T. Baggesgaard-Rasmussen, of Copenhagen; Professor R. Eder, of Zurich; Dr. A. Goris, of Paris; Dr. A. W. K. De Jong, of Medan, Netherlands; Professor Erich Knaffl-Lenz, of Vienna, and J. R. Nicholls, of London. Dr. LaWall is representing the U. S. Treasury Department as a pharmaceutical chemist assigned to this special research.

THE Committee on Scientific Research of the American Medical Association has made grants to Dr. Richard L. Crouch, assistant professor of anatomy at the University of Missouri, to promote studies on the connections of the diencephalon in the monkey, and to the American Institute for the Deaf-Blind to be used in aid of research relating to the vibratory sense. This work will be carried on under the direction of Dr. Robert H. Gault, professor of psychology, and Dr. A. C. Ivy, professor of physiology in Northwestern University.

DR. RALPH SAMS HAWKINS, head of the department of agronomy of the College of Agriculture of the University of Arizona, delivered on May 22 the address of the retiring president of the Arizona Chapter of the Society of Sigma Xi, on "Research as an Aid in Regaining Arizona's Domestic Cotton Market."

DR. LOTHAR W. NORDHEIM, visiting professor of theoretical physics at Purdue University, gave a lecture at the University of Oklahoma on May 20 on "The Nature of the Metallic State." He also spoke before the department of physics on "Electron Free Path Phenomena in Metals."

A SIGMA XI lecture before the Brown University Chapter was given by Dr. Edgar Allen, of the department of anatomy, Yale University School of Medicine, on "Recent Advances in the Study of Reproduction."

THE Halley lecture of the University of Oxford was delivered on June 5 by Dr. J. S. Plaskett, director of the Dominion Astrophysical Observatory, Victoria, B. C., Canada. He spoke on "Dimensions and Structure of the Galaxy."

THE American Society of Zoologists will hold its thirty-third annual session at Princeton University on December 30 and 31, 1935, and January 1, 1936. The headquarters will be at the Biological Laboratories in Guyot Hall, and arrangements will be made for accommodations at the Graduate College and the hotels in Princeton. Detailed announcement will be sent to the members later.

THE American Association of Cereal Chemists opened its twenty-first annual meeting at Denver, Colo., for five days, on June 4.

THE conference of Pennsylvania geologists, which convened in Philadelphia on May 31, devoted three days to the study of the crystalline rocks of southeastern Pennsylvania, in order to secure additional information as to their origin, age and relations. Some 200 geologists attended the conference. The field trips were under the leadership of Dr. Edward H. Watson, of Bryn Mawr College, and Dr. Benjamin L. Miller, of Lehigh University. Among those who were expected to take part were Dr. George Ashley, state geologist of Pennsylvania; Dr. F. Bascom, U. S. Geological Survey; Dr. Arthur Bevan, state geologist of Virginia; Dr. Marland Billings, Harvard University; Dr. F. Ward, Lafayette College; Dr. Emmett R. Dunn, Haverford College; Dr. Charles Fettke, Carnegie Institute, Pittsburgh; Dr. Marcus I. Goldman, U. S. Geological Survey; Dr. Hugh D. Miser, U. S. Geological Survey; Dr. Edward Sampson, Princeton University; Dr. P. Tolmachoff, Carnegie Museum, Pittsburgh, and Dr. Herbert P. Woodward, Dana College, Newark, N. J.

The Museum News reports that the Buffalo Museum of Science opened on April 4 the Cabana Hall of Man, a gift of Oliver Cabana, Jr. The opening ceremonies included addresses by Kendall Emerson, executive secretary of the American Public Health Association, and Henry Vaughan, health commissioner of Detroit. The Hall of Man is on the main floor of the museum between the halls of primitive races and of heredity and environment. It is an exposition of the structure and

functioning of the human body. Exhibits included are a life-sized radiograph of a living person, body cross sections in model, a moving skeleton actuated by an electric motor, flanked by a disarticulate skeleton, models showing chest and diaphragmatic breathing, a rubber lung, voice production and reflex action exhibits, and exhibits showing the circulation of the blood, all the heart valves and circulation mechanism being demonstrated in action.

THE Department of Geology and Geography at Smith College has announced its plans for the summer program of work in the Black Hills. The study of the Mississippian-Pennsylvanian contact will be continued, and an effort will be made to determine the geographic range of the five faunal zones which have been differentiated in the Upper Cambrian as a result of field and laboratory studies carried on during the past three years. The western flank of the Black Hills will receive especial attention, and the group's activities, directed by Howard A. Meyerhoff and Robert F. Collins, will extend to the Bear Lodge Mountains, north of Sundance, Wyoming.

THE use of 10,000 acres of cut-over timber land in Livingston parish for use as a laboratory in reforestation work has been extended to the department of forestry at Louisiana State University by the Great Southern Lumber Company, of Bogalusa. The same organization cooperated with the department of forestry of the university in establishing a summer forest camp for students at Bogalusa. About 16,000 trees have already been planted in the area by the farm forestry class, under the direction of Ralph W. Hayes, head of the department.

E. G. REX, New Jersey state supervisor of plant pest control, has announced that the Federal Government is establishing a research unit at Morristown, to fight the Dutch elm disease. New Jersey has already spent $65,000 on the program and the U. S. Department of Agriculture $720,000.

COOPERATING with the Minnesota Department of Conservation, the U. S. Biological Survey has recently established the Talcot Lake Migratory Waterfowl Refuge, in Cottonwood County, Minn., and with funds from the sale of migratory waterfowl hunting stamps the bureau is restoring the area to its former usefulness for wildlife. This project is the first to be financed by the duck-stamp revenues. Sponsored by E. V. Willard, conservation commissioner of Minnesota, the Talcot Lake refuge is regarded by the Biological Survey as an example of the results obtained when conservationists work together. Destroyed by drought, the lake is now being reflooded to provide habitat for waterfowl and fishing for sportsmen. This dual purpose is being accomplished through an agreement whereby the State Department of Conservation will acquire the lands and flowage rights and the Biological Survey will construct a dam in the nearby Des Moines River to restore the lake and to control water levels. Approximately half of the 2,035-acre refuge is being conveyed to the United States for the Biological Survey's use as waterfowl breeding and feeding grounds, including a dry savannah that will be restored to its former marsh condition. The remainder, including most of the lake proper, will be administered by the state for the benefit of fishermen and fur trappers, and in accordance with bureau recommendations regulated fishing and trapping will be allowed throughout the area to such an extent as will not interfere with the primary use of the refuge for water-fowl conservation purposes. The state will assist in patrolling and otherwise protecting the refuge, and the bureau will undertake the biological development of the area and will introduce aquatic plants for waterfowl food and cover.

The British Medical Journal reports that at a luncheon on April 20, held to celebrate the diamond jubilee of the Edinburgh University Chemical Society, Professor James Kendall, of the chair of chemistry at Edinburgh, said that the original foundation of this society went back, not to 1875, but to 1785, so that it was the first chemical society in the world. Examination of the register of students at the university in 1785 had established that out of fifty-nine members of the Chemical Society, fifty-three were students attending Professor Joseph Black's class in chemistry. How long the society survived after 1785 they did not at present know, but they hoped it might be possible to locate a descendant of one of the original members who was in possession of some record of its proceedings and history. It was possible that the Chemical Society of Philadelphia, which claimed to be the first chemical society in the world, might be an offspring of the original Edinburgh Chemical Society, because the University of Pennsylvania had been instituted in 1765, under strong Edinburgh auspices, and the coat of arms of Edinburgh University was still to be seen above the entrance to one of its original buildings.

THE royal research ship *William Scoresby* arrived in London on May 14, after seven months' work in Antarctic waters. This was the fourth visit to the Southern Seas, and was occupied entirely in observing and marking whales, this being the purpose for which she was designed and constructed. It is hoped that this work will cast light on the migrations of the whales of the Antarctic whaling grounds. After final provisioning at Simonstown, South Africa, the *William Scoresby* sailed for the pelagic whaling grounds, and on December 1 the first whale was marked. Soon afterwards the ship met pack ice, and from this time until her return whales in varying numbers were con-

stantly met, sometimes in small numbers, sometimes as many as 200 in one day. The grounds visited were those about Bouvet Island; thence southward towards the ice and along the ice edge eastward to 90 deg., that is, to a position off Queen Mary Land in the Australian Antarctic Territory; then westward to the vicinity of Enderby Land. Between her departure from Capetown and her return to that port at the conclusion of the marking, the *William Scoresby* steamed 17,500 miles and passed 122 days out of sight of land. G. W. Rayner, a member of the *Discovery* scientific staff, was in charge of the operations, with Captain C. R. V. Boothby, R.N.R., in executive command.

THE London correspondent of the *Journal* of the American Medical Association writes: "Again the figures of the registrar general show that as a people the English are growing older as a result of the falling birth and death rates. The birth rate for 1934 was 14.8 per thousand of population. In the last thirty odd years the rate has been halved. This fall is without parallel in the history of this or any other country. The infant death rate in 1934 was 59 per thousand live births; in the quinquennium 1901–1905 it was 138. The general death rate has also been falling steadily. In the quinquennium 1901–1905 it was 16.1 per thousand of population; in 1934 it was 11.8, which was 0.4 above that for 1933, the lowest on record. The increasing aging of the population is shown by the proportion of the persons over the age of 70 years per 10,000 of the total. In 1911 they numbered 297; in 1921, 344; in 1931, 426 and in 1932, 434. The registrar general therefore describes the increase in the number of old people as 'an outstanding feature of our vital statistics.'"

DISCUSSION

THE NEW ACTIVE PRINCIPLE OF ERGOT

RECENT work, revealing the presence in ergot of a water-soluble principle acting very promptly on administration by the mouth, has evidently aroused wide interest. In the issue of SCIENCE for March 29 (*Supplement,* p. 10) a short review was given of the paper[1] published on March 16, in which we described the isolation in crystalline form of the chemical characters and the action of the substance responsible for this effect—a hitherto unknown alkaloid, to which we gave the name "Ergometrine." This had resulted from joint work, on which we had been engaged ever since one of us (Moir) first demonstrated, in 1932, that watery extracts of ergot contained a substance different from any of the principles hitherto known, and acting in this way.[2] Though our work had thus extended over nearly three years, it had been interrupted by the circumstance that Moir accepted, during its progress, a pleasant invitation to visit the United States, where, during a visit of some six months, he had the opportunity of lecturing to American colleagues and demonstrating the method of recording contractions of the puerperal human uterus, which had first revealed the presence of this ergot principle, and which enabled it to be detected and measured in the course of our chemical work. It is now evident that the matter was of such interest to colleagues in Baltimore and Chicago, where the lectures were given, as to stimulate investigators in both centers to independent researches, having the object of identifying the unknown principle. Our own quest for it was resumed on Moir's return to London. This concurrent effort has had the result, in many ways satisfactory, that our recognition of the principle as a new ergot alkaloid has received double confirmation, not only independent but almost simultaneous, from both these centers. The March issue of the *Journal* of the American Pharmaceutical Association (p. 185) contains a paper by M. R. Thompson, of Baltimore, who was probably the first to recognize that the unknown principle had alkaloidal properties. His paper is chiefly concerned with an alkaloidal fraction containing it; and, from the details of the physiological action described, it would appear that this fraction, which he calls "alkaloid X," still contained much alkaloid of the ergotoxine type. In a footnote, however, Thompson reports a later success in crystallizing what was very probably our Ergometrine. The issue of SCIENCE for April 19 (p. 388) publishes a statement entitled "Ergotocin," by M. S. Kharasch and R. R. Legault of Chicago. These authors had apparently not yet seen our paper of March 16, or the abstract of it given by SCIENCE of March 29. In their own earlier paper on the subject, by Davis, Adair, Rogers, Kharasch and Legault, published in the *American Journal of Obstetrics and Gynecology* for February (p. 155), the Chicago group described an impure preparation, having a high activity of the type under discussion, and regarded by them as non-alkaloidal; and they there stated that Eli Lilly and Company had made arrangements to prepare and issue this preparation, and had "given it the trade name 'Ergotocin.'" Again in a footnote, these authors recorded a subsequent success in crystallizing the principle; and it seems clear from the note in SCIENCE (April 19) that they have now recognized that the crystalline principle is alkaloidal and desire to transfer to it the name "Ergotocin." The characters which they attribute to it are those of Ergometrine.

We should like to make it clear that it is far from our intention to engage in a discussion of priority on

[1] *British Medical Journal,* i, 520, 1935.
[2] *British Medical Journal,* i, 1119, 1932.