birds. Based mainly on the songs of the males, his estimate showed that the breeding birds on these 800 acres include about 275 pairs of 51 species. In timber Mr. Howell noted 159 pairs of 28 species. In grassy fields he counted 38 pairs of 13 species. Slashings, he found, contained 42 pairs of 5 species; 20 pairs of 2 species were in swampy thickets; 12 pairs of 4 species in orchards or dooryards, and one pair in a marsh. Only one species of game bird has thus far been noted—4 pairs of bobwhites breeding in grassy fields.

The bureau has planted lespedeza, soybeans, millet and other food and cover plants to make the area more attractive for upland-game birds. Provision will also be made for propagating these birds in captivity for later release.

The two ponds for waterfowl to be created by building dams will be about a mile apart. The impounded water in each case, it is expected, will cover 18 acres.

By impounding water the bureau will also furnish suitable surroundings for muskrats and beavers—valuable fur bearers that contribute to the income of farms where they are encouraged. At the site of one of the projected ponds, workers have planted willows to furnish food for beavers, and additional provisions will be made for improving the food supply for fur animals. The area will include units for the production of fur animals in captivity.

The demonstration area will also serve as a wild-life experiment station. The results, it is expected, will be of value not only to farmers undertaking game management, but also to federal and state agencies in the administration of wild-life refuges. Specialists of the bureau will experiment with various methods of game-management and will study the factors influencing the abundance of wild life—including predators, rodents and diseases. Plans are being made for a central laboratory for detailed investigations, and provision will be made for keeping birds and animals under observation. This tract is typical of the areas on thousands of farms, and the bureau intends to show how such a piece of land can be made of great value in furthering the national program of wild-life restoration.

THE NATIONAL RESEARCH COUNCIL OF THE PHILIPPINE ISLANDS

THE National Research Council of the Philippine Islands was created in 1923 by the Philippine Legislature, under Act 4120. The council has been constituted as follows:

EXECUTIVE BOARD

Chairman: Dr. Manuel L. Roxas, under-secretary, Department of Agriculture and Commerce, Commissioner of Research, acting director, Bureau of Plant Industry.

Vice-chairman: Dr. Bienvenido M. Gonzales, dean, College of Agriculture, University of the Philippines.

Executive Secretary: Dr. Patrocinio Valenzuela, associate professor, School of Pharmacy, University of the Philippines.

Members: Arthur F. Fischer, director, Bureau of Forestry; acting director, Bureau of Science; *chairman,* Division of Agriculture and Forestry. Dr. Eduardo Quisumbing, chief, National Museum, and curator, Philippine National Herbarium, Bureau of Science; *chairman,* Division of Biological Sciences. Angel S. Arguelles, assistant director, Bureau of Science; *chairman,* Division of Chemical and Pharmaceutical Sciences. Hermenegildo B. Reyes, professor of mechanical and electrical engineering, College of Engineering, University of the Philippines; *chairman,* Division of Engineering and Industrial Research. Dr. Antonio G. Sison, professor of medicine, College of Medicine and Surgery, University of the Philippines; *chairman,* Division of Medical and Veterinary Sciences. Dr. Victor Buencamino, director, Bureau of Animal Husbandry; *chairman,* Division of Government, Foreign and Educational Relations. The Reverend Miguel Selga, director, Weather Bureau; *chairman,* Division of Physical and Mathematical Sciences.

SCIENTIFIC NOTES AND NEWS

DR. JOSEPH S. AMES, president of the Johns Hopkins University, formerly professor of physics and for four years provost of the university, has announced his intention to retire at the close of the next academic year.

DR. JAMES SOMERVILLE MCLESTER, professor of medicine at the University of Alabama, was chosen at the recent Cleveland meeting president-elect of the American Medical Association by a margin of fourteen votes. Dr. McLester received eighty-five votes in the House of Delegates against seventy-one for Dr. Hugh S. Cumming, surgeon-general of the United States. Dr. McLester will take office next year, succeeding Dr. Walter L. Bierring, of Des Moines, who was elected a year ago. Dr. Dean DeWitt Lewis, surgeon-in-chief of the Johns Hopkins Hospital and professor in the university, was the retiring president.

ADDITIONAL members of the Science Advisory Board, created by an executive order of President Roosevelt on July 31, 1933, have been appointed as follows: Dr. Roger Adams, president-elect of the American Chemical Society, professor of organic chemistry and chairman of the department of chemistry of the University of Illinois; Dr. Simon Flexner, director of the labora-

tories of the Rockefeller Institute for Medical Research; Dr. L. R. Jones, professor emeritus of plant pathology at the University of Wisconsin; Dr. Frank R. Lillie, dean of the Division of the Biological Sciences of the University of Chicago; Dr. Milton J. Rosenau, professor of epidemiology at the Harvard School of Public Health, and Dr. Thomas Parran, state commissioner of health of New York.

AT a recent convocation at the University of Oxford the honorary degree of doctor of science was conferred on Dr. Edwin P. Hubble, astronomer of the Mount Wilson Observatory.

AMONG the honorary degrees conferred by Yale University on June 20 were the doctorate of laws on Dr. James Bryant Conant, of Harvard University, and the doctorate of science on Dr. Frederick G. Keyes, professor of physical chemistry at the Massachusetts Institute of Technology, and on Dr. Adolf Meyer, psychiatrist in chief at the Johns Hopkins Hospital.

THE honorary degree of doctor of science was conferred on Barnum Brown, curator of vertebrate paleontology at the American Museum of Natural History, at the commencement exercises of Lehigh University.

AT the closing exercises of Acadia University, Wolfville, Nova Scotia, held on May 23, the honorary degree of doctor of science was conferred on the following alumni: Dr. George Russell Bancroft, professor of physiological chemistry and toxicology at Jefferson Medical College, Philadelphia; Dr. John Stuart Foster, professor of physics at McGill University, and Dr. Frederick Shand Goucher, research physicist at the Bell Telephone Laboratories, New York City.

A LUNCHEON in honor of the seventieth birthday of Dr. Frank M. Chapman, curator of birds at the American Museum of Natural History, was given on June 13 by his associates, seventy-five of whom were present. Dr. Chapman has been connected with the museum for forty-seven years.

AN album of letters from some five hundred friends and alumni expressing appreciation of his work and of his contributions to agriculture was recently presented to Dr. Charles Franklin Curtiss, who retired in 1932 as dean of agriculture at the Iowa State College and director of the Experiment Station. An oil portrait of Dean Curtiss, painted by Robert Grafton, of Chicago, will be presented to the college.

On the occasion of the resignation of Dr. D. Clifford Martin, for twenty years chief of the tuberculosis Bureau of the New York City Department of Health, a dinner was given in his honor by two hundred of his friends and associates. Among the speakers were Health Commissioner John L. Rice, Dr. James A. Miller and Dr. William H. Park.

Industrial and Engineering Chemistry reports that to commemorate the fiftieth anniversary of the scientific activity of Nicholas D. Zelinsky, professor at the State University, Moscow, U. S. S. R., and member of the Academy of Sciences, a celebration was held in Moscow on June 8. Professor Zelinsky is known for his work in the field of the hydrocarbons.

THE gold medal of the American Medical Association has been awarded to Dr. Gregory Shwartzman, of Mt. Sinai Hospital, New York, in recognition of his method of producing an antitoxin serum for typhoid fever.

DR. WILLIAM SNOW MILLER, emeritus professor of anatomy at the University of Wisconsin, was awarded the Trudeau medal at the thirtieth annual meeting of the National Tuberculosis Association, held at Cincinnati.

THE following awards are reported in *Nature* to have been made by the Royal Aeronautical Society, London: Simms Gold Medal to Sir Gilbert Walker, for his paper on cloud formation; Taylor Gold Medal to A. Plesman, managing director of K.L.M., for his paper on the Amsterdam-Batavia service; the Wakefield Gold Medal to Señor J. de la Cierva, for his work on the development of the autogiro; the Busk Memorial Prize to A. V. Stephens, for his paper on recent research in spinning, and the Pilcher Memorial Prize to W. H. Lewis, for his paper on duralumin in aircraft construction.

AT the Johns Hopkins University, Dr. Allen W. Freeman has been appointed dean of the School of Hygiene and Public Health for three years from July 1. He succeeds Dr. Wade H. Frost, professor of epidemiology. Dr. Edward W. Berry, professor of paleontology, has been reappointed dean of the College of Arts and Sciences for a term of five years. Other appointments include Dr. Edward H. Hume, Noguchi lecturer; Dr. Pasteur Valery-Radot, of Paris, Thayer lecturer in the School of Medicine, and Dr. Julius Lewy, formerly of the University of Giessen, visiting professor in the Oriental Seminary for the first term. Dr. Alan C. Woods, formerly associate professor of ophthalmology, has been appointed acting professor of ophthalmology, and Dr. Ludwig Edelstein, formerly of the University of Berlin, associate in the history of medicine.

DR. IVEY FOREMAN LEWIS, professor of biology at the University of Virginia, has been elected dean of the university, and Dr. George Oscar Ferguson, Jr., professor of psychology and education and assistant dean of the College of Arts and Sciences, has been made dean. Dr. Gordon Thomas Whyburn, associate professor of mathematics at Stanford University, has been elected professor of mathematics, and Dr. Albert

Eugene Carey, since 1927 assistant in experimental pathology with the Rockefeller Institute for Medical Research, associate professor of pathology.

WALTER G. WHITMAN, associate director of research of the Standard Oil Company of Indiana, has been appointed head of the department of chemical engineering at the Massachusetts Institute of Technology. Professor Whitman succeeds the late Professor William P. Ryan, who died in June, 1933. Since that time, Dr. Warren K. Lewis has directed the affairs of the department as acting head.

DR. LLOYD A. YOUNG, research assistant in theoretical physics at Princeton University, formerly National Research Fellow at Harvard University and the Massachusetts Institute of Technology, has been appointed instructor in theoretical physics at the Carnegie Institute of Technology, Pittsburgh. Dr. Young will work under the direction of Dr. Otto Stern, head of the physics research laboratory.

DR. FRANZ BLUMENTHAL, formerly surgeon at the Institute of Dermatology of the University of Berlin, arrived in New York on June 1. He will lecture at the University of Michigan and plans to continue there his work on the treatment of skin diseases.

DR. BERNARD L. OSER, of the Food Research Laboratories of New York City, has been promoted to the position of director of that organization.

DR. HAROLD LEVINE, research associate at the South Carolina Food Research Laboratory and lecturer on nutrition at the Medical College of the State of South Carolina, will join the Premier-Pabst Corporation of Milwaukee as biochemist.

H. A. BALLOU retired recently as commissioner of agriculture for the British West Indies and head of the department of zoology and entomology in the Imperial College of Tropical Agriculture.

DR. L. M. DENNIS, emeritus professor of chemistry at Cornell University, sailed for Europe on June 6.

DR. CAROLINE E. FURNESS, professor of astronomy at Vassar College, has leave of absence for the coming academic year.

DR. STANLEY T. BROOKS, curator of recent invertebrates at the Carnegie Museum, Pittsburgh, will sail in June for several months collecting in Newfoundland. The trip is for the purpose of studying the circumpolar and nearctic molluscan fauna, although collections of plants and insects will be made.

THE Secretary of State has designated Professor George Grant MacCurdy, of Yale University, as an official delegate of the United States to the first session of the International Congress of Anthropological and Ethnological Sciences to be held in London from July 30 to August 4. He will also represent the Smithsonian Institution at the congress. Dr. MacCurdy, as director of the American School of Prehistoric Research, will consult with Theodore McCown, of the University of California, and Sir Arthur Keith, who are studying and preparing for publication the ten Neandertal skeletons recently dug from caves at the foot of Mount Carmel, Palestine, by the joint expeditions of the American and British schools.

DR. R. E. ROSE, director of the Technical Laboratory of the E. I. du Pont de Nemours and Company, Incorporated, and president of the American Association of Textile Chemists and Colorists, addressed the Technical Association of the Pulp and Paper Industry in Philadelphia on May 25 on "Developments in the Technology of Cellulose."

DR. LAURENCE H. SNYDER, of the Ohio State University, delivered an address before the Society of Sigma Zeta at Otterbein College on May 18. His subject was "Heredity and Modern Life."

DR. WALDEMAR KAEMPFFERT, science editor of *The New York Times*, gave the address at the commencement exercises of the Carnegie Institute of Technology on June 11.

HOWARD T. BLAKESLEE, science editor for the Associated Press, was the speaker on June 5 at the graduation exercises of the Massachusetts Institute of Technology.

THE Academy of Natural Sciences, Philadelphia, is sending an expedition to the Republic of Mexico, under a grant from the American Philosophical Society. The members of the party, which left Philadelphia on June 12, are Dr. Henry A. Pilsbry, curator of mollusks, and Dr. Francis W. Pennell, curator of plants, in the Academy, and Cyril H. Harvey, teacher of natural science in the Friends School in Atlantic City. They will spend three months in the field, carrying on their investigation in the high plateau of central Mexico, and securing mollusks and plants for the collections of the academy.

THE exhibition of machine art recently held in New York City will be placed on display at the Museum of Science and Industry in Jackson Park, Chicago, from June 25 to November 15. The exhibition is a collection of manufactured articles which combine beauty and utility, gathered together by the Museum of Modern Art in New York and sent to Chicago.

THE twenty-sixth annual session of the University of Michigan's Biological Station at Douglas Lake, thirteen miles from Cheboygan, will open on June 25.

DR. JAMES P. CHAPIN, of the American Museum of Natural History, has transmitted to The New York

Botanical Garden the extensive botanical collections made by him on Mount Ruwenzori, Mount Kenya, and Kivu Volcano, in central Africa, and in the Lukolela region of Belgian Congo in 1926–27 and 1930–31.

GROUND-BREAKING ceremonies for the Hayden Planetarium of the American Museum of Natural History, which is to be constructed just north of the museum buildings, took place on May 28. Contract for constructing the planetarium building has been awarded to the White Construction Company of New York, whose bid, which was the lowest, was $509,144. All funds for the construction and incidental equipment will be obtained through a $650,000 bond issue purchased by the Reconstruction Finance Corporation and to run for a period of twenty years. The Zeiss projection planetarium apparatus and the Copernican Planetarium will be acquired through the gift of $150,000 of Charles Hayden, after whom the planetarium has been named. Mr. Davison presided at the ground-breaking ceremonies. The speakers were Mr. Hayden, who turned the first spadeful of soil; Park Commissioner Robert Moses, representing the city, and Dr. Clyde Fisher, curator of astronomy at the museum. It is expected that about a year will be taken to complete the planetarium. An admission charge will be made until the money borrowed from the federal government has been paid, but public school children attending classes are to be admitted free at special periods.

THE voices of Dr. William L. Bragg and Sir Arthur Stanley Eddington, visiting lecturers at Cornell University, have been recorded as part of an arrangement to preserve for future generations the voices of distinguished persons connected with Cornell. Professor Vladimir Karapetoff, of the school of electrical engineering at Cornell, has volunteered to make the records on his high-fidelity voice recording equipment perfected after several years of experimenting. Dr. Bragg's statement opened as follows: "This is W. L. Bragg speaking, of Manchester University, England, on May 3, 1934. I am often confused with my father, Sir William Bragg, greatly to my own advantage, since we are both professors of physics and have worked together at the same branch of research in the investigation of crystal structure by means of x-rays. We started this research in 1913 and were awarded the Nobel Prize for it jointly two years later." Sir Arthur introduced himself in these words: "This is Sir Arthur Eddington speaking on May 1, 1934. I have been visiting Cornell University to give the Messenger lectures for this year. I have been for twenty years professor of astronomy in the University of Cambridge, England, and am director of the observatory there. When I am not occupied with the stars, I am generally occupied with Einstein's theory or with some of the developments of theoretical physics that have arisen out of it."

FOR the first time in a century there are new-born musk-oxen in Alaska, according to a report to the Bureau of Biological Survey, U. S. Department of Agriculture. Two young animals were born April 29 in the herd transplanted to the territory in 1930. Musk-oxen, according to statements by natives, practically disappeared from Alaska about one hundred years ago, and there seem to be no authentic records of their existence there until the fall of 1930. In April, 1927, the Territorial Legislature in a memorial to Congress urged an appropriation for re-establishing musk-oxen in Alaska, and the Bureau of Biological Survey undertook the task. Thirty-four young musk-oxen were transplanted from northeastern Greenland to the territory in the summer and fall of 1930. These were captured by a Norwegian collector, and after transshipment in Norway traveled on an ocean liner to New York. They were subsequently placed on a suitable range, and although there have been a few casualties, the herd has prospered.

DISCUSSION

THE "SINKING" OF LAKE AND RIVER ICE

IN the spring, as Tennyson puts it, some of us are prone to obsessions. One of these obsessions is that of the boatman, fisherman and lots of others, who swear that at this season surface ice becomes rotten or honeycombed, and sinks. They know it sinks, because in the evening the lake, for instance, may be covered with a sheet of old ice from end to end and shore to shore, and by the next morning no trace of the ice left, save little patches here and there along the water's edge. "Of course it sank," they say, "how else could it have disappeared so rapidly?" And river men tell us not to worry about the ice coming down stream from a broken jam above, for before getting very far it will go to the bottom like a rock. Evidently it can be sunk, and sometimes is, just as a boat may be, by overloading with a substance denser than water, such as sand, gravel or mud. But as this requires one pound of sand, for example, to every 7 pounds of ice, a proportion hundreds of times greater than that of the suspended matter to the water in even a muddy river, it is obvious that such sinking can not occur on lakes, except rarely at the mouths of flooded streams, nor at all commonly anywhere else.

This sinking by overloading every one admits. The argument, and need for explanation, comes when it is