

1. "The Arctic and Sub-Arctic as they really are, to the Best of Our Present Knowledge and Belief—Climate, Resources, People."

2. "Greek Views of the Nature of the Arctic after 500 B. C. Theories and folk belief regarding the Far North. Travelers and trade. Pytheas. The ebb and flow of geographic knowledge. Ottar (Othere) and the English knowledge of Norway. The Irish discover Iceland—a stepping stone to the Arctic and to America."

3. "The Norse Colonize Iceland. The foundation and growth of the Republic. Literature and life. Discovery of Greenland."

4. "The Colonization of Greenland. The discovery and attempted colonization of North America."

5. "The Greenland Republic, its History from 986 to 1500. The fate of the settlements."

6. "Summary of Arctic Discovery from Cabot to Franklin."

7. "Summary of Arctic Discovery, from Franklin to Peary."

8. "The Relation of the Arctic to the World as a Whole. Scientific problems. Commercial development and economic destiny. (This lecture is a more or less personal account of the results of the three Stefansson expeditions of 1906-07, 1908-12 and 1913-18.)"

SCIENTIFIC NOTES AND NEWS

THE regular fall meeting of the executive committee of the council of the American Association for the Advancement of Science will occur in Washington on Sunday, October 21. All matters of business and policy that are to be brought before the council at the annual meeting in New York should come before the executive committee at its fall meeting, in so far as that is possible. Communications to be presented to the executive committee at its fall meeting should be in the hands of the permanent secretary, Dr. Burton E. Livingston, the Smithsonian Institution Building, Washington, D. C., by October 15, to make sure that they get properly placed on the order of business and properly presented.

THE International Congress of Americanists is holding this week its twenty-third session in New York City. Dr. Henry Fairfield Osborn is the honorary chairman, and delegates from seventeen foreign nations were expected to be in attendance.

SIR THOMAS HOLLAND, rector of the Imperial College of Science and Technology, London, distinguished for his work in geology and mining engineering, was elected president of the British Association for the Advancement of Science at the recent Glasgow meeting. Sir Thomas was born in Canada in 1868.

STEPHEN C. SIMMS has been appointed director of the Field Columbian Museum to succeed David

Charles Davies, who died on July 14. Mr. Simms has been a member of the scientific staff of the institute since it was founded in 1893, first as assistant curator of anthropology and since 1913 as curator of public-school extension.

HONORARY membership in the American Electrochemical Society has been conferred on Mr. Thomas A. Edison, who is one of the original members of the society.

DR. ATHERTON SEIDELL, of the Hygienic Laboratory of the U. S. Public Health Service, has been made a chevalier of the Legion of Honor.

DR. CHARLES L. REESE, director of E. I. du Pont de Nemours and Company, past president of the American Institute of Chemical Engineers, has been made an honorary member of the Institution of Chemical Engineers of Great Britain, in recognition of his distinguished services to chemical engineering and the promotion of international relations.

THE University of Amsterdam celebrated recently the seventieth birthday of Professor E. Dubois. The speakers recalled the services to paleontology of Professor Dubois, and more particularly his discovery and reconstruction of *Pithecanthropus erectus*.

NILES A. OLSON has been appointed chief of the bureau of agricultural economics of the U. S. Department of Agriculture, to succeed Lloyd S. Tenny, who has accepted a position with the Associated California Fruit Industries.

DR. ROBERT B. SOSMAN has resigned his position as physicist at the Geophysical Laboratory of the Carnegie Institution to join the staff of the newly organized research laboratory of the U. S. Steel Corporation, Kearny, New Jersey.

DR. WALDEMAR KAEMPFFERT, director of the Rosenthal Industrial Museum, of Chicago, announces the appointment of J. R. Folse, of Northwestern University, to be curator of the division of prime movers, and of Marion F. Williams, of the University of Chicago, librarian.

THE regents of the University of Wisconsin have formally adopted a program of forestry research to be carried out in cooperation with the Federal Lake States Forest Experiment Station and the Wisconsin Conservation Commission. Dr. Raphael Zon, director of the Lake States Station, has accepted an appointment as non-resident professor of forestry and has assumed general supervision of all forestry research projects.

PROFESSOR NELSON C. BROWN, of the College of Forestry of Syracuse University, has been named a member of the New York State Reforestation Commission. Investigation of the possibilities of reforestation of New York State and the preparation of a survey of the location, value and area of all land available for reforestation constitute the purpose of the commission.

DR. ROGER I. LEE, professor of hygiene in the Harvard Medical School, has been made chairman for the ensuing year of the committee on public health of the Boston Chamber of Commerce.

DR. A. U. DESJARDINS, of the Mayo Clinic, has been appointed technical adviser to the irradiation committee of the National Research Council.

THE REVEREND EDWARD C. PHILLIPS, since 1925 director of the Astronomical Observatory of Georgetown University, has been appointed to the office of Provincial of the Jesuit Province of Maryland-New York.

SIR J. C. MARTIN, director of the Lister Institute, has been appointed by the British Minister of Agriculture and Fisheries to be chairman of the departmental committee which will report on the reconstruction of the Royal Veterinary College.

DR. DAYTON STONER has resigned his position as assistant professor of zoology at the State University of Iowa and has accepted an appointment as associate entomologist in the U. S. Bureau of Entomology. His work will deal with truck crop insects, and he will be stationed at Sanford, Florida. On May 1, 1929, Dr. Stoner will return to Syracuse, New York, to complete his work on the birds of the Oneida Lake region. This project is promoted by the New York State College of Forestry and the Roosevelt Wild Life Experiment Station.

DR. E. A. BIRGE, president emeritus of the University of Wisconsin, has returned from Northeastern Wisconsin, where his party of ten men studied contents of 229 lakes. Dr. Birge spent his seventy-seventh birthday unpacking boxes containing hundreds of samples of lake water and low forms of lake life collected during the summer in the comprehensive study of lake productivity which he began about thirty years ago.

ERNEST W. LINDSTROM, professor of genetics in the Iowa State College at Ames, has returned after a year in Europe. He was assistant director of the International Board in Biology and Agriculture. Professor Lindstrom traveled in most of the countries of Europe where important research is being under-

taken, except in Russia, in order that the board, through fellowships and assistance to laboratories, might best assist the progress of science.

DR. JOHN D. LONG, U. S. Public Health Service, has been relieved as chief quarantine officer of the Panama Canal and will report to the surgeon-general for conference prior to a tour of Latin-American countries as a representative of the Pan-American Sanitary Bureau.

ROY C. POTTS, in charge of the division of dairy and poultry products of the Bureau of Agricultural Economics, has returned to Washington after attending the World's Dairy Congress, recently held in London. He visited Denmark and Holland to study the butter and cheese control service which is supervised by the ministries of agriculture of the governments.

DR. J. WALTER WOODROW, professor of physics in the Iowa State College, has returned after a year in England. As a Guggenheim Fellow, he investigated the physical properties of cod-liver oil, working at Oxford, Cambridge and Liverpool.

DR. O. T. JONES, professor of geology at the University of Manchester, England, has been visiting the United States. With Dr. E. O. Ulrich he has been studying Cambrian and Ordovician stratigraphy of the Appalachian Valley, their trip extending from northern Pennsylvania to Alabama.

DR. WARREN K. STRATMAN-THOMAS, research pharmacologist in the University of Wisconsin, Madison, sailed on August 2 for the Belgian Congo to study the effect of certain drugs in the treatment of sleeping sickness.

DR. ANDREW HENRY PATTERSON, professor of physics in the University of North Carolina for twenty years and for the last seventeen dean of the school of applied sciences, has died at the age of fifty-eight years. Dr. Patterson had leave of absence from the university and was resting in New Hampshire in the hope of recovering his health.

DR. JOHN RENNIE, an authority on parasitology and entomology at Aberdeen University and the North of Scotland College of Agriculture, died on August 30, at the age of sixty-three years.

FRANK LEWIS MASON, of West Haven, Connecticut, the consulting geologist and mining engineer, died on September 12 at the age of seventy-two years. Mr. Mason was at one time connected with the geological surveys of New Jersey and Missouri.

A MARBLE bust of the late Dr. John Collins Warren is to be placed in the Warren Museum of Harvard University Medical School.

THE fifth annual meeting of the Eastern Society of Anaesthetists will be held in Boston, from October 8 to 12, when a bronze bust of W. T. G. Morton will be presented to the Massachusetts General Hospital, in which institution the first demonstration of an operation under ether anesthesia was performed.

A JOINT celebration was recently held at Darmstadt to celebrate the one hundred and twenty-fifth birthday of Justus von Liebig on May 12, 1928, and the centenary of the synthesis of urea by Wöhler. Besides representatives of the German chemical societies, others from European countries and from Japan were present. The memorial address on Liebig was delivered by Haber, of Berlin; Professor Wohl, of Danzig, spoke on Wöhler. Wöhler's original preparations of urea and of aluminum had been borrowed from Göttingen for the celebration. The birthplace of Liebig, which had to be razed in 1920 because of its dilapidated condition, has been exactly reproduced, as a result of contributions from German chemists and chemical manufacturers, and is now to serve as a museum in commemoration of Liebig and of the industries which originated with him. There is a Liebig museum at Giessen as well as at Darmstadt.

At the annual meeting of the Mount Desert Island Biological Laboratory the following officers were re-elected: Dr. Hermon Carey Bumpus, *president*; Dr. Duncan Starr Johnson, *vice-president*; Dr. Louise DeKoven Bowen, *treasurer*; Dr. Herbert Vincent Neal, *secretary*. Dr. Neal was reelected director of the laboratory. Seven new members were added to the corporation: Dr. W. H. Cole, of Rutgers University; George B. Dorr, of Bar Harbor; Dr. Margaret M. Hoskins, of New York University; Mr. Roscoe B. Jackson, of Seal Harbor; Dr. C. C. Little, of the University of Michigan; Dr. F. E. Lutz, of the American Museum of Natural History, and Dr. William Morton Wheeler, of Harvard University, making a total of twenty-nine members. Mrs. Bowen, the treasurer, reported that the total donations to the laboratory from August 16, 1927, to August 1, 1928, were \$5,636.00 and that the balance in the treasury on August 1, 1928, was \$3,127.58. The trustees voted to use the McCagg tract of land at Salisbury Cove as building sites for laboratory workers.

ACCORDING to a radio to Science Service the airplane expedition of the U. S. Department of Agriculture, which went into the wilds of New Guinea last spring to hunt for new varieties of sugar-cane, has now emerged and is returning to the United States. Dr. D. W. Brandes, leader of the expedition, reports a complete success in every respect. One hundred and seventy-one distinct varieties of cane were secured, in-

cluding twenty wild kinds, and one species wholly new to science. These specimens of sugar-cane are being brought out alive, and it is the intention of the Department of Agriculture to use them in improving the canes now in cultivation, with the special aim of getting disease-proof varieties. The expedition covered a great deal of new and little known territory, flying over the heads of the head-hunting tribes that hold the land between the coast and the higher mountain areas. They spent seven weeks on the upper Fly river, three weeks in the Owen Stanley range and two weeks on the upper Sepik river. Fourteen lakes not hitherto on any map were located, and a number of other new geographical features discovered. The expedition has sailed for Vancouver, B. C., by way of Sydney, Australia.

THE Medical Research Council, as we learn from *Nature*, announces that on behalf of the Rockefeller Foundation it has made the following awards of fellowships provided by the foundation and tenable in the United States of America during the academic year 1928-29. These fellowships are awarded to graduates who have had some training in research work either in the primary sciences of medicine or in clinical medicine or surgery, and are likely to profit by a period of work at a university or other chosen center in America before taking up positions for higher teaching or research in the British Isles. Dr. L. E. Bayliss, Sharpey Scholar at University College, London; Dr. A. V. Neale, Children's Hospital, Birmingham; Dr. F. J. W. Roughton, lecturer in physico-chemical aspects of physiology, University of Cambridge; Dorothy Stuart Russell, Baron Institute of Pathology, London Hospital; Mr. Arthur Wormall, lecturer in biochemistry, University of Leeds.

DR. EDWARD GOODRICH ACHESON, known for his work with electric furnaces, presented the American Electrochemical Society during its recent session at Charleston, West Virginia, the sum of \$25,000 as a trust fund to form the basis of an award every second year of a gold medal and a prize of one thousand dollars (\$1,000) for a distinguished contribution to any of the branches fostered by the American Electrochemical Society.

JOHN D. ROCKEFELLER, Jr., has given \$100,000 to the Leonard Wood Memorial for the Eradication of Leprosy. The trustees of the fund have appropriated \$165,000 to build an incipient station at Cebu, Philippine Islands. Heretofore all lepers have been taken to the leper colony at Culion. This has meant that those suffering from the disease, whether in advanced or mild stages, have been detained in this single colony. It is proposed to establish similar stations in

various provinces in the islands where those suffering from mild forms of leprosy may be treated.

THE board of directors of the Cottage Hospital, Santa Barbara, announce gifts amounting to more than half a million dollars for research work. Edward L. Harkness, George O. Knapp and Max C. Fleischmann each gave \$200,000, Edward Lowe, \$5,000, and E. Palmer Gavitt, a new building to be devoted to research. The gifts of Mr. Harkness and Mr. Knapp are to be invested and the income only used for research. The Fleischmann donation, after providing for certain improvements to buildings, will be invested and only the income used.

UNIVERSITY AND EDUCATIONAL NOTES

DARTMOUTH COLLEGE has received a bequest of \$1,619,550 from the estate of the late Edwin W. Sanborn.

BY the provisions of the will of the late George Warren Brown, a shoe manufacturer, the residue of his estate, amounting to not less than \$630,000, is given to Washington University, St. Louis.

GIFTS to the University of Chicago announced by the board of trustees are \$25,000 from the Milbank Fund, New York, for research on infantile paralysis, under the direction of Dr. Edwin O. Jordan and Dr. Ludvig Hektoen; \$449.60 from Dr. Lester E. Frankenthal to cover purchases for the medical library, and \$5,000 from Mr. Frederick Bode and \$1,000 from Mr. Herman H. Hettler for the Frank Billings Medical Clinic Fund.

DR. E. D. BALL, formerly director of research work in the U. S. Department of Agriculture and assistant secretary of agriculture, recently in charge of celery insect investigations for the Florida State Plant Board, has been appointed dean of the college of agriculture and director of the agricultural experiment station at the University of Arizona. He will assume his new work about October 1. Professor J. J. Thorner, at his own request, has been transferred to his old position of professor of botany and botanist in the experiment station. He will continue his research work on the Flora of Arizona and teach the courses in systematic botany.

PROFESSOR JOSEPH EUGENE ROWE has resigned his position as head of the department of mathematics and director of extension at the College of William and Mary to accept the presidency of the Clarkson

Memorial Institute of Technology at Potsdam, New York.

DR. ARTHUR THOMPSON EVANS, since 1920 professor of botany and plant pathology at South Dakota State College, has been appointed professor of botany and head of the department at Miami University.

DR. W. H. BAIR, of Purdue University, has been appointed professor and head of the department of physics at Clarkson College.

DR. H. A. BENDER, of the University of Illinois, has been appointed assistant professor of mathematics at the Municipal University of Akron.

DISCUSSION

THE DISCOVERY OF LIVING MICRO-ORGANISMS IN ANCIENT ROCKS

ABOUT one and one half years ago the writer began some experiments which he has carried on since, as time permitted, to determine whether or not living spores of bacteria or fungi or resting bodies of other micro-organisms might still exist inside of ancient rocks. The basis of my decision to start upon such an apparently hopeless quest will be given in a future detailed report on the results obtained. It suffices for the purposes of this preliminary note to state in general terms the startling fact that I have discovered living organisms in a Pre-Cambrian rock from the Algonkian in Canada and in one from the Grand Canyon of the Colorado. I have also discovered other types of micro-organisms in a Pliocene rock which derives from a depth of several hundred feet from which it has recently been uncovered. It is impossible in this note to furnish details of the technique employed, but it may be said that drastic sterilization measures for the outside of the rocks studied were employed. While some of the organisms which appeared in the cultures are doubtless derived from the free air which had momentary access to the rock in the process of the technique employed, certain organisms were found which occur in every plate culture made with the rocks examined and which are of a strikingly different type from any which are usually found in plates made with soils or rocks. These organisms make a very sparse growth on media which support excellent growth of other organisms and seem to belong to the interior of the rocks studied. At least one and perhaps two such singular types of organisms were found which possess many characters of the Actinomyces group. They are spore-bearing rods occurring in chains, and I have become convinced that they are indigenous to the rocks in the spore