THE HOPKINS MARINE STATION

THE Hopkins Marine Station at Pacific Grove has acquired an addition of $50,000 to its endowment through a gift of that amount by the Rockefeller Foundation. The gift will be used to erect a second laboratory building and provide additional equipment. By the terms of the donation Stanford must raise another $50,000 from other sources for the same object, and pending this must spend annually an additional five per cent. of that amount from its own funds for maintenance of the station.

This extension of the facilities of the Hopkins Station will not only promote the science of marine biology and general physiology, but will furnish a very practical aid in the protection and development of the important sea food resources of the Pacific coast. Protection of the sea food supplies depends upon knowledge not only of the fishes, bivalves and crustaceans which furnish human food but also of the sources of supply for these. At the Hopkins Marine Station research is carried on in both these branches. Stanford scientists for several years have been carrying on investigations there and elsewhere of salmon, clams and other important sea food with a view of checking the serious depletion that is taking place.

The Hopkins Marine Station was opened in 1892, the second year of the university's existence, and was named for Timothy Hopkins, trustee of Stanford since the beginning, through whose generosity and interest the original site and buildings were secured and the work there supported through the first twenty-five years. In 1916 the location of the station was changed to a point a half-mile east of the old buildings, where a tract of over eleven acres was secured and a new building erected.

The new situation, consisting of the main portion of Cabrillo Point, insures complete control of the coast line of the point, including an excellent sheltered landing place and harbor for boats of considerable size, and provides room for future expansion. Upon this site the first building of the new station was erected. The building is of reinforced concrete construction. It contains five laboratories available for classes and eight private laboratories for investigators. These private laboratories and all the facilities of the station are open free of charge to scientists from all parts of the country and the world who wish to carry on research in Pacific marine life.

The position of the Hopkins Station, on Monterey Bay, is exceptionally advantageous. It is the point at which the ocean life of the north and the south meet. The marine animals and plants accessible include not only the species found between tide levels, but also those which dwell in the open ocean and those which are secured by dredging at various depths.

The student of land forms finds an equally interesting and in some ways peculiar assemblage of material. This is in part due to an unusual variety of physiographic and climatic conditions within a relatively small area and in part to the presence of a number of characteristic and dominant types such as the Monterey cypress and Monterey pine.

One of the particular advantages of work at the Hopkins Marine Station is the possibility of observing and studying a large number of live animals while these are filling their rôle in the general scheme of marine and terrestrial life.

While the Hopkins Marine Station has always been open the year round for research workers it is only this year that regular class work has been carried on there except during the summer. Now there are courses for undergraduate and graduate students in both the spring and the summer quarters.

SCIENTIFIC NOTES AND NEWS

DR. WARREN K. LEWIS, head of the department of chemical engineering at the Massachusetts Institute of Technology and president of the American Chemical Society, has been elected an honorary member of the British Institution of Chemical Engineers.

PROFESSOR G. H. PARKER, director of the Harvard Zoological Laboratory, has been elected a foreign member of the Linnean Society of London.

THE Laetare medal of Notre Dame University has been awarded to Dr. A. F. Zahm, director of the aerodynamical laboratory of the Navy Department, Washington.

AT the recent Washington meeting of the Association of American Physicians, Dr. Richard P. Strong and Dr. Francis W. Peabody, both of the Harvard Medical School, were elected, respectively, president and secretary.

DR. W. W. KEEN writes that the medal awarded to him by Brown University is the Susan Colver-Rosenberger medal of honor, not "Colvin" as erroneously printed. This medal and the Colver lectures foundation were established by Mr. Rosenberger to honor the memory of his wife, through her father, Colver, who was a graduate of Brown University.

THE honorary degree of doctor of science has been conferred on Clyde William Warburton, director of extension of the U. S. Department of Agriculture, by the Iowa State College, in recognition of his contributions to American agronomy and to the organization of extension agencies.

DR. ALEXANDER BRUNO, former associate director of the Rockefeller Commission to France, has received the degree of M.D. from the University of Paris, which it is said only five Americans have received thus far. Dr. Bruno's thesis was his volume of 500 pages, "The Rôle of the Rockefeller Commission in Organizing against Tuberculosis in France."

DR. BEVERLY DOUGLAS, of Nashville, has been awarded the degree of doctor of science by the Faculty of Medicine of the University of Lyons for his work on the treatment of acute intoxication and infection.

ON the occasion of the King's birthday, Sir John Bland-Sutton, president of the Royal College of Surgeons, was made a baronet, and Dr. J. Robertson, professor of public health in the University of Birmingham, was made a knight.

THE honorary degree of LL.D. has been conferred by St. Andrews University upon Professor F. G. Donnan, professor of inorganic and physical chemistry in the University of London.

DR. ARTHUR H. ESTABROOK was elected president of the Eugenics Research Association at the annual meeting, Cold Spring Harbor, Long Island, on June 27.

WALTER H. FULWEILER, chemical engineer for the United Gas Improvement Company of Philadelphia, was elected president of the American Society for Testing Materials at the twenty-eighth annual meeting held in Atlantic City from June 22 to 26. H. F. Moore, professor of engineering materials at the University of Illinois, was elected vice-president.

PROFESSOR R. HARCOURT, of the Ontario Agricultural College, was elected president of the Canadian Institute of Chemistry at the annual meeting in Guelph, Ontario.

THEODORE STRETTON, of Haslam and Stretton, Ltd., has been elected president of the Association of Mining Engineers of England.

DR. HENRY C. COWLES, professor of plant ecology at the University of Chicago, assumed the chairmanship of the department of botany on July 1, upon the retirement of Professor John M. Coulter.

THE British Air Ministry announces that the Secretary of State for Air has appointed Mr. H. E. Wimperis to be director of scientific research, and Mr. D. R. Pye to be deputy director of scientific research, under the Air Ministry.

DR. JAMES ROBINSON, lately in charge of the wireless research laboratories of the Royal Air Force, England, has tendered his resignation to the Air Ministry in order to take up the post of director of research to the group of periodicals published by the Radio Press.

THE Medical Research Council of England has awarded Rockefeller Medical Fellowships, tenable in the United States during the academic year 1925–26, to the following: Dr. D. Campbell, Pollok lecturer in pharmacology and therapeutics, University of Glasgow; Mr. W. H. Craib, house physician, Guy's Hospital, London; Dr. Katherine H. Coward, assistant in biochemistry, University College, London; Mr. W. S. Dawson, senior assistant, Maudsley Hospital, London; Mr. H. W. Florey, John Lucas Walker Student, University of Cambridge; Mr. A. D. Ritchie, lecturer in physiological chemistry, University of Manchester; Mr. G. P. Wright, Macgregor Student and demonstrator in histology, University College, London.

GOSTA OKERLOF, of Sweden, who was assistant to Professor Svante Arrhenius, has been granted a Harrison fellowship in chemistry by the trustees of the University of Pennsylvania, to enable him to continue work on the electrochemistry of solution.

OLAF P. JENKINS has resigned as associate professor of economic geology at the State College of Washington and has accepted a permanent position with the Standard Oil Company. He will be stationed at Batavia, Dutch East Indies.

SIDNEY D. WELLS, who has been with the Forest Products Laboratory of Madison, Wisconsin, since 1911, has resigned to take charge of the Paper Mill Laboratories, Inc., of Quincy, Ill.

F. W. SPERR, JR., formerly chief chemist of the Koppers Company Laboratories, has been appointed director of research. He is succeeded by O. O. Malleis as chief chemist and H. J. Rose becomes assistant chief chemist.

DR. J. H. MERRILL, of the department of entomology of the Kansas State Agricultural College, has resigned to take up commercial work in Massachusetts.

DR. GEORGE D. SHEPARDSON, head of the department of electrical engineering at the University of Minnesota, has been granted a sabbatical furlough for the year 1925–1926, which will be spent largely in foreign travel. Professor F. W. Springer will be acting head of the department.

AT Oberlin College leaves of absence for the year 1925–26 have been granted to Professor H. N. Holmes, of the department of chemistry, and Professor Lynds Jones, of the department of animal ecology.

DR. EDWARD HINDLE, Milner research fellow of the London School of Tropical Medicine and Hygiene, has been granted leave of absence for two years to under-

take, in conjunction with Major W. S. Patton, an investigation on the transmission of kala-azar in North China, on behalf of the Royal Society.

CAPTAIN WILKINS, who recently was in Central Australia collecting specimens for the British Museum, has left Adelaide for London to make preparations for his proposed Australian Polar-Pacific expedition. He hopes to take two aeroplanes on his journey and will attempt to fly from the Ross Sea to Graham Land.

CLYDE E. WILLIAMS, superintendent of the Northwest Experiment Station of the Bureau of Mines, Seattle, Wash., has recently returned from Argentine, where he has been studying for the Argentine government the possibility of establishing an iron and steel industry in that country. Mr. Williams is soon to be transferred to the Pittsburgh, Pa., station of the Bureau of Mines.

DR. FRANCIS W. PENNELL, of the Academy of Natural Sciences, Philadelphia, has returned from a botanical collecting trip to Peru, bringing with him approximately 10,000 specimens which are to be divided among the Academy of Natural Sciences, the New York Botanical Garden, the Field Museum in Chicago and the botanical departments of Harvard University.

PROFESSOR ALFONS KLEMENC, holding the chair of chemistry at the University of Vienna, has arrived in the United States for an extended visit. He will assist in editing the International Critical Tables of the National Research Council.

DR. H. P. K. AGERSBORG, Wheeler professor of biology in the James Millikin University, is spending the summer at Yale University, continuing his researches on sensory receptors in nudibranchs.

SIR OLIVER LODGE has been appointed Huxley lecturer for the session 1925–26 at the University of Birmingham. The subject of the lectures will be "Difficulties about the ether."

CARMELIA TOUSSAINT, of the department of mathematics at the College of the City of New York, died on July 17 at the age of forty-four years as a result of being accidentally shot.

DR. SIGMAR STARK, professor of gynecology of the University of Cincinnati, died at Carlsbad, Czecho-Slovakia, on July 15, aged sixty-three years.

DR. WILLIAM PERRY WATSON, former president of the American Pediatric Association and of the New Jersey State Medical Society, died on July 17, aged seventy-three years.

HAROLD H. CLARK, chief engineer of the Wico Electric Company of West Springfield, Mass., and for many years chief electrical engineer of the United States Bureau of Mines at Pittsburgh, has died at the age of fifty-four years.

ALFRED CRAVEN HARRISON, Jr., of Philadelphia and Venice, died July 7, in London, after a brief illness. Mr. Harrison conducted expeditions to the ruins of Copan in Spanish Honduras, Borneo, the Gobi Desert, Mongolia and Siberia.

THE deaths are announced of Dr. D. A. de Jong, professor of pathology at Leyden; Dr. C. Emery, professor emeritus of zoology at Bologna, and Dr. F. Ranwez, professor of pharmacology at Louvain.

PROFESSOR GUSTAV MUELLER, former director of the Astrophysical Observatory at Potsdam, has died.

THE annual meeting of the French Association for the Advancement of Science will be held at Grenoble, July 27 to August 1.

ACCORDING to a press dispatch, the International Conference on Pure and Applied Chemistry, in Bucharest, has accepted an invitation to hold its seventh meeting, in 1926, in the United States in connection with the annual meeting of the American Chemical Society. At a session of the sixth conference held in Bucharest it was voted not to admit former enemy citizens to membership in the International Chemistry Union until the former enemy states are admitted to membership in the League of Nations. The American delegates, under the leadership of Professor James Flack Norris, president of the American Chemical Society, refused to support the motion.

THE summer meeting of the Mathematical Association will be held at Cornell University, on Tuesday and Wednesday, September 8 and 9, in connection with the summer meeting and colloquium of the society. Addresses will be given by Professor G. D. Birkhoff on "The mathematical basis of art" (illustrated); by Mr. H. E. Webb on "The foundations of geometry from an elementary standpoint"; by Professor Irving Fisher on "The mathematics of economics," and by Professor H. L. Rietz on "Certain applications of differential and integral calculus in actuarial science" (retiring presidential address), with probably one other paper. The full program with information as to room and board will be sent to the members of the association about the first of August and reservations can be made at that time through Professor W. A. Hurwitz, of Cornell University.

THE annual meeting of the British Medical Association took place at Bath from July 20 to 25. The president-elect is Dr. F. G. Thomson, of Bath, and the following sections met under the respective presidents: Medicine—President, Lord Dawson of Penn.

Surgery—President, Sir Berkeley Moynihan. Obstetrics and Gynecology—President, Lady Barrett. Pathology and Bacteriology—President, Professor J. C. G. Ledingham. Neurology and Psychological Medicine—President, Sir Maurice Craig. Therapeutics (including Balneology and Radiotherapy)—President, Professor R. B. Wild. Laryngology, Otology and Rhinology—President, Mr. Arthur A. Cheatle.

IN connection with the two hundred and fiftieth anniversary of the founding of the Royal Observatory, Greenwich, and to meet the delegates to the International Astronomical Union, the Royal Society held a conversazione on July 23.

THE Academy of Sciences of Russia will celebrate its bi-centenary at Leningrad and Moscow between September 6 and 14 next. Foreign representatives are being invited.

THE Imperial Mineral Resources Bureau, England, will be amalgamated with the Imperial Institute as from July 1, 1925, and will thereafter be known as the Mineral Resources Department of the Imperial Institute.

DR. HERTZELL has founded at Bremen an institute for research on problems connected with radio and broadcasting. There are accommodations for twenty-five research workers. The main aim of the founder, who is an orthopedist, is to adapt loud speaking devices to medical diagnosis. He calls it the Institut für Radiokunde.

A GIFT has been made by M. Assan Fared Dina to the French Academy of Sciences of an astronomical library and one million francs for astronomical research.

THE late Sir David Salomons, under his will, has left £5,000 to Gonville and Caius College, Cambridge, for extending the college buildings, and £1,000 in augmentation of the Salomons Scholarship Fund to enable the college to give this scholarship more frequently or for longer terms of tenure. To the Royal Institution he left his large magnet (designed by him and known as the Broomhill Magnet), and all the apparatus belonging to it, which enables the magnet to be used as a polariscope and for other purposes. Subject to his widow's interest, he left to the University of Cambridge all his scientific instruments and medical apparatus properly belonging to the workshops or laboratories and theater, his collection of crystals and other apparatus used for polariscope work, etc.

ELI LILLY & COMPANY, of Indianapolis, manufacturers of chemicals and pharmaceuticals, have given a fund of $1,200 a year for a period of five years to the Indiana State University, for research work in this line, to be known as the Eli Lilly & Company fund of the Indiana University.

CHAPTERS of the Pi Mu Epsilon Mathematics Fraternity were established at Hunter College, New York City, and Washington University, St. Louis, Mo., on May 30 and June 4, respectively.

AN X-ray diffraction equipment, by which the crystal structure of matter can be investigated, has been presented to Sir William Bragg of the Faraday Laboratory, of the Royal Institute of Great Britain, by the General Electric Company.

THE French Senate passed a bill on July 8 for the creation of an International Institute for Intellectual Cooperation at Paris, which former Premier Herriot promised the League of Nations that France would undertake.

AT a recent meeting of persons interested in the Peking Union Medical College which is financed by the China Medical Board of the Rockefeller Foundation, an organization called the Yu Wang Fu Association was formed. It was decided that the purpose of the association shall be, by frequent informal meetings, to stimulate good fellowship and to continue and increase interest in the welfare of the college in those who have at any time or in any capacity worked in Peking in connection with it, and have now entered other pursuits. Dr. Franklin C. McLean, the organizer and first director of the college, was elected president; Dr. E. V. Cowdry, secretary-treasurer, and Dr. A. B. Macallum, Dr. Charles Packard and Dr. Donald D. Van Slyke, members of the council. It is planned to establish branches of the association, of which New York is the headquarters, wherever such may be justified, but particularly in Chicago, San Francisco, London, Tokyo and Shanghai. It is proposed to hold the first meeting of the association at the Marine Biological Laboratory, Woods Hole, Massachusetts, on August 1, when an address will be delivered by the secretary of the Rockefeller Foundation, Mr. Edwin R. Embree. Those wishing to join the association are requested to communicate with Dr. E. V. Cowdry, at the Rockefeller Institute, 66th St. and Avenue A, New York, N. Y.

IN accordance with the policy of the federal Bureau of Fisheries of cooperating with the states in fisheries conservation, a biological survey of the marine fisheries of Texas is to be initiated during the present month. The minimum qualification is an A.B. in zoology, and any one interested in securing an appointment should write directly to the Commissioner of Fisheries, Washington, D. C.

THE American Institute of Chemical Engineers, meeting in Providence, adopted the report of the committee on chemical engineering education, recommending that the following fourteen schools be rated as giving satisfactory courses: the Armour Institute, the Carnegie Institute, the Case School of Applied Sciences, Columbia University, the Iowa State College, the Massachusetts Institute of Technology, the Ohio State University, the Brooklyn Polytechnic Institute, Yale University, Rensselaer Polytechnic Institute and the Universities of Cincinnati, Michigan, Minnesota and Wisconsin. It was voted to hold the next convention in December at Cincinnati. The summer session will be at Berlin, N. H.

A CORRESPONDENT writes: "An extended study of aviation hazards with particular reference to life insurance is being undertaken by Dr. Frederick L. Hoffman, consulting statistician, in cooperation with the army and navy services, commercial organizations and air authorities both at home and abroad. The investigation will cover chiefly the post-war period, attempting to establish a trustworthy basis of determining the true hazard of flying and the trend towards greater safety in both military and commercial flying operations. The investigation is the direct result of the suggestion made by Major-General Patrick in his address before the Association of Life Insurance Presidents that the subject should receive more extended and critical consideration. Dr. Hoffman would be pleased to enter into correspondence with any one interested in the questions which will receive consideration. Inquiry should be addressed to him at his office at Wellesley Hills, Mass."

THE Department of Commerce announces that birth rates for 1924 were higher than for 1923 in sixteen of the twenty-five states for which figures for the two years are shown. The highest 1924 birth rate (31.9 per thousand population) was in the rural districts of North Carolina, and the lowest (14.9) in the rural districts of Montana. Death rates for 1924 were lower than for 1923 in twenty-three of twenty-nine states shown for both years. Record low rates appear for Connecticut, Delaware, Kansas, Kentucky, Maine, Massachusetts, Montana, Nebraska, Ohio, Pennsylvania, Vermont, Virginia and Wisconsin. The states having higher death rates for 1924 than for 1923 are California, Florida, Mississippi, Oregon, South Carolina and Washington. The highest 1924 death rate (22.1 per thousand population) was in the urban districts of Mississippi, and the lowest (6.5) in the rural districts of Montana. Infant mortality rates for 1924 are generally lower than those for 1923; only three of the twenty-five states show higher rates in 1924. The highest 1924 infant mortality rate (121.6) was in the urban districts of South Carolina, and the lowest (51) in the rural districts of Nebraska. Infant mortality rates are shown for both years for forty-four cities of 100,000 population or more in 1920. For thirty-six of these cities the 1924 infant mortality rates are lower than those of the previous year. The highest 1924 rate (92) is for Trenton, N. J., and the lowest (45.3) for Seattle.

WE learn from the *Electrical World* that in concert with the under secretary for technical education and the University of Lille, France, there has been founded in that city an electromechanical institute. It occupies the former building of the Institut des Arts et Métiers and thus has at its disposition an important equipment of machinery and tools. It also will be able to make use of the laboratories of the faculty of arts and sciences. Organized on entirely original lines, its program of instruction will be such that both the student and the industry will have advantages hitherto unknown in France. The instruction will supplement both ordinary engineering and electric science with a dual (or cooperative) course which will permit a student once enrolled to take charge of actual installations of electric power production or application. The length of this supplementary course is reduced to the minimum of six months for students already in possession of that general knowledge which would presumably permit their passing the ordinary mechanical examinations. Thus at a minimum expenditure of time and money they are fitted for immediate employment in the higher positions which at the present time it is difficult to fill because of a dearth of competent men. Various electric companies are giving encouragement and financial assistance to the project, which within the course of the next few years may be expected to furnish to them the technical personnel which the continually increasing number of central and distributing stations require.

UNDER the terms of an order issued with the approval of President Coolidge and effective July 1, supervision of lands bearing oil segregated for the use of the navy will be conducted in the future by the Geological Survey instead of the Bureau of Mines as formerly. A new organization unit, to be known as the "conservation branch," will absorb the functions heretofore exercised by the Bureau of Mines in naval oil reserve administration. The survey, through the branch just created, also will take over the proposed naval oil reserve in Northern Alaska, covering an area of 50,000 square miles. In his announcement on the "conservation branch," Secretary Work said that the new unit would have engineering control of all mineral leasing on the public domain as well as the classification of public lands.

THE Association to Aid Scientific Research by Women has renewed its support of the Zoological Station at Naples, suspended since 1917, and, for the season of 1925, has appointed Mrs. Mary Mitchell Moore (Bryn Mawr, '15), wife of Dr. William E. Moore, of Rutgers College, as its "scholar." The association contributed for nineteen years, beginning in 1898, to the support of the American Women's Table at Naples.

UNIVERSITY AND EDUCATIONAL NOTES

WASHINGTON UNIVERSITY, St. Louis, has announced a gift of $1,000,000 from Charles Rebstock.

JOHN D. ROCKEFELLER, Jr., has contributed $1,000,000 for endowment of the Divinity School of the University of Chicago.

THE sum of $50,000 has been given to the Johns Hopkins University by James Speyer, of New York, to establish a lectureship fund to bring scientific men to the university from Germany.

A REGULAR four-year medical course, leading to the degree M.D., has been established by the University of Wisconsin. Hitherto the first two years only have been offered.

STANFORD UNIVERSITY has organized a school of engineering, combining the work of all its engineering departments in a four-year undergraduate course leading to the professional degree of engineer. The new school will begin functioning at the opening of the next college year in October. Professor Theodore J. Hoover, at present head of the department of mining and metallurgy at the university, is to be the dean.

DR. HELEN P. WOOLLEY, psychologist of the Merrill-Palmer School, Detroit, has been appointed director of the Institute of Child Welfare Research and professor of education, with a seat in the faculty of Teachers College, Columbia University.

DR. E. F. MALONE has been appointed Francis Brunning professor of anatomy at the University of Cincinnati.

DR. HENRY BLUMBERG, of the University of Illinois, has been appointed professor of mathematics at the Ohio State University.

DR. EARL B. MCKINLEY, national research fellow in medicine with Professor Bordet at the University of Brussels, has been appointed as assistant professor of bacteriology in the College of Physicians and Surgeons, Columbia University.

DR. THOMAS D. HOWE, Ph. D. (Wisconsin, '25), has been appointed instructor in biology at the James Millikin University.

DR. IVAN C. HALL, professor of bacteriology in the New York State College of Agriculture at Cornell University, has become head of the department of bacteriology and public health in the new University of Colorado Medical School at Denver.

DR. WILLIAM W. CORT, associate professor of helminthology, department of medical zoology, School of Hygiene and Public Health, the Johns Hopkins University, has been promoted to a professorship of helminthology.

DR. ARTHUR W. WRIGHT, of the Boston City Hospital, Boston, has been appointed assistant professor of pathology at the Vanderbilt University Medical School at Nashville.

DR. HIBBERT WINSLOW HILL, London, Ont., has been appointed professor of bacteriology and professor of nursing and public health at the University of British Columbia, to succeed the late Dr. R. Mullin.

AT the University of Cambridge, D. Keilin, Magdalene College, has been appointed university lecturer in parasitology and J. A. Carroll, Sidney Sussex College, assistant director of the Solar Physics Observatory, has been appointed university lecturer in astrophysics.

DISCUSSION AND CORRESPONDENCE

THE ART OF PLUVICULTURE

IT is remarkable, when we consider the varied attempts in our country to grow rich without risk or effort, that one of the most certain enterprises of this sort has been almost completely overlooked by trade-schools, as well as by the argus-eyed press.

The professions of crystal-gazing, clairvoyance, kleptomania, and the like, receive due attention from the press, as well as by the police, all efforts to benefit humanity by these means being everywhere discouraged. The ancient arts of astrology and horoscopy, however, have their quarter-column in most of our leading papers, while the modern diversions of pluviculture, chiropractics and hormonism are everywhere treated with respect.

Of these none can be more scientific than is pluviculture or rainmaking, as it is commonly called. Yet nowhere so far as I have noticed is the method of operation made clear, nor the economic laws which make it, not only valuable to the farmers, but a sure thing in general. Even the astute Father Ricard goes on with his prophecies, apparently oblivious to the work of other scientists right within the range of his storms and sun spots.

For successful rain-making, it is necessary to find first a region in which rain is expected but has failed to come. The first element is then to find a few