

not be permitted to come into destructive competition with nature. It has become obvious that neither legislation, the courts, science, executive officials, or civilians working alone can meet the situation, and define, or allocate responsibilities and remedies remedially efficient. Cooperation, both broad and intimate, is essential if we are to overtake and conquer the economic menace arising from aquatic pollution.

Should not some of the dollars which originated in "economical methods," of waste disposal, not then even perhaps suspected of being in violation of nature's laws, be now made available for helping nature "back to normalcy," and to avoid further biologic blunders in the disposal of our waste products? In this belief, the executive committee of the National Conference on Outdoor Recreation has voted to seek the financial support necessary for initiating a non-political, authoritative, adequate disinterested survey of existing facts and factors involved in the present polluted conditions of our public water courses, assisting and cooperating to the utmost practicable degree with the existing federal and state agencies, with a view to the establishment of basic economic facts for future remedial procedure, upon which legislators, manufacturers and the public may rely, in constructive action which will at once define and defend private rights through safeguarding the public rights. This committee will aim to secure a coordination of pure science, applied science, political, economic and business science, carried on in the spirit of altruism, controlled and guided by "common sense," free from prejudice, sectional and personal interest and control: safeguarding the public, but making possible the utmost personal latitude of action within the limits of biological safety.

GEORGE WILTON FIELD

WASHINGTON, D. C.

AWARDS OF THE JOHN SIMON GUGGENHEIM MEMORIAL FELLOWSHIPS

THE appropriation of \$100,000 for the assistance of young American scholars and artists during the year 1926-27 has been announced by Henry Allen Moe, secretary of the John Simon Guggenheim Memorial Foundation. This foundation was established a year ago with a fund of \$3,000,000 by former United States Senator and Mrs. Simon Guggenheim, as a memorial to a son who died on April 26, 1922.

Thirty-seven new Fellows have been appointed from 18 states, ranging from Georgia to Washington. The list includes five women. Three artists are appointed for creative work in painting, three musicians for creative work in musical composition,

and the research appointments are for work in a wide range of subjects. Among the fellows for 1926-27 are members of the faculties of 22 colleges and universities. Harvard University leads with four fellows; the University of Chicago has three; the University of Cincinnati, three; the University of Wisconsin, two; and Yale University, two. Seven of the fellows for 1926-27 are not at present affiliated with any educational institution.

The Guggenheim Foundation offers to the young productive scholars and artists of the country opportunities to carry on research and creative work, chiefly abroad. Applicants are required to present definite projects for research in a given field of knowledge, or projects for creative work in some one of the fine arts.

The fellowships are tenable anywhere in the world, for any period, long or short. The stipend is usually \$2,500 for a period of twelve months, but in every case is adjusted to the needs of the individual appointed. The fellowships are open on equal terms to men and women, being citizens of, or permanent residents in, the United States, of every race and creed. The normal age limits of fellows are twenty-five and thirty-five years.

The appointments to fellowships just announced were made on the recommendation of the committee of selection of the foundation, consisting of: President Frank Aydelotte, Swarthmore College, *chairman*; President Frederick C. Ferry, Hamilton College; Dean Virginia C. Gildersleeve, Barnard College; Professor Charles Homer Haskins, Harvard University; and Dean Carl E. Seashore, The State University of Iowa.

Among the thirty-seven fellowships awarded are the following in the natural and exact sciences:

Dr. Wallace Reed Brode, research chemist, Bureau of Standards, Washington, D. C.—appointed for research on the absorption spectra of simple azo dyes, principally with Professor Arthur Hantzsch at the University of Leipzig, Germany. This involves a continuance of research carried on by Dr. Brode for his doctor's degree at the University of Illinois, and other researches, in a field in which he has published a number of papers in the past five years.

Dr. Royal Norton Chapman, professor of entomology, University of Minnesota—appointed to make an investigation of the problem of the relation of the abundance of insects, particularly destructive insects, to changing environmental conditions, principally at the European Parasite Laboratory, Le Mont Fenouillet, Hyeres, France, and the Rothamsted Experiment Station, England. Dr. Chapman has made and published studies of importance to the milling and cold storage industries, notably his "Insects in Relation to Wheat Flour and Wheat Flour Substitutes," "Observations on Mites infesting Flour

and Mill Feed," and "Insects infesting Stored Food Products."

Dr. Arthur H. Compton, professor of physics, University of Chicago, will continue his study of the problem of the nature of radiation, in consultation with European authorities. Dr. Compton's work during the last few years has placed him in a unique position regarding this problem, the solution of which is of the greatest importance in the advancement of physical science.

Dr. Alfred Edwards Emerson, associate professor of zoology, University of Pittsburgh—appointed for certain investigations concerned with the problem of the ontogenetic and phylogenetic origin of the castes of termites, at certain laboratories in Sweden and Italy. Dr. Emerson has carried on fundamental research in this field since 1919. He has made two journeys to British Guiana for the purpose of this research, and he now intends to examine the known species of termites in European collections.

Dr. Edwin Crawford Kemble, assistant professor of physics, Harvard University—appointed to make certain studies in the field of the new quantum theory, principally with Professors Born and Heisenberg at the University of Göttingen, Germany. Dr. Kemble's research work has been concerned principally with the application of the quantum theory to the interpretation of band spectra and to the related problem of the temperature variation of the specific heats of gases. He has published numerous articles on the subject of these researches.

Dr. Ernest Preston Lane, assistant professor of mathematics, University of Chicago—appointed to make a comparative study of the methods of investigation in the field of projective differential geometry used by American and Italian geometers. Dr. Lane was a pupil of Professor Wilczynski, of the University of Chicago, who developed methods of exceptional generality and power in the domain of analytical projective geometry. He will go abroad to become familiar with the methods of investigation developed by the Italian school of geometers and at the same time will bring complete understanding of Wilczynski's methods to the Italian school.

Dr. Julian Herman Lewis, associate member, Otho S. A. Sprague Memorial Institute; assistant professor of pathology, University of Chicago; pathologist, Provident Hospital, Chicago—appointed for a study of the fundamental nature of immunity phenomena, with particular reference to the relation of chemical constitution to biological specificity; and to study the chemical and immunological specificity of proteins isolated from organs. Dr. Lewis is a negro. He holds the degrees of A.B. and M.A. from the University of Illinois; Ph.D., *Magna Cum Laude*, from the University of Chicago; and M.D. from the Rush Medical College. He was elected to Sigma Xi, Honorary Scientific Fraternity, and Alpha Omega Alpha, Honorary Medical Fraternity, and while at Rush Medical College was awarded the Benjamin Rush Medal as the highest standing student of his class. He has carried on fundamental research for several years and has published numerous papers.

Dr. Harold Myers Marvin, assistant professor of medicine, Yale University School of Medicine—appointed for research in the field of cardiovascular physiology in Sir Thomas Lewis' Laboratory at the University College Hospital, London, England. During the past five years Dr. Marvin has been in charge of the work in heart disease at the New Haven Hospital. His work with Sir Thomas Lewis will be a continuation of work in the same field, the normal and abnormal physiology of the heart and circulation, in which he has published several papers.

Dr. Linus Carl Pauling, department of chemistry, California Institute of Technology, Pasadena, California—appointed for certain theoretical and experimental researches concerning the interior of the atom, principally with Professors A. Sommerfeld, at the University of Munich, Germany, and Niels Bohr, at Copenhagen, Denmark. Dr. Pauling has for the past four years prosecuted researches important in this general field and has published numerous articles.

Dr. Franklin Pearce Reagan, assistant professor of comparative anatomy, on leave from the University of California, under appointment to Indiana University—appointed for the continuation of studies of the structure and development of the earliest blood vessels of Mammalian Embryos, in certain laboratories of England and Scotland. Dr. Reagan has been working in this field for the past six years. Under the auspices of the foundation he will carry on a new comparative study of embryos of certain rare and almost extinct Australian a-placental mammals which represented, so far as they are now represented, the ancestors of the present-day mammals.

Dr. Gladys A. Reichard, instructor in anthropology, Barnard College, Columbia University—appointed to make a study concerning itself principally with defining the art style of Melanesia, with Professor Thilenius, director of the museum at Hamburg, Germany. Miss Reichard is the author of a grammar of the language of the Wiyot Indians. In the field in which she proposes to work under the auspices of the foundation, she has written "Literary Forms and the Dissemination of Myths," and "The Complexity of Rhythm in Decorative Art."

Dr. Ralph A. Sawyer, assistant professor of physics, University of Michigan—appointed to make a study of spectral series relations in extreme ultra-violet metallic spectra and the correlation of the results with modern theories of atomic structure, principally in the laboratory of Professor F. Paschen, president of the Imperial Physico-Technical Institute, Charlottenberg, Germany. Dr. Sawyer worked with Professor R. A. Millikan on the opening up of the investigation of the whole extreme ultra-violet field. His earlier work was experimental in nature, but lately has dealt with the analysis of the results of experimental spectroscopy.

Dr. Ellis Bagley Stouffer, professor of mathematics, University of Kansas—appointed for a comparative study of three general methods of investigation in the field of projective differential geometry, and also research

into certain problems in the same field. Dr. Stouffer's proposed studies are in the same field as Dr. Lane's, also a fellow of the Guggenheim Foundation for 1926-27. He has published numerous papers in his proposed field of investigation.

Dr. Glenn Thomas Trewartha, instructor in geography and climatology, University of Wisconsin—appointed for geographic investigations of certain selected type areas in Japan and China. Dr. Trewartha's principal researches for the past two years have been on the subject of the relationship of Wisconsin's physical environment to its pre-eminence as a dairy state. In preparation for his research in Japan and China he has had a thorough academic training in the geography, climatology and the diplomatic history of the Far East. His researches under the auspices of the foundation will be entirely in the field.

Dr. Norbert Wiener, assistant professor of mathematics, Massachusetts Institute of Technology, Cambridge—appointed for researches on Bohr's almost periodic functions, on haphazard motion, on periodogram analysis, and other topics, connected with one another by forming extensions of the ordinary Fourier series and Fourier integral theory. Dr. Wiener has been invited by the Mathematical Institute of the University of Göttingen to deliver a course of lectures on the subject of his researches, and the book which will result from those researches has already been tentatively accepted as a volume of a series of important mathematical works.

The Fellowship awarded to Dr. Coleman R. Griffith, assistant professor of psychology, University of Illinois, for research in problems of child psychology, principally at the University of Giessen, Hesse, Germany, for 1925-26, has been transferred to the 1926-27 group.

SCIENTIFIC EVENTS

THE OCEANOGRAPHIC STATION AT SALAMMBO, NORTH AFRICA

ON February 14 the oceanographic station at Sallambo, near Tunis, was formally opened to the public, and the station is now engaged in carrying on the studies indicated by its title. It is under the control of the direction generale des Travaux Publics of the Regenal de Tunis Protectorate de France and the funds have been largely supplied by the profits accruing from the sale of fish, caught in the Lake of Tunis—a monopoly enjoyed by the station. This monopoly was granted mainly for the control of the fishing, for the lake is a fruitful breeding ground for many marine fishes and secondly, for the control of prices in the market and for the profits accruing therefrom. The profits surpassed expectation and late in 1922 the foundations of the station were laid. The building is 33.4 m long by 33.3 m wide, two stories high, built of masonry, covered by stucco in the fashion of the country.

The building is supplied with sweet water from the Tunis water supply and with salt water from an un-

derground reservoir, pumped from the sea and filtered as at Naples and New York. Lighting and pumping are done by electricity.

On the ground floor are laboratories for research, a well-equipped chemical laboratory, a laboratory for photography well supplied with apparatus; a large room for the reception of material with large tanks for handling and sorting; a studio for artistic work, adequate rooms for supplies and collections and a large hall for lectures.

In the upper floor are the aquaria, now fourteen in number, a museum displaying fishing apparatus and models, together with prepared specimens of sea animals; a tank room exhibiting in small tanks the invertebrates and small fishes; the office of the director, the library, and other research rooms. The whole is well lighted and admirably arranged.

The floating equipment consists of a steamer—the *Raymond Lane* of 700 tons—which also serves to care for the lighthouses of the Gulf of Tunis: a motor boat 17 m long—the *Andre Choleski* and an auxiliary sail boat 14 m long. Connected with the work of the station at six other points along the coast are boats used in the inspection of fisheries and in the researches of the station. At the present time the principal efforts of the station are: (1) the hydrology and biology of the Lake of Tunis; (2) the study of migratory fishes; (3) the biology of sponges, and (4) investigations upon fishing appliances best adapted to increase the values of the fisheries.

The publications comprise bulletins and notes. Three bulletins have already been issued and one of the notes. Exchange of publications with similar institutions is cordially invited. Qualified students of marine biology are welcome from any country.

The location of the laboratory is charming. It lies between the two ponds, commonly called the ports of ancient Carthage. The byrsa, or citadel, is a few hundred yards away, and along the shore are the remains of a vast fortifying wall. It is easily reached from Tunis by an electric railway in about 30 minutes. The station is under the direction of Monsieur H. Heldt, who is undertaking researches along several important lines.

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THE RAWSON-MACMILLAN SUB-ARCTIC EXPEDITION OF THE FIELD MUSEUM

COMMANDER DONALD B. MACMILLAN, the arctic explorer, has been commissioned by the Field Museum of Natural History to lead an expedition into the sub-arctic to collect zoological, geological, anthropological and botanical specimens for the institution.