

his discovery of the "Atlantic Palolo" and his study on the *Partulas* of Tahiti.

In 1900 Mayor entered on a new phase of work. He was appointed curator of natural science at the new Brooklyn Museum and, in 1904, curator-in-chief. Here he devoted himself to arranging the rapidly increasing collections; and he also continued his studies on *Lepidoptera* and *Medusæ*. But museum work was too static for this experimental naturalist. He agitated the establishment of a marine laboratory at the Tortugas (*SCIENCE*, January 30, 1903) and found the American biologists strongly favored the plan. So it was natural that when the Carnegie Institution of Washington was casting about for the best projects to support it should adopt this and its principal sponsor, Dr. Mayor. In 1905 he published a book, "Sea Shore Life," of which he unselfishly turned the copyright over to the New York Zoological Society; just as he turned over the problem of the *Partulas* of Tahiti to Dr. H. E. Crampton; and just as he generously gave unsparingly of his time and ideas to others.

And now began a new era in Mayor's life. He erected in July, 1904, laboratory buildings at Loggerhead Key, Florida, and sailed thence from Maine to the Tortugas in the new 57-foot auxiliary ketch, the *Physalia*. Besides providing for the physical care and scientific needs of the zoologists that gathered at the laboratory, Mayor plunged into scientific work. In it he combined his special knowledge of jelly fishes with his fondness for physical and chemical experimentation and showed that rhythmical pulsation may be initiated and maintained independently of the nervous system. During the following seasons he made fundamental studies on the effect of different ions. Thus Mg is stupefying and the NaCl, K and Ca and sea water resist its stupefying effect; many ions have the opposite effect on muscles from that on cilia.

In 1909 the series of "Papers from the Tortugas Laboratory" began to appear, of which 15 large volumes have been published. It took a lot of pertinacious endeavor and much tact on the part of the director to secure a prompt publication of results.

In 1913-14 Mayor made an expedition to Thursday Islands and Murray Islands in Torres Straits, where studies were made on coral reefs, and where he found clear evidence of solution of limestone on the reefs. A summary of the first ten years of work of his department is given in Mayor's report in the *Year-book* of the Institution for 1914.

Already it had begun to appear that the Tortugas must be abandoned as the permanent site of the laboratory, on account of its destructive hurricanes and its isolation; so Mayor visited numerous other islands to find a better site; also more studies were undertaken in the Pacific Ocean on coral reefs, especially at American Samoa. Later studies were made here upon the theory of coral reef building.

The war seriously interfered with Mayor's scientific work for a year or two—when he was giving much time to instructing naval recruits in navigation. Returning to Samoa in 1919 he demonstrated that the present living coral reefs are not superimposed upon ancient reefs but have simply grown outward from the shore slopes since post-glacial times. Mayor made observations and photographs of corals down to 8.5 fathoms by the use of a diving hood, and it was probably in connection with this trying experience that his resistance was weakened and that illness was started which resulted in his death.

Mayor's scientific influence is not confined to his personal researches; to his activity must be largely ascribed the results of Vaughan's studies on growth of corals, of Bartsch's on hybridization in *Cerion*, of Drew's on the origin of limestone deposits through bacterial action, of Harvey's on phosphorescent light; and many other researches. The hope may be expressed that since the department which Mayor founded has so amply justified itself the man and means will be found to continue it.

CHAS. B. DAVENPORT

## A SCIENTIFIC EXPEDITION TO THE ISLANDS OFF THE WEST COAST OF LOWER CALIFORNIA

THE most important expedition sent out by the California Academy of Sciences this year has sailed from San Diego for a two months'

cruise among the islands off the west coast of Lower California. The expedition has been made possible through the cooperation of the Mexican government with a number of American institutions, including the California Academy of Sciences, the San Diego Museum of Natural History, the Scripps Institution for Biological Research, the National Geographic Society, and the Committee on Conservation of Marine Life of the Pacific of the Pacific Division of the American Association for the Advancement of Science, functioning under authority of the Committee on Pacific Investigations of the Division of Foreign Relations of the National Research Council.

The Committee on Conservation of Marine Life of the Pacific, of which Dr. Barton W. Evermann, director of the Museum of the California Academy of Sciences, is chairman, has for several months been planning this expedition, but not until recently were funds forthcoming to meet the expense. When the matter was placed before the Mexican government it very generously proposed not only to detail their fishery guard boat *Tecate* for the purpose, but also to accept as their guests the naturalists whom the American institutions desired to send on the expedition. The National Geographic Society, always alert to the possibilities of increasing geographic knowledge, became interested in the expedition and has liberally contributed to the fund for meeting the cost of the cruise. With such material aid from these two sources, the proposed expedition has become a reality.

The Mexican government is represented by Sr. Carlos Cuesta Terron, professor of herpetology and biology in the Museo Nacional de Historia Natural de Mexico; Sr. Jose Maria Gallegos, professor of mammalogy and botany in the same institution; Captain Victor Angulo of the *Tecate*; Sr. Jose Rubio, taxidermist; Sr. Gonzales, inspector of fisheries; and Sr. Rodolpho Lazcano, inspector of lighthouses. Professor Terron will be in general charge of the expedition.

The California Academy of Sciences is represented by Dr. G. Dallas Hanna, curator of paleontology and secretary of the Committee on Conservation of Marine Life of the Pacific;

Joseph R. Slevin, assistant curator of herpetology, and Frank Tose, chief taxidermist.

The San Diego Museum of Natural History sends A. W. Anthony, curator of vertebrates, and Ernest Hinkley, assistant; and P. S. Barnhart represents the Scripps Institution for Biological Research.

Messrs. Hanna and Anthony will be in immediate charge of the scientific investigations.

The primary purpose of the expedition is to make investigations to determine as fully as may be the present abundance and condition of the southern fur seal, southern sea otter, and elephant seal in the localities visited. It is known that each of those three important and valuable marine mammals was at one time quite common not only about the islands off Lower California but also about the islands on the California coast as far north as the Farallons. Records believed trustworthy show that in the years 1808 to 1811, more than 203,000 fur seals were taken on the Farallon Islands, besides many thousands on the Channel Islands, Cedros, and other islands off the coast of Lower California. Records also show that the southern sea otter was at one time very abundant in the great kelp beds about these same islands, more than 22,000 having been taken prior to 1806. The elephant seal was once abundant on Guadalupe Island and on other islands on this coast.

It is generally believed that each of these interesting animals is now extinct or nearly so; but certain recent discoveries show that at least small remnants of each of the three species still exist. It is the purpose of this expedition to find out the facts in so far as is possible and place them before the State Departments of the United States and Mexican governments in the hope that the necessary steps may be taken by the two governments through an international treaty for the adequate protection of these valuable natural resources.

The scientists of this expedition will avail themselves of the exceptional opportunities for making a general survey of the fauna and flora and geology of the islands visited. They will be equipped for making collections in various branches of natural history, particularly in birds, mammals, reptiles, insects, shells, botany

and fossils. These islands have been but little explored and it is believed that many new species will be discovered. Provision is made for taking photographs, both still and moving, adequate for illustrative and educational purposes.

Cooperation of Mexican and American scientists in an expedition of this kind is most gratifying and will do much toward increasing the friendly relations between the two countries and developing a mutual interest in the conservation of the natural resources of our coastal waters.

On Sunday morning, July 9, the expedition sailed from San Diego, with all the scientific staff on board, and with the American flag flying at the masthead and the beautiful *Palabellón Mexicano* flying gracefully aft.

## SCIENTIFIC EVENTS

### THE CHEMICAL FOUNDATION

(*American Chemical Society News Service*)

THE American Chemical Society, representing some 15,000 men and women working in educational institutions, research laboratories and industrial plants, is preparing to fight to the last ditch to preserve the American chemical industry.

Recent acts on the part of the government have made the necessity for such a fight apparent to this group. In the hope of placing a fair presentation of the views of American chemists before the president, Dr. Edgar F. Smith, former provost of the University of Pennsylvania and now president of the American Chemical Society, appointed a committee to serve with him. Their purpose in seeking a conference with President Harding was to lay before him briefly the far-reaching effects which the contemplated action against the Chemical Foundation will have upon chemistry in America. The committee also desired to have any facts which could properly be given to them in order to guide the society in its future actions. The committee with Dr. Smith as chairman is as follows:

Dr. J. E. Teeple, consulting chemist, New York, treasurer of the American Chemical Society.

Dr. R. H. McKee, head of the department of chemical engineering, Columbia University.

Dr. J. F. Norris, professor of organic chemistry, Massachusetts Institute of Technology, Cambridge, Mass.

Dr. A. D. Little, consulting chemist, Cambridge, Mass., past president of the American Chemical Society and of the American Institute of Chemical Engineers.

E. R. Weidlein, director, Mellon Institute of Industrial Research, Pittsburgh, Pa.

Dr. George D. Rosengarten, director and member advisory committee on national policy, American Chemical Society, Philadelphia, Pa.

Dr. Julius Stieglitz, University of Chicago.

William Hoskins, consulting chemist, Chicago, Ill.

H. E. Howe, editor, *Journal of Industrial and Engineering Chemistry*, member National Research Council.

None of the members of this committee is a dye manufacturer or connected with the Chemical Foundation. The committee believes that the president would not have taken this step if he had possessed full information or had called into conference unprejudiced persons well able to advise him.

American chemists believe in the Chemical Foundation and no facts have been presented thus far by the administration to shake their faith in this institution which has become the nucleus of the organic chemical industry in this country.

The request for a conference with the president was made on July 12, and was followed by two reminders. Not until July 21 was official word received from the White House. It was then stated that the president would be unable to meet such a committee for the present because of the other urgent and imperative matters now before him.

The American Chemical Society is about to hold its annual meeting in Pittsburgh, where the situation will be presented in detail to the governing body at the general meeting. The society is planning a vigorous campaign to have the country understand the true situation. The latest evidence of the necessity for this action is an announcement carried in an Associated Press despatch from Chicago, dated July 18, which makes the significant announcement that the Third German-American Na-