moved rapidly, and in 1916 the National Research Council was organized by the academy under its Congressional charter as its agency, at the request of President Wilson, as a measure of national preparedness. In 1918 the status of the National Research Council was made permanent and its functions broadened at the request of President Wilson. It established and maintained divisions for continuing contact with research and education in all the sciences, with medicine, agriculture, industry and the federal government. Subsequently relations with the federal government were strengthened by the Science Advisory Board, and by its successor, the Government Relations and Science Advisory Committee of the academy. At the request of Secretary Ickes three members of the academy have been appointed and serve on the Science Committee of the National Resources Committee.

In all this you will note the steady growth of consciousness of social and political responsibility that attaches to scientific leadership in our times. I venture that we still love best, however, the imaginative reading of the universe as the most ideal aim of science, and in the long run the most rewarding also in a social sense.

I hardly know what to say of our foreign relations in general since 1913; certainly it would be difficult at this time to duplicate the international galaxy of the semi-centennial celebration; but if there have been clouds in some quarters obscuring parts of the galaxy, clear skies have continued to favor us in others. There is time for only one allusion. The Royal Society of London was the model after which the American Philosophical Society was patterned; if we remind ourselves of Dr. Keen's statement that four fifths of our original membership was derived from that source, a relationship of sorts must be postulated between our academy and the Royal Society. It may be of interest to remind ourselves how closely the origins of scientific organization in America were associated with the Royal Society, the roots of which trace back to 1645, though incorporated in the reign of King Charles II in 1662. During the next century many Americans, as subjects of Great Britain, were elected fellows of the Royal Society, from New England, Pennsylvania, Virginia and the Carolinas. Among them was Benjamin Franklin. In 1727 in Philadelphia, at the age of 21, he gathered scientific men around him in an informal "Junto," and in 1743 formally organized the American Philosophical Society.

After the American revolution I assume that the membership of American citizens as fellows of the Royal Society terminated. But a new relationship began as early as 1788 in the election of James Bowdoin as the first "foreign" American member. At the present time there is a considerable number of American foreign members who are also members of the National Academy and, reciprocally, at least an equal number of members of the Royal Society who are foreign associates of our academy.

A recent fertile union of ideas among officers of our respective organizations has resulted in the birth of the Pilgrim Trust Lectureship. Under the terms of this relationship it is agreed, on the initiation of the Royal Society, that a Pilgrim Trust lecturer shall be appointed annually: in alternate years an American scientific man to be appointed by the Royal Society to give the lecture in London, and a representative of British scientific men to be appointed by the academy to give the lecture in Washington. This arrangement is supported by a grant of 250 guineas per year for a period of six years by the Pilgrim Trust. I am happy to announce that the Royal Society has appointed as the first Pilgrim Trust lecturer our fellow member, Dr. Irving Langmuir, to speak in London in December of this year.

This very welcome consummation has also been the occasion of renewal of pledges of mutual hospitality to our respective members in London and in Washington. The president of the Royal Society alluded most cordially to this arrangement in his anniversary address last November. We join with him in the wish and expectation that science, which stands apart from all nationalism, may become an increasingly strong bond between the nations of the earth.

FRANK R. LILLIE

UNIVERSITY OF CHICAGO

PRESENTATION OF THE AGASSIZ MEDAL FOR OCEANOGRAPHY TO EDGAR JOHNSON ALLEN

WHAT an association of great names of explorers of the ocean! Alexander Agassiz, Swiss-born American, great son of a great father, explorer of life in all the oceans, president of the National Academy of Sciences from 1901 to 1907, foreign secretary, 1891 to 1901 and 1908 to his death in 1910, by his will left to the academy $50,000 to establish the Agassiz Fund.

Sir John Murray, Scot-born cosmopolitan, naturalist on the *Challenger* expedition of 1872–1876, which has been called "the most momentous geographic undertaking since the voyages of Columbus and Magellan," editor of the "Challenger Reports" consisting of 52 monumental volumes, explorer of the North Atlantic together with Johan Hjort and coauthor with him of "The Depths of the Ocean."

I recall his humorous and salty address at the annual dinner of the academy in 1911 and his gift of $6,000 to provide for an award of a gold medal to be named in honor of his friend Alexander Agassiz and to be conferred "for original contributions to the science of oceanography."

Previous recipients of this medal have been:

1913 Johan Hjort of Norway
1918 Albert 1st, Prince of Monaco
1920 Charles D. Sigsbee, Rear Admiral, U. S. N.
1924 Otto Sven Petterssen
1926 Vilhelm Bjerknes
1927 Max Weber
1928 V. Walfrid Ekman
1929 J. Stanley Gardiner
1930 Johannes Schmidt
1931 Henry Bryant Bigelow
1932 Albert Defant
1933 Bjorn Helland-Hansen
1934 Haakon Hasberg Gran
1935 T. Wayland Vaughan
1936 Martin Knudsen

The committee on the award of the Agassiz Medal presents for that honor this year:

Edgar Johnson Allen, D.Sc., LL.D., F.R.S., for forty-two years the director of the Laboratory of the Marine Biological Association of Great Britain, at Plymouth, England. Dr. Allen has been in a very real sense the creator of this laboratory, which is one of the most important in the world. A British colleague has written that "it was universally regarded as a 'white elephant' when Dr. Allen took the directorship and turned it into a highly efficient research institution." In 1902 the Plymouth Laboratory was placed in charge of the British work on the International Commission for the Exploration of the Sea with Dr. Allen in charge of investigations. These investigations have been carried on there ever since and include studies on hydrography, meteorology, currents, plankton and other marine organisms. By means of these studies the circulation of oceanic waters in the English Channel and North Sea have been charted, and the movements of swarms of plankton and their relation to food fishes have been determined.

Much of Dr. Allen's own work in this program is embodied in the publications of his associates, for his wide knowledge, sound judgment and especially his sympathetic cooperation are praised by all who know him. His own most important publications may be classed in six different but related fields; namely, (1) The histology, physiology and embryology of Crustacea and Annelida; (2) the fauna and bottom deposits of English Channel Estuaries; (3) the culture of marine diatoms in artificial sea water and the quantitative study of plankton; (4) Mendelian studies of the eye pigments of Gammarus; (5) food from the sea; the connection between mackerel and sunshine; the age of fishes and the rate at which they grow; (6) the progression of life in the sea; origin of adaptations; the science of the sea.

For his contributions to oceanography in the creation and wise direction of the Plymouth Laboratory; for his unselfish cooperation with hundreds of investigators at the laboratory for the past forty-two years; for his active work in connection with the International Commission for the Exploration of the Sea; for his direct contributions to the study of the life of the sea and its relation to human welfare, the committee on the Agassiz Medal takes particular pleasure in recommending for the award at this meeting a friend of Sir John Murray and Alexander Agassiz—Dr. Edgar Johnson Allen.

EDWIN G. CONKLIN

In the absence of Dr. Johnson, the medal was received by Leander McCormick Goodhart, Esq., of the British Embassy.

PRESENTATION OF THE PUBLIC WELFARE MEDAL TO WILLIS RODNEY WHITNEY

MY great joy in presenting to you for honor my friend, idol and former director is tempered with a sense of inadequacy on my part. Poor lame words can not portray great qualities; they connote only the common.

Dr. Whitney is well known as a scientist, and you have already honored him as such. He has made outstanding contributions to human welfare in the field of electric lighting, and in the use of high-frequency electric currents for curing diseases such as paresis, arthritis and bursitis.

His greatest contribution, however, is as organizer and director of scientific research. Not the common organizer. The very term does him injustice. His organization was a growth rather than a creation. It grew so gradually that it is difficult to give any date when it became an organization, except the date, November, 1900, when the M. I. T. professor began sharing his time with General Electric, spending two days each week at Schenectady.

Nor was he an ordinary director, of the kind who keeps a large number of men busy by telling each what to do. Dr. Whitney never told anybody what to do. His leadership was more by example and inspiration than by precept. It would be unfair to him not to acknowledge that he originated a large fraction of the projects which he so generously credited to others; but he seldom if ever assigned these problems. I never was able to get him to tell me or even advise me what to do. His method was suggestion. On his daily rounds of the laboratory he always had some new suggestion, which he continued to peddle until some one became enthusiastic and *asked permission* to work on it. The executive who tells a hundred assistants what to do achieves the efficient goal of providing a hundred pairs of hands for one brain. Dr. Whitney had a hundred brains working together.

A characteristic feature of Dr. Whitney's direction was his receptiveness to new ideas; yet no one was harder to fool. He seldom fired anybody, yet it would be hard to find a group with fewer drones. He never