zyme activity. Dr. Calvery will be in charge of the biochemical work of the laboratory.

Dr. E. W. Wallace, since 1932 in direct charge of the teaching of pharmacology in the University of Chicago. His publications have been in the fields of pharmacology and experimental medicine.

Dr. J. M. Curtis has, for the past year, been National Research Council Fellow in anatomy at Yale University. His publications have been in the field of the chemistry and the isolation of the hormones of the sex glands.

Dr. G. E. Farrar, Jr., member of the Department of Medicine of the University of Michigan. His work has been especially in the field of the effect of heavy metals upon the formation of blood.

Dr. Lloyd C. Miller, physiological chemistry, has for two years been in the research laboratories of the Upjohn Company. His work has been in the fields of metabolism and the preparation and assay of sex gland products.

In addition to these newly appointed specialists, the original members of the pharmacological section of the Drug Division remain as a part of the new Pharmacological Division, including the following men:

W. T. McClosky, who has been in charge of the pharmacological section, will continue in charge of the biological assay work of the new division. His work in the field of biological assays, especially of pituitary gland, is widely recognized.

Dr. H. D. Lightbody joined the Food and Drug Administration in 1931. His publications have been especially in the fields of sulphur and carbohydrate metabolism.

Dr. Harold P. Morris was National Research Council Fellow in Nutrition at Minnesota from 1930 to 1931. He has since worked for the U. S. Bureau of Fisheries and the Bureau of Home Economics in the fields of food chemistry and food utilization.

Ewald Witt is a registered pharmacist.

Paul E. Tullar studied in the University of Michigan.

Herman J. Morris studied at George Washington University.

Dr. J. A. Matthews, after four years at the Bureau of Standards, joined the Department of Agriculture in 1934.

APPROPRIATIONS FOR THE MUSEUMS OF NEW YORK CITY

REPRESENTATIVES of the Metropolitan Museum of Art, the American Museum of Natural History, the New York Botanical Garden, the New York Zoological Society and the Brooklyn Institute of Arts and Sciences presented on August 1 to Budget Director Rufus E. McGahen and Assistant Director Leo J. McDermott of the Bureau of the Budget estimates of funds required for the year 1936. They called for an appropriation of $484,501 from the city, an increase of $85,356 over last year.

According to the account in *The New York Times* Dr. Herbert Winlock, director, and Frank Dunn, auditor, appeared for the Metropolitan Museum with a request for $398,757, an increase of $36,194.

Of the increase asked for by the American Museum of Natural History, $77,956 are for the salaries of attendants in the New York State Roosevelt Memorial building, which it is hoped will be opened next fall. $36,000 are for the wages of twenty-five additional attendants as being necessary for the reopening of at least five of the ten halls now closed in the museum.

The New York Botanical Garden asked for $254,968, an increase of $45,853, through Dr. Elmer D. Merrill, retiring director. The largest item of increase, $32,000, it was agreed, might be eliminated when Mr. McDermott pointed out that greenhouse repairs could probably be handled by the Public Works Administration. Other increases had to do with restoring the force of laborers to take care of the 400 acres that make up the gardens.

Philip N. Youtz, director of the Brooklyn Institute, asked for $269,723, an increase of $54,962. A schedule of $73,068, an increase of $5,816, was presented for the Aquarium, and one of $270,037, an increase of $8,554, for the New York Zoological Park in the Bronx. Both increases were based principally on supplies and equipment.

It had been proposed to open the Theodore Roosevelt Memorial Wing of the American Museum of Natural History on October 27, the seventy-seventh anniversary of Roosevelt's birth. Dr. Henry Fairfield Osborn, who retired from the directorship of the museum two years ago, in a statement made before sailing recently for Europe said that work on the memorial is not quite complete and an allocation of $100,000 to put the final touches on educational equipment for the museum is required. He was assured, however, that this sum would be forthcoming and that all financial matters relating to the subject would be settled on his return on September 8. The total cost of the structure to date is $3,500,000.

AWARD OF THE PRIZE IN PURE CHEMISTRY OF THE AMERICAN CHEMICAL SOCIETY

THE American Chemical Society award in pure chemistry will be presented to Dr. Raymond M. Fuoss, assistant professor of chemistry at Brown University, at the medal ceremony at the San Francisco meeting, which will be held from August 9 to 23.

Dr. Fuoss was selected for the most conspicuous research by a chemist under thirty-one years of age during the past year. Experimentation with electrolytic solutions in Dr. Charles A. Kraus's laboratory at Brown University led him to formulate what is said to be "the first comprehensive theory in that field."

Dr. Fuoss will read a paper on his work before the Division of Physical and Inorganic Chemistry. He is one of the younger members of a school of chemists, now in its third generation, founded at the University of Kansas in 1896 by Dr. Charles A. Kraus, Professor Hamilton P. Cady and Dr. Edward Curtis Franklin. Dr. Franklin, emeritus professor in Stanford University, is honorary chairman of the San Francisco meeting committee.

Since his graduation from Harvard University in 1923, Dr. Fuoss has studied at the University of Munich; in Professor Debye's laboratory at Leipzig, and under Professor Fowler at Cambridge. He has also completed graduate work at Brown and Harvard Universities, carried on industrial research and assumed charge of the Newport Rogers Laboratory at Brown University in Dr. Kraus's absence. He has published twenty-one papers in scientific journals, seventeen since 1922. He was born in Bellwood, Pa. Dr. Kraus has given the following description of Dr. Fuoss's work:

Dr. Fuoss has developed a theory of electrolytic solutions which applies to solvents other than water, such as ammonia. On coming to Brown, he undertook researches into the difficult and somewhat unpromising problem of electrolytic solutions. On the experimental side, the field of electrolytic solutions was in a very unsatisfactory state. Adequate data for testing theoretical relationships were available only for water solutions.

In the case of solutions in solvents other than water, the data were, in general, not sufficiently reliable to permit a definite answer to the question as to whether or not mass action effects actually exist in solutions of ordinary salts in such media. No serious attempt has been made to provide a theory for solutions of this type.

Striking at the root of the problem, Dr. Fuoss measured the conductance of solutions. He showed for the first time that conductance of an electrolyte in a nonpolar medium approaches a limiting value rather than zero. On the basis of his experimental results, he proceeded to develop an adequate theory to account for the observed properties of an electrolytic solution as a function of the dielectric constant of the medium, temperature, and certain other constants of the medium and the solute. He likewise devised new methods for mathematical analysis of the various types of conductance curves. These methods have proved invaluable in analyzing the results of conductance measurements. It is not too much to say that as a result of this work we now have, for the first time, a comprehensive theory of electrolytic solutions which, at lower concentrations, applies to all solvent media and to all electrolytes.

In other words, we are now able to predict the properties of a solution of a given electrolyte in a given solvent medium provided that certain fundamental physical constants of the electrolyte and the medium are known.

The $1,000 award in pure chemistry was founded by A. C. Langmuir, of Hastings-on-Hudson, N. Y., to reward "the accomplishment in North America of outstanding research in pure chemistry by a young man or woman under thirty-one years of age, preferably working in a college or university." "Outstanding research" is construed to mean work of unusual merit for an individual on the threshold of his career. Members of the Committee on Awards of the American Chemical Society award in pure chemistry are: Professor Edward Bartow, of the University of Iowa, president-elect of the society; Professor Homer B. Adkins, Dr. John Johnston, Dr. Ralph E. Gibson, Dr. Frank C. Whitmore, Dr. W. H. Carothers and Edward Mack, Jr.

THE DIRECTOR OF THE NEW YORK BOTANICAL GARDEN

AT a special meeting of the Board of Managers of the New York Botanical Garden, held at the office of the president, Henry W. de Forest, Dr. Marshall Avery Howe was elected director of the garden, effective on October 1. He succeeds Dr. Elmer Drew Merrill, director since January 1, 1930, who has resigned to accept a call to head the eight botanical units of Harvard University. Dr. Howe has been a member of the scientific staff of the Botanical Garden for thirty-four years, serving as assistant director for the past twelve years and as acting director for several short periods. He has seen the garden develop from little but an ambitious plan in the mind of the first director, the late Dr. Nathaniel Lord Britton, and his co-workers to its present rank as one of the three leading institutions of the world devoted to the advancement of the plant sciences, with four hundred acres of land, more than one hundred people on its regular payrolls, about 1,800,000 specimens in its herbarium, 45,000 bound volumes in its library, and notable floral and horticultural displays out of doors and under glass extending throughout the year.

Dr. Howe is a graduate of the University of Vermont, of which state he is a native. After a short period as submaster of the Brattleboro High School, he accepted, in 1891, an appointment as instructor in cryptogamic botany in the University of California. In 1896, he came to New York for graduate studies at Columbia University, from which he received the degree of doctor of philosophy in course in 1898. After three years as a member of the botanical staff of Columbia University, he became assistant curator of the New York Botanical Garden in 1901, advancing to curator in 1906, and to assistant director in 1923. Dr. Howe has made field expeditions to Nova Scotia, Newfoundland, Bermuda, Florida, the Bahama Islands, Cuba, Puerto Rico, Jamaica and Panama. He has made special studies of the plant life of the sea, in which field he is an acknowledged authority. Since 1912, his writings and lectures have emphasized the importance of lime-secreting sea-plants in reef-building and land-forming, an activity that has long been