rative plants, weeds, fungi and wild plants. The horticulturist, as such, is primarily interested in the garden, and in plants as they are useful for making a garden, or have other ornamental value or economic value. Of course, the fields of botany and of horticulture overlap, as do all the sciences, and any attempt to define a hard and fast dividing line would fail; but in the older botanic gardens the main concern appeared to be to grow the plants which the botanist wished for studying and for teaching; the problem of a beautiful garden, if it existed at all, was secondary. The justly famous Chelsea Garden, near London, especially in its earlier years, is an example. The gardens of the great English estates, Japanese landscape gardens, and, in America, such gardens as the Magnolia Gardens and the Middleton Garden near Charleston are examples of horticultural (as distinguished from botanical) gardens.

The problem of the modern botanic garden is to be educational and otherwise serviceable from the standpoint of botany and, at the same time, to be as beautiful as possible *as a garden*—to combine botanical and horticultural values; to be socially serviceable. A few lantern slides will illustrate in a partial manner one attempt to realize this ideal.

(At this point a number of colored lantern slides and two reels of motion pictures in natural color were exhibited, illustrating the plantations and various aspects of the scientific and educational work of the Brooklyn Botanic Garden.)

OBITUARY

ANDREI VASSILIEVITCH MARTYNOV

NOT long ago, very little was known of the fossil insects of the vast Russian territory in Europe and Asia. Ust Balei, on the Angara River in Siberia, had produced a series of interesting forms, and I had the pleasure of collecting insects of Tertiary age on the east coast of Siberia. But no one realized that the U. S. S. R. was in fact a happy hunting ground for the paleoentomologist, comparing not unfavorably with some productive regions in western Europe and in parts of the United States. As recently as 1927 a rich deposit of Liassic age was discovered in Ferghana, and subsequent collecting brought to light a fauna which has just been recorded in a volume of 232 pages, with many illustrations, published at Moscow and Leningrad, 1937. When I received this book not many weeks ago, I thought of its author, A. V. Martynov, and recalled my meeting with him at Leningrad in 1927. I remembered his many valuable contributions to the knowledge of recent and fossil insects, and rejoiced to think that he was going on from discovery to discovery, taking advantage of the opportunities which came to him. I recalled his vivid account of his search for insects in Permian rocks; how he hunted long without success, and eventually found two concretions, of no great size, but filled with remains of insects. One could not fail to be struck by his keenness of mind, his enthusiasm, and his perseverance. In the midst of these reflections came the melancholy news that Martynov had died on January 29, from cancer.

Martynov was born in 1879 in Central Russia. He graduated from Moscow University, and became assistant professor at Warsaw in Poland. When I met him he was in the Zoological Museum of the Academy of Sciences in Leningrad, but more recently he was transferred to the newly established Institute of Paleontology of the Academy in Moscow. He had made intensive studies of the caddis-flies (Trichoptera) in the recent fauna, but he was attracted to problems having to do with the morphology and phylogeny of insects, problems which were illuminated by the many newly discovered types in Mesozoic and late Paleozoic strata. Describing very many genera and species, which often had to be referred to entirely new groups, he was not concerned so much to record a large number of novelties as to see what they all meant for the long history of insect life and the understanding of evolution in general. We may not adopt all his views, but at the very least we must recognize the permanent value and importance of his work, which will be continually referred to by all subsequent students.

T. D. A. COCKERELL

RECENT DEATHS AND MEMORIALS

DR. DANIEL WEBSTER HERING, since 1916 professor emeritus of physics at New York University, dean of the Graduate Faculty from 1902 to 1916 and curator of the James Arthur collection of timepieces, died on March 24 at the age of eighty-eight years.

DR. PERLEY ASON ROSS, professor of physics at Stanford University, died on March 20 in his fifty-fourth year.

DR. LOUIS WILLIAM STERN, professor of psychology at Duke University and prior to the recent difficulties in Germany director of the Psychological Institute at the University of Hamburg, known for his contributions to child psychology and psychological testing, died on March 27 at the age of sixty-six years.

Nature reports the following deaths: Charles Benson, formerly deputy director of the Agricultural Department, Madras, known for his work on Indian cotton and tobacco, on March 5, aged eighty-two years;

of Dr. Alfred Fischel, formerly professor of experimental embryology in the University of Vienna and editor of the *Zeitschrift für Wissenschaftliche Biologie*, aged sixty-nine years, and of Professor Friedrich von Krüger, for many years director of the Department of Physiological Chemistry in the Institute of Physiology of the University of Rostock, aged seventy-six years.

THE Edison Institute Foundation, in charge of Greenfield Village, established by Henry Ford, has announced plans for the dedication on April 16 of the home and workshop of Orville and Wilbur Wright. Orville Wright has been invited to be the guest of honor. The Wright home and the bicycle shop in which the brothers constructed the first successful airplane have been moved from Dayton, Ohio, and reconstructed in Greenfield Village and much of the original equipment has been installed. The dedication will occur on the birthday anniversary of Wilbur Wright, who was born in 1867 and died in 1912.

A SERVICE in memory of the late Lilian Welsh, professor emeritus of physiology and hygiene at Goucher College, will be held at the college on Sunday afternoon, April 3, at 4:00 P. M. Addresses will be made by: Dr. Florence Rena Sabin, member of the Rockefeller Institute for Medical Research; Dr. Margaret Shove Morriss, dean of Pembroke College, Brown University, president of the American Association of University Women; Dr. Gertrude Carman Bussey, professor of philosophy; Dr. Jessie L. King, professor of physiology; Eline von Borries, associate professor of physical education, Goucher College, and Eleanor Diggs Corner, alumna member of the Board of Trustees.

SCIENTIFIC EVENTS

PRESENTATION OF THE PHILADELPHIA AWARD TO PROFESSOR RICHARDS

AS has been recorded in SCIENCE, Dr. Alfred Newton Richards, professor of pharmacology at the University of Pennsylvania, received on March 9 the Philadelphia Award, which was presented to him at the Academy of Music. The award, established by Edward W. Bok, consists of $10,000, a gold medallion and an engrossed scroll. Dr. Edwin G. Conklin, of Princeton University, executive vice-president of the American Philosophical Society, made the presentation, and the principal address was given by Waldemar B. Kaempffert, science editor of *The New York Times*. We are permitted to quote the remarks made in response by Professor Richards, which read:

The chief element of such satisfaction as I have felt since learning of what was to happen to-night lies in the fact that in this city there are scores—in this country, hundreds—of young men, who, known or unknown to me, are my colleagues and who may gain encouragement from this award. They are my colleagues in the sense that their chief interests, like mine, are centered in the experimental science of physiology—the science which strives to describe and to understand the phenomena of living things; hence, when studied in relation to man and higher animals, the mother of scientific medicine.

Their work, directed at accurate descriptions and correlations of the manifestations of life, is commonly pursued with little thought of immediate practical outcomes; but nevertheless, with profound conviction, amply justified by experience, that out of clearer understandings of the mysterious processes at work within our bodies, there must, inevitably, come in time discoveries of better methods of dealing with the ills which result from disturbances in those processes.

In the past, the Bok Committee has honored exquisite surgical technique in the service of medicine by its award to Dr. Chevalier Jackson; deep understanding of mental phenomena in relation to medicine by its award to Dr. Bond. To-night, the aim must have been, however widely the mark has been missed, to honor the sciences which contribute to medicine, the broadest and deepest of which is physiology.

I conceive it not only fitting but obligatory to acknowledge some of the debts which have been accumulating during the years, out of which have emerged the contributions with which my name may be associated.

First, to a group of younger collaborators, changing in personnel as the years have passed, whose minds and energies joined with mine in efforts to increase our insight into certain problems of the physiology of excretion concerning which we were at sea. Chance gave me the privilege of seniority in that group; chance brought us together; chance, good-fortune, the questions of alert students directed us toward problems which we were able partially to solve. I welcome the bestowal of the Philadelphia award, inasmuch as it constitutes recognition by a distinguished committee of Philadelphians of the labor of those particular people for whom I have deep affection.

Acknowledgment must also be made to the school in which for so many years we have had the privilege of working. Concerted investigative efforts, when carried on in universities, are possible only in those whose administrators recognize that the obligation to contribute new knowledge is as binding as is the obligation to instruct students. The student who breathes the exhilarating air of investigation comes to realize that what he learns from the records of the past is the product of the enthusiasm of youngsters like himself, fascinated by a glimpse of the mysteries which surround him, determined to try to describe and understand them. He becomes truly a contemporary of the great ones of the past as well as of the lesser ones who are following their steps. With such thoughts as these schools like that which, for