Science on insectivorous plants, especially on Dionaea. While in this country he was invited to a professorship in biology at the University of Pennsylvania; he accepted and in 1893 became professor of botany, a position held until his retirement in 1920.

Through the untiring and unremittant efforts of Dr. Macfarlane as head of the botany department and director of the botanic garden over a period of twenty-seven years great advances and constructive improvements were wrought, both for the cause of botany at the university and for the general field of this science. From "extended vistas of sand-hills and gravel hollows" there was evolved a well-balanced and highly useful botanic garden. From a shelf with seventeen volumes on botany in 1893 there emerged a well-stocked botanic library with more than five thousand volumes. Greenhouses were erected and filled with a large and representative collection of plants. Laboratories were equipped with essential apparatus. The faculty was enlarged and the student body greatly augmented from time to time, with five hundred students taking courses in botany in 1920. Dr. Macfarlane believed in the influence and usefulness of subsidiary organizations that would serve to bring the alumni of the university and the general public in contact with the botanical department of the university. With this aim in view he founded the Botanical Society of Pennsylvania in 1897. This organization, which very soon included 150 members, has continued to the present and held the founder's interest and guidance to the end of his long life. The Graduate Botanical Club, organized about the same time, served to unite faculty, graduate students and graduates in their common interests. At the bi-weekly meetings results of investigations were reported and botanical literature was discussed. These meetings were preceded by a social hour when a repast was served. Here also Dr. Macfarlane showed that delightful geniality so characteristic of this beloved Scot and frequently he recited bits of Scotch poetry and prose in his pleasing native brogue into which he could lapse so readily.

A classical as well as a scientific background in his training, wide experience in the laboratory and in the field and the close association with his fellow man, all gave Dr. Macfarlane a universality of knowledge and a versatility of application seldom found in any one individual. He will be remembered longest as a magnetic teacher, who loved students and who never "talked down" to them but rather on the same plane. Classes coming to him for the first time were usually greeted by "Fellow Students" which would put even the most timid student at ease. He was never too busy to help and to counsel the student. To his colleagues he was ever an inspiring leader. He was an ideal friend and host and the portals of his office and of his home were ever open to all his friends.

Although Dr. Macfarlane carried a heavy teaching schedule, yet he found time for research, writing and publishing more than 140 volumes, monographs and contributions. He was active in research practically to the end of his long and full life, leaving much unpublished work, mainly on taxonomic botany. The unique versatility and ability in his researches are portrayed in the variety of scientific fields which he explored so thoroughly. He held first rank as an authority on insectivorous plants. To cite some of his volumes—as "The Causes and Courses of Organic Evolution," "The Evolution and Distribution of Fishes," "Fishes the Source of Petroleum," "The Quantity and Sources of our Petroleum Supplies," "The Evolution and Distribution of Flowering Plants (Apocynaceae. Asclepiadaceae)"—further shows not only the diversity of his interests but also that he wrote with authority.

Dr. Macfarlane enjoyed membership in many learned societies here and abroad. In addition to the degrees from the University of Edinburgh he held an honorary LL.D., University of Pennsylvania, 1920, and an honorary Litt.D. from LaSalle College, 1929. He was married twice. His first wife, Emily Warburton Macfarlane, died in 1927. His second wife, Lily Wells Macfarlane, survives him, as do four children—Alistair, a teacher in the Philadelphia public schools; Norman, a physician; Archibald, in the State Department, Washington; and Mrs. Winifred Mair, Carlisle, Pa.

WALTER STECKBECK
UNIVERSITY OF PENNSYLVANIA

RECENT DEATHS

DR. HERMAN L. FAIRCHILD, professor of geology emeritus at the University of Rochester, died on November 29. He was ninety-three years old.

DR. FRANK E. LUTZ, chairman and curator of the department of insects and spiders of the American Museum of Natural History, New York City, and since 1909 a member of the scientific staff, died on November 27 at the age of sixty-four years.

ELMER SETH SAVAGE, professor of animal husbandry at Cornell University, died on November 20 at the age of sixty years.

DR. GEORGE H. BURROWS, who retired in 1942 as professor of chemistry and head of the department of the University of Vermont, died on November 22 in his sixty-eighth year. He had served on the faculty for thirty years.

DR. IRWIN BOESHORE, assistant professor of botany at the University of Pennsylvania, died on November

22 at the age of sixty years. At the time of his death he was president of the Botanical Society of Pennsylvania.

FRANKLIN DERONDE FURMAN, who retired in 1941 as professor of mechanism and machine design and dean emeritus of Stevens Institute of Technology, died on November 21. He was seventy-three years old. He served for forty-eight years as a member of the faculty, thirteen years of which he was dean of the college.

MRS. ADELINE DESALE LINK, assistant professor of chemistry at the University of Chicago, died on November 21. She was fifty-one years old.

LIEUTENANT LEONARD A. KEYES, JR., civil engineer, instructor in navigation at Mather Field, California, has been missing since July. Search for the airplane of which he was one of the officers has been abandoned. He was twenty-seven years old and was one of a group studying the latest use of radar in navigation. Colonel John W. Egan wrote to his parents: "Leonard had been on duty with this school for approximately fourteen months, and graduated with the highest honors ever made in the school. The loss of his services will be distinctly felt by the war effort, and extremely difficult to replace." Lieutenant Julian Taylor wrote: "I will say, as any member of the navigation school will say, that, if your son is lost, the navigation school has lost its most brilliant mind. The navigation manual which was to become a permanent navigation text lies half finished for lack of the driving force that was your son."

SCIENTIFIC EVENTS

ENLARGEMENT OF THE LABORATORY STAFF OF THE U. S. FOREST PRODUCTS LABORATORY

THE requirements of the Army and Navy for wood and other forest products and the need for precise study of their properties and uses have been reflected in the quadrupling of the staff of the U. S. Forest Products Laboratory at Madison, Wis., in the past two years. This institution, maintained by the Forest Service of the U. S. Department of Agriculture in cooperation with the University of Wisconsin, is the largest and oldest research organization of its kind in the world. With a background of thirty-three years of experience in wood utilization problems ranging from strength and other analyses of wood properties to the chemical synthesis of wood into new substances of potential value, the Forest Products Laboratory has become established as the nation's center of such knowledge. Since the Pearl Harbor attack, all its resources have been directed toward research and investigations tied directly to the war effort.

Professional personnel was expanded from 91 on July 1, 1941, to 419 on September 30, 1943. The staff on the latter date consisted of forty-two chemists, six chemical engineers, a hundred engineers of other classifications—largely civil, aeronautical and structural—fifty-three technologists, forty-three industrial specialists, seven technical writers, two mathematicians, two physicists and 164 laboratory, engineering and physical science aids. In addition, 249 other employees—administrative, clerical, maintenance and craftsmen—brought the grand total number to 668. Noteworthy in this expansion has been the number of women employees, which increased from thirty-four to 191, including chemists, laboratory aids and other technical workers.

These employees are engaged in a variety of research, test work and consultation for various war agencies. Two entirely new divisions were created and staffed—the Division of Matériel Containers, concerned primarily with testing and designing of better wood and fiber-board containers for the Army Ordnance Department, Army Air Forces, Navy, War Food Administration and similar agencies charged with the packaging and shipment of war matériel of all kinds to overseas fighting fronts; and the Division of Technical Service Training, organized to conduct short specialized courses for Army, Navy and civilian personnel engaged in packaging work, aircraft wood inspection and maintenance of wood aircraft. Major aircraft research programs are being carried out in cooperation with the Army and Navy to develop design data for aircraft parts and set up specifications for wood, plywood, plastics, glues and finishes used in aircraft. The Navy Bureau of Ships is cooperating in a program of research designed to solve many problems of wood use with which it is concerned. Various projects are under way for the War Production Board to find new methods of getting improved service with wood or developing substitutes for other critical materials. Requests for information and testing work are daily received from other Government agencies as well as from many manufacturers confronted with difficult problems of conversion to wood use, ranging from producers of aircraft parts to makers of farm machinery, refrigerators and storage batteries.

THE PACIFIC MAP OF THE NATIONAL GEOGRAPHIC SOCIETY

THE National Geographic Society has issued a new ten-color map of the Pacific Ocean and the Bay of