found only at low water level? Such questions may be called ecological questions, but it is obvious that they are fundamentally physiological. The questions become more perplexing when we seek an explanation for the discontinuous horizontal distribution of algae restricted to specific tidal levels. Two striking examples of this problem may be cited. *Gymnogongrus linearis,* which only grows between the 0.5 foot and mean low tide levels, is a perennial restricted to rocks within 100 feet of the ends of long sandy beaches. *Nemalion lubricum* is an annual which appears late in May and disappears early in October. Every year for the past 20 years it has reappeared on the same rocks but not on adjacent rocks where conditions seem to be identical. Why do not these algae spread laterally to what seem to be equally favorable habitats? The questions are obvious, the answers are not. All that can be done is to invite you to take another trip 25 years from now and hope some of these questions will have been answered by that time.

OBITUARY

WILLIAM TRELEASE
1857–1945

WILLIAM TRELEASE, professor emeritus of botany of the University of Illinois, died after a brief illness in his eighty-eighth year on January 1, 1945. He had remained active during the summer and early autumn, to the extent permitted by rapidly failing eyesight, and though hospitalized for several days in October, he had rallied and returned to his home. Until the middle of October he was engaged in the taxonomy of recent collections of Central and South American peppers. It is interesting to note that his active botanical career spanned a period of more than sixty-five years; his first botanical publication appeared in the *Torrey Bulletin* in September, 1879.

Trelease's interests were broad, including all plants from bacteria to angiosperms. His earliest studies included insects in relation to cross pollination in plants. His doctor's thesis at Harvard was in cryptogamic botany, at that time a new division of botany, under the direction of Professor Farlow, but he had already published a score of botanical contributions. Earlier he had received, from Asa Gray, instruction from which stemmed his interest in the taxonomy of seed plants.

William Trelease was born in Mount Vernon, N. Y., on February 22, 1857, a son of Samuel Ritter and Mary Elizabeth (Gandall) Trelease. After attending high school at Branford, Conn., and the Brooklyn (evening) high school, he entered Cornell University, graduating with the B.S. degree in 1880. He had come under the instruction of Professor J. H. Comstock and was appointed by the U. S. Department of Agriculture as a special agent on cotton insects. In his leisure time connected with this duty he made many observations on pollination by humming birds and insects, and on nectar secretion, which may partly account for his early activities in this field of biology. In 1881–1883 he was instructor in botany at the University of Wisconsin; in 1883–1885 he was professor of botany there. In the summers of 1883–1884 he was in charge of botany at the summer school of Harvard, and in 1884 was lecturer at the Johns Hopkins University. He received his D.Sc. degree from Harvard University in 1884.

At the University of Wisconsin, Trelease gave much of his attention to bacteria and fungi. He conducted the first comprehensive survey of the parasitic fungi of Wisconsin and taught the first course in bacteriology given in the university. He was at this time one of the leading mycologists in this section of the United States.

It was largely through the influence of Asa Gray that he was appointed to the Englemann professorship in Washington University, St. Louis, where he opened the Shaw School of Botany in 1885. He served as director of the Missouri Botanical Garden from 1889 to 1912. Under his leadership this institution prospered and became famous as a botanical center, to which many American botanists owe their training in research.

In 1913, Professor Trelease came to the University of Illinois, where he served as professor and head of the department of botany, retiring from active teaching in 1926 as professor emeritus. Trelease enjoyed the following long period of freedom, alternating intervals of travel to various parts of the United States and Mexico, to Europe and New Zealand, with much longer periods at his home. Most of the time he remained in Urbana, almost daily at his desk, engaged in taxonomic work on the groups of plants in which he was the most distinguished authority.

The plants which Trelease named and described number more than 2,500 species and varieties—they may exceed 2,700—and include plants from bacteria to angiosperms. Treleasia and Neotreleasea, the latter a Mexican genus of Commelinaceae, as well as the specific names of many other plants have been dedicated to him by botanists in various parts of the world. He is also commemorated in Mount Trelease, a 12,500-foot summit in Colorado, about fifty air-line miles west of Denver in the Clear Creek country near Loveland Pass, where he had botanized in 1886. In this area mountains named for other famous American

botanists—Torrey, Asa Gray and Engelmann—may be seen.

Professor Trelease has participated in many other travels and botanical excursions, including the Harriman Expedition to Alaska and other trips to the West Indies and remote parts of the North American continent. He visited Europe many times, attending the International Botanical Congress in Vienna in 1905, and working at the principal botanical gardens and herbaria on American plants represented in these collections. He spent the year 1912–1913 in Europe. He was successful in obtaining many rare volumes and sets of botanical works, greatly enriching the libraries of his institutions.

Some time after going to the Missouri Botanical Garden, Trelease gave most of his attention to the taxonomy of seed plants. However, he always retained a keen interest in the development of cryptogamic botany, and the field represented by his early activities. He was author of many botanical publications, including a series of monographs based upon the collections of the Missouri Botanical Garden and other American herbaria. In collaboration with Asa Gray he edited the "Life and Works of George Engelmann." The larger monographs include "Agave in the West Indies," the genus Phoradendron, the Oaks and several monographs on Piperaceae, a family of plants to which he was still devoting his time shortly before his death. In his early years at Wisconsin and St. Louis, he translated some Danish and German botanical works and reviewed a large number of foreign publications in American journals. From 1903–1922, he was chairman of the group of American editors of *Botanisches Centralblatt*. His manuals, "Plant Materials of Decorative Gardening" and "Winter Botany," are widely used by botanists and horticulturists in the identification of trees and shrubs, and each of them has gone through three or four reprintings.

Professor Trelease was the recipient of many honors. He was a fellow of the American Academy of Arts and Sciences since 1892, was elected, in 1902, to the National Academy of Sciences and in 1903 to the American Philosophical Society. He was also a member of the American Society of Naturalists (president, 1903) and many state academies of science. He was chairman of the organizing committee and the first president of the Botanical Society of America in 1894–95. After the society was reorganized and merged with other botanical groups in 1907, he was reelected to the presidency in 1918. He was directeur (pres.) of the Académie International de Géographie Botanique in 1896, and held corresponding and honorary memberships in other botanical societies of Europe.

The University of Wisconsin, the University of Missouri and Washington University conferred on him honorary degrees. He served as a member of the Illinois State Natural Resources and Conservation Board from the time of its organization in 1917. He had also taken part in civic enterprises of his community and was chairman of the first city planning commission of St. Louis in 1911–12.

Professor Trelease's sound judgment and his background of long experience and broad interest in all phases of botany fitted him peculiarly as a valuable counselor to students and younger botanists. His radiant personality and sympathetic interest in the problems of younger botanists who sought his advice endeared him to all who came under his influence. His zeal in continued botanical activity during the long period of his retirement has been a source of inspiration to his colleagues and friends who will miss these contacts and his cheerful greetings. The world has lost a famous botanist; American botany has lost a distinguished leader.

J. T. BUCHHOLZ

UNIVERSITY OF ILLINOIS

RECENT DEATHS

LIEUTENANT COLONEL M. F. MORGAN, chief agronomist of the Connecticut Agricultural Experiment Station and a former secretary of Section O of the American Association for the Advancement of Science, was killed by enemy action on Leyte Island on January 15, while on convoy duty. He was fifty years old.

DR. DENNIS E. HALEY, professor of soil and phytochemistry in the department of agricultural and biological chemistry of the Pennsylvania State College, died on February 10, at the age of fifty-nine years.

SCIENTIFIC EVENTS

AWARDS OF THE GEOLOGICAL SOCIETY, LONDON

AWARDS made by the Council of the Geological Society, London, as reported in *Nature*, are:

The Wollaston Medal to Professor O. T. Jones, emeritus professor of geology in the University of Cambridge, for outstanding contributions to knowledge concerning the stratigraphy of Lower Palaeozoic sedimentary rocks of Wales; the Murchison Medal to Dr. W. Campbell Smith, keeper of minerals in the British Museum (Natural History), for his work on petrology and mineralogy, and his long service as secretary to the society; the Lyell Medal to Dr. L. F. Spath, of the Geological Department of the