

Bernard O. Dodge, Mycologist, Plant Pathologist

Bernard Ogilvie Dodge was born 18 April 1872 on his father's farm near Mauston, Wisconsin. He died at the age of 88, on 9 August 1960, in St. Luke's Hospital, New York City.

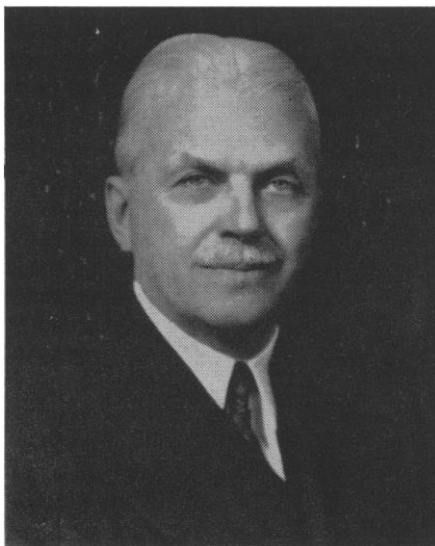
His ancestors were old New England stock, mainly of English origin. They were farmers, blacksmiths, tanners, wheelwrights. His paternal grandfather, Levi Dodge, was descended from Richard Dodge, who came from Somersetshire, England, to Salem, Massachusetts, in 1638. His paternal grandmother, Olive Blanchard Dodge, was the granddaughter of John Blanchard, born in Connecticut in 1737 and probably descended from Blanchards who were in Massachusetts in 1639. His maternal grandfather, William Nourse, was a lineal descendant of Francis Nourse, who came from England and was in Salem in 1639. Francis Nourse's wife, Rebecca Towne Nourse, had come to the Massachusetts Bay Colony from Great Yarmouth, England, about 1638. During the hysteria which swept Salem in 1692, Rebecca Nourse was accused of witchcraft and on 19 July 1692, at the age of 71, was hanged on Gallows Hill. Dodge's maternal grandmother, Mary Ann Rogers Nourse was descended from Robert Rogers, who came from England to the Massachusetts Bay Colony in 1634.

Dodge's father, Elbridge Gerry Dodge, was a carpenter by trade, but he devoted most of his active life to farming and to teaching in the local schools. A man with no high school or college education, he had a wide acquaintance with English literature and on occasion would recite entire scenes from Shakespeare to his attentive family.

Dodge's mother, Mary Ann Nourse Dodge was 16 when she accompanied her family from Vermont to Wisconsin, in 1856. She taught school until she married Elbridge Gerry Dodge before a justice of the peace in 1861, in spite of

the strong disapproval of her father. Mary Ann Dodge bore her husband five sons and two daughters and lived the life of a farmer's wife. She loved music, wrote verse (though she had no more schooling than that provided by a district school), and at 69 undertook the translation of a 64-page Spanish story into English. Dodge's mother and father were happy in their married life; they loved literature and respected learning—a circumstance which must have had much influence on their son.

Bernard Dodge spent his young manhood on his father's farm and did not complete his high school education until he was 20. He then taught school for several years. He entered the University of Wisconsin as a special student in 1895, but before the college year was completed his funds were exhausted and he found it necessary to return to teaching. After alternating periods as teacher and student, he graduated from the Milwaukee Normal School in 1901. He then spent five summer sessions and the school year of 1908–09 at the University of Wisconsin and received the



Bernard Ogilvie Dodge. [Bachrach]

degree of bachelor of philosophy in 1909, at the age of 39. He married Jennie S. Perry in 1906.

Dodge became interested in the fungi while he was a high school teacher in Wisconsin, through a chance meeting with an elderly Bohemian tailor who was collecting edible fungi. He maintained his interest at the University of Wisconsin and continued to be fascinated by this group of plants all his life.

After completing the requirements for his undergraduate degree, Dodge accepted a position as assistant and research fellow in botany at Columbia University and received the degree of doctor of philosophy in 1912. He remained at Columbia as an instructor until 1920, when, on being appointed plant pathologist (in fruit diseases) in the Bureau of Plant Industry of the United States Department of Agriculture, he moved to Washington, D.C. In 1928 the New York Botanical Garden appointed him plant pathologist, and he retained that position until he retired in 1947, to become plant pathologist emeritus and consultant in mycology. At his request, he was relieved of his duties as consultant in 1957, but he continued to work in his laboratory until a few months before his final illness, making his way several times each week by subway to the New York Botanical Garden, nearly an hour's journey from his apartment in the vicinity of Columbia University.

Dodge published about 150 papers dealing with the life histories, cytology, morphology, pathology, and genetics of the fungi and with insects and other animal pests of plants. He was 42 when his first paper was published; his last appeared when he was 85.

As a graduate student and instructor at Columbia University, Dodge's first interest was the Ascombolaceae, especially their reproduction; later, as plant pathologist in the Bureau of Plant Industry, he was concerned with the rusts, and his investigations dealt with diseases of raspberries, blackberries, and dewberries.

Toward the end of his stay in Washington his attention was directed to *Neurospora*, and in 1927 he published the first of 42 papers on this fungus, which remained a major concern for the balance of his life. He described its life history, distinguished three genera, produced species hybrids, clarified the mechanism of mating type inheritance, demonstrated the Mendelian nature of inheritance in this fungus, obtained ab-

solute Mendelian ratios by isolating and growing the lineally arranged ascospores of a single ascus, used the fungus to define the phenomenon of "heterokaryotic vigor," and made many other fundamental contributions to the biology and genetics of this organism. In many respects Dodge's discoveries and views were well in advance of those of his time, and his findings had an important influence on the development of genetics, especially of microorganisms, and on biochemical genetics, for which *Neurospora* became so useful a tool.

He convinced T. H. Morgan of the potentialities of *Neurospora*, and Morgan took cultures with him when he moved from Columbia University to the California Institute of Technology in 1928. There, C. C. Lindegren, on Morgan's advice, undertook the preparation of a dissertation on *Neurospora* and spent the summer of 1930 in Dodge's laboratory, one of many students and colleagues who felt the impact of Dodge's ideas and enthusiasm.

At the New York Botanical Garden Dodge was responsible for the control of plant diseases and pests, a responsibility which he took very seriously, frequently supervising in person the spraying, dusting, and other control measures. He published research findings and observations on diseases of iris, Japanese cherries, pachysandra, roses, geraniums, cedars, marigolds, opuntias, delphiniums, and other ornamental plants and a text on diseases of ornamental plants.

His researches on *Neurospora* were an "extra," pursued while he carried on his official duties of plant pathologist and coped with limitations of time, assistance, and facilities uncommon in these days of substantial support of basic research. Routine media were frequently prepared by Dodge himself; individual ascospores were isolated by means of a sharpened sewing needle inserted in a simple wooden handle. It is, of course, fruitless to speculate on what he might have accomplished had he been less handicapped by lack of funds in his earlier years and more generously supported in his research later on.

Dodge's concern with fungi as causes of disease extended from plants to animals and man. From 1928 to 1939 he was consultant in mycology for the Presbyterian Hospital, New York City, and from 1929 on, was lecturer in dermatology for the College of Physicians and Surgeons, New York.

In his later years Dodge was intrigued by phyllotaxy, the Fibonacci series, and other expressions of design in nature, and with his usual enthusiasm he spent much of his spare time puzzling over them and directing the attention of his colleagues to their wonders.

Dodge's contributions to science were widely recognized. He was a member of Sigma Xi and of the National Academy of Sciences, fellow of the American Academy of Arts and Sciences and of the American Association for the Advancement of Science, foreign member of the Linnean Society of London,

and honorary member of the British Mycological Society. He received the Distinguished Service award of the New York Botanical Garden and the Golden Jubilee award of the Botanical Society of America.

Dodge participated willingly and effectively in the affairs of the various organizations to which he belonged. He served as associate editor of *Mycologia*; editor of the *Bulletin of the Torrey Botanical Club*; convener of the section on fungi and fungus diseases of the 3rd International Microbiological Congress; secretary-treasurer and president of the Torrey Botanical Club; president of the Mycological Society of America; vice-president of the 7th International Botanical Congress; and vice-president of the American Association for the Advancement of Science.

He was a big man physically as well as mentally. Blond, blue-eyed, fine-looking, he was over six feet tall and weighed 190 pounds. He was modest to an extreme, a bit shy, friendly, cheerful, good-natured, never bitter, and especially marked by his enthusiasm. Nothing pleased him more than to inspire in some beginner or colleague enthusiasm for the subject in which he took so great an interest, and few could resist him. He was inclined to be conservative in politics and was affiliated with the Episcopal church.

He is survived by his wife, Jennie Perry Dodge.

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Science in the News

Educating the Public: To Win Broad Support for His Program Kennedy Assumes the Role of Mass Educator

Last week the Administration's education program had become so enmeshed in the side issues of civil rights and religion that Chairman Powell, of

the House Education and Labor Committee, announced that unless the situation could be cleared up, the President's program was dead. At the same time it had become clear that the Administration's over-all program, including its plans for science, had become enmeshed in an education problem

of another and more general sort: the problem the Administration faces in educating the country as a whole to what it is talking about.

The paradox with which the Administration is faced is that, although Kennedy himself has made an exceedingly good impression on the country (a Gallup poll taken after his first 30 days in office showed him enjoying a popularity even greater than Eisenhower's at the same point of his Administration), nevertheless there seems to be no discernible ground swell of support for his program. Few people doubt either that if the election were to be held over again this week, Kennedy would beat Nixon by a much greater margin than he did in November, or that if Congress were to vote on