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GEORGE ELWOOD NICHOLS

George Elwood Nichols was born on April 12, 1882, at Southington, Connecticut, and died on June 20, 1939, at New Haven. Upon entering Yale University in 1900, he began an association which was to last the remainder of his life. Continuing in graduate study after the award of the A.B. degree in 1904, he aided in the work of the department of botany as Assistant in Botany, and received the Ph.D. degree in 1909. He was then appointed Instructor in Botany, and after successive promotions, attained full professorial rank in 1926. At the time of his death, he held the Eaton Professorship of Botany, and was Chairman of the Department and Director of the Marsh Botanical Gardens. Beginning in 1920, he also served on the staff of the University of Michigan Biological Station at Douglas Lake, Michigan.

Doctor Nichols attained eminence in both research and teaching in two botanical fields, bryology and ecology. His enthusiasm for bryology, early exemplified in "The Bryophytes of Connecticut," published jointly with Doctor A. W. Evans in 1908, continued throughout his life, and numerous papers on the bryophytes of Connecticut, Nova Scotia, and Michigan resulted. This interest was shown also in the reports of his ecological field work, mosses and liverworts regularly receiving their due share of attention in marked contrast to their treatment by most plant ecologists. His enthusiasm for study of the lower groups was contagious, and the interest of many of the younger bryologists and algologists was engendered or greatly stimulated in his courses in the Taxonomy of Bryophyta and Algae at Douglas Lake. His attainments and the esteem in which he was held by his co-workers in bryology led to his election as President of the Sullivant Moss Society in 1938, a post he still held at the time of his death.

In the summer of 1910, Doctor Nichols, interested in the rapidly expanding field of plant ecology, came to the University of Chicago, to study with Henry Chandler Cowles. He returned to New Haven thoroughly imbued with the point of view of dynamic ecology, and the importance of physiography in controlling local vegetation patterns. In 1913 he was a member of the International Phytogeographic Excursion across North America. This trip, in company with leading American and European ecologists, left its impress in his ecological philosophy concerning climax formations. During the decade between 1910 and 1920, most summers found him in the field, first in Connecticut, later in northern Cape Breton Island. His comprehensive papers on the vegetation of these two regions will remain the classics in their field. He also found time during this period to serve as botanical advisor to the American Red Cross on the *Sphagna* used in surgical dressings, and spent considerable time in the field working out their geographical and ecological distribution in an attempt to locate major sources of supply.

As a result of the intensive field work of this period, and of the problems which arose in attempting to delimit, describe, and classify the vegetation units with which he was concerned, Doctor Nichols

became interested in defining and refining the concepts of community ecology, and in working out a sound basis of approach to the analysis of the vegetation of regions. This he found in an ecological classification based on succession, geography, physiognomy and ecological structure, a scheme which he acknowledged to be "the outgrowth of the classification originally devised by Cowles." His theoretical ideas were set forth in three papers (*Plant World* **20**: 305–319. 1917; *Ecology* **4**: 11–23, 154–179; and *Proc. Intern. Congr. Plant Sci.* **1**: 629–641. 1929). Their concrete application is best exemplified in "The Vegetation of northern Cape Breton Island, Nova Scotia" (*Trans. Conn. Acad.* **22**: 249–467. 1918). His own contributions to theoretical ecology are difficult to evaluate. He freely exchanged his ideas with others, both in correspondence and conversation, and his influence in this way probably equalled that of his papers in stimulating the analysis of ecological concepts in both America and Europe during the period 1915–1935. While his classification has not been universally adopted, it has been used widely and undoubtedly has been influential beyond its actual use.

Doctor Nichols was a charter member of the Ecological Society of America, served on the editorial boards of both Ecology and Ecological Monographs, as Vice-President in 1920 and as President in 1932. Many remember with delight his retiring address at Atlantic City when he gave one of the few public showings of part of his remarkable collection of lantern slides illustrating actual successional changes.

In addition to his work in ecology and bryology, Doctor Nichols was always willing to labor for the good of botany and science as a whole. He served on the National Research Council, and as Treasurer (1925–1932) and Vice-President (1933) of the Botanical Society of America.

As a scientist, Doctor Nichols will be remembered for his keen critical faculties, his excellent literary ability, and his energetic personality and leadership. To those who looked forward eagerly to seeing him each year at the Christmas meetings, his human qualities in good fellowship are equally missed now, and will be in the future. To those of us who knew him intimately as students, his generosity and sympathy as a friend as well as advisor was a vital thing which cannot be replaced.

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