

resolutions of respect

Henry Allan Gleason
1882-1975

Henry Allan Gleason's active career in ecology spanned the whole of the first half century of the development of the science in America. His work began with heresy, continued in rebellion, and ended in triumph. Few have contributed more significantly to shaping ecological thought than he.

Gleason's career began at the University of Illinois where he completed his B.S. in 1901. (He received his doctorate from Columbia University in 1906.) Employed at Illinois in teaching, he conducted intensive field studies of sand area vegetations as well as of prairies and forests. After moving to the University of Michigan in 1910, he continued his vegetation studies until his acceptance, in 1919, of a curatorial post at the New York Botanical Garden where he remained until his retirement in 1951. Gleason was a taxonomist of note as well as an ecologist, and his interest in subjective problems of classification influenced his thinking in both fields of endeavor.

Gleason's massive vegetation studies were not numerous, but they supplied fuel for his questioning mind and led him to analyse the concepts underlying the plant community idea. This analysis continued throughout his active career, and it should be emphasized that it was based solely upon his own observations and personally gathered data.

His extensive field studies in forest and prairie centered upon dynamics—succession fascinated him. Because he dwelt upon process, and because he was a keen and logical observer, he consistently encountered anomalies, phenomena that failed to conform to the widely accepted "system," phenomena that ran quite counter to traditional ideas of plant succession. As instance after instance appeared, there soon accrued a body of evidence that ruled out, for him, the "organismic" concept of the plant community and the orderly fixed pattern of succession upon which it was largely based.

He saw the plant community as the result of many variables, expressing itself differently with every change in time and space. In his own words (ESA Bull. 34: 41. 1952), "I examined the floodplain forests of the Mississippi over four hundred miles; I examined the beech-maple forest at many stations from Lake Superior almost to the Ohio River. Each one of them formed a continuum, as Curtis would say today, and in each the unimportant and scarcely appreciable differences from one mile to the next cumulated into profound differences as miles were measured by hundreds."

Gleason's disquieting observations might have gone unnoticed and unchallenged had he not been guilty of thought and heretical interpretation as well. As a consequence, he suffered editorial censorship of his first interpretive effort and had to resort to the Association of American Geographers for publication. Subsequently, in 1926, his landmark paper on the "individualistic" concept of the plant association appeared in the *Bulletin of the Torrey Botanical Club*. This distillation of Gleason's ideas resulted in a half-day scheduled discussion of the question during the International Botanical Congress at Ithaca, New York, the same year. In this session the individualistic concept was rejected and ridiculed. It is extremely unlikely that any professor carried back to his classroom a Gleasonian inspiration from that session. Student awareness of these ideas had to await the publication of the *Proceedings of the Conference on Plant and Animal Communities* held at the Cold Spring Laboratory in 1938. The appearance of the *Proceedings* as a single issue of the *American Midland Naturalist*, sold in hard cover for one dollar, attracted every thoughtful graduate student, and most of them could muster a dollar even in the depressed economy of 1939. Among the attractive big names in the symposium, Gleason appeared with a new rendition of his individualistic concept. The heresy was now in the hands of the students and the rebellion in full stride.

In every generation of graduate students one found the rebellious few, the independent thinkers to whom any "system" was anathema. These suffered their unhappy fates in various degrees of frustration or even drifted out of ecology into less restrictive intellectual fields. Suddenly, however, it was no longer necessary to conform or get out. A whole series of new kinds of plant ecology began to appear. Physiological ecology emerged from exile among the plant physiologists; genecology, gradient analysis (and ordination), experimental plant competition, allelopathy, and such anomalies as auto-succession found expression. In most of these the "system" could be ignored and studiously has been. From this has emerged the greatest anomaly of all—a generation of students who do not know what they have escaped or to whom they owe their freedom. Many would deny that Gleason ever had anything to do with their fields of study, not realizing that it was largely for the creation of an atmosphere of intellectual freedom in ecology that he was elected Eminent Ecologist in 1959.

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