

awards for 1981

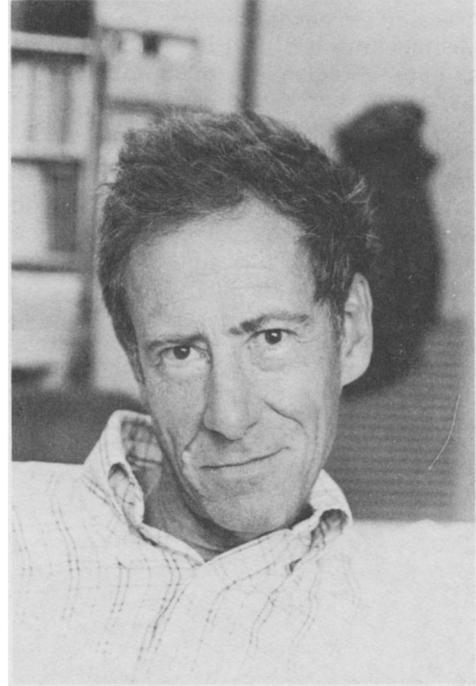
EMINENT ECOLOGIST

Robert Harding Whittaker

During the 32 years of his professional career, Robert H. Whittaker helped to revolutionize American traditions of vegetation study. Through his conceptual and methodological contributions to gradient analysis, Whittaker succeeded in transforming a discipline which had become transfixed with categorization into one which could embrace both the continuity and complexity of variation in natural landscapes.

Beyond providing a calculus for conceptualizing vegetation structure, Whittaker made major empirical and methodological contributions to the study of terrestrial plant diversity, productivity, and nutrient cycling. He studied vegetation patterns in several montane regions of the United States (Great Smokies, Siskiyou, Santa Catalinas, San Jacintos) and in arid and mediterranean climate regions of the United States, Israel, Australia, and South Africa. Whittaker's contributions to concepts and methods of ecology were not circumscribed, however, even by this array of accomplishments. Through his interpretations and syntheses of world literature, he brought clarity and new conceptual developments to such disparate fields as allelochemistry, classification and ordination techniques, the evolution of diversity, spatial patterning of organisms, niche theory, and the systematics of kingdoms of organisms.

From the earliest days of his career Whittaker challenged major existing paradigms in ecology and evolutionary biology. His first paper (*Northwest Science* 261:17-31, 1951), based on his doctoral dissertation on the vegetation of the Great Smoky Mountains, challenged three major Clementsian notions of the day: the regional climatic climax theory; the notion that unique seres lead to a climatic climax; and the supraorganismal theory of plant association. Whittaker emphasized the individualistic nature of species distributions, and the continuity of floristic change along environmental gradients. Although Whittaker invariably acknowledged his



debt to Gleason and Ramensky for these ideas, and the independent work of Curtis and the Wisconsin School in exploring vegetation gradients, it was the thoroughness of Whittaker's empirical documentation, and the intensity of his written and oral styles, that contributed significantly to the diffusion of continuum theory. Shortly thereafter, he challenged the prevailing three-kingdom taxonomy of systematists with a four- and later five-kingdom proposal. He pursued his interest in evolution and systematics throughout his career.

Whittaker argued for his conscientious beliefs when the tide of opinion was against them. He demonstrated a courageous pursuit of scholarly discourse in his early career, despite being fired from his first academic job at Washington State College (now University), and struggling for six years to publish his dissertation monograph in detail (*Ecological Monographs* 26:1-80, 1956). To those who knew Whittaker only after his reputation had

been firmly established through his textbook (*Communities and Ecosystems*, 1970, 1975) and other writings, a study of these early career struggles is illuminating, even heartening.

In the past decade, Whittaker's accomplishments and authority in the field of vegetation analysis were recognized widely. He was elected to the National Academy of Sciences and the American Academy of Arts and Sciences, became an Honorary Member of the British Ecological Society and the Swedish Phytogeographical Society, served as Vice-president of the Ecological Society of America in 1971 and as President of the American Society of Naturalists in 1980. The citation of Eminent Ecologist for 1981 was bestowed on Robert Whittaker by the Ecological Society of America shortly before his death on October 20, 1980 at the age of 59.

The eminence of R. H. Whittaker in the field of ecology arises from more than his published works. He was an immensely generous donor of his time and energies to students and colleagues in the institu-

tions where he worked (including Hanford and Brookhaven Laboratories, Brooklyn College, University of California, Irvine, and Cornell University), and to ecologists throughout the world. Through his extensive lecturing, correspondence, and editing he built bridges with ecologists on all continents, aided ecologists from Eastern bloc and Third World countries who sought his support, and fostered communication between European phytosociologists and North American ecologists. His exhaustive data collection and analysis techniques, the acumen of his field observations, and the riveting quality of his lecturing style all contributed to the solidity of his reputation.

The impact of R. H. Whittaker on ecological thought has been such that his influence will long be evident. Ecologists everywhere feel his loss.

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