

WILLIAM DWIGHT BILLINGS (1910–1997)



Dwight Billings on the wet coastal tundra near Barrow, Alaska in 1981.

Dwight Billings, James B. Duke Professor of Botany at Duke University, eminent ecologist, writer, prolific mentor, original thinker, and master of his discipline, contributed much to our ecological understanding of the Arctic and beyond. His list of honors and accomplishments fills several pages. Dwight passed away at his home in Durham, North Carolina on 4 January 1997, at the age of 86. It would be impossible to guess Billings' birthplace or boyhood origins in Washington, D.C. and Indianapolis, Indiana, given his intimate familiarity with all parts of North America. His knowledge and love of landscapes extended well beyond this continent to favorite spots like Hawaii, New Zealand, the Snowy Range of Australia, the Alps, Scandinavia, and the high Andes of South America. That Dwight had a love of vegetation, and of plants, is obvious, but his appreciation extended to animals, people, and culture.

Billings attended Shortridge High School in Indianapolis, Indiana and earned a Bachelor's degree at Butler University in 1933. A graduate student of H.J. Oosting, he received advanced degrees in Botany (A.M., 1935 and Ph.D., 1936) from Duke University. His dissertation involved a study of soils in successional forests of the North Carolina piedmont.

Jobs were scarce in 1936, and he took a temporary position at the University of Tennessee before accepting a permanent job at the University of Nevada in Reno in 1938. It was in Nevada that Billings' love for the open spaces and dramatic scenery of the West developed, and he often considered himself a Westerner. Field studies in Nevada and throughout the diverse ecosystems of the western United States sharpened his ecological senses. In 1952, he was asked to return to Duke as a member of the Botany faculty in what was already one of the hotbeds of American ecology, but even more important to his professional achievements was his marriage in 1958 to Shirley Miller, in whom Dwight found a wellspring of support focused upon his professional success. Billings supervised a total of 52 doctoral students in his years at Duke; as a result, his academic progeny shaped much of the modern field of ecology. The clear and straightforward style of his succinct book *Plants and the Ecosystem* was responsible for awakening the interest of many to the field of ecology. Billings is considered the father of modern physiological ecology.

Officially retired in 1980, Billings continued to inhabit his office at Duke, conducting seminal research, publishing outstanding papers, teaching honors classes, and enlivening the Duke ecology program. For him, retirement was simply the freedom not to attend faculty meetings: all other aspects of his professional life continued, with 40 of his more than 125 professional papers coming after his retirement. His diligence and attention to detail were exceptional, and many of his habits became favorite educational institutions among his students and peers (such as "The Billings Gazette," a selection of clippings he maintained daily on the wall outside his office, and the "Plant of the Day," a botanical specimen perched upon a pedestal near the chalkboard in his lecture hall where the plant's scientific name, family, and distribution were duly noted). Dwight's principal interests were reflected in the license tags on his and Shirley's automobiles, one reading ARCTIC and the other ALPINE. Many will recall Billings' first rule to his students, still good advice to any Arctic researcher: "Don't get ahead of your air freight!"

Given his grand professional stature and the enormous respect he was accorded by others, many who met Dwight Billings were surprised to encounter a man of small physical stature. Everything else about him was bigger than life. As his graduate student during the mid-1970s and in the prime physical condition of my life, I could only just keep up with Billings, then in his mid 60s, as we walked miles across Alaska's wet coastal tundra. In the evenings, as I slept exhausted, Dwight would still find time and energy to write entries in his diary. He loved basketball, having played in his youth, and he was a remarkable runner even past his 60s. He loved music, especially chamber music, but his collection of original art spoke more clearly of his ecological and Arctic passions. His incredible memory for names and events long past can only partially be attributed to his diary. Many people have expressed to me their amazement at his ability to recall their names, hometowns, and details of previous

conversation, despite having met them only briefly years before. Dwight's influence extended well beyond his students, in part because he showed such remarkable interest in people, and because he was always willing to help.

Billings' pioneering work on the physiology of alpine plants, along with that of his students, earned him the recognition of being America's foremost authority on alpine tundra. This led naturally to the tundra of the Arctic, and although his interest in everything from deserts to deciduous forests remained keen, most of his later life was devoted to the study of Arctic and high-latitude ecosystems. The body of work of Dwight Billings (and that of his academic offspring) pertaining to the Arctic is large and well respected. Many of today's Arctic ecologists trace their academic heritage to Dwight Billings, and essentially all others acknowledge some form of Billings' influence.

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