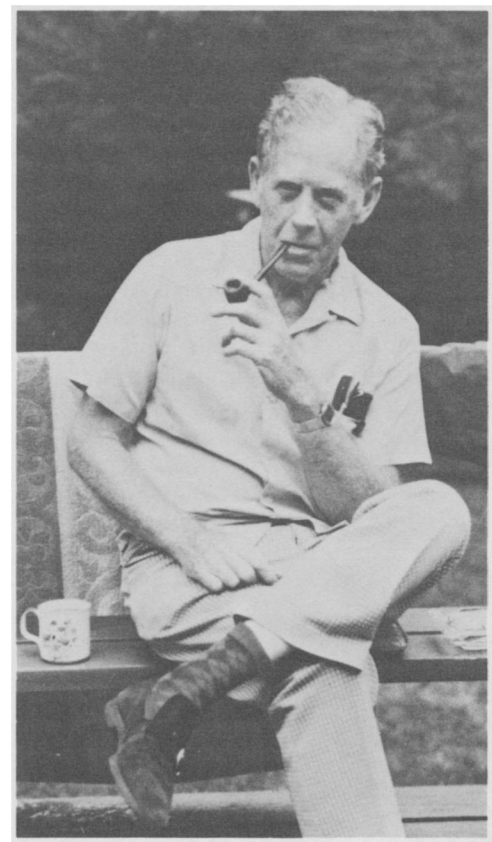
resolution of respect

EDWARD S. DEEVEY 1914–1988



Edward Smith Deevey died in Gainesville, Florida, on 29 November 1988, following a heart attack. At the time of his death, he was Graduate Research Curator of Paleoecology of the Florida Museum of Natural History, University of Florida, Gainesville. He also held graduate research professorships in four U.F. departments: zoology, botany, geology, and Latin American studies.

Ed Deevey was born in Albany, New York, on 3 December 1914, and attended the Albany High School and N.Y. State College for Teachers before graduating *summa cum laude* in botany from Yale University at the age of nineteen. He completed a Ph.D. in zoology four years later, under the direction of G. Evelyn Hutchinson, with whom he shared an additional year as Sterling Fellow and a life-long close personal and professional association.

In 1938, Ed Deevey married the oceanographer Georgiana Baxter, with whom he had three children and three grandchildren. In 1945, he and Georgiana published a pioneering life table for the black widow spider. Two years later Ed published "Life tables for natural populations of animals" (Deevey 1947), which became a *Current Contents* citation classic. Ed and Georgie also collaborated on several zooplankton articles. Following Georgie's death in 1982, Ed married Dian Hitchcock, with whom he published on atmospheric geochemistry.

During his early years at Yale, Ed established the subject of quantitative paleolimnology with his biostratonomy of Linsley Pond, and raised many of the questions that have occupied paleolimnologists over the past four decades. His early New England pollen stratigraphy formed the basis for all later pollen work in northeastern North America. Ed con-

ducted a regional limnological study of Connecticut and New York that provided the basis for many of his early articles.

Ed Deevey's depth and breadth of knowledge became apparent early in his career. Among his early contributions, one finds papers on copepods, freshwater jellyfish, fisheries, oxidation–reduction potentials of lake waters, Arctic–Alpine limnology, and palynology of the Himalayas. His pollen work from southern Asia showed that interglacial lake levels had been high there. It took thirty years for Quaternary paleoecologists to realize that this Deevey observation was no tectonic anomaly, but an instance of the general interglacial association of warmth and humidity at low latitudes.

Ed moved from Yale to Rice Institute in 1939, where he worked on the hydroids of the Gulf of Mexico and began the study of warm-region lakes that was to be his principal focus in later years. A trip to Lake Patzcuaro, Mexico, in 1941 yielded one of the first neotropical pollen diagrams and led him to consider the application of pollen analysis to problems in New World tropical archaeology.

Ed spent the last two years of World War II at Woods Hole working on marine fouling. His experience there deepened his understanding of hydroid ecology, and from the distribution of Gulf hydroids, he concluded that there had been a substantial Quaternary reduction of sea surface temperature at the latitude of southern Florida.

Ed Deevey returned to Yale in 1946 and three years later published "Biogeography of the Pleistocene" (Deevey 1949), which summarized the influence of Quaternary climatic change on the distribution of organisms in Europe and North America. It is difficult to understand today the vehement expressions of outrage that greeted his typically reasonable conclusion that vegetation south of the Pleistocene ice sheets must have been very different from that of modern times.

Deevey was the Director of the Yale Geochronometric Lab from 1951 to 1962, and used the new radiocarbon-dating technique to calibrate pollen stratigraphies and calculate the accumulation rates of microfossils in lake sediments. During this period, he did collaborative work on the isotope geochemistry of lake waters and sediments. Among the discoveries of the time were the recognition of the "hard-water-lake" effect on radiocarbon dating and the role of lacustrine microorganisms in fractionating carbon and sulfur isotopes.

Throughout the 1950s, Ed continued his early interest in population dynamics, and his widely reprinted paper "The hare and the haruspex" (Deevey 1959) introduced a generation of ecology students to cyclic small-mammal populations. The decade also signaled his renewed interest in the limnology and paleolimnology of Middle America. A 1950 reconnaissance trip was the basis for Ed's classic 1957 paper "Limnologic studies in Middle America, with a chapter on Aztec limnology" (Deevey 1957). In the introduction, Ed expressed his interest in disclosing the history of nonglaciated regions, and his disappointment at the failure to find lakes with appropriate sedimentary stratigraphies. As if foreshadowing the work he would pursue two decades later, he noted that perhaps such lakes "should be sought in the Peten, in Guatemala."

During Ed's tenure at Yale, he held a Guggenheim fellowship, an NSF Postdoctoral fellowship, and two Fulbright awards, at Danmarks Geologiske Undersogelse and the University of Canterbury in New Zealand. He also served as Section Head for Environmental and Systematic Biology and Program Director for Environmental Biology at NSF.

Ed moved to Dalhousie University in 1968, where he was Kilham Professor of Biology. While at Dalhousie, he served on the Fisheries Research Board of Canada, and as a member of the Canadian Committee on the International Biological Programme. Ed served as ESA President from 1969 to 1970, and in his presidential address, titled "In defense of mud" (Deevey 1970), he promoted the conservation of wetlands and lake bottoms, arguing that the microbes that inhabit anaerobic sediments are essential to global nitrogen and sulfur biogeochemical cycles. Ed had a long, close association with the ESA, and served as Zoological Editor of *Ecology* for seven years and Chairman of the Aquatic Section, before becoming President. He was our Eminent Ecologist in 1982.

Ed Deevey was an active member of numerous other learned and professional societies that reflected his wide-ranging interests, and served on the editorial board of half a dozen journals. He was President of the American Society of Limnology and Oceanography in 1974, and served as President of

the 3rd International Symposium on Paleolimnology in 1981, the same year in which he was elected to the National Academy of Sciences.

Ed joined the University of Florida in 1971 and initiated his long-term project, "The Historical Ecology of the Maya." The multidisciplinary research design combined archaeological and paleolimnological data to elucidate the impact of long-term prehistoric settlement on the watersheds of Peten, Guatemala. During the 1970s, Ed also renewed his search for late Pleistocene deposits in the region, and in 1980, long cores from two deep Peten lakes yielded sediments of sufficient age. Pollen data from the cores showed that the lowland dry tropical vegetation that covers the Peten today is no older than about 11,000 years, laying to rest the previously accepted notion of a sempiternal Neotropical forest.

Ed's years at U.F. were largely dedicated to comparative limnology and paleolimnology of subtropical and tropical karst districts. Among the geographic areas of interest were the Maya Lowlands, peninsular Florida, Hispaniola, and most recently, the Yunnan Plateau of China. In all four localities, Deevey used the paleolimnological record to address questions about climate change and the environmental impact of historic and prehistoric human land use.

Ed supervised nine doctoral students and seven master's students and sat on the committee of numerous others. Through shared students, his influence extended to fields such as oceanography, ornithology, and animal behavior, and through collaborative research he provided a conduit for the passage of ideas between anthropology and ecology. His more than 20 postdoctoral research associates are a distinguished company that includes many of the finest paleoecologists and geochemists.

Ed was outstanding for his diffidence, his kindness and his keen sense of humor. His encyclopedic knowledge of limericks was begun at his mother's knee and greatly extended in a day when publishing taboos restricted most of them to the oral tradition. He was a master of the limpid pun and of the esoteric allusion. His 120-odd scientific papers provided limited expression for his sense of humor, and the brightest Deevey gems required for their appreciation something approaching his own knowledge of anthropology, mythology, and poetry. Only his closest friends enjoyed the cream of this Deevey gift, but his *New Yorker* article on Irish bogs gave a wider audience some idea of the pleasure of his company.

Ed never patronized his students, graduate or undergraduate. His sublime confidence that undergraduates shared his fascination with ideas was sometimes misplaced, and his belief that graduate students shared his extensive vocabulary usually was. A conversation with Ed Deevey in which all the significant nouns and adjectives were those of the Middle Western drift stratigraphy was a remarkably effective spur to learning the vocabulary of Quaternary geology. The titles and text of his many articles contained terms (e.g., intussusception, haruspex, yclept, prolegomena) that could not help but pique the curiosity of his readers.

Like most successful graduate teachers, he taught mostly by example. Ed was always available for consultation, and lengthy conversations were often ended only by a phone call or other interruption. His words of comfort and encouragement at times of personal or professional travail kept many of us going, and were just as readily available to us long after we left his laboratory. With his passing, we have not only lost our mentor, but a friend.

Ed Deevey followed a deliberate policy of doing research that wouldn't be done if he didn't do it. It is a measure of his prescience that so many topics he pioneered seem too important now for the scientific world to have left them unexplored for long. Without his seminal beginnings, however, tropical limnology, paleolimnology, isotope biogeochemistry, historical biogeography, paleoclimatology, and population dynamics would be different and much poorer subjects today.

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