

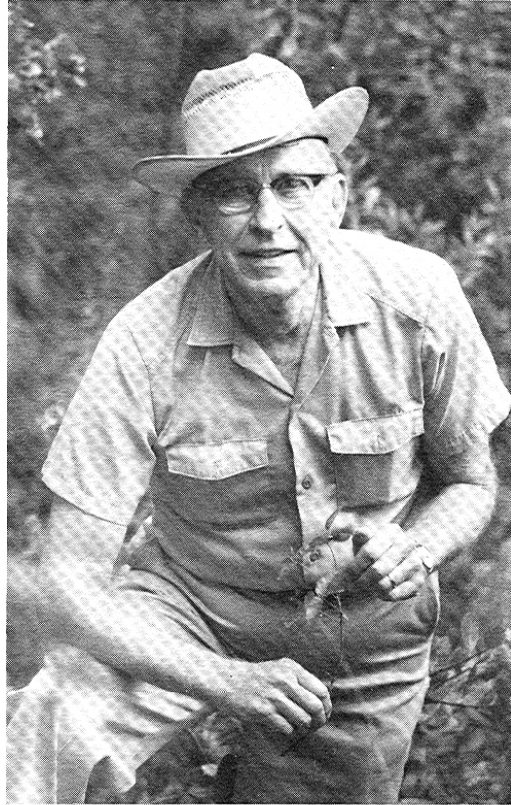
eminent ecologist, 1975

Cornelius H. Muller

C. H. Muller was born in Collinsville, Illinois, in 1909 and reared in Cuero, Texas. He worked his way through college, and in 1933 to a Master's in botany at the University of Texas, and his Ph.D. at the University of Illinois in 1938. 1938 was, like the present, not an easy time for academic jobs. For some years he was a researcher in plant taxonomy and on the rubber plant and guayule for the United States Department of Agriculture until he joined the faculty of the University of California at Santa Barbara in 1945. He married Katherine Kinsel in 1939, and since 1945-6 he and his wife have been associated with the University of California at Santa Barbara and the Santa Barbara Botanical Garden, of which Katherine was director from 1951 until her retirement in 1974.

The period with the Department of Agriculture was one of extensive publication on topics other than rubber and guayule: papers on systematics, including many on oaks, and a series of descriptive articles on southwestern vegetation—the Chisos Mountains of Texas (1937), northeastern Mexico (1937), Nuevo Leon (1939), succession in the *Larrea-Flourensia* climax (1940), and vegetation of Coahuila (1947). Some of this work was accomplished by the most advanced research technology then available for detailed studies in remote areas, namely travel on horseback. The period at Santa Barbara included many further studies of the oaks and articles on the systematics of other genera, as well as observations on succession in the arctic (1952), association of desert annuals with shrubs (1953), and the philosophy of the community concept (1958). Work on guayule (1946) and desert shrubs (1953) led, along with observations in the chaparral near Santa Barbara, to the concern with chemical interactions among plants—allelopathy—for which Muller is best known. Numerous publications by himself and his collaborators and students from 1964 on have now clarified the meaning of allelopathy for a wide range of communities from grasslands through various shrublands to forests.

Such information may belong in this statement, but it does not convey the character of Muller's career. Depression and wartime employment by the Department of Agriculture were accompanied by a range of research and publication that only a few ecologists with academic employment during that period



could match. The observations on oaks, on vegetation dynamics, and on plant interactions were original. Early in the work on allelopathy Muller published an article in the *Bulletin of the Torrey Botanical Club* (1966) that was so good that I think it still a classic statement on the phenomenon. Three decades at the University of California at Santa Barbara saw progressive change in Muller's circumstances from a scientist active by his own efforts along in a small college, to an established scientist surrounded by associates in an extensive research program, training young ecologists, and internationally recognized as the one who, more than any other, made allelopathy a part of ecological understanding and the recent development of chemical ecology.

That recognition is a reason for this award, but I should like to stress another way in which his career is distinguished—its quality of enterprise and individuality. When hybrids were oddities that other systematists named for the pleasure of naming, Muller recognized and demonstrated the ecological and historical

significance of hybridization and the genetic characteristics of oak populations. When dozens of American ecologists were describing the eastern states, Muller went into the unfashionable and unknown areas of the Southwest and Mexico to contribute a large share of the information we have available, now, on some of these areas. While American ecology was still largely guided by Clementsian thinking, Muller dissented, accepting Gleason's individualistic hypothesis when it was highly unpopular, and stating his own divergent views of desert and arctic climaxes. Allelopathy was an obscure problem that,

because of its complexity and the technical difficulty of research on it, most ecologists preferred not to try to deal with. It was Muller who took difficulty for a challenge and developed techniques to make this an area of active research. This venturesome quality, this drive to probe into things that others were content to leave alone, is a quality of Muller and his career, a quality that is the key to the kind of achievement that, even apart from eminence, so well fits a one-word description of what Neil Muller is that justifies this award: a scientist.

R. H. Whittaker