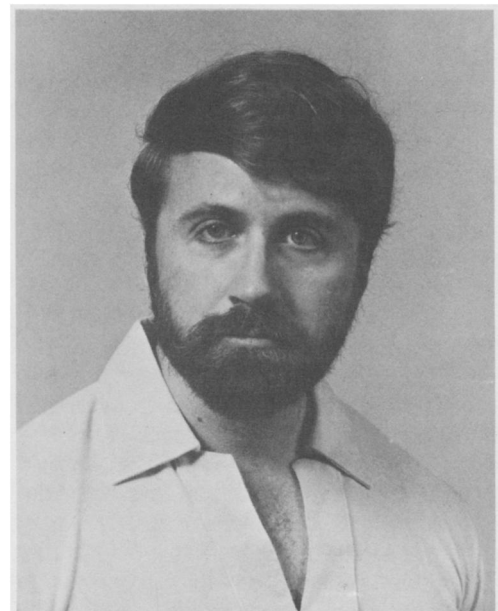
Thomas W. Schoener



The Robert H. MacArthur Award was named after one of the most original thinkers in ecology. This special award has appropriately been given to Thomas W. Schoener, a major contributor to population and community ecology for over two decades. Perhaps more than anyone, he has shown how descriptive, experimental, and mathematical approaches can be blended synergistically.

Tom began his career at Harvard, where he was an undergraduate, graduate student, junior fellow, and assistant and associate professor. As an undergraduate, he had passions for both natural history and mathematics, subjects that E. O. Wilson and W. B. Bossert showed him could be integrated as "population biology."

Harvard in the late 1960s and early 1970s was fertile ground for budding evolutionary ecologists. The faculty was stimulating and Tom's fellow graduate students (J. E. Cohen,

M. Gadgil, A. R. Kiester, J. Roughgarden, D. S. Simberloff, M. Slatkin, R. L. Trivers, and T. P. Webster), many of whom I overlapped with, were an unrepentant cadre of upstarts.

Tom quickly made his mark. His first publication (1965, *Evolution,* later reprinted) argued persuasively for the importance of competition in the evolution of bill-size differences among birds. This paper, originally a term paper written as a sophomore, set new standards of comparative scholarship. E. E. Williams cleverly convinced Tom that *Anolis* lizards were inherently superior to birds for ecological research, and Tom then began a series of fundamental studies that evaluate the community ecology of these unique lizards and pioneered the analysis of statistical trends among populations. Over the years, Tom has also written numerous theoretical, analytical, and review papers on population and community ecology. He has always been an articulate and balanced proponent of competition.

As a byproduct of his work on body sizes of *Anolis,* Tom developed an interest in optimal foraging theory, which was founded in 1966 with the publication of two seminal papers (MacArthur and Pianka, Emlen). Tom not only helped lay the mathematical foundations of the field, but also was the first to publicize the diverse applications of the theory, especially through his classic 1971 paper on the theory of feeding strategies. His recent chapter in *Foraging Behavior* (1987, Kamil, Krebs, and Pulliam, editors) is an engaging and personal account of the ontogeny of this field.

Tom's interest in island faunas also stimulated his research on island biogeography, another important field founded by MacArthur (with E. O. Wilson). Schoener's landmark empirical research on *Anolis* and spiders in the Bahamas continues to test and extend this theory. He uses islands as replicates, both natural and experimental, to test whether particular species influence community dynamics.

I have often wondered what accounts for Tom's academic success. He is obviously several standard deviations out in terms of brilliance, creativity, and mathematical skill. But I suspect what makes him special are three additional traits. First, he has been an avid naturalist since childhood, and his appreciation for the biology of animals is clearly evident in his research. Second, he is a near-pathological bibliophile. As a result his knowledge and understanding of the literature and history of ecology and natural history (and also of trashy novels) may be unsurpassed; and this gives him an exceptionally broad biological perspective. Finally, he is intense and tireless, both in the field and at the desk. (Indeed, the amount of field and analytical work he devoted to his path-breaking 1974 paper on "Competition and the form of habitat shift" is exhausting just to contemplate.)

Tom doesn't restrict these traits to his academic life. Deciding at mid-career to become an athlete, he attacked weight lifting with his characteristic intensity, and the resulting metamorphosis of his habitus surely matches that of any holometabolous insect. (Tom was affectionately known as "Conan the Ecologist" while a professor at the University of Washington.)

Perhaps the most typical anecdote occurred when a major flood threatened the Schoener farm near Seattle. As graduate student volunteers stood by ready to move the furniture out of the house, Tom set out stakes in the adjacent pasture and carefully monitored the rising water level. Finally, Tom proclaimed that everyone could go home: The second derivative of water level with time had just changed sign, and he concluded that the water would not reach the house. The man has faith in models!

Prior to the MacArthur Award, Tom received several significant honors (Junior Fellowship at Harvard, membership in the National Academy of Sciences, elective membership in the American Ornithological Society, and two Citation Classics). Moreover, he has served as editor or on editorial boards of several journals, including *Theoretical Population Biology, Oecologia, Evolutionary Theory, Evolution,* and *American Naturalist.* He is currently Professor of Zoology and of Environmental Studies at the University of California, Davis.

Thomas W. Schoener joins Robert T. Paine and Robert M. May in receiving the prestigious MacArthur Award. Like his predecessors, he shares many of the qualities, interests, and impacts that MacArthur himself brought to ecology.

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