

Fredrick Smith, President 1973-74

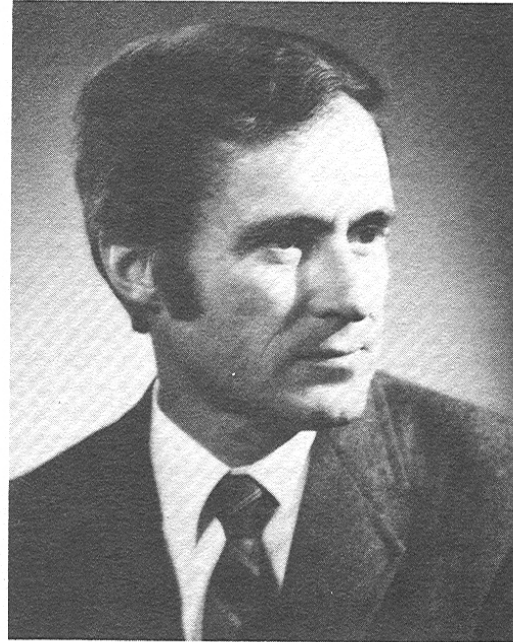
society president

Our new president, Frederick E. Smith, is Professor of Advanced Environmental Studies in Resources and Ecology at the Graduate School of Design, Harvard University. He moved there in 1969 to work as an ecologist in such teaching programs as Landscape Architecture, City Planning, and Regional Planning. He is also affiliated with the Department of Biology, the Division of Engineering and Applied Physics, and the Center for Population Studies. His present research is divided between a team effort within the School on more effective land-use planning, and continued interest in the theory of ecosystem function.

Dr. Smith was born July 23, 1920 in Springfield, Massachusetts. He attended public school in Bloomfield, New Jersey, and earned a B.S. in Entomology from the University of Massachusetts in 1941. During military service 1942-46 he completed pre-medical training at Cornell and Yale, and two years of Medical School at the University of Vermont. He married in 1945.

In 1946 he returned to the Biology Department of Yale University, where he had worked as a pre-medical student identifying invertebrate stomach contents of marine fish at the Bingham Oceanographic Laboratory. His doctoral dissertation, completed in 1950, was an attempt to understand the interrelations among nine predator species (fish) and their 29 major food species (bottom invertebrates), working from fishing trawlers in Block Island Sound. While at Yale he was profoundly stimulated by G. Evelyn Hutchinson, who directed his program along with Daniel Merriman, Edward Deevey, and E.F. Thompson. Additional interactions with Gordon Riley and such classmates as L.B. Slobodkin and H.T. Odum led to his immersion in mathematically-oriented theoretical ecology.

He joined the Zoology Department of the University of Michigan in 1950 as an Invertebrate Zoologist. He became Professor in 1962, moved to the Department of Wildlife and Fisheries of the School of Natural Resources (University of Michigan) in 1965, and served as chairman of the department 1967-69. His major teaching activities were Invertebrates and General Zoology at the undergraduate level, and Biometry and Ecology at the graduate level. For several years he worked with physiologist Edward Baylor in research on zooplankton behav-



ior, and throughout his stay at Michigan he was influenced by associates Francis Evans, Nelson Hairston, and Lawrence Slobodkin. He completed extensive laboratory experiments on the dynamics of population growth using *Daphnia*. His move to Natural Resources was motivated by growing interests in the biostatistical problems of analyzing field data, a closer association of ecological theory and resource management, and the further development of an ecosystem approach in ecology.

The International Biological Program offered an exceptional opportunity for putting thought into practice. He served as Director of the Analysis of Ecosystems through its organizational period, 1967-70. He helped several hundred scientists initiate the Biome Programs of the Grasslands, Desert, Tundra, Deciduous Forest, and Coniferous Forest, seeking research designs that would ensure conceptual gains in our understanding of ecosystems.

Most of his published work, and the dissertations of most of his doctoral students, are in the fields of population dynamics and ecosystem analysis. His first significant paper (*Ecology* 33) was a critique on experimental methods in population dynamics, organized while he was deep in the sorting of fish stomach contents. His most recent

paper is an abstract analysis of spatial heterogeneity, stability, and diversity in ecosystems (Trans. Conn. Acad. Sci. 44), begun in the first year amongst Designers. His most controversial paper (co-authored with Hairston and Slobodkin) on community structure, population control, and competition appeared in Volume 44 of the American Naturalist.

Dr. Smith has previously served the Society as a member of the Editorial Board of

Ecology, and as a member-at-large on the Council. He has also served on the Editorial Board of Limnology and Oceanography, the Advisory Panel on Environmental Biology in the National Science Foundation, and is this year completing a six-year term on the National Science Board. He is or has been a member of several committees in the National Academy of Sciences, and is a member of the American Academy of Arts and Sciences.