

MEMORIAL RESOLUTION

DENNIS A. POWERS, PH.D.

(1938-2003)

Dennis A. Powers, the Harold A. Miller Professor of Biological Sciences and former Director of the Hopkins Marine Station, died at age 65 on December 8, 2003, at the home of his daughter Kathi Santos in New Smyrna Beach, Florida, following a long illness.

Dennis was a powerful creative force in developing the field of ecological and evolutionary physiology. His studies provided detailed molecular explanations of how organisms adapt during evolutionary time to a diversity of environments and in this work he was a pioneer in introducing contemporary methods of molecular biology to the study of marine organisms. His laboratory at the Hopkins Marine Station became the epicenter for this marine molecular biology and Dennis' energy and enthusiasm had catalytic effects on the large cadre of younger scientists who worked under his mentorship. He leaves to science a remarkable legacy in research and training.

Dennis had a similar catalytic role as Director of the Hopkins Marine Station. He led an expansion of the Station's faculty, research programs, and contributions to training undergraduate and graduate students. During the course of his Directorship he obtained four new endowed chairs for the Station's faculty and recruited support for two major new research facilities.

Dennis was born in Dearborn, Michigan in 1938. Prior to obtaining his university training, he served in the United States Marine Corp as a member of the First Force Reconnaissance Company from 1957 to 1959 and he remained in the Marine Corps Reserve until 1963. His undergraduate degree was awarded by Ottawa University in Ottawa, Kansas, in 1963, the same year he was married. He completed his doctoral studies in biochemistry at the University of Kansas in 1970 and went on to postdoctoral research at the State University of New York campus at Stony Brook and at the Marine Biological Laboratory in Woods Hole until 1972. He then joined the Department of Biology at The Johns Hopkins University, where he rose to the positions of Chair of the Department, Director of the McCollum-Pratt Institute for Biochemistry, and Acting Director of the Chesapeake Bay Institute.

In 1988, Dennis became the Director of Stanford University's Hopkins Marine Station in Pacific Grove, a position he held until 2000, when his illness necessitated taking medical leave. At Stanford, Dennis manifested the type of dynamism and forward-looking approaches that characterized his activities in basic research and in academic administration. As Director, he led a remarkable rise in the vitality of the Station through acquiring four new endowed chairs, raising support for the construction of a major new teaching and research building, The DeNault Family Research Building; and establishing the Tuna Research and Conservation Center, a joint project with the Monterey Bay Aquarium. During his tenure as Director, the Station's research and teaching programs attained new levels of success.

In his research, Dennis played a pivotal role in fostering development of the field of ecological and evolutionary physiology, which examines the ways in which the functional

properties of organisms are adapted to different environmental circumstances. He demonstrated, perhaps better than any other scientist, that a full understanding of the evolutionary and ecological aspects of organismal function requires an integrative experimental approach that exploits a spectrum of experimental techniques, including those of behavioral science, population genetics, physiology, protein biochemistry and molecular biology. Dennis was one of the first investigators in his field to appreciate the promise of the new molecular techniques that were being developed in biomedical laboratories. He brought these new, cutting-edge methods to the study of diverse types of marine organisms, and his laboratory at Hopkins Marine Station became an international center for training in marine molecular biology. His classic work with a small fish, known as the mummichug, linked genetic differences between populations living at different latitudes with adaptive variations in thermal optima of their molecular functions and behavioral capacities. His work thus provided important insights into the ways that genetic variation enables organisms to cope with the particular suite of environmental stresses, such as fluctuations in temperature, that they face in their habitats.

Dennis' intellectual strengths were complemented by a level of enthusiasm, dedication, and drive that had catalytic effects on those around him. He attracted to his laboratory a large cadre of graduate students, postdoctoral scholars, and sabbatical visitors from around the world, who prospered under his stimulating mentorship. His legacy to science is great. It comprises not only the dozens of alumni of his laboratory, many of whom occupy faculty positions at leading research universities, but also a new world view within his field, which emphasizes the importance of integrative experimental approaches. He set the style and the standards for the next generation of researchers interested in learning how the physiological traits of organisms "fit" them for success in their environment.

Dennis' contributions to science included a wide range of services to the broader scientific community. He played major editorial roles for leading journals and was the founding editor of a new journal, *Marine Molecular Biology and Biotechnology*. He served on many governmental panels and was active in several scientific societies, including the Genetics Society of America and the Society for Integrative and Comparative Biology.

A memorial service to honor Dennis' life was held at the Hopkins Marine Station on April 17, 2004.

Dennis is survived by three daughters, Kathi Santos of New Smyrna Beach, Florida; Julie Powers of St. Cloud, Florida; and Wendy McNall of Oregon, Wisconsin, and four grandchildren. His former wife, Dianne Power-Kattawar, resides in Gainesville, Florida.

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