



### **Harold Haley Haskin Honored Life Member**

Harold Haskin is affectionately known as “Doc” by his many students; by members of the shellfish industry who, over the years, came to respect and trust him in a way that few academics have ever been; and by state and federal government officials, who regularly sought his advice on matters pertaining to marine and estuarine environments. During his many years of service on the faculty of Rutgers University and to the shellfish industry of the US, he gained a reputation for bringing sound scientific reasoning to the often contentious issues concerning the use and protection of shellfish resources, and for teaching others to do the same.

Hal was born Harold Haley in Niagara Falls, NY on January 3, 1915, and was orphaned 3 years later during the influenza pandemic of 1918–1919. By his own admission, Hal was a bit of a “hellion” at this early age, and his future was in some doubt after his parents died. Fortunately, he was adopted by Frederick J. Haskin a family acquaintance who was a bachelor pipefitter. His adoptive father moved with Hal to southern New Jersey, where they lodged with retired farmers. This fortuitous arrangement introduced Hal to Delaware Bay, a focus of much of his professional life. The lifestyle instilled in Hal a lifetime love for the outdoors and an ethic of hard work. His father also strongly encouraged young Hal to advance himself, and Hal’s high school principal, sensing an unusual intellectual ability in the young student, helped him prepare for college. Because of his fascination with the water, Hal hoped to attend Annapolis, but he was also interested in science and finally entered Rutgers College (class of 1936) because of the reputation of its biology program. It was a professor of English, however, who encouraged Zoology Department Chairman Thurlow (T.C.) Nelson to offer Hal the scholarship and job that allowed him to remain in school during the lean Depression years. Hal was an outstanding student and the first graduate of Rutgers College to attain a straight A average. At the same time, he was a championship boxer and became the cadet colonel of the Rutgers ROTC. But it was his association with T.C., and particularly a summer job studying the biology of oyster drills in Barnegat Bay, that directed Hal toward his lifelong love affair with oysters.

On the basis of his outstanding academic record and his keen observations during field work, T.C. recommended Hal for graduate school to colleagues at Harvard, where he was awarded a fellowship to study marine biochemistry. There, he completed a master’s degree on chemoattractants, a PhD degree in algal physiology, and met his wife Peg (Smith College 1939). One month after graduating in 1941, Hal was inducted into the Army. He first commanded units guarding the coast from Long Island to the Virginia Capes and later was in charge of training infantry recruits—a job he did so well that the Army consistently refused his requests for overseas transfer. Major Haskin was discharged in early 1946 and spent the next 6 months as a research associate in coastal oceanography at WHOI, working

under his PhD advisor, Alfred C. Redfield. By the fall semester, however, he was back at Rutgers College where he began teaching general biology, limology, malacology, and oceanography, and resumed his research on shellfish problems. His early work on hard clam biology led to an offer to become director of the Virginia Fisheries Laboratory (now the Virginia Institute of Marine Science), but he decided to remain at Rutgers and in 1950 he succeeded T.C. as Chairman of the Department of Oyster Culture in Rutgers College of Agriculture and Director of the Oyster Investigation Laboratory. From 1951–1953, he took two years off from teaching and moved his growing family (eventually to include four daughters and a son) to southern New Jersey, near the “Oyster Lab” at Bivalve, where he directed a Navy-funded hydrography project within and offshore of Delaware Bay. There were few days during those years when Hal was not aboard the RV Julius Nelson sampling around the estuary. It was at this time that he met and formed lasting friendships with many of the local oyster planters, a feat made possible by his own “South Jersey” upbringing, his first-hand knowledge of the Bay, and his unpretentious manners.

In the early 1950s, while Hal was engaged in the “Navy Project,” the Delaware Bay oyster industry was facing serious problems. Planters relied on seed oysters from natural setting areas, but overharvesting and poor recruitment had severely depleted that supply. Hal not only recognized the gravity of the problem, but was willing to argue, essentially alone, for drastic action to turn the situation around. He convinced the state management agency that data needed to be gathered regularly and scientifically to document the status and trends of the seed oyster population and the factors affecting it. It was more difficult, however, to convince the oystermen that additional restrictions were needed on the quantity of seed being harvest and that the restrictions should be based on rigorously collected and analyzed data. Hal later recalled rancorous meetings and threats against the Laboratory, but his steadfastness, the high regard that the oyster-producing community had for him, and the volumes of data he presented eventually led to the establishment of the desired controls and improving conditions on the seed beds. More importantly, his efforts led to the establishment of an unusual tripartite management system, which is still in effect, consisting of the state management agency, the oyster industry, and the University researchers, each with defined roles and shared responsibility for managing the oyster resource. The concept of the University as an independent and unbiased supplier of data to industry and management agencies was later adopted, with Hal playing a leading role, in the management of the Atlantic surf clam fishery.

The MSX epizootic, which began in Delaware Bay in 1957, led Hal in new directions: oyster pathology and genetics. Working with numerous students and colleagues, Hal pursued the search for answers about this mysterious new disease, which was devastating oyster populations in Delaware and Chesapeake Bays. One of his most valued associates was Leslie A. Stauber, a parasitologist and fellow member of the Rutgers’ Zoology Department. The Haskin-Stauber team spawned generations of teachers and researchers (some now in the fourth generation) dedicated to studying disease processes and defense mechanisms in oysters and other marine bivalves.

One of Hal’s major contributions to science and to the oyster industry has been the development of oyster strains resistant to MSX disease. Beginning shortly after the MSX outbreak, he began breeding the survivors of the epizootic—to determine whether these individuals possessed a heritable trait that could be improved by selective breeding, and if so, to provide broodstock to the industry. The breeding program, which did produce resistant strains, is ongoing today and now includes selective breeding for resistance to Dermo disease. It is one of the longest sustained breeding programs for an aquatic species.

Hal’s work with oysters has sometimes overshadowed his contributions in other fields, which include research on hard clam depuration, oil and sewage pollution, oyster drill biology, and the effects of dredging, damming, and development on the estuarine environment. Hal has always insisted that basic and applied science are integral to each other. He pursued both, to their mutual benefit, even when this clashed with the prevailing philosophy of University administrators.

Hal is a dedicated educator, researcher and public servant. In addition to the large cadre of Haskin-trained students (including some Haskin children) who teach in colleges and universities in this country and abroad, many serve in state and federal agencies where they are involved in marine research and policy making. He is at his best when he combines his research interest with education, both formal and informal. He is famous for his graduate courses that involved field trips most every weekend, regardless of weather; hence another affectionate title “Hurricane Hal.” Students who took Hal’s courses in estuarine ecology and coastal oceanography can attest to being in the field on blustery days with Hal standing in icy water, seemingly oblivious to the cold, lecturing on one of his favorite subjects—oyster biology. Years later, former students would approach him at meetings or other functions and say that these classes were the most valuable they had taken in their graduate career.

Hal’s classroom lectures were fact filled and precise, reflecting his exhaustive preparation. A crew assigned to film lectures for General Biology at Rutgers found that most faculty lectures could easily be edited and considerably reduced, and many had to be refilmed. Hal’s, however, took the full time allotted and required virtually no editing. Hal’s teaching was by no means restricted to the classroom. Students were to be found everywhere: visitors to his office or lab who were entranced by his discourses on oysters, or clams, or estuarine processes; businessmen he met at social functions, who learned how the oyster industry operates; students and employees who were treated to impromptu dialogues in front of a shucked oyster; and the legions of undergraduates who spent a summer rearing oysters at the Cape Shore Laboratory or field sampling in Delaware Bay or off the New Jersey coast.

In recognition of his contributions to Rutgers, to state and federal governments, and to science and industry, Hal has received numerous awards. Until his retirement in 1984, he was the Julius Nelson Professor of Zoology at Rutgers, where he won the Lindback Award for Distinguished Faculty Research in 1980 and the University Medal for Distinguished Service in 1986. In 1980, he was the recipient of the Governor’s Earth Day Anniversary Award for outstanding contributions to the protection of New Jersey’s environment and in 1988, he was given an EPA Environmental Quality Award in recognition of commitment to environmental protection. He has been a member of the National Shellfisheries Association for his entire professional life and served as president from 1967 to 1969. He became an Honored Life Member in 1979 and received the David Wallace Award in 1984. Hal received a particular honor when, by a vote of the Board of Trustees of Rutgers University, the new, modern laboratory he worked so hard to build in Bivalve was named after him in 1990. This was the first time that a Rutgers building was named for a living person—a second “first” for Hal at the University.

Hal's many contributions to maintaining a safe and clean environment cannot be fully appreciated without acknowledging the major role played by his wife, Peg. The Haskins are known throughout New Jersey for their efforts to preserve water quality and to allow natural systems to operate while trying to integrate the many conflicting uses. It has been in these endeavors that the pair's access to state government served both science and the estuary well. In 1994, the "Hal and Peggy" team was honored by the Water Resources Association of the Delaware River Basin with the Dr. Ruth Patrick Excellence in Education Award for their "long-standing efforts to inform and create an awareness of the water resources of the Delaware River Basin." Their most recent award, given in 1999 on behalf of the people of New Jersey by the Governor, was in gratitude for their many efforts to "benefit the natural resources of the Delaware River Basin."

Hal Haskin's singular dedication and commitment to his mission has been extremely effective in the difficult task of integrating scientific information with political reality. Too often, science focuses on a single problem and loses perspective. We can all learn from Hal's dedication, his broad and balanced outlook, and his insistence on facts and good science. He said it best while speaking of the many interests that compete with oysters for use of the Delaware Estuary: "I am not one of those who believes in keeping everything just the way it is in the name of conservation. I think we can arrange things to serve many different needs, but we have to recognize we have a very valuable, renewable resource here, and the pressures on it are already great. We should be very watchful when we consider changes that could add new stresses."

John Kraeuter and Susan Ford  
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