



**Sandra E. Shumway**  
**Honored Life Member**

Sandra “Sandy” Shumway was born March 29, 1952 in Taunton, Massachusetts. She attended Mulcahey Grammar School before going on to Taunton High School, where she graduated as Salutatorian in 1970. A tomboy as a youngster, she was more interested in cowboys and Indians, football and baseball than dolls. She began piano in the second grade, but it was not her instrument. In fourth grade, she took up the clarinet and later bass clarinet and played first chair in the All-State Band twice. While continuing to play throughout college, music was for fun and science would win out. From the time that school let out until Labor Day, summers were spent at the family summer home in Portsmouth, Rhode Island. She dug her first clam by the age of three, and as she got older she fished, sailed, and tended a few lobster pots. She spent countless hours collecting marine life and cataloging it (unlike other normal children). She began a small science project by the 5th grade and was involved in science fairs thereafter. She regularly won local and regional fairs and took first place at the Massachusetts State Science Fair at MIT during her junior year. In her senior year, she was named a Ford Future Scientist of America and to the NASA Youth Science Congress. She credits her parents and several tolerant and progressive teachers for nurturing her scientific interests.

Thus, her love of the sea and its creatures has carried over into her adulthood, and it is not surprising that she majored in this field in college. Sandy graduated *Summa Cum Laude* in 1974 with a B.S. in Marine Science/Biology from Southampton College, Long Island University. From there, she went on to the University College of North Wales in Bangor, Gwynedd, Wales as a Marshall Scholar, where she received her Ph.D. in 1976 and later a D.Sc. in 1992. As a post-graduate she continued at the Marine Science Laboratories in Menai Bridge, Gwynedd, North Wales, then at the University of Otago in Dunedin, New Zealand and with the Department of Ecology and Evolution, State University of New York at Stony Brook.

In addition to her investigations in Wales and New Zealand, Sandy has also conducted research in laboratories in Brazil and numerous states including Georgia, Maine, Washington, and North Carolina. Her formal teaching experiences have been limited to several levels at Southampton College, but she teaches constantly wherever she goes, and she has served on thesis committees at the University of Maine, the College of William and Mary, University of Washington, College of Charleston, North Carolina State University, University of South Florida, University of Maine, University of Connecticut, and Rutgers University. She has served as an External Examiner for Ph.D. candidates at various universities in Australia, Canada, England, India, New Zealand, and South Africa.

Her travels have taken her far and wide. After returning from abroad, where she spent 1974–1980 in Wales, New Zealand and Brazil, Sandy spent two years at Stony Brook and then moved north to the Maine Department of Marine Resources as a Research Scientist from 1983 to 1993 and an adjunct scientist at the Bigelow Laboratory for Ocean Sciences. After this, she moved back to Southampton College and spent the next seven years as a Professor of Marine Science and Biology. In 2001, she moved to the Department of Marine Science at the University of Connecticut in Groton, where she is presently an Adjunct Professor in Residence.

Sandy’s research covers more than 27 years in shellfish biology, filter feeding, and physiological ecology of marine invertebrates. She pioneered the study of impacts of harmful algae on shellfish and introduced the use of flow cytometry to determine particle selection in filter-feeding invertebrates. A primary focus has been on problems associated with the shellfish industry; for example, distribution of toxins in shellfish tissues, detoxification rates, and timing and extent of toxicity between shellfish species with the goal of establishing species-specific closures and helping the industry to prosper in the presence of harmful algal blooms. She has recently worked with scientists at North Carolina State University to determine the impacts of *Pfiesteria* spp. on shellfish and public health. Two of these collaborators, Drs. JoAnn Burkholder and Howard Glasgow, recently named a new species of dinoflagellate, *Pfiesteria shumwayae*, in her honor. Sandy has a permanent illustration of it with her at all times.

Sandy has authored 120 publications, edited two books, and co-authored a shellfish cookbook. She has served as editor of the National Shellfisheries Association’s *Journal of Shellfish Research* since 1986 and also edits the *Journal of Experimental Marine Biology and*

*Ecology*. In addition, she serves on the editorial boards of several other journals. Although this takes an incredible amount of time, she finds it satisfying to see the results in print and says it also gives her a fantastic overview of the fields of shellfish biology and experimental marine biology. The number of manuscript submissions to JSR from foreign countries has increased dramatically in recent years, and Sandy enjoys helping scientists from underdeveloped countries get their work published. She recently launched a new journal with Elsevier, *Harmful Algae*, co-edited by Ted Smayda.

Sandy has been responsible for much of the recent growth of the National Shellfisheries Association. When she became Editor of the *Journal of Shellfish Research*, the publication was often behind schedule and barely 100 pages a year. Since then, the JSR has averaged 600–700 pages annually and reached a new level with the publication of five issues and more than 1,700 pages in 1998. She was the first woman president of NSA, serving in 1991–1992, and was re-elected in 2002 to serve again in 2003–2004. She has worked to increase membership in the association and has played an important role in the annual meetings of NSA with her organizational skills, her management of students for registration, sales, and as AV operators, and for the student auctions, which she initiated in 1993. These auctions raise money for the Student Endowment Fund, which helps defray the costs of students who attend the annual meetings. She has good-humoredly dressed for these occasions in various costumes, including a court jester, a blue quahog, a geoduck, and a lobster. On another occasion, she made her own bikini top, with the help of a hotel employee, from a pair of sea scallop shells, and has actually sold the shirt(s) off her back. In her never-ending effort to nurture students, in 1992, Sandy began the Recruits, the organization of student members of NSA. The Recruits now have their own forum on the NSA website, a nonvoting representative on the EXCOM and write articles for the Newsletter.

Sandy has also held several offices in the World Aquaculture Society and was the push that NSA needed to become a sponsor of the Aquaculture Triennial Meetings, first as an affiliate sponsor of Aquaculture '86 and then as a full sponsor of Aquaculture '89 in Los Angeles. These meetings have allowed NSA members to meet with members of the World Aquaculture Society, the American Fisheries Society Fish Culture Section, and many other smaller societies. Since that first meeting, NSA has enjoyed the intellectual and financial advantages that these larger meetings provide, and Sandy has been a major part of the organization and production of each of these including San Diego, Las Vegas, two in Orlando and the upcoming AQ '04 in Hawaii.

Despite her seemingly endless efforts with students, journals, scientific meetings, and the shellfish industry, Sandy still has time to spend with her miniatures which she began building in 1982. She is a nationally recognized miniaturist, yet many of the people who know her are unaware of her love of the small. Students are particularly surprised to find out that she devotes time to things other than science. Her buildings have been featured in several magazines including *Miniature Gazette*, *Nutshell News*, *International Dollhouse*, and *Miniature Collector*. "Sandra Shumway's Sea-Born Treasures" by Mary Kaliski in the April 1998 issue of *Miniature Collector* is a wonderful example. At one time, she ambitiously wanted to build an entire village in miniature (1 inch = 1 foot), but she has had to settle for less because of lack of time and space. Thus far, however, she has created a general store, two fishing shacks, a bordello, a bakery, a drug and candy store, a barber shop, a school house, and a funeral parlor (all complete with people).

Sandy is also an avid pool player. She began when she was in college, but became more serious about it when she moved to Maine. She not only loves the game for what it is, but for the opportunity it provides to interact with fishermen. She organized local tournaments for years and has a number of trophies to show for her efforts. Often after a day of paper sessions and a dinner at the annual NSA meeting, she will find a local pool hall to unwind. Of all the honors and awards she has received over the years, one of her most prized recognitions came from a well-seasoned, cynical fisherman in a local bar who, when asked "Who's the broad at the pool table?" replied "She's a scientist, but she's okay."

Sandy was awarded NSA's highest honorary citation, the Honored Life Member award at Aquaculture '01 in Orlando, Florida on January 18, 2001 following the eloquent remarks of Dr. Melborne R. Carriker, who stated that "it is her warm outgoing personality, genuine interest in people, and readiness to extend an unselfish helping hand to those in need that has endeared her most to so many of us."

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