

# Fisheries, Animal and Veterinary Science: Thirty Years Later, Mission Accomplished

by Tony Corey

They've come from right down the street and from the other side of the world. They've come to learn to be better fishermen and to learn about managing fishery resources. Some have gone back to their fishing boats; others have gone into classrooms, government agencies, or entrepreneurial endeavors.

For 30 years, students have come to the University of Rhode Island (URI) Fisheries Program to chart their futures. Over the course of these three decades, the students, their aspirations, and the course of study have changed with changing fisheries. The program that started as the two-year Fisheries and Marine Technology curriculum designed primarily for fishermen blossomed over the years into a four-year course of study covering biology, fisheries statistics, research diving, aquaculture, and related courses, eventually adding master's options, too.

"The first students were here in 1967, so there was already a recognition that the industry needed to train good, qualified people," recalls Richard Wing, a fisheries associate professor who has been with the program since its earliest days. "The industry was on the upswing, and there was a need to get away from the idea that, to be a fisherman, you had to be doing it for 100 years and your father had to be doing it, too."

Chris Murphy, '70, was one of those early graduates who took his education back to the boat. Murphy fishes alone—accompanied in summer by his wife—out of Martha's Vineyard, an admitted concession to quality of life over generous income. "It gets harder to make a living as you get farther away from Point Judith and the big boat centers," he acknowledges. But that choice suited the fishing life he wanted.

When he entered the brand-new fisheries program, Murphy accelerated what would have been a lengthy shipboard apprenticeship to earn a place in an increasingly competitive and technological vocation. Through the intervening



Richard Wing, retiring associate professor, has been with the fisheries program since its earliest days, teaching, developing curricula, designing equipment, and building boats.

*Photo by Tony Corey.*

decades, though, the industry has changed, and making a good living from the water is no longer assured. “It’s hard to reconcile working all year for a half-year’s pay when you could be a carpenter for \$30 an hour and be home weekends,” he comments with muted resignation. “But I love being a fisherman. It’s a lovely way to live.”

### **From Capture to Culture**

Changes that limited commercial fishing opportunities opened options for other means of seafood production. Aquaculture worked its way into the fisheries curriculum, and Karin Tammi, ’96, jumped in with both feet. A graduate student initially interested in aquatic pathology, Tammi veered toward her eventual career when she and her professor, Michael Rice—now chair of the fisheries, animal and veterinary science department—were tapped for technical assistance with a scallop restoration project.

With seed money from the Rhode Island and Woods Hole Oceanographic Institution Sea Grant programs, Tammi began research on artificial spat (juvenile scallops) collectors for the Westport, Mass., Water Works Group and did indeed demonstrate natural scallop stock enhancement as the project intended. From that experience, Tammi took the next logical step: She started a shellfish hatchery.



Karin Tammi (right) has directed her graduate education in aquaculture toward shellfish restoration programs and has pioneered certain protocols for shellfish hatchery establishment. *Photo by Tony Corey.*

Hope Shellfish Company was a “pioneering effort,” broaching issues of capacity, water quality, and permitting protocol, Tammi reports. Because of the company’s enormous production potential—200 million spat when fully operational—proportionally large water requirements, and unique water quality considerations, Tammi’s journey through the permitting process blazed a trail for future aquaculture endeavors. “We set certain procedures for establishing a shellfish hatchery, and we introduced standards for water quality in shellfish aquaculture,” Tammi says. “We went through that gauntlet and created a path for others to follow.”

Despite a solid production base and high expectations, however, Hope Shellfish didn’t make it. Still, Tammi is satisfied that the company’s legacy of permitting protocol and water quality standards opens the way for productive land-based shellfish aquaculture. And she has found other applications for her work—strategic planning and follow-through for a National Oceanic and Atmospheric Administration/R.I. Department of

Environmental Management (RIDEM) project to restore resources lost in the *North Cape* oil spill, along with advisory work for Renew the Resources of the Bay, a foundation set up by Rhode Island marine industry magnate Luther Blount to finance shellfish restoration.

More immediately, Tammi's years of scallop work find a tangible outlet in the form a dedicated cookbook. More than a collection of recipes, *Scallops on the Table: From the Culling Board to the Platter—A New England Coastal Cookbook* takes a worldwide look at the scallop fishery, featuring historical information and interviews with scallopers, processors, sellers, chefs, and fishery scientists. Tammi wrote the book with her mother, Elaine Tammi, and with mentoring support from renowned chefs Chris Schlesinger and Julia Child. Describing her book as perhaps the first "devoted just to scallops," Tammi is working with an agent to expand the manuscript for an international market.

### **Evolving Legacy**

Murphy and Tammi illustrate the evolution of the fisheries program as it paralleled the evolution of fisheries science. And Robert Smith has been there through it all. A long-time lobsterman and former president of the Rhode Island Lobstermen's Association, Smith helped design the fisheries program and marvels at its changing legacy.

"It's amazing to me how many people went to the fisheries school and never went fishing," he muses. "Now there are so many fields for graduates to go into other than commercial fishing." Broad applicability is part of the fisheries program's appeal. "A number of students who came here had already been somewhere else," Wing observes. "And a number who got an associate degree here then got a B.S. in resource development or marine affairs, even back in the beginning."

Richard Allen did something like that. A lobsterman and fisheries policy consultant, Allen earned a bachelor of science degree in natural resources ('72) and kept going to earn a master's in marine affairs ('73). Right out of school, he started working with the Atlantic Offshore Fish and Lobster Association and took an immediate interest in fisheries management. That early interest fueled a lifelong study of management issues that has guided Allen's representation of fishermen's interests in various forums. For nine years on the New England Marine Fisheries Council and now through his fisheries consulting business, R.B. Allen Associates, he has worked to "empower the fishing community through fisheries science."

"It became a passion to bring back what I was learning to the fishing community," he says. As a student of fisheries policy past, present, and future, from New England to Australia, he has come to believe that what ails the fishing industry is partly a limited understanding of "the biology and economics driving the system."

"Bioeconomics" may not be a common phrase in management circles, but it is a concept that Allen embraces because it considers both the biology of the resource and the economics of the industry. "It's interesting that some concepts

we think to be new we're discovering in old journals," he comments wryly. "Fishery bioeconomics goes back about 100 years."

Bioeconomics reasserts itself in a project Allen undertook to get biological and economic principles into the hands of fishermen in a form they could use. With grant funding from the Pew Charitable Trust, he brought together separate biological and economic computer simulation models of the lobster fishery and added modifications to make the information accessible to fishermen as well as scientists.

This project is characteristic of a career throughout which Allen has applied the practical background and the policy development framework of his two degrees to improvement of both fisheries and fishery management.

### **Reaching Out**

Bringing information to the trenches is also Robert McClure's connection to the fisheries program. Although not an alumnus himself, McClure was responsible for introducing 30 Omani students to the URI program in the 1980s. The students came under the aegis of the U.S. Agency for International Development to upgrade their skills for managing a primarily artisanal fishery, McClure explains.

These days, McClure brokers education electronically as science and education manager for the Fish Information and Services Web site (<http://www.fis.com/>). The international site provides access to detailed fisheries information such as products, prices, technologies, market reports, and trade show schedules while offering interactive marketing and informational opportunities.

This cross section of fisheries graduates attests to a gradual shift in expectations from the program over three decades. The first such program in the country, the Fisheries and Marine Technology curriculum formalized an already active interface between the university and the fishing community, Wing recalls. It attracted students—many of them back from Vietnam and attending under the GI Bill—"who saw that there was a real future in the industry; a chance to make a good living."

Today's students are more likely to come straight from high school, he suggests. "I think the interest now is more to work for agencies than to be fishermen."

The change signals a couple of realities of the modern fishing industry. As Smith ruefully points out, "Fishing is a tough business now; it's not as attractive as it used to be." At the same time, though, the business is more professional. Bringing it to that point was part of the fisheries program's mission.

"We wanted to get rid of the stigma of the uneducated, easy-come, easy-go image of fishermen," Smith recalls. Reflectively, he adds, "I think we did that. There are more educated people in the industry now—and they need to be." And with the air of a parent whose job is done, he says quietly, "I feel good about the people coming out of the program."

—Tony Corey is a Communicator for Rhode Island Sea Grant.