

# Providence Journal-Bulletin

June 18, 1996

## Symbiosis between fish and fishers

BY STEPHEN B. OLSEN

It is springtime again and many of us are planting a garden. Any gardener knows that success lies in a symbiotic, (not a predatory), relationship between a gardener and his garden. A symbiotic relationship has many feedback loops. The gardener harvests the flowers and the vegetables, but only when they are ready to harvest, and the harvest comes only after a long sequence of weeding, thinning, watering and keeping pests at bay. There are many demands and many rewards for both the gardener and the garden. If there are no feedbacks and the gardener only takes—or mines—his bit of land, we all know what the result will be. After a season or two a luxuriant and beautiful garden becomes patches of bare earth interspersed with clumps of weeds.

We see a marine equivalent in New England's fishing grounds—among the most productive on the planet. The desirable species, the cod family and the flounder family, have never been scarcer. Once-abundant species like the mighty and delicious halibut disappeared long ago. It is the weed species, the skates, dogfish and sand eels, that today are wonderfully abundant. As a result, many fishers are bankrupt and a way of life central to New England's culture and economy is as endangered as the fish stocks that supported them for generations. This sad progression of overfishing and collapse is being repeated around the world.

Yes, New England's fisheries are once again in crisis. But this is only another downward tread on a staircase that began many hundreds of years ago when European fishers discovered and began to mine the extraordinary bounty of fish off New England's shores and northwards to the Grand Banks. Each step in this sustained decline has been marked by more intensive mining of (or predation on) a diverse and beautiful form of wildlife with an extraordinary ability to regenerate itself. Each increment in the mining has usually been triggered by a more efficient technology. It began with the single hook and line and progressed through multiple hooks on ever longer "long lines" and set nets, and beginning in the 1930s, ever more efficient trawls and electronic fish-finding equipment. Now the most productive sea floor is being scraped over several times a year by heavy gear that sweeps up everything in its path.

I have been a bit player in this massive failure. I began going out on commercial boats before I was in high school. By my mid-twenties I'd fished in the Mediterranean, the North Sea and off Rhode Island.

I loved the people, the work, the spells of boredom in a wide ocean, that particular camaraderie and inter-dependence that exists only on a fishing boat. Sometimes I was humbled by my incompetence and my seasickness. In some countries I shoved "trash fish" overboard by the ton; in others the "trash" was what we ate.

Twenty years ago New England fisheries were in another crisis. Foreign fleets had vacuumed up our stocks. After a long struggle, the U.S. declared a 200-mile territorial sea and we all believed that the time had finally come to do it right and to see our fishing fleets prosper. As the 200-mile limit approached, a colleague and I prepared a report that documented the evolution of Rhode Island's fisheries and suggested how this state could respond to the promise of a well-managed, rich and self-renewing resource. One recommendation called for a Rhode Island Fisheries Council that would put the regulators, scientists and fishermen on a single body with broad powers to regulate fishing and conserve the stocks within our three-mile limit. Soon thereafter the federal Fisheries Management and Conservation Act of 1976 set up regional councils to manage stocks offshore. Both councils have failed in their fundamental mission, and today we must say that the high hopes of the mid-1970s have been dashed. We missed a great opportunity, and are now paying a great price.

What went wrong? This is the time to rethink the relationship between fishers and fish. We must get back to basic principles. Perhaps the first step is to examine the goal. In the past the goal was—in essence—to take as much as possible economically, biologically or whatever. A mining, and therefore predatory, approach.

We would proceed differently if the goal was to balance among (1) sustaining the quality of life of the fishers, and (2) sustaining the qualities of the resources upon which they depend. The principle would be to replace predation with symbiosis; mining with husbandry. The challenge becomes making a stewardship ethic operational for the benefit of both the fishers and the fish. If we chose to follow such an approach, we would find that the guideposts to making this operational are fairly clear and well known.

We must recognize that approaching the goal can occur only through a series of strategic actions over many years. We will need clear, unambiguous objectives for each step back up the staircase that has led us down

to the weedy garden that now confronts us offshore. We will have to learn because we will continue to make mistakes. Who is the "we"? It must be the scientists, the regulators and the fishers working together towards a common goal. We have learned time and again that stewardship—or any other attempt to modify human behavior—succeeds only when the people involved (or most of them) believe in the goal. We also know that fishing effort must be in balance with a sustainable yield. You don't harvest your garden with a bulldozer. Destructive forms of fishing must be eliminated. That may mean replacing most trawling with less damaging and wasteful technologies.

Perhaps most important is to worry about feedback loops between the fishers and the fish. The lobster trap fishery is doing well. Could the reason be the abundance of positive feedbacks? Every day hundreds of tons of lobster food are taken offshore. Under-sized lobsters and lobsters with eggs are thrown back and most survive the trip to the surface. Lobster fishers believe in the regulations and enforce them by common consent. Quality of life for most lobstering families is pretty good. Here the goal is in sight.

Currently, the most popular definition of "the fisheries problem" is quite different to the one suggested here, and so is the proposed solution. Most believe that the problem lies not in the goal but simply in the fact that fish are common property. The prescription is to "privatize," and make over ownership and responsibility for the fish to a smaller number of fishers who, driven by the desire to maximize their profits, will stop mining what they own and become stewards. I'm skeptical. I think the problem lies in the paucity of positive feedback between the fishers and the fish. Meaningful stewardship calls for close attention to goals and a lot of hard work. But fishers—certainly the ones I know—are not afraid of work and care passionately about their way of life. It is hard to imagine this today, but perhaps New England's fishers could become a model for how human society can learn to prosper in balance with nature rather than offering us parables for our failures as stewards. The traditional fishers, independent-minded and unruly as they are, just might embrace such a goal.

- Stephen B. Olsen is director of URI's Coastal Resources Center.