Marine Resources Information 119 A Bimonthly Newsletter of the University of Rhode Island Sea Grant Advisory Service January-February 1982

## **Rejoice, Oyster Fanciers!**

It is always a pleasure to tell a success story, and the state of Connecticut has just that. It is a story about oysters.

According to John Baker, Director of the Aquaculture Division of the state Department of Agriculture, commercial oyster farming there has come back from near extinction to an exceedingly healthy industry.

Because commercial oyster beds are privately franchised or leased, no figures are available on the total number of oysters harvested each year or the value of that harvest. But New Haven harbor alone, with less than 1500 acres of the state's more than 40,000 acres of franchised, leased and natural or public beds, is conservatively estimated to yield \$10 million worth a year. Good news for the producers, good news for the eaters!

Even though the concept of aquaculture or "farming the sea" was unknown to most Americans as recently as a dozen years ago, oyster farming at one level or another dates back in this country to the 18th century.



Captain Peter Decker of Norwalk, Connecticut was the pioneer in introducing steamers for oyster cultivation. In 1848 he altered his sloop into a steamer and named her the "Early Bird".

The oyster's life style makes it almost ideal for the practice. A spawning female releases millions of microscopic eggs into the brackish waters of bays, estuaries and tidal creeks each year. Those lucky enough to collide with sperm from a male promptly hatch into minute larvae, no bigger than a grain of pepper. The fraction that survive to a second larval stage begin to develop a shell and settle to the bottom of the water. If they land on a suitable hard, clean surface, they cement themselves to it and remain cemented there for the rest of their lives, filtering their food out of the surrounding waters. Delicious, nourishing, plentiful and free for the taking, they were a diet staple of coastal Indians and colonial settlers. They were, in fact, so highly thought of that the first colonial law to protect them was passed in 1715. Later in the same century, coastal dwellers began to think about ways they might harvest more and plumper oysters.

As supplies became exhausted in some areas, these early "farmers" began to re-populate them with juvenile oysters transplanted from other, thickly settled beds. They also began the practice of moving the young oysters, which in nature take up to five years to grow to toothsome size, to waters where they would find more nourishment and fatten quicker for market. Collecting"spar, the collective name for baby oysters, began in the 1830's, according to a 1898 report on Fisheries Industries of the United States.

Because Connecticut has so many rivers that empty into Long Island Sound, providing an ideal environment for oysters, it had "from time immemorial" a vast natural population. It was the first state to grant vested rights in the oyster grounds, and by the middle of the 19th century, serious cultivation of crops in the harbors was well underway. Deep-water planting in the Sound began about 20 years later.

By the 1880's, nearly all the legally available ground for oysters in the rivers, harbors and bays had been designated or deeded to private ownership and a system of deepwater farms, stretching miles from the shores in 30 to 70 feet of water extended in an almost unbroken line from Greenwich to Branford, 45 miles east as the crow flies. A writer of the time describes New Haven harbor as looking like "a submerged forest, so thickly are planted the boundary stakes of the various beds."

In 1880, the state estimated that 1,006 people were employed in oystering, producing 336,450 bushels of oysters with a value of \$677,875. Connecticut ranked eighth out of 20 coastal states harvesting the mollusks, and of the hundreds of thousands of barrels shipped to Europe in those days, three quarters came from its waters.

But while the oyster business was prospering, by the end of the 19th century, Connecticut's natural beds had been virtually decimated by overharvesting.

And 50 years later, the oyster business itself was in sorry shape. Its decline began in the 1950's and by the late '60's the industry was in a deep decline.

Norman and Hilliard Bloom who had gone into business in 1947 on beds held in their family for over a century, remember the time well. Today, Bloom Brothers Seafoods in Norwalk is one of the biggest in the business, with ten suction dredge boats, one 124 feet, but the early years were a struggle.

"First we had bad hurricane damage, and then we had a cycle of bad sets," Hilliard Bloom recalls. An additional reason cited by Baker was economic. As supplies became scarcer, smaller oysters were harvested and prices declined. Routine harbor dredging during spawning time destroyed entire populations, and water pollution was another serious problem. Dumping of toxic and other wastes into Connecticut's rivers had been routine for years. State and federal health agencies, newly aware of environmental hazards but lacking baseline data on water quality, were often over-zealous in closing areas to shellfishing. Since so much of Connecticut's oyster crop went out of state, the Federal Drug Administration was the ultimate authority. In 1971, Baker and Bloom recall, the FDA threatened to close the state's oyster industry down altogether.

But in the same year, prospects for the languishing industry began to brighten. Connecticut's Shellfish Commission, which since 1881 had administered all the state's oyster beds, was abolished and a new entity created within the Department of Agriculture. Under Baker's direction, the Aquaculture Division, as he named it, began vigorous efforts to support and encourage oystering. With the backing of the state legislature and the Army Corps of Engineers, harbor dredging during oyster spawning season was stopped (except in New London, a harbor considered essential to national defense). With more informed monitoring, water quality began to improve, and the requirements of state and federal health agencies became easier to live with.

The larger growers had realized that if you want to keep taking away, you also have to put back, and in cooperation with the Aquaculture Division a continuing effort was begun to provide a better substrate for spat by spreading old shell on the bottom. Close to 800,000 bushels of shell were planted in the Sound last year, Baker says. By 1974, National Fisherman reported that the state was enjoying an "oyster boomlet'.

Meanwhile, a variety of biological research by the National Marine Fisheries Service's Milford laboratory, the University of Connecticut and Southern Connecticut College was producing useful information on ways to improve growing conditions and reduce predation by starfish and drills, the oyster's major enemies.

Interest in coastal towns in the beds under their jurisdiction has also quickened in recent years and recreational oystering has revived in many of them where long unused growing areas exist. Hilliard Bloom is all in favor of that. "The more people get interested in oystering in the state," he says, "the more they'll look out for water quality." Oyster growers still have problems. No cure has yet been found for MSX, a fatal disease of the mollusks, first identified in the 1940's, predation is still a problem, as is water pollution from petroleum and industrial wastes, and competition for the shoreside acreage needed for docking and storing is hampering some of the larger firms.

Nevertheless, the future looks brighter for oyster farming in Connecticut than it has in years, John Baker believes. "We have a superior oyster here," he says proudly. (*Crassostria virginica* is the only species permitted by an 1881 law to be grown in state waters.) "It has excellent keeping qualities, which is important when you realize it is shipped all over the world. When our oysters are held at 42 degrees, they will keep for three months or more, while oysters from warmer waters begin gaping in days."

Success breeds success, and Baker notes that a number of new firms are entering the business today. "There are still plenty of beds available that have been closed for years," he says. "I see plenty of room for expansion in the industry."