

A Comeback for Great Bay Oysters?

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The oysters of Great Bay have provided a welcome source of seafood for New Hampshire inhabitants for centuries. Regional Native Americans gathered these bivalve mollusks, as evidenced by the presence of shell middens (relic piles of discarded shell). Early European coastal inhabitants probably discovered oysters in the mid-1800s. The advent of “tonging” (the efficient use of long implements for

two parasitic protozoan pathogens caused a dramatic drop in oyster abundance. Oyster numbers fell at all beds, and a particularly severe decline occurred at Nannie Island, one of the most popular oystering areas. This loss was followed by nearly a decade of poor spawning. Possibly the continued presence of oyster pathogens affected their ability to spawn successfully.

In 2006, the oysters saw a blockbuster spat-fall (production of young oysters), one that far exceeded historical records and brought on

a hopeful gain in total abundance. 2007 saw another good spat-fall. Here was the start of a real comeback for Great Bay oysters! Spatfall in 2008 and 2009 tailed off some, but was still present, and the good sets from 2006 and 2007 are surviving and growing to harvest size. Time will tell, but with careful management, help from oyster harvesters and innovative programs to return shell to oyster beds where it can catch spat-fall, the future looks brighter for the oysters of Great Bay.



Oyster harvesters “tonging” on Great Bay.

gathering) allowed for the take of oysters from their subsurface beds. Once the resource was tapped, an escalation of oyster harvesting by dredge quickly followed, even using horse-drawn dredges when ice covered the bay.

Over-harvest and pollution of Great Bay by industrial and lumbering operations gradually drove the oyster stocks toward serious decline. Two factors helped to turn this around – a prohibition of commercial oystering and the cleanup of pollution sources encouraged by environmental laws like the Clean Water Act. There was new hope for establishing and maintaining a viable oyster stock, one that would provide both a sustainable recreational fishery, as well as serve the valuable role as a “keystone species” in Great Bay. Keystone species serve a variety of ecological roles for their entire regional ecosystem: nutrient cycling, habitat provider and general water quality enhancer. Oysters once filtered all the water of Great Bay every few days; now it takes months.

During the mid to late 1900s, a regulated fishery and some improvements of water quality allowed the oyster population in Great Bay to remain somewhat stable. In the mid-1990s, a combination of stressful high water temperatures, higher-than-usual salinities and the presence of

How Oyster Harvesters Can Help

Three simple actions that any oyster harvester can do to help improve success of spat-fall and annual replacement of the harvested crop:

- **Careful and complete culling** – As you sort through the material brought up by tongs or rake, do your best not to damage or take small oysters. Remember, an oyster may be a functional male spawner in its second year, so even though it may be too small to harvest, it can still spawn.



- **Return shells to the bed** – Hard surfaces, especially oyster shells, are critically important as attachment substrates for oyster larvae. You can simply bring the shells back to your favored location and throw them in. The best timing for this is May-June, since the spat-fall each year occurs in August-September. The UNH/Jackson Laboratory Oyster Shell Recycling Program (www.oysters.unh.edu/shell-recycling.htm) maintains a shell collection depot at the entrance to the Jackson Estuarine Laboratory on Adams Point in Durham. Shells will be returned to an ex-



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isting bed or to one of their experimental restoration sites. The Coastal Conservation Association of N.H. is using a \$10,000 grant from the Orvis Company to involve restaurants in the oyster shell recycling program.



- **Control of Oyster Predators** – Oysters, especially young ones, have a few problem predators that can bring about substantial losses to the stock. Foremost of these in Great Bay is the oyster drill (*Urosalpinx cinerea*), a snail that can bore and consume young spat. These snails and their egg cases are often brought up with oyster shells and should not be returned to the water. Illustrations of oyster drill can be found at www.fishnh.com/marine.