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Citizen-Scientists Raise Baby Oysters On Great Bay

UNH, NOAA, Nature Conservancy Partner With Local 'Oyster Conservationists'

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August 29, 2006

DURHAM, N.H. -- Homeowners along New Hampshire's Great Bay and its tributaries are helping to restore oysters to the estuary system, thanks to a new program of the University of New Hampshire and The Nature Conservancy.

The program, coordinated by oyster researchers Raymond Grizzle, research associate professor at the University of New Hampshire's Jackson Estuarine Laboratory, and supervisor of laboratory research Jennifer Greene, has enlisted 16 "oyster conservationists" to raise baby oysters that will be used in restoring oyster reefs in Great Bay and the Bellamy River. Each of the volunteer conservationists received 1,500 – 2,000 young oysters, called spat, that they will raise to adulthood in cages that hang off their docks. The adult oysters will be placed at historic oyster reef sites in an effort to rebuild the Great Bay system's once-thriving oyster population.

"This collaboration is a wonderful opportunity to involve citizens in the science that ensures Great Bay remains a valuable resource," says Greene.

The project is funded by the National Oceanic and Atmospheric Administration's (NOAA) Community Based Restoration Program.

In the past decade, the oyster population of Great Bay has plummeted dramatically, due to the 1995 arrival of the oyster disease MSX. The previous century saw a slower but equally devastating demise of oysters from exuberant overharvesting.

The oyster conservationists will help meet the New Hampshire Estuaries Project's goal of restoring 20 acres of oyster beds to Great Bay by 2010. "Many people are familiar with oysters on the half shell, but perhaps not so knowledgeable about the ecological importance of these tasty bivalve mollusks," says Grizzle. Oyster reefs – consisting of thousands of individual oysters cemented together – form complex, three-dimensional structures that provide unique habitat for many species of fish, invertebrates, and plants.

In addition, an oyster reef can collectively filter thousands of gallons of waters each day,

effectively cleaning the water as the oysters feed. A new study published by The Nature Conservancy and UNH includes an estimate of historic oyster filtration levels: Before recent drastic losses, the natural oyster populations could have filtered the entire volume of Great Bay in less than four days. Grizzle and Jay Odell, marine biologist for The Nature Conservancy, estimate that at current population levels it would take more than four months to filter the same volume.

With a good survival rate, oyster conservationists will raise 10,000 oysters for the estuary's restored reefs. Just as important, the volunteers will measure the oysters every other week, providing the researchers with valuable growth data. "We'll be able to see at what sites they grow the fastest," says Grizzle. "It would be very difficult for us to get this data otherwise."

The oyster conservationists are spread throughout the Great Bay system: on Little Bay as well as the Piscataqua, Oyster, Lamprey and Squamscott rivers. Response from the volunteers was overwhelming, and the project was expanded slightly to accommodate the would-be oyster conservationists. One street on Dover Point has four oyster conservationists in a row, adding a neighborly dimension to the project. "They were so excited when I delivered their baby oysters," says Greene. "One of them joked she was going to put pink and blue balloons on her mailbox."

The oyster conservationist program is patterned after similar Community Based Restoration projects of The Nature Conservancy and NOAA around the country. "Oyster loss is not just a Great Bay problem," says Odell of The Nature Conservancy. "Several other east coast estuaries are now at the brink of ecological collapse because of nutrient loading and other stresses. When Great Bay's oysters are back on the job, the chances this will happen here will be greatly reduced."

For more information about UNH's oyster restoration efforts, visit www.oysters.unh.edu.

Note to reporters and editors: For more information about the oyster conservation program, or to speak with an oyster conservationist, contact Jennifer Greene at 603/862-5131 or Jenn.greene@unh.edu.