

UMass Dartmouth to Study Emerging Whelk Fishery

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UMass Dartmouth School for Marine Science and Technology Professor Bradley Stevens has been awarded \$220,000 in Saltonstall-Kennedy funding for a two-year study to improve the conservation of the New England whelk, a large, edible sea snail, locally known as a "conch."

"This is an opportunity to study a fishery before it is significantly depleted," said Dr. Stevens. "Although relatively small now, the whelk fishery has the capacity to expand significantly virtually overnight, and we need to anticipate the effects of such an expansion."

At \$3 million in landings per year in Massachusetts (2007 estimates), the whelk fishery is small compared to fisheries such as lobster and scallops, and it operates with few regulations and virtually no biological information, therefore, the population's degree of vulnerability is a question mark. In recent years, the demand for New England whelk has increased, especially in Asian and Italian markets.

Dr. Stevens, who blends expertise in fisheries, whelk biology, and research aquaculture, said, "There are currently 166 conch-pot permits in Massachusetts, but only about 40 of those are actively fished. If the remainder were to be fully utilized, landings could quadruple, which could seriously deplete the whelk population."

Stevens noted that the whelk fishery has been moving northward for decades. Directed fisheries for whelks developed in the 1970s in the Carolinas, the 1980s in Virginia, and the late 1990s in New England. The Massachusetts whelk fishery was a small bycatch fishery until about a decade ago, just as lobster populations were showing the most dramatic drop. Lobster fishermen have long found whelks in their pots, but as the lobster catch declined, the lobstermen began to target the whelks as an income source. "Wherever such fisheries have sprung up, they started as bycatch fisheries, expanded rapidly as fishermen sought alternative income after sudden declines in other fisheries such as shrimp and lobster, and then just as rapidly began to decline within a few years," Stevens said.

Expanded whelk harvesting could threaten not only the target species, but also the horseshoe crab. The preferred bait for whelk pots, horseshoe crabs are already fully exploited in New England, mostly for medical applications. Stevens will be investigating alternative baits and fishing practices to reduce the pressure on the horseshoe crab population.

Working in cooperation with the Massachusetts Division of Marine Fisheries and the Massachusetts Lobstermen's Association, Stevens will determine life history, growth rates, age distributions, and size/age of sexual maturity in channeled whelks. The information will be provided to managers to improve the conservation of whelks in a sustainable manner.

The Saltonstall-Kennedy Grant Program is a competitive program administered by the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration, Department of Commerce to provide financial assistance for research and development projects to benefit the U.S. fishing industry.

Dr. Stevens lives in Wareham, MA.

Source: UMass Dartmouth