



NOAA Community-Based Restoration Program



Copper River Clam Restoration Cordova, Alaska

Historically, shellfish resources have played an important role in the economic sustainability of coastal Alaskan communities. From 1916 until the late 1950's, the City of Cordova supported a large commercial razor clam (*Siliqua patula*) fishery and proclaimed itself as the "Razor Clam Capital of the World." Historic commercial harvest in this area was as much as 3 million pounds.



Photo by Jennifer Allen

Orca Inlet, looking north toward Cordova.

However, by the early 1960's, the razor clam fishery began to decline due to reduced clam populations, presumably due to over-exploitation. Then in 1964, an earthquake caused significant uplift in the Copper River Delta and Prince William Sound. Impacted areas included prime razor clam habitat in Orca Inlet, adjacent to the City of Cordova. In following years, low razor clam harvests around Orca Inlet caused harvesters to shift to the east side of the Copper River Delta and the Controller Bay area, and the local clam fishery was significantly reduced. Regional scientists believe that a period of low clam recruitment and survival occurred throughout the 1970's and 1980's, due to this combination of over-harvest and the changes in habitat caused by tectonic activities. This in turn led to a significant reduction in population growth rates and spawning potential. The resulting clam recruitment bottleneck gave rise to a population of razor clams that can no longer seed throughout its geographic potential.

Declines in clam population size and distribution around Cordova pose problems not only for the commercial clam fishery, but also for the coastal ecosystem. Razor clams are an important prey resource for many species of fish, crabs (e.g. juvenile and adult dungeness crabs) and marine mammals (particularly sea otters).

Fortunately, it is believed that this razor clam population may be restored through a combination of adult relocation and clam bed seeding. Therefore, in 2002, through a partnership with Ocean Trust and National Fisheries Institute, NOAA awarded over \$15,000 to the Prince William Sound Science Center for shellfish restoration in Orca Inlet. The goal of this project is to develop mechanisms for restoration and enhancement of razor clam populations.

Project objectives include: identification of viable donor sites for razor clams, reconstruction and enhancement of clam beds through relocation of adults into concentrated seed bank areas, and development of a conservation and enhancement plan for razor clams. This project is one of the first to follow the State of Alaska's new "Protocol for Shellfish Enhancement by Non-state Entities" (adopted in 2002), so it is hoped that this project will set a standard for future shellfish enhancement projects in Alaska.

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