

A Collaborative Approach to Fisheries Science in Cape Cod Waters in Partnership with the Commercial Fishing Industry

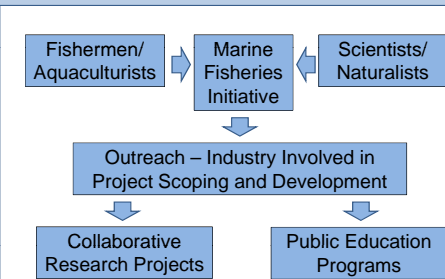
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Introduction:

The objectives of the Provincetown Center for Coastal Studies' Marine Fisheries Initiative are to:

- Foster collaboration and understanding between fishermen and scientists
- Conduct cooperative research and education
- Focus on scientific and policy issues confronting local commercial fishermen and aquaculturists.



Participation in research that directly affects fisheries management gives fishermen an ownership role in the process that affects their livelihood. Involvement in public education programs provides fishermen with a platform from which to share their knowledge and heritage as authentic, engaging educators.

Commercial fishermen from Chatham and Provincetown speak at a public forum held at the Provincetown Center for Coastal Studies



Collaborative Research:

Working directly with fishermen, scientists can collect biological and oceanographic data that are difficult to acquire using traditional techniques.



Collecting length/weight of freshly caught squid at Stage Harbor, Chatham (left); Temperature data logger affixed to fish weir in Nantucket Sound (right).

Many aspects of fisheries biology, ecology, and oceanography are poorly understood but critical to the future of sustainable fisheries. Fishermen and scientists can combine their unique skills and knowledge to conduct field research aimed at filling crucial data gaps.

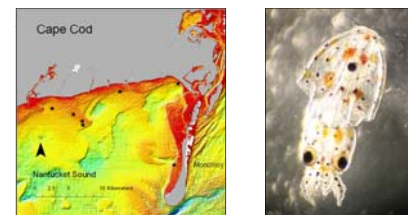
Collaborative research projects build a foundation on which the relationship between fishermen and scientists can evolve into one of mutual trust and learning.



Marine biologist and commercial fisherman hauling a fish weir.

Research Projects:

Commercial weir fishermen in Chatham and researchers from the Marine Fisheries Initiative and the School for Marine Science and Technology (SMAST), University of Massachusetts (UMass) Dartmouth are studying environmental effects on spatiotemporal distribution and embryonic development of longfin squid (*Loligo pealeii*).



Locations of Nantucket Sound fish weir study sites (left); Two-day-old squid paralarva seen under a microscope (actual size ~4 mm, right)

Understanding the responses of squid to temperature, salinity, wind, and other factors has profound implications for the interpretation of abundance surveys and landings data on which fishery managers base decisions, as well as an understanding of the potential effects of climate change on marine fisheries.

Future Directions:

Projects currently under development include shellfish habitat assessment, analysis of fishing gear depredation by seals, yellowtail flounder bycatch reduction techniques, and high-resolution catch data collection for lobster and trawl fisheries.

The Marine Fisheries Initiative would not be possible without the willingness of the Cape Cod fishing and aquaculture community to move forward in partnership with scientists as we together attempt to understand how we can sustainably harvest the resources in our waters. Among those who have helped shape this program and provide incentive and inspiration are Alex Brown, Steve Cadrin, Mark DaLomba, Shareen Davis, Rich Delaney, David Dutra, Ernie, John and Shannon Eldredge, Chip Foster, John Granlund, Beau Gribbon, Dave Haley, Tony Jackett, Jeff Johnson, Eric Knowles, Kurt Martin, Josiah and Stormy Mayo, Phil Michaud, Todd Motta, Morgan Parker, Luis Ribas, Ed Rohmer, Paul Tasha, John Vasques, and so many others who have taken their time to share knowledge, insight and ideas at the rail of a boat or over a cup of coffee. Squid studies in Nantucket Sound conducted as part of O. Nichols' Ph.D. research (SMAST/UMass Dartmouth) funded by the Massachusetts Marine Fisheries Institute, A.V. Stout Fund/Norcross Wildlife Foundation, and the Sounds Conservancy Grants Program/Quebec-Labrador Foundation.

