

Shell Disease & Paramoeba

Shell Disease

Bacterial Assemblages Involved in the Development and Progression of Shell Disease in the American Lobster, *Homarus americanus*

Andrei Chistoserdov, Marine Sciences Research Center, Stony Brook University. Co-investigator: Roxanna Smolowitz, Marine Biological Laboratory, Woods Hole, MA

By comparing shell disease in lobsters from Eastern Long Island Sound with those from Buzzards Bay, Massachusetts, Chistoserdov and Smolowitz will seek to identify the types of bacteria that cause lobster shell disease. The team will also design a set of specific probes that will be used to test for such pathogens.

Administrator: New York Sea Grant

Paramoeba

Phenotypic and Molecular Identification of Environmental Specimens of the Genus *Paramoeba* Associated with Lobster Mortality Events

Patrick M. Gillevet, George Mason University, Fairfax VA. Co-investigators: Charles J. O'Kelly, Bigelow Laboratory for Ocean Sciences, West Boothbay Harbor, ME; Thomas A. Nerad, American Type Culture Collection, Manassas, VA; Thomas K. Sawyer, Rescon Associates, Inc. Turtle Cove. Royal Oak, MD

Gillevet will use a combination of methods to isolate and characterize the paramoeba that has been identified in Long Island Sound lobsters. Gillevet and O'Kelly hope to develop a sensitive "fingerprinting" tool that will detect this paramoeba in the environment.

Administrator: Connecticut Sea Grant



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Long Island Sound Lobster Research Initiative is a research collaboration of National Oceanic Atmosphere Administration's (NOAA) National Marine Fisheries Service, Connecticut Department of Environmental Protection, and the Sea Grant Programs in New York and Connecticut.



Bringing Science to the Shore

Oligonucleotide-based Detection of Pathogenic Paramoeba Species

Rebecca J. Gast, Woods Hole Oceanographic Institution, Woods Hole, MA

This research will seek to develop a method to facilitate the detection of paramoeba in animal tissues, water, and sediment samples. Using the new method, the researchers will sample Long Island Sound for one year to analyze the paramoeba's natural fluctuation and distribution.

Administrator: Connecticut Sea Grant

Development of polymerase chain reaction and *in situ* hybridization-based tests for the specific detection of the paramoeba associated with epizootic lobster mortality by determination of the molecular systematics of the genus *Paramoeba*

Salvatore Frasca, Jr., Dept. of Pathobiology, University of Connecticut. Co-investigators: Richard French, University of Connecticut; Sylvain De Guise, University of Connecticut

The purpose of this project is to produce and analyze gene sequences of a number of *Paramoeba* species and to develop a molecular diagnostic assay (a kind of "fingerprinting" technique) for the *Paramoeba* species that occurs in Long Island Sound lobsters.

Administrator: Connecticut Department of Environmental Protection

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