

NH Sea Grant Funding For 2008-09 Includes Local And Regional Marine Research

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DURHAM, N.H. - From coastal waters to the open ocean, NH Sea Grant (NHSG) is at the forefront of marine research with a focus on issues important locally and regionally within the Gulf of Maine.

In a new project supported by NHSG, University of New Hampshire professor of zoology Winsor Watson is working to determine if reproductive limitation in the American lobster is impacting annual recruitment estimates for their populations within the Gulf. In another project, a team of researchers from Dartmouth, the University of Maine and the U.S. Geological Survey will study how mercury and methylmercury contaminants are transformed and made available to organisms living in the waters around Great Bay.

"The purpose of the Sea Grant College Program is to promote the wise use and conservation of our coastal and marine resources," explains Brian Doyle, associate director of NHSG. "The program combines research, extension/education and communication to meet this challenge."

For the 2008 biennial funding cycle, six multiyear research projects totaling over one million dollars were chosen from a competitive application process. The research includes a wide variety of topics that encompass local and regional issues of importance.

In addition to the two research projects mentioned, four additional projects will be funded:

- -UNH Stormwater Center researchers Thomas Ballestero, associate professor of civil engineering, and Alison Watts will be assessing the degree to which polycyclic aromatic hydrocarbons (PAHs) are released from different types of sealcoated pavements into New Hampshire's coastal waters.
- -UNH researchers James Byers, associate professor of zoology, and Kevin Gardner, associate professor of engineering, will focus on improving techniques by which estuarine sediments contaminated with PAHs and polychlorinated biphenyls (PCBs) can be 'capped' in place. Thin geotextile mats containing reactive compounds will be used in the Cocheco River to sequester PCBs and PAHs from the sediments and keep them from entering the food web of the estuary.
- -UNH microbiologists Cheryl Whistler and Vaughn Cooper, both assistant professors, are studying the microbial interactions that influence the emergence of pathogenic *Vibrio* bacteria species in oysters.
- -UNH professor of zoology Huntting Howell is testing multi-beam sonar to see if it can provide more accurate data on relative abundance and spatial distribution of fish species that will improve the ability of scientists and fishermen to successfully manage fisheries in the Gulf of

Maine.

"Sea Grant is not just a grant-funding entity," explains Jon Pennock, director of NHSG. "We work with the local stakeholders to identify the critical issues involved with the NH coastal environment, the economy and the surrounding communities, but with an eye towards the regional issues."

"In addition to these major research efforts, we are also funding a number of smaller endeavors," Pennock adds. "These development projects give researchers from around the state the opportunity to do preliminary work in preparation for undertaking a major marine-related research effort."

Although research receives about half of the federal funding given to NHSG, the combination of extension, research and communication is the program's greatest strength, Pennock says. Federal funding comes from the National Oceanic and Atmospheric Administration (NOAA), which is part of the Department of Commerce.

Each coastal and Great Lakes state, along with Puerto Rico, has a Sea Grant College Program. In New Hampshire, that program is located at UNH.

"UNH is one of the few land, sea and space grant universities in the country," Doyle says. "There are only a handful that have all three designations. We are a small enough university that these three disciplines are able to integrate in unique ways. From a Sea Grant perspective, this has worked out in a very positive and productive way. The collaboration between all three strengthens each one and I see this as a great benefit."

The benefits extend beyond the University's research realm, he adds.

"The extension portion of Sea Grant is the conduit through which research-based information is shared with our stakeholders," says Doyle. "On the flipside, extension educators bring their concerns and issues back from our stakeholders to the research community."

Extension educators are working to address issues in commercial fishing, aquaculture and water quality, Doyle says. The UNH Marine Docents and the Great Bay Coast Watch are two organizations developed by NHSG as a way for the community to become involved in water quality monitoring and marine education. Individuals associated with these groups often become leaders in their local community to help distribute information about the marine environment, Doyle adds.

In addition, NHSG has a policy advisory committee composed of approximately 20 individuals to help advise and guide the Sea Grant college program, Doyle explains. There are a wide variety of individuals on the committee, including local community representatives, university faculty, representatives from state agencies, fishermen, marine-oriented business people and marine educators. Members provide feedback about important local and regional topics, Doyle says.

Each component of NHSG complements the others to provide a well-rounded approach to marine conservation. In addition, the research for the 2008 funding cycle brings together the best and brightest from UNH, Dartmouth and Plymouth State University, Pennock says.

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