

Tidings

Gulf of Maine Research Institute Newsletter

SUMMER
2008

Interns gain a wealth of experience

GMRI is thrilled to have eight interns on our staff this summer. Chosen through a competitive process, these students represent the best of the next generation of scientists emerging from schools like the University of Southern Maine, University of Maine, Boston University, Connecticut College, Cornell University, Duke University, Eckerd College and even Newcastle University in England.

“Their energy and enthusiasm for marine science is a tremendous asset during a busy field season, says Benthic Ecologist, Jonathan Grabowski, who organizes GMRI’s intern program. They add depth and talent that enables us to branch out and address a wider diversity of research questions.



Interns are involved in a variety of projects from interactions between cod and lobster, to techniques for oil slick detection, to sustainable harvesting certification. Peter Stetson (Boston University) has been working with computer models to follow the movement of krill by internal waves.

“This has been a fantastic learning experience, says Stetson. It’s been tremendously satisfying to contribute to the Gulf of Maine community.

Thanks in part to support from the Libra Foundation, GMRI offers students an opportunity to become part of the fabric of an extraordinary marine community: collaborating with local fisherman, attending Lobster Council meetings, examining a variety of fish stomach contents, and presenting their summer work to the entire GMRI staff for peer review.

Research



Lessons from Iran – GMRI’s research is strategically focused on the Gulf of Maine, but our scientists’ expertise is sought in a global context. Gear technologist Steve Eayrs notes, “Even though the species are different, research carried out in other fisheries around the world can have extraordinary relevance to efforts underway in the Gulf of Maine.”

Steve recently spent two weeks as an expert presenter at a fisheries conference in Iran. His advice on trawl performance was sought by the Food and Agriculture Organization of the United Nations and the Iranian Fisheries Organization. Steve discussed several gear designs used to reduce bycatch (non-target catch) in the U.S. and other parts of the world. He then spent seven days aboard a 43-meter factory trawler to test five prawn trawl designs in the Sea of Oman.

Steve’s gear tests were his most successful to date. Two of the trawl modifications reduced bycatch by over 90%, and all five reduced bycatch at least 50%. This is a huge improvement over the typical 15% reductions seen in unmodified trawl gear. Through this experience, Steve will utilize the knowledge he gained as part of a collaborative project with the Island Institute and the Midcoast Fishermen’s Association. The fishermen of Port Clyde, Maine, are taking a proactive approach to implementing more sustainable fishing practices. Steve will work with them to conduct sea trials to evaluate the efficiency of gear modifications aimed at reducing bycatch. These tests will establish a performance baseline by which to gauge future improvements.

Tackling Questions

Nick Record, a scientist in our ecosystem modeling lab, was excited to tackle a question recently asked by a visitor to GMRI’s website. On the surface it seemed like a simple inquiry: “What is the average depth of the Gulf of Maine?” But when Nick dove in, the answer turned out to be intriguingly complex:



Because the majority of the Gulf of Maine is made up of shallow banks (<100m) and deep basins (>200m), an average doesn’t give an accurate representation of depth. There are also statistical biases and limitations where measurements have been taken (areas of interest, linear transects, satellite resolution, etc.), and the value changes depending on where one draws the boundary of the Gulf of Maine. If I take an average, my current bathymetry data (which does not include “all soundings” but gives good coverage), I get 170m. But, if I weight that average based on how much area I know each data point represents and draw a reasonable boundary, I get 120m.

GMRI is working with other researchers, fishermen and students to answer the toughest questions facing our ocean. “We’re asking about how the Gulf of Maine is changing, and why, and how can we can better sustain its health,” says Nick. “We love to share what we’re learning with people who are interested in this amazing place that we’re studying.”

To ask a question of your own, visit www.todayinthegulfofmaine.com.

Community

Taking the Pulse of the Lobster Industry –

New England's lobstermen have enjoyed record catches for several years. However, a new report released by GMRI's Laura Taylor Singer and Dan Holland points to risk factors that may make it difficult for lobstermen to weather the current downward trend in lobster landings, especially when combined with rising costs for bait, fuel and mandated gear changes (sinking line). The report, *Taking the Pulse of the Lobster Industry: A Socioeconomic Survey of the New England Lobster Fishermen*, provides the first comprehensive look at the region's lobster businesses and the families who depend on them.



In-depth surveys were conducted with lobstermen across Maine, New Hampshire, Massachusetts, and Rhode Island in 2006. The report analyzes the resulting data on family demographics, household income, amount of time spent on the water, lobster landings, cost of expenses (bait, fuel, gear, insurance, etc.) and business financing. It considers other job skills, ownership of permits in other fisheries, health insurance coverage, and financial planning for retirement or for their children's educations.

These resulting insights, captured at a period of high landings and relatively low costs, may help fishermen understand where they are most vulnerable in the future. To further assist the lobster community during the potentially tough economic times ahead, GMRI will be hosting a series of pilot workshops in early 2009 focused on the fundamentals of financial and business planning.

Report Highlights:

- Although some lobster license holders are making substantial revenues from lobstering, the average net incomes of lobstermen in 2005 (after accounting for operating expenses) are not high.
- New England families, particularly those in northern area, are dependent on the health of the lobster fishery for the majority of their household income. This is especially true in Downeast Maine where there are fewer options for comparable occupations.
- Lobstermen lag behind others in the region in terms of percentage of health insurance coverage.
- Lobstermen are on par with other self-employed individuals when comparing retirement planning.
- Over half of active lobstermen use personal or family savings as a method to finance their lobster businesses. One in five use personal or family credit cards to fund their lobster businesses.

Full report found at

www.gmri.org/community/seastate/gmri_lobster_report_lores.pdf

Sea State 3.1 Lecture Series is sponsored by: 

- September 18:** *Advanced Composites Materials: From R&D to Maine Jobs*
Habib J. Dagher- Advanced Wood Composites Center, University of Maine
- October 9:** *Harnessing the Power of the Market to Promote Sustainable Fisheries*
Cathy Rohaim, University of Rhode Island
- November 13:** *How about Indigenous Innovation: How Small Places Can Change the World*
Alan Lishness, Gulf of Maine Research Institute
- Location:** Gulf of Maine Research Institute
Time: 7 pm to 8 pm, doors open at 6:30 pm
RSVP: Paty at (207)228-1625 or lectures@gmri.org

Harvesting Maine's Unique Resource

Please join the Gulf of Maine Research Institute for our ongoing public lecture series. Sea State 3.1 provides a unique opportunity to learn about the current challenges facing the Gulf of Maine ecosystem, as well as the communities and economies that rely on it, from leading experts in the region.

Sea State 3.1

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