

Tidings

Understanding and Supporting the Monkfish Fishery

Fishermen are wary as the New England Fishery Management Council considers a shift to catch shares in the monkfish fishery. The change might mean that fishermen would receive an annual allocation of fish, either individually or through a cooperative, rather than days-at-sea and daily catch limits. At the same time, there is uncertainty about whether monkfish from the Gulf of Maine to North Carolina is one stock or two. The Gulf of Maine Research Institute is assisting fishermen and managers to address these questions. GMRI Demersal Ecologist Graham Sherwood recently presented research suggesting that monkfish (*Lophius americanus*) may be one stock, although it is managed as two. Along with Benthic Ecologist Jonathan Grabowski, Sherwood has been collaborating with fishermen to tag and track over 8,000 monkfish since 2007. They use tags that record release and recapture locations, as well as data storage tags that also record time, temperature, and pressure every ten minutes. Sherwood, who serves on the council's Monkfish Plan Development Team, said:



Curt Brown, GMRI Research Technician and Lobsterman, is part of the monkfish tagging program team.

“It’s been invaluable to work with fishermen to obtain monkfish movement data and then convey information directly to managers. This program is likely to have major implications for the fishery.”

GMRI’s Community team is also involved in the exploration of a monkfish management change. Our staff surveyed fishermen and participated in council meetings, providing information on the steps needed to develop and adopt a catch share system. If the council decides to move forward, GMRI is poised to hold a series of meetings for fishermen and managers to discuss and refine proposals outside of the formal council process.

PowerHouse

Students Learn About Household Energy Use

Students in Guy Meader’s classes at Augusta’s Cony High School were among the first to experience *PowerHouse*, the Gulf of Maine Research Institute’s new STEM (science, technology, engineering, and mathematics) education program for Maine’s 7th and 8th graders. They used their laptops to analyze real home energy consumption data that had been collected using smart meters.



“I saw my students build an understanding of the seemingly invisible power of electricity. They had the chance to apply critical thinking skills to a real investigation and really met the challenge!”

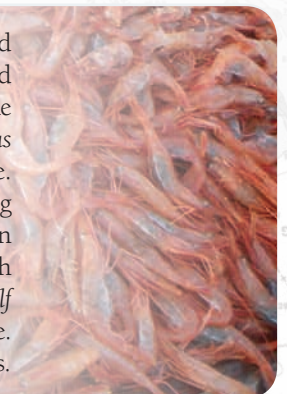
PowerHouse has potential to help Mainers save on electricity. To accelerate its launch, Google Inc. Charitable Giving Fund of Tides Foundation awarded GMRI a \$100,000 grant. Twenty-three teachers from across the state participated this year, and more will take part in the coming school year. GMRI President Don Perkins reflected:

“*PowerHouse* leverages 21st century technology to help Maine develop its role as a national education leader. Science and math will become personally meaningful as students challenge themselves, and their families, to understand and reduce electricity use in their homes. The jobs and environmental challenges of tomorrow demand that our next generation be prepared to solve real world problems and *PowerHouse* puts students in the driver’s seat.”

PowerHouse partners include GMRI, Maine Mathematics and Science Alliance, Maine Energy Education Program, Maine Learning Technology Initiative, Natural Resources Council of Maine, Maine Dept. of Education, Maine Dept. of Environmental Protection, Central Maine Power, and Bangor Hydro Electric Company.



Gulf of Maine Responsibly Harvested™ Northern Shrimp – This summer, seafood shoppers will find northern shrimp, cod, haddock, and lobster products that have been verified by the *Gulf of Maine Responsibly Harvested™* program. Purchasing these products supports the long-term health of the region’s fisheries and fishing communities. Northern shrimp (*Pandalus borealis*) are harvested in the winter in the clean, productive waters of the Gulf of Maine. They play an important role in the food web, feeding on plankton and invertebrates along the seafloor. They are prey to many finfish, including cod, redfish, and silver hake. Northern shrimp fishermen have developed highly effective trawl gear that keeps unintended bycatch of groundfish to a minimum (usually just 1-2% of total catch). Watch for Cozy Harbor’s *Gulf of Maine Responsibly Harvested™* northern shrimp in the frozen section of your grocery store. GMRI is also working with chefs to feature this plentiful but often under appreciated species.



Working with Fishermen to Improve Profitability – As New England’s fishermen face the challenges of a changing industry, they are working hard to improve the profitability of their businesses. GMRI Sustainable Seafood Program Manager Jen Levin and Fish Behavior and Gear Technologist Steve Eayrs recently held a two-day Environmental Management System workshop in Beverly, Massachusetts. Fishermen and groundfish sector managers explored how to decrease the costs of fishing while improving the marketability and profitability of their catch. Topics included fuel savings, improved catch value, quality handling, reduction of environmental impacts, financing, and marketing. Funded by the Northeast Consortium, the workshop was free to participants. Many came in thinking they may not learn anything new, but a fisherman said:

“I didn’t think I would like this or get much out of it, but I was wrong. This has given us a vehicle to work through some of the issues facing the industry — issues that we have some control over. GMRI’s role as an enabler has been extremely helpful. Every single fisherman I spoke to is full of ideas that have never been brought to fruition. Maybe we now have access to the tools to work on some of these ideas.”



Data Resources for Recreational Boaters – Boaters rely on a complex system of weather and water data coming from multiple sources at any given time. GMRI’s Ocean Data Products team works behind the scenes to make this type of data accessible and easy to navigate. It requires an understanding of the science as well as a pulse on the needs of boaters. After developing multiple web applications that provide ocean data in the Northeast, the team was selected by the Great Lakes Ocean Observing System to develop a new application for recreational boaters in the St. Lawrence River area of upstate New York. The first phase is now underway, with GMRI developing content and holding workshops at several locations along the St. Lawrence to assess the needs of the region’s recreational boaters. Information of particular interest includes water level, weather and river conditions, amenities, and river access. The team is also gauging interest in real-time vs. forecast data, and the preferred mechanisms for delivery, such as website, email, or text. GMRI will work with the Great Lakes Ocean Observing System, New York Sea Grant, NOAA Great Lakes Environmental Research Lab, and a team of boaters to test the product before launching it this fall.

New Citizen Scientists Join Vital Signs Community – Volunteers from the Kezar Lake Watershed Association and the Lovell Invasive Plant Prevention Committee now know how to apply scientific tools and methods in their fight against invasive species. This expertise came to Lovell thanks to the first train-the-trainer workshop provided by the Gulf of Maine Research Institute’s Vital Signs team. Participant and organizer Lucy LaCasse said:



“Vital Signs has been an outstanding resource as we’ve launched our Eyes on the Water campaign. We discovered that all we need to engage with Vital Signs is curiosity, a digital camera, and access to a computer.”

Sea State 6.1

Public Lecture Series

Four Fish and a Movie – The Gulf of Maine Research Institute’s Sea State Public Lecture Series provides a unique opportunity to learn about the current challenges facing the Gulf of Maine ecosystem from leading experts in the region. Our next series begins in July, featuring talks on alewives, tuna, lobster, and salmon, and a screening of “The Fish Belong to the People,” directed by William Hyler.

www.gmri.org/seastate

Read more online at www.gmri.org/lovell