

# Tidings

Gulf of Maine Research Institute Newsletter

FALL  
2009

## New Director of Community

The Gulf of Maine Research Institute is delighted to introduce Kate Burns as our next Director of Community Initiatives. Raised in Northern Ireland with over 22 years experience in rural economic development, Kate brings extraordinary depth and sensitivity to her new position.



“I am delighted to join GMRI. The partnership, convening and innovation culture of the organization, coupled with its clear vision and professionalism, really attracted me to the position. I hope to combine my professional skills and knowledge with my passion for all things maritime to help facilitate real change for coastal communities.”

Kate holds a B.S. from the Open University and a M.S. in Rural Development from Queens University in Belfast. She lived for years on Rathlin Island, off Northern Ireland, where she raised four boys among the island's fishing community (one son is a fisherman, one is a ferry skipper!).

From 2003-06, Kate served as CEO of the Irish Central Border Area Network (ICBAN), a cross border municipal government organization that implemented innovative community and economic development in eight border counties – three in Northern Ireland and five in the Republic of Ireland. Since leaving ICBAN, Kate has been consulting, with a focus on rural development and business innovation in Ireland, and most recently, carrying out strategic planning for the Cyprus government with respect to re-unification of Cyprus.

## 2008 Annual Report Available Online!

Check it out: [www.gmri.org/AR2008](http://www.gmri.org/AR2008)

Videos, financials, a message from our president, and more!

**GMRI Launches *Lobster: Untold Tales*** – Over the past four years, more than 38,000 fifth and sixth graders have solved the *Mystery of the X-Fish* during their *LabVenture!* visit to GMRI's lab in Portland. Our first *LabVenture!* visit of this school year was especially exciting. On August 28th, classes from Mars Hill and Easton in Aroostook County became the first students to investigate our brand new science content, *Lobster: Untold Tales*.

*Lobster: Untold Tales* puts fifth and sixth graders in the driver's seat to figure out why lobsters are relevant to Maine. The students study what lobsters eat, where they live, and how they are caught. They also work with live lobsters to study adaptations. Through a half-day, hands-on science investigation, students build a framework to better appreciate the intriguing life history and current resource management issues behind these iconic creatures.

## Research Moving Up the Watershed

Penobscot River dams will be removed in the near future, restoring sea-run fish to nearly 1,000 miles of river habitat. GMRI scientists Graham Sherwood and Jonathan Grabowski are working with USM's Karen Wilson and Theo Willis to capture a snapshot of relationships between predators and prey before this major restoration effort gets underway.

The GMRI/USM research team will measure what fish are currently eating using a novel scientific technique to analyze the chemical composition of their muscle tissue. These “isotope signatures” can then be compared to samples collected several years after the dams are removed. Will the dam removal change food availability for key species? Could an influx of alewives help recovering cod populations in Penobscot Bay? This study will verify whether predator species are taking advantage of increased prey populations.

Conducting before and after studies are critical to understanding the impact of conservation efforts. Funded by The Nature Conservancy, this project will provide invaluable data on how a river ecosystem changes and recovers following dam removal.



### In Your Words: Mike Denniston

Mike, a science teacher at Middle School of the Kennebunks, uses GMRI's *Vital Signs* program with his classes. Below he shares the value of this field science program and the connections it builds among Maine's 7<sup>th</sup> and 8<sup>th</sup> grade students and a growing community of scientists and citizen scientists. Working together they collect, analyze, and share essential environmental data across upland, freshwater, and coastal ecosystems.



“*Vital Signs makes science real and applicable to my student's daily life. Nothing replaces taking students out of the classroom to collect and then analyze their own data. Their data is meaningful because we share it with scientists and classrooms across the state to help with invasive species monitoring efforts!*

*I have been teaching for 36 years and Vital Signs has proven to be one of the best programs I have been involved with. Vital Signs helps students become responsible, contributing members of society, with an understanding that our ecosystems are complex and fragile.”*

**Sectors Advancing in New England** – In June, fisheries across the nation took notice of the New England Fishery Management Council's decision to allow groundfish fishermen to opt out of the failed days-at-sea management plan by joining harvesting cooperatives called sectors. This is an important test case for determining whether placing limits on the amount of fish caught rather than the level of fishing effort can achieve much-touted economic and conservation gains.

There is a lot of work to do before the changes take effect in May 2010. GMRI's role has evolved from information broker to on-the-ground technician. GMRI will be working with fourteen sectors from Maine to Rhode Island to meet tight administrative deadlines, facilitate efforts to implement enhanced dockside and at-sea monitoring, and provide resources to fishermen who are forming new partnerships while they are developing strategies to both sustain groundfish populations and increase profits.



As part of GMRI's *LabVenture!* program, students from Aroostook County use cameras to study lobster and fish behavior in the Cohen Center's benthic tank. The tank displays a dynamic East Coast aquatic ecosystem with lobsters, sculpin, and sea ravens defending their underwater territories.



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