



Is it summer yet Mom?

# The Coastal Current

A Quarterly Newsletter Keeping You Current on Marine Protected Areas Issues in Your Community

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## MUN Science Team in Eastport for the Summer

A team of Memorial University scientists are doing lobster research in and around the Eastport Marine Protected Areas this summer. They hope to shed some light on several key questions, such as:  
—How is the size structure of the adult lobster population changing over time?

—How do local ocean currents affect lobster larvae while they drift in the water column?  
—How are lobster larvae using their limited ability to swim up and down in the water column to determine where they settle?  
—Where are the “hot-spots”

for baby lobster? (That is, where are the greatest numbers of baby lobsters settling to the bottom?)

Much of this research will build on information that has already been collected by fishers and scientists. In addition, new research techniques that have been proven successful along the east coast of the U.S. and Atlantic Canada will be used in Eastport to examine the distribution of “baby” lobsters

Sampling to collect information on size and reproductive status of adult lobsters inside the closed areas is already underway. The sampling method used inside the closed areas is identical to the At-Sea-Sampling being done outside the MPAs by lobster harvesters Bill and Michelle Mercer, John, Phil and Flossie Rogers, Terry Travers and George Feltham.

Article continued on page 2



**A very young lobster - no bigger than a fingertip - must keep well-hidden from predators. It will feed on tiny invertebrates and scraps of food that fall close to its hiding place.** Photo courtesy of Dr. Richard Wahle, Bigelow Laboratory for Ocean Sciences (Maine, USA).

## A New Coordinator for Gilbert Bay MPA

Marilyn Penney has just begun her work as the new Community Coordinator for the Gilbert Bay MPA. Wayne Russell is settling into his new position with the Labrador Southeast Coastal Action Program but he will continue to be a wonderful resource person for the MPA. We wish him all the very best.

Marilyn grew up in Port Hope Simpson and spent her summers in Sandy Hook when the

fishery was in full swing. She's pleased and excited to take on the coordinator position and is looking forward to travelling around the Gilbert Bay Marine Protected Area and helping all the various projects to run smoothly.

It certainly looks like she will have a busy summer ahead of her—there's lots going on in Gilbert Bay. Corey Morris of DFO and Dr. John Greene will continue

their cod study in the marine protected area and surrounding waters, while Trevor Bell's research team will begin Phase III of the habitat mapping project. Joe Wroblewski also has further scallop research in the planning stages for this fall.

Marilyn is working part-time (in the mornings) and can be reached at: [gilbertbaympa@yahoo.ca](mailto:gilbertbaympa@yahoo.ca) or by telephone at 709-960-1010.



### This issue

MUN research team working in Eastport this summer pages 1 and 2

Gilbert Bay has a new coordinator page 1



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MUN Science Team in Eastport *continued from page 1*

Because sampling inside and outside the closed areas is being done the same way and at the same time of year (during the commercial lobster season) the size structure of the lobster populations inside and outside the MPAs can be compared. Over time, changes in the size structure (which means the number of lobsters in each size group on the scale) may give clues to the health of the population.

Studies will also be done on local ocean current patterns and larval distribution. Researchers will use marked grapefruit to gather information about currents in the Round Island MPA and the adjacent waters. Grapefruit are a good choice for drift studies because they are biodegradable, they float in the top meter of the water column as larval lobsters do, and are relatively unaffected by wind.

With help from local fishers, researchers will also tow a plankton net to study larval distribution. The numbers of

larvae caught in nets are often very small, but enough to tell us something about larval drift. Data collected this year will be combined with data collected in the past to start building a better understanding of ocean current patterns and larval drift around the Eastport MPAs.

In order to find the locations where the greatest number of baby lobsters settle to the bottom, two types of sampling will be used—settlement trays and suction sampling.

Researchers will deploy 50-60 settlement trays near Round Island. The exact locations are not decided yet, but will be based on surveys of the bottom and suggestions from fishers. Settlement trays are modified wire lobster traps, lined on the bottom and three sides with a fine mesh. They are filled with tennis-ball to grapefruit-sized cobble (this type of rocky bottom is the most favored by baby lobsters). The trays will be set on the bottom in and left in the water from late July to late October.

Towards the end of October, larval lobsters in the water column begin to search for a good place to settle on the bottom. Lobster larvae that settle inside the settlement trays will be counted, measured, and released alive in the same location.

In addition to settlement trays, baby lobster abundance will be measured by divers using an “air-lift suction sampler.” Lobsters collected with the suction sampler will also be counted, measured, and released alive.

This summer’s research in the Eastport MPAs depends on the collaborative efforts of several groups. Research efforts are coordinated by MUN Research Assistant, Kate Jones, and carried out by four summer students—Tannis Milley, Chad Brinston, Don Saunders, and Esther Keddie—and one Ph.D. student, Victoria Burdett-Coutts. Researchers rely on local fishers to provide advice on sampling locations and methods, to take them out in boat, and to deploy sampling equipment. The MPA Program of DFO Oceans Branch and MUN’s Ocean Sciences Centre are providing funding, as well as technical and administrative support.

If you have questions or comments on any of the research taking place in the Eastport MPAs this summer, feel free to contact Kate Jones at 677-3972 or 754-9508, or email at [kmjones@mun.ca](mailto:kmjones@mun.ca).

The research team would like to thank Crossroads Contracting Ltd. in Traytown for generously donating the rock used to construct the settlement trays.

Article by Kate Jones



Divers use a suction-sampler to look for newly-settled lobsters. Photo courtesy of Dr. Richard Wahle, Bigelow Laboratory for Ocean Sciences (Maine, USA)