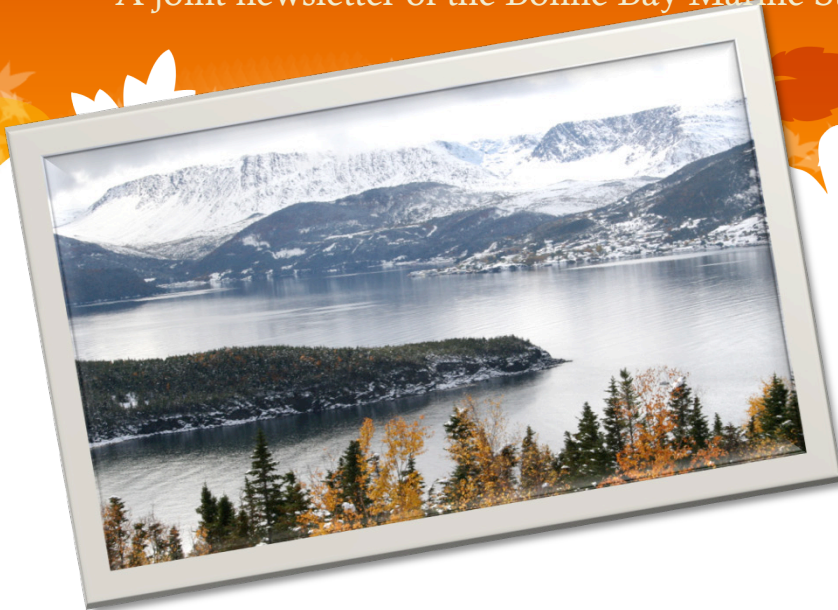


The

Western Shorefast

A joint newsletter of the Bonne Bay Marine Station and the CURRA



Bonne Bay Marine Station

Fall comes to Bonne Bay and life at the Bonne Bay Marine Station slows down from its hectic summer pace. Seven Marine Biology courses were taught this spring and summer. Numbers of students attending undergraduate field courses in Bonne Bay increased by 89% over 2008.

Three undergraduates were hired in early May for our public programming. Interpreters completed a two week training and familiarization with the Gros Morne area in mid May. Two high school students joined the program at the beginning of July for the peak season.

Several researchers from other Universities visited the station and used it as a base for field studies in microbiology, slipper limpets and marine invertebrates.

The OSC divers came out in early May to collect creatures for our live displays. We have added a new CURRA research display to the public area, as well as a 4-panel fibre art display depicting the life of the Atlantic salmon. This is on loan courtesy of two local artisans Clara Jenniex and Maria Voitk.

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Loading mackerel at the wharf in Norris Point



CURRA folks

Barbara Neis

Barbara Neis (Ph.D.) has been carrying out research on the Newfoundland and Labrador fisheries for more than thirty years. She is the principal investigator on the CURRA, responsible for overall program leadership, chairing the executive, reporting to funders and to the advisors. She also supervises staff and several CURRA graduate students, is co-lead on the governance and wolffish components of the CURRA, and has played a leadership role in identifying and developing new research and outreach initiatives essential to the long-term sustainability of the CURRA initiative. Barbara is a University

Research Professor in the Department of Sociology and a Senior Research Associate at SafetyNet, Memorial University of Newfoundland's Centre for Occupational Health and Safety Research. Dr. Neis received her B.A. in Sociology and Psychology from Glendon College, York University in 1975, her M.A. in Sociology from Memorial University in 1980, and her Ph.D. in Sociology from the University of Toronto in 1988. Her research focuses on the relationship between work, environment and health in rural and remote contexts. She has researched many aspects of the Newfoundland and Labrador fisheries and has collaborated with researchers in India, Norway and Europe.

Janet Oliver

Janet is the part-time Administrative Officer with the CURRA. She works closely with the PI (Barb Neis) and Executive Committee members (Sean St. George and Bob Hooper) in managing the financial and administrative activities of the project. She is responsible for processing/monitoring budgetary expenditures and for monitoring compliance with ethics and other university and SSHRC requirements. Janet also assists the Executive in preparing contracts and reports for various funders and committees. She organizes meetings, seminars and other CURRA events and prepares summary draft reports for most of these. She works closely with graduate students helping them prepare for fieldwork and making sure all safety and other required documentation is in place. Janet has been working at Memorial for over 25 years, initially with the former Extension Services and 'Decks Awash' Magazine and later with the Institute of Social and Economic Research (ISER). For the past 10 years she has been working part-time on large, grant funded research projects such as the 'Eco-Research Project', the 'Coasts Under Stress Project,' and now the CURRA.



Ben Jackson

Ben Jackson is working on the St. John's campus as a Research Assistant with SafetyNet. He is also working on the Safe Wharves Project, a study of safety on fishing wharves in rural Newfoundland. Ben works with the CURRA as web developer and occasional graphic designer of posters and other materials.



Joan Cranston--Meeting Coordinator

Joan was hired in August to coordinate the CURRA public meetings and workshop in Bonne Bay in late October. She is a resident of Norris Point, where she is an active volunteer for the Bonne Bay Cottage Hospital Heritage Corporation and the Tales, Trails and Tunes spring festival. Joan is a registered physiotherapist.



Fiona Cuthbert moves east

In September, Station manager Fiona Cuthbert accepted a one-year position with the Biology Department of Memorial University in St. John's. She will be teaching full-time in the Biology labs, preparing students for careers in the world of marine science.

The staff at the station, returning biology students and her many friends in Norris Point and around Bonne Bay greatly miss her lively humour and tireless energy. We wish her the best in this new direction, and we hope she will return to Bonne Bay soon.





Kristen Lowitt—Food Security

Kristen Lowitt, Interdisciplinary PhD. candidate prepared a report from research she conducted on the west coast this summer. In an effort to paint a picture of the community food system, she compiled a food resource inventory, undertook food costing in eight grocery stores throughout the region, and completed interviews with community members from different positions in the food system.

The full report, *A Community Food Security Assessment of the Bonne Bay Region*, is available in PDF format on the CURRA web site (www.curra.ca). It is organized into six sections. This first section introduces key concepts and frameworks and describes the assessment process. Parts II, III & IV present the findings from the food resource inventory, key informant interviews, and food costing. Part

V integrates these findings to identify key strengths and weaknesses of the community food system. Lastly, Part VI presents innovative examples of community-based fisheries and food security projects from other communities in Newfoundland, the U.S. and Europe.



Diet and Depression

Could the right diet help you prevent depression? Eat like a Spaniard.

A recent *New York Times* article revealed the results of a recent study concluding that eating a diet containing mainly fish, fruits and vegetables, may not only be good for your physical health but good for your mental health as well. According to the article, a study of over 10,000 Spaniards followed for almost four and half years on average found that those who adhered most closely to this kind of diet were 42 percent to 51 percent less likely to develop depression than those who did not stick with the diet.

To benefit from these results, make sure your diet is packed with fruits, vegetables, legumes (beans and peas), nuts, olive oil, and fish!

Ian Murphy in St. Paul's



Conservation Corps intern and CURRA researcher Ian Murphy spent some time this summer in St. Paul's following up on some of the insights and recommendations that emerged from Coastal Connections and CURRA research in that community last year and from a local community meeting and multi-stakeholder workshop. He talked to people in the community about the ecological, economic, social and cultural importance of St. Paul's Inlet and wrote a report on his findings that is presented in PDF format on the CURRA web site: [*Strategies and Resources for Integrated Community Sustainability Planning*](#).

Ian's report will help the community of St. Paul's develop its community sustainability plan and is of general relevance to other fishery-dependent coastal municipalities currently undergoing this exercise. The report concludes that St. Paul's has the community resources to remain sustainable as the province continues to change and develop. Ian emphasizes that developing linkages between community assets and maximizing the benefits of regional cooperation are two areas of priority for prosperity in the near future. By developing a municipal plan according to the standards of integrated community sustainability planning, St. Paul's can proceed towards achieving its community goals and community vision. Ian maintains that the choice of direction for community sustainability planning should remain with the people of St. Paul's, their municipal council and other community organizations. Public inclusion is required for integrated community sustainability planning, and the vision for how St. Paul's should look in 10 or 20 years belongs to the public. His report shows that there is a wealth of potential for community development in St. Paul's that has only just begun to be explored. As local initiatives are organized to harness this potential, an integrated approach to community planning can help St. Paul's ensure that they are developed sustainably. The report contains a list of resources of potential use for the development of an integrated sustainability plan.

Ian's work was supervised by Ratana Chuenpagdee and Barb Neis and he received extensive and useful guidance from members of his steering committee, Sean St. George, Monica Pittman and Anita Best. Since completing his Conservation Corps internship with the CURRA, Ian has begun a thesis on community sustainability planning for rural coastal communities in Newfoundland and Labrador. His research is part of the international Coastal Network (ICN), supervised by Ratana Chuenpagdee. The ICN, housed at Memorial University of Newfoundland as part of Ratana Chuenpagdee's Canada Research Chair program on Natural Resource Sustainability and Community Development, aims at building collaboration and encouraging exchange between researchers with different backgrounds and training, to assist communities and policy-makers in progressing towards coastal sustainability, community resilience and good governance.

Post-doc Fellowships

A post-doctoral fellowship will be available in early 2010, to develop the science basis for evaluating several conservation initiatives currently practiced in Newfoundland lobster fishing. These practices include an officially designated Marine Protected Area, several locally initiated closed areas, v-notching, and release of large lobsters. The project will focus on reproductive value, an established concept in population biology that is rarely applied to fisheries. This is an opportunity to further develop the quantitative basis for evaluation of risks and policy in commercially exploited populations of long-lived marine species. See the article on our web page for detailed information. [Fellowships](#)

CURRA News Bytes

Wolffish on the West Coast

Jennifer Dawe, a Master's Candidate in Environmental Science, along with Melanie Quinlan, an intern working through the Conservation Corps and a recent graduate of Memorial University, have spent the summer in communities along the west coast of Newfoundland interviewing fish harvesters. These face-to-face interviews, which will be included in Jennifer's Master's thesis, explored local wolffish abundance, distribution, and biology. Using mapping software they found common areas for wolffish in fisheries along the Northern Gulf of St. Lawrence. Jennifer has also been analyzing data from the Sentinel fisheries along the Gulf in hopes of reconstructing relative trends in wolffish populations in the last decade. Both Jennifer and Melanie would like to thank all the harvesters that we talked to and the harvesters that weren't able to do interviews but gave us positive feedback!



Rural Youth & Quality of Work

Working as a research assistant for Dr Nicole Power of the "Rural Youth and Quality of Work" component of CURRA, Ted Norman spent the spring collecting data with community partner Vanessa Farrell of the L.E.A.P. Centre in Port aux Basques. There, he conducted six focus groups with 19-24 year old youth in Port aux Basques and surrounding area. The focus groups covered a wide range of work-related issues including employment opportunities for young people in rural coastal Newfoundland, work place safety, and connections between work, recreation, and sense of community. Ted was granted a Post-Grad Research Fellowship and will return to the area this fall to continue his work with young people.



TNL holds first reading of new play commissioned by the CURRA

Theatre Newfoundland Labrador held a three-day workshop and reading in Cow Head this July of the first draft of *The Oracle of Gros Morne* by Berni Stapleton and received some valuable feedback from invited guests.

Four actors joined director Jeff Pitcher and playwright Berni Stapleton to read the play and discuss the text, focusing on character development and story arc. And how the work related to the fishery and community recovery. The piece has dramatic and theatrical potential but needs to further explore the concept of recovery. Berni is now embarking on more research to infuse the story with more concrete and real proof of actual instances of recovery in the eco-system as well as in affected communities along the coast. The playwright feels that a good portion of the February workshop will be focused on fusing the two worlds.

CURRA News Bytes

Brook Trout and Salmon

Natalie Alteen is an undergraduate in Environmental Science at Sir Wilfred Grenfell College.

Deer Arm Brook and Western Brook in Gros Morne National Park are known to be important for both brook trout and Atlantic salmon. Her research project (supervised by Dr. Christine Campbell, Sir Wilfred Grenfell College) is part of a larger Memorial University project (coordinated by Dr. Ian Fleming with the Ocean Sciences Center) looking at movement of brook trout in Deer Arm Brook, Western Brook, and associated estuaries. Her project focuses on ectoparasite abundance on brook trout.

Ectoparasites are tiny, naturally occurring organisms that live on the outside of other animals or plants, gaining nutrition from the body fluids of the host. Ectoparasites such as sea lice and other copepods can cause erosion



Natalie Alteen and Michelle Caputo

of skin tissue in trout which may lead to infections and osmoregulatory problems. This can lead to increased mortality levels in salmonid populations. She is interested in monitoring the number of the most common copepod parasite *Salmincola edwardsii* to see if abundances are high or low relative to other areas in Canada.

Brook Trout Migrations and the Recreational Fishery

Michelle spent the summer in Gros Morne National Park studying brook trout as they migrate to sea. She set out 7 receivers around the Eastern Arm of Bonne Bay that would be able to detect fish migrations. She then surgically implanted trout coming out of Deer Arm Brook with devices that send out a signal to the 7 receiver devices. Using this technology, she was able to track where trout go at sea and the habitats they exploit during the summer months. She also collected trout heads by fishing and from local fishermen in Bonne Bay and Western Brook Estuary. The heads were dissected to obtain the ear bone, called the otolith. She will analyze the otoliths to



provide information about how often trout in the area have gone to sea and at what age they made these migrations. She can also determine whether the mother of the fish had ever gone to sea. As a second part of her project, she has been surveying trout fishermen in the Gros Morne area to get information on changes in the fishery over time and to gather opinions on management in the area. Currently, she is compiling all the data obtained and is analyzing and writing up the results.

CURRA News Bytes

Deep-Sea Corals

In the past few years there has been an increased interest in deep-sea corals in Atlantic Canada due to the impacts of bottom fishing on deep-sea coral ecosystems.

Bottom-fishing threatens deep-sea coral in terms of mechanical damage, habitat alteration and coral by-catch. Despite increased awareness, little is known about the deep-sea corals in the Northern Gulf of St. Lawrence.

Researcher Emile Colpron is using a combination of DFO survey trawl records, fisheries observer by-catch records and local ecological knowledge (LEK) to map the distribution and assess the conservation status of deep-sea corals in the Northern Gulf.



Emile Colpron

Erin Stevens



Zooplankton

Erin Stevens, a graduate student in Biology has just joined the CURRA project. She spent six weeks in July and August and completed her first field season of zooplankton sampling in St. Paul's Inlet. Zooplankton are microscopic, floating creatures related to crabs that are important in aquatic food webs.

Erin was based up in the town of St. Paul's and went out on the inlet once a week with local fisherman and tour boat operator Craig Payne, usually very early in the morning to avoid the winds. She collected samples from four locations within the inlet using tow nets.

The temperature, depth, and salinity of each sampling site were also measured. These data will allow her to assess the zooplankton abundance and biodiversity within the inlet, relating to the abundance of fish in the larval stages. She will also be sampling freshwater drainage and zooplankton drift into the upper inlet region next summer.

Fishing Matters

Individual Fishing Quotas

Daniel W. Bromley, Anderson-Bascom Professor of Applied Economics at the University of Wisconsin has written a thought-provoking article in the journal *Fisheries* (*Fisheries* 34:280-291). The article is entitled *Abdicating Responsibility: The Deceits of Fisheries Policy* and in it Bromley argues that Individual Fishing Quotas (IQs or IFQs) are not beneficial to fishers or to conservation of resources.

He outlines what he calls the five core deceits at the basis of claims of the beneficial outcomes arising from IFQs. These deceits are: (1) over-fishing can be blamed on missing property rights; (2) private ownership is necessary and sufficient for socially beneficial stewardship; (3) IFQs must be of infinite life and freely tradable in order to produce the desired efficiency and stewardship properties; (4) IFQs are private property; and (5) IFQs are necessary and sufficient to produce efficiency, and to maximize resource rent, in a fishery.

He goes on to show each of these claims to be incoherent and then offers a brief outline of a national fisheries policy that acknowledges the clear need for allotted catch shares. He explains that an IFQ fishery will require careful and attentive management by governments. He also explains the economic logic behind the idea he proposes that fishing firms should pay a royalty share (resource rent) on the fish they catch and sell.

The entire article is available on his web site <http://www.aae.wisc.edu/dbromley/>, along with several other articles on fisheries and economic policy.



Intervale Placemat

Faced with the question: What can people do to help with the recovery of Atlantic Cod in Newfoundland and Labrador waters? Intervale staff chose to begin the dialogue at the dinner table. They launched a strategy in 2009 with the objectives to encourage constructive dialogue, highlight positive actions, and inspire a vision for recovery.

Working with CURRA, DFO fisheries researchers, harvesters, resource managers, and a local artist from Labrador, Intervale developed a placemat about Atlantic Cod and printed 100,000 copies. They distributed 95,000 of them among 30 popular family restaurants (e.g., Irving/Circle K, Ches's Fish and Chips, and family-run establishments) from Labrador to the Avalon Peninsula, timed according to the commercial fishing and recreational groundfish fishery seasons.

In a sample of 30 restaurant patrons at six restaurants, 70% reported having read the placemat and 55% claimed an increase in knowledge, particularly about cod growth and reproductive capacity. One-half of those dining in groups reported some discussion. Meanwhile, restaurant demand for additional placemats exceeded the supply. Living memory of large cod and of overall abundance is vital to the creation of a community vision for cod recovery.

Cod Spawning in Bonne Bay

Inshore cod are helping to rebuild the fishery in Newfoundland and Labrador. Trinity Bay in eastern Newfoundland, Placentia Bay in southern Newfoundland and Gilbert Bay in southeast Labrador are known to be homes to local stocks of Atlantic cod. Along western Newfoundland there have been no studies of cod living in inlets and fjords like those of Bonne Bay, but CURRA researchers are now working with local fish harvesters to determine if Bonne Bay is a nursery ground for Gulf cod, and whether or not Bonne Bay is home to a local cod stock.

Arnault Le Bris, from Brittany on the west coast of France, is a doctoral student at Memorial University, studying the “homing to spawn” behaviour of Gulf cod. Like Atlantic salmon returning to their natal stream, Atlantic cod may repeatedly return to the same bay to spawn. Arnault was spending time last summer around Bonne Bay looking for female cod with ripe gonads or “britches”.

With the help of Norris Point fisherman Keith Reid, Arnault was able to photograph gonads of Atlantic cod at different stages of maturation, including ripe gonads (picture 1). Interestingly, Arnault also photographed ripe gonads of rock cod in Bonne Bay (picture 2), suggesting that both rock cod and Atlantic cod spawn during late June-early July in the bay. Unlike the britches of Atlantic cod (picture 1), the britches of rock cod are blackish in coloration (picture 2). But they are still good to eat, fried up!

Arnault will be back in Norris Point this fall to look for juvenile cod. If spawning in Bonne Bay was successful this past summer, there should be small Atlantic cod and rock cod a few months old, living among the seaweed and cobble a short distance off the shoreline.

So, you may see Arnault around Bonne Bay

with a beach seine and looking for baby cod. His research will be very important to Bonne Bay fishers in the coming seasons.



Picture 1: Ripe gonads of Atlantic cod (*Gadus morhua*)



Picture 2: Ripe gonads of rock cod (*Gadus ogac*)

Globalization, fisheries and recovery: update

Peter Sinclair

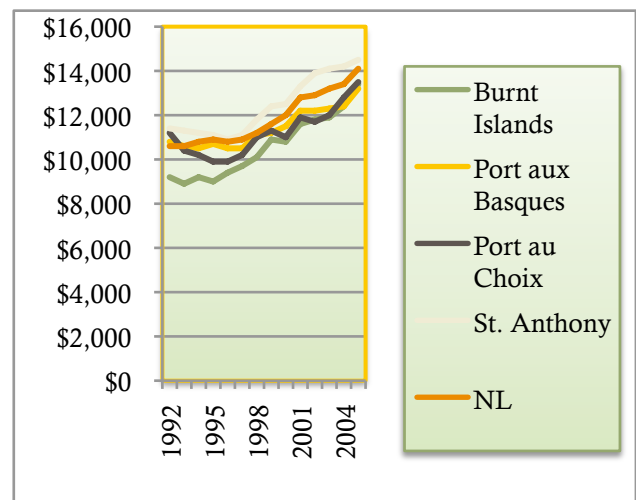
This section of the CURRA is trying to answer how we can best understand the current situation and the prospects of fishing dependent communities. How have they survived the collapse of the cod fishery? Our mandate thus extends from the fisheries to the communities. In October 2008 and May 2009 we met with approximately 60 people in the three communities of Burnt Islands, St. Anthony and Port au Choix. For Burnt Islands we also focused on Port aux Basques because of the close links between them. We are combining this information with the census and other secondary sources. Here are a few preliminary observations.

Although Burnt Islands-Port aux Basques as a whole appears to have stabilized in the last few years in terms of employment and population, the fishery now has a small role in the area and small-boat fishers are struggling to survive given the low prices for their lobster in the current markets. This is the challenge of the US market at present. Also, the Burnt Islands area no longer has a winter cod fishery. In the future, if the cod stock can rebuild, there may be opportunity to increase value based on the long line technology, perhaps with eco-labelling playing a part. This challenge of finding ways to increase returns is common to all areas. They are not helped at present by Marine Atlantic's new policy that two days notice is required for a shipment. This endangers the quality of fish getting to market because shipments cannot be timed perfectly.

In general, data on incomes show that all communities we studied have improved substantially from the low points of the mid-nineties. Some fishers have recovered by focusing on shellfish plus other species when available. Part of the improvement in incomes is unfortunately the result of the decline in population that all communities experienced as

out-migration reduced the pressure on local opportunities. Part is also due to increased reliance on seasonal employment elsewhere or long-term, long distance commuting. Some work in the Alberta oil patch, others on the Great Lakes boats. Still others find employment in urban Ontario or as home care workers in Nova Scotia. This enables families to stay in the area, maintaining communities. However, this strategy is vulnerable to downturns in the wider economy, as happened this year.

The following graph illustrates the patterns of family income in four west coast communities, compared to the provincial norm.



Bonne Bay: A Treasure and a Resource

The CURRA held a series of meetings and presentations in the Bonne Bay communities of Woody Point and Norris Point from October 27-29. People from all the communities in Bonne Bay were invited to celebrate the Bonne Bay Marine Station's fortieth birthday, to hear about the research that has been going on in the area and to discuss the issues facing them and their communities. High school students attended special afternoon presentations. The Norris Point Community radio Station VOBB was on hand to broadcast the meetings and run webcasts for those who could access the transmissions on the Internet. Those who came enjoyed the delicious local food and fine entertainment. A report on the meetings is being prepared by coordinator Joan Cranston and will be available on the CURRA web site in the coming months.



Photos by Sheldon Stone and Anita Best

Bonne Bay Gathering



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