

The

Western Shorefast

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



Autumn has truly arrived on the west coast: the potatoes are dug, the carrots and beets are almost all taken in, and Wayne's Bakery is on its winter schedule.

Congratulations to the Red Ochre Board, the CURRA and the GNP Heritage Network which has been chosen by the Province to participate in a 3-year heritage pilot project. This is a unique opportunity for heritage organizations on the Great Northern Peninsula to lead the way in developing individual heritage organizations and the regional cluster as a whole. Mark Lamswood, Business Officer for Red Ochre, says: "We hope to create a "blueprint for success" for other regions in the province to emulate." Stay tuned for more information.

There are several workshops coming to the west coast this fall:

1. Opportunities for Sustainable Livelihoods in the Southwest Coast Lobster Fishery will take place on November 5 (Bonfire Night) at the Hotel Port aux Basques. To register contact Janet Oliver at joliver@mun.ca or 709 864 7551.

2. Climate Change and how it relates to the Northern Peninsula will be discussed in Hawke's Bay on November 18 and in Norris Point at the Marine Station on November 19. Please contact Regina Rumbolt at: info@torrentriver.ca or 709 248 4066.

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Photos courtesy of Pierre LeBlanc

CURRA Researcher Pam Hall: Encyclopedia of Local Knowledge

My PhD research explores art as a form of making and moving knowledge. Traditionally, we have seen science as the main and often the only source of knowledge in western society, and my research will work to expand, deepen and make visible many others forms of knowledge that have been undervalued and consequently under-used. My work with CURRA will involve a major collaborative creative project that will take place in communities throughout Bonne Bay and the Great Northern Peninsula. It is called **Towards an Encyclopaedia of Local Knowledge** and hopefully will include participants from school children to elders, who will share their own knowledge to be included in the **Encyclopedia**.

Often, we think of “knowledge” in narrow ways that exclude many kinds of knowing and many kinds of knowers; my work as a scholar and an artist begins with the assumption that *everyone* knows something interesting and important about where they live and how they live there. My goal is to make that knowledge *visible* so it can be shared and used within and beyond the communities where it emerges.

Even children “know things” about their homes and communities, whether it be which are the fastest paths home or where there are good places to hide or where important things happened. Fishers and hunters know a lot about their local ecology but also about how to make things, find things, or interpret the weather. Some women know not just where to find berries, but how to preserve them: some know not just who their relatives are, but where they came from, and what their ancestors did in previous generations. Schoolteachers, convenience store workers, grandparents, mechanics, teenagers, union officials, waitresses, nurses, fishers, truck drivers, and carpenters, ALL have particular ways of knowing their place and know particular things about it.

Everyone has some expert knowledge and **Towards an Encyclopaedia of Local Knowledge** will gather ecological, social, historical, technical, material and cultural knowledge from voluntary “experts” up and down the west coast of the Province. It will build on, expand and extend some of the community-specific knowledge that already exists and make it visible, alongside new knowledge -so it can be shared and presented- honoured and celebrated.



History Counts on Memory- Pam Hall, 2008- from the series- *Things I learned from Eli Tucker*

Everyone who participates will be acknowledged as a co-author, and many kinds of traditionally “invisible” forms of knowledge will be included. For example, local and CURRA researchers have already begun to gather fishermen’s ecological knowledge (FEK), which, in the **Encyclopaedia** can be set beside other land and sea use knowledge about where things and creatures are in the landscape, and how they are used, prepared, preserved. It will also include knowledge about hand work and harvesting practices, about relationships and ancestry, about settlement patterns and knitting patterns, about boat building and gardening and pickling and preserving and where things come from and travel to. Essentially, it will contain all the local knowledge folks on the Northern Peninsula are willing to share!

I am excited to begin the search for women and men up and down the Northern Peninsula who will share their time and knowledge to help me create the **Encyclopaedia of Local Knowledge**.

For more information on my work as an artist, visit www.pamhall.ca and for more information, contact me directly at pamhall@nf.sympatico.ca.

THE CURRA WEBSITE

Recent additions to the CURRA website: www.curra.ca

- Video - Bonnie McCay reflecting on her decades of experience doing research on Fogo Island fisheries <http://www.curra.ca/features.htm>
- -- “An examination of the conditions and considerations for the sustainability of the Atlantic ground fishes (with an emphasis on cod).” A Power Point presentation to the Fisheries Resource Conservation Council (FRCC) meetings in Port aux Basques by Ahmed Khan and Barb Neis. <http://www.curra.ca/presentations.htm>
- “The results of Newfoundland and Labrador’s 2004 and 2006 Costs and Earnings (C&E) Surveys”, a Power Point presentation by Sharmane Allen. <http://www.curra.ca/presentations.htm>
- “The Habitats of 0-group Juvenile Atlantic Cod in Bonne Bay, a fjord within Gros Morne National Park” A report by Jeanette E. Bruce, David Schneider and Joseph Wroblewski <http://www.curra.ca/reports.htm>
- Video – Evelyn Pinkerton discusses co-management as it is practiced in the fishery. Pinkerton is a maritime anthropologist who has integrated common property theory and cultural/political ecology to consider the role communities play in the management of adjacent renewable natural resources. She has played a key role in developing the theory and practice of powersharing and stewardship through co-management agreements. <http://www.curra.ca/features.htm>
- “A report on the Fishery-Tourism Forum” that was held on June 13, 2010 in Norris Point <http://www.curra.ca/reports.htm>
- “What New Insights can a Global Value Chain Analysis Give us into the Crisis in Newfoundland and Labrador’s Northern Shrimp Industry?” A power point presentation by Charles Mather Professor, Department of Geography, Memorial University and Jóhan Símun Joensen Research Assistant with the CURRA Initiative. <http://www.curra.ca/presentations.htm>
- The first in the series of plain language summary reports on CURRA research is now available. *The effects of v-notching on reproductive potential in American Lobsters in Newfoundland* is a ‘plain language’ summary of Cathy’s Whiffen’s Biology honors thesis authored by Kat Goetting.

The CURRA “Rural Youth and Quality of Work” Research was ‘On the Road Again’ in the Month of May—Ted Norman

For the fourth time in less than a year, the CURRA “Rural Youth and Quality of Work” research team was on the road again. In the month of May, we travelled up and down the west coast of Newfoundland, with stops in Burgeo, Port aux Basques, Burnt Islands, Codroy Valley, Norris Point, Rocky Harbour, Trout River and Woody Point. In these communities, researchers from the team listened to young people (12-24 years) describe in their own words their quality of work and recreation experiences. In addition to surveys, interviews and focus groups, participants were also given digital cameras and asked to take pictures of the things that mattered most to them in their communities. This method, known as Photovoice, takes the researcher beyond the walls of the traditional interview setting and out into the community, where participants can represent their lived experiences through their own eyes.

Based on a preliminary analysis of the results of our research, there are several emerging themes that are of particular interest to the research team and to our partners. First and foremost, in contrast to previous research reports that have found rural coastal Newfoundland youth talk about their communities as having “nothing to do”, “nowhere to go” and “no good jobs”, we found that youth had deeply ambivalent relationships with their communities. Many youth, particularly younger boys (12-15 years), had very positive thoughts about the recreational opportunities offered in their communities. This sense of opportunity, however, seemed to wane as youth in their late teens and early twenties spoke less positively.

Young women in their twenties were the most critical of their local job and recreational options. Second, for many, positive experiences within their communities translated into strong and enduring connections to them. In other words, many youth remained steadfast in their commitment to live in rural Newfoundland, suggesting that its clean and natural beauty, strong social networks and lack of crime made it an ideal place to raise a family. Thus, while there were many youth who indicated that they would “get out” of their communities as soon as they could, a sentiment that was seemingly in greater prevalence in more rural locations, there was also a strong sense that many youth were prepared to make sacrifices to stay in the communities or come back. Third, and finally, many youth also articulated a deep sense of pride in their Newfoundland communities, particularly as seen through the eyes of outsiders or tourists.

One 14 year old girl explained, “it makes you feel good to see license plates from Florida here, to know that people come all the way from Florida to see our town, you know, this is where I live”. Indeed, the youth articulated powerful and deep bonds with the natural beauty of the Newfoundland landscape, insinuating, that it comforted and spoke to them. These bonds were beautifully captured in many of the photographs the participants took, as can be seen in the sample of their photographs we have included with this

COASTAL MATTERS

Step Zero to Fisheries Closures in Western Newfoundland—Presentation by Kim Olsen and Ratana Chuenpagdee

Where: Room 104, Rec Plex, Grenfell Campus

When: November 2, Lunchtime--12:30 to 1:30 PM

Photos courtesy of Ted Norman



A Tall Tale: The Fisherman and the Tourist

A boat docked in a tiny Greek island. After lunch, a tourist complimented the local fishermen on the quality of their fish and asked how long it took them to catch it.

"Not very long," they answered in unison.

"Why didn't you stay out longer and catch more?"

The fishermen explained that their small catches were sufficient to meet their needs and those of their families.

"But what do you do with the rest of your time?"

"We sleep late, fish a little, play with our children, and take siestas with our wives. In the afternoons we have a snack at the beach, or go into the village to see our friends at the Kafenio, drink a little Ouzo and play tavli. In the evenings we go to a taverna play the bouzouki, drink a little more Ouzo, sing a few songs, and break a plate or two. In other words, we have a full life."

The tourist interrupted:

"I have an MBA and I can help you! You should start by fishing longer every day. You can then sell the extra fish you catch and with the extra revenue, you can buy a bigger boat."

"And after that?"

"With the extra money the larger boat will bring, you can buy a second one, and a third one, and so on until you'll have an entire fleet of trawlers. Then, instead of selling your fish to a middleman, you can negotiate directly with the processing plants and maybe even open your own plant. You can then leave this little village and move to Athens, Paris or even to London; from there you can direct your huge new enterprise."

"How long would that take?" "Twenty, perhaps twenty-five years." replied the tourist.

"And after that?"

"Afterwards? Well my friend, that's when it gets really interesting," answered the tourist, laughing. "When your business gets really big, you can start buying and selling stocks and make millions!"

"Millions? Really? And after that?" asked the fishermen.

"After that you'll be able to retire, live in a tiny village near the coast, sleep late, play with your children, catch a few fish, take a siesta with your wife and spend your evenings drinking Ouzo and enjoying your friends."

Great Northern Peninsula Transportation Forum

A forum on transportation in the Great Northern Peninsula was held at the *Straits Arena, St. Barbe* on September 8th, 2010.

The forum was planned to discuss the findings contained in a report on the possible business opportunities resulting from the completion of the Trans-Labrador Highway. You can review the entire study on the Nordic Board website at www.nedc.nf.ca.

The two regional economic development boards (Economic Zone 6 and 7) on the Great Northern Peninsula, along with other partner organizations such as CBDC-Nortip, Innovation, Trade & Rural Development (INTRD), the Rural Secretariat NL, ACOA, and municipalities in the region organized this forum “for all stakeholders wishing to learn and/or have input on these emerging transportation business opportunities. The primary focus will report on the recent completion of the Trans Labrador Highway and its overall impacts on the Great Northern Peninsula as related to the road, marine and air transportation routes.”

Additionally, the forum wanted to “seek input towards developing both short and long-term strategic directions for the entire Great Northern Peninsula with respect to business development linked to transportation. Recommendations from the Forum along with the recommendations outlined in the Trans Labrador Highway Study will help shape an overall Transportation Business Development Strategy for the Great Northern Peninsula

moving forward in 2010 and beyond.”

The organizers sent the attendees a discussion document that spoke of opportunities to discuss: the transportation study; business opportunities and gaps; highway development, signage and webcams; high-speed Internet; emergency services and response; language services; and ferry-related topics, such as schedules, wharf improvements.

All of the presenters identified the following as major issues that will need addressing in the near future:

- High-speed Internet access
- Inadequate human resources for service industry and tourism operations
- Highway upgrading and development
- Improved ferry service to and from Labrador, especially in winter
- The impact of heavy trucking and increased traffic on the existing roads

Several presenters spoke of the eventual need for a fixed link between Labrador and the Island, outlining proposed routes and possible costs.

The meeting concluded with an invitation from Chris Mitchelmore to prospective and existing entrepreneurs to avail of the business planning services offered through the development boards and the Canadian Business Development Corporation. He encouraged entrepreneurs to work with existing networks, such as The Viking Trail Tourism Association and the Northern Peninsula Business Network.

Photo of
Conche
by
Pierre Le
Blanc



Fisheries Governance

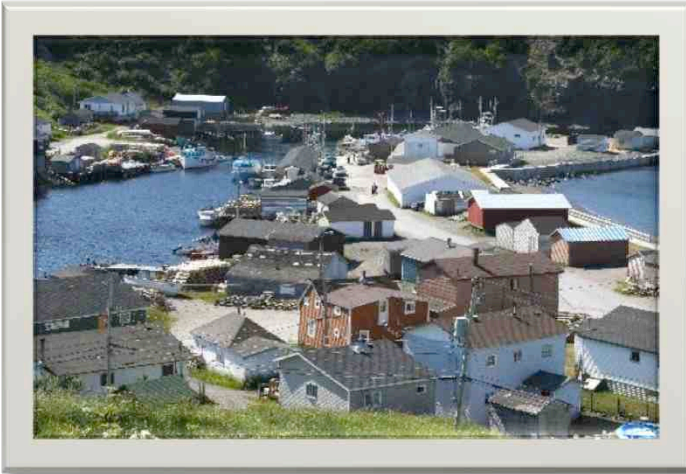


Photo courtesy of Pierre LeBlanc

Kurt has been doing a lot of historical, archival research about the history of the fisheries in the Bonne Bay-St. Paul's area. This summer he conducted interviews with those involved in the Trout River lobster closed area and in the St. Paul's Herring Protection Committee. His research contributes to the CURRA fisheries governance component, which is identifying the governance challenges in local fisheries and looking for potential solutions to those challenges. Examining both failed and successful attempts at local management can contribute to our understanding of the ways formal governing structures constrain and guide local options. This kind of research can also highlight ways in which local value systems, practices, and customs might serve as a basis for new, locally led approaches to marine governance in the future.

Some of the themes that emerged particularly strongly in the course of this research were the parallels between past and present conservation efforts. In St. Paul's many informants recalled a broad array of measures men and women from the community had practised to avoid over exploiting not only fish, but also the forests, fowl, and other game on which their survival depended. One common, and especially good, example of this seemingly general attitude in the past regards the collection of the eggs of seabirds. Not only were their self-imposed prohibitions on gathering too many eggs (children were advised only to take eggs from nests that contained three eggs, and then to take only one), but also on the species from which eggs might be taken. Duck eggs, for example, were off limits, as each egg represented a potential meal later in the year. In any event, perhaps the most important lesson from this field trip was that the attempt to close the herring fishery in St. Paul's inlet appears to have been an outgrowth of this more general system of values, a system rooted in close connections with and heavy dependence on local resources. It seems that despite whatever good intentions they may have had, regulatory agencies at the time missed an opportunity to build on deeply held convictions about responsible use of local resources, and the devastation of the local herring stock was the result.

The more recent efforts in Trout River suggest that even while the kinds of circumstances that produced the values which appear to have been so central in communities like St. Paul's have passed, the lessons have not been entirely lost on more recent generations. Taking their lead from local harvesters in this community, regulators have established two voluntary closed areas. For many harvesters, participation in the closure and being proactive about ensuring the future of *their* industry seems to have sparked a greater interest in such efforts. It also appears to have fostered a high degree of self-regulation, with harvesters steadfast that the closed areas ought to remain off limits.

The results of Dr. Korneski's work will be summarized on the CURRA website, www.curra.ca when they become available.

CURRA News Bytes

Congratulations to Jennifer Dawe

Jennifer has just been made a “Fellow” of the School of Graduate Studies at Memorial University.

The title of Fellow of the School of Graduate Studies is awarded in recognition of outstanding academic achievement throughout a graduate program. It may be awarded only once, during the last year of a student's graduate program.

Students awarded this distinction must have maintained a high academic standing, an 85 overall average in graduate program courses and demonstrated performance of special merit in the graduate program.



Her research has also included questions about small-scale forest ownership and management, aboriginal rights, water policy and dam removal, and environmental history.

This research project is focused on examining forest policies, land tenure, and forest community well-being during a time of global market change. The goal of the research is to provide information about community needs and challenges in adapting to new market conditions, and to facilitate collaborative efforts already underway in several forest communities of Newfoundland.

The first component of the project is an overview of forest policies and land tenure in Newfoundland. It will include a comprehensive overview of forest policy at multiple levels of government, and interviews with foresters, industry, environmental groups, and others involved in creating and implementing District Management Plans.

The second component of the project is a case study of rural community change in Newfoundland and emerging market opportunities for forests. Two communities will be selected in the coming months which are undergoing and responding to changes in the forest sector. The communities will also be placed within a broader Newfoundland context through comparison of demographic and forest management data by region. Interviews with community residents, including businesspeople, politicians, and foresters, will be combined with participant observation and document analysis.

Forest Research



Erin Kelly is a new post-doctoral research fellow at Grenfell Campus of Memorial University, researching the changing forest sector in Newfoundland.

Dr. Kelly completed her graduate work at Oregon State University, in the College of Forestry, researching changing industrial forest tenures and impacts on nearby communities.

Gros Morne Brook Trout Research Presented at Vancouver Conference

Michelle Caputo travelled to Vancouver at the end of May to present at her first academic conference, the Ecological and Evolutionary Ethology of Fishes (EEEF) conference held at Simon Fraser University. Michelle presented her research entitled: *The migratory behaviour of brook trout (Salvelinus fontinalis) in Gros Morne National Park, Newfoundland.*

This was a great opportunity to discuss the results of her thesis research with top scientists in the field of salmonid biology and specifically the behavioural ecology of these fishes. Not only did this conference provide Michelle with the opportunity to share her research with her colleagues, it also resulted in feedback on her research and allowed her to make important connections to other researchers working in her research field.



Natalie Alteen and Michelle Caputo

Michelle's presentation was well received and her colleagues gave her good feedback, in terms of the quality of both the presentation and the research.

She was told that her research was very interesting and that it fills a knowledge gap in the study of salmonids because very little is known about the partial migrants in the species (a lot more is known about species who make longer migrations).

Michelle returns with confidence in her results and a reaffirmation of the usefulness of her research to the scientific community. Her research results will be posted to the CURRA web site shortly.

Cod Placemats Reprinted

CURRA Community partner Intervale has printed 25,000 more Atlantic Cod placemats, adding to the 100,000 that were printed last August and distributed to family restaurants across the Province. The placemat is designed for general audiences. Its purpose is to increase knowledge about the life history of Atlantic Cod in Newfoundland and Labrador and to stimulate dialogue about how we might ensure the recovery of our cod stocks. The central message of the placemat is that all of us can help.

The additional 25,000 placemats were reprinted in April 2010. Several partners supported this printing including the Government of Canada Habitat Stewardship Program and the French Shore Historical Society (FSHS). The new placemats were distributed to more than 30 family-style restaurants from the Labrador coast to the Avalon Peninsula, with the strategy of involving restaurant staff in promoting discussions about cod recovery with people of all ages. They were also used in special cod celebrations sponsored by the FSHS this July.

The placemats were also used in Battle Harbour for workshops involving regional leaders, and at the Mary's Harbour crab festival, where they used in a community dinner for about 500 people. The placemat makes a good teaching tool for classroom use or as a wall display. CURRA members who would like to receive copies of the placemat can do so by contacting Kathleen Blanchard (kblanchard@intervale.ca) or by calling Russell Wall at 709-686-5927.

Lobster and the need for Sustainable Livelihoods

Katie Temple is a fisheries research Conservation Corps intern working with the CURRA on a short-term project based in the Port aux Basques area. The project entails exploring a variety of alternative marketing options for the southwest coast lobster fishery with the vision of making the industry more viable for harvesters. Some of the work includes examining the advantages and disadvantages of seafood ecolabelling; studying examples of community supported fisheries in other areas; and **organizing a workshop in Port aux Basques for November 5 to present the findings of the research.** Other project partners include the Fish, Food and Allied Workers Union (FFAW) and the Conservation Corps, a non-profit youth employment and environmental organization.

Katie finished a Master of Science in Rural Planning and Development at the University of Guelph at the end of the summer.



Katie Temple

Fishery-Tourism Forum

The Bonne Bay Fishery-Tourism Forum was held in Norris Point on June 13. This day-long meeting brought together interested fish harvesters, tourism operators and community members to hear presentations from Sam Elliott of the St Anthony Basin Resources Inc. (SABRI); Juanita Keel-Ryan of the Department of Tourism, Culture and Recreation; Andrea Maunder of *Baccalao Restaurant* in St. John's and Clarenville; Sheila Earle on behalf of the Federation of Co-ops, and Anita Best, CURRA community coordinator.

They participated in an extensive question-and-answer session and discussion with the presenters and officials from the Federal Department of Fisheries and Oceans and the Provincial Department of Fisheries and Aquaculture. You can read the report on this forum on the CURRA web site <http://www.curra.ca/reports.htm>

Currently the steering committee is working to obtain funding for a researcher to follow up on the questions raised at the Forum. The researcher will work with some local fish harvesters, fish processors and tourism operators to identify the obstacles and opportunities for tourism packages in this area. Cooperative enterprises will also be considered.



Highlights from the 2010 IIFET Montpellier Conference, France

Ahmed Khan, PhD Candidate, Department of Geography, Memorial University

The International Institute of Fisheries Economics and Trade (IIFET) is a global network of economists, scientists, government managers, private industry members, and other researchers interested in the exchange of ideas and information on marine resource issues.

This year's 15th bi-annual IIFET conference was held in Montpellier from the 12th to 17th of July and co-organized by the French Institute of Research and Development (IFREMER), the University of Nantes, and various French government agencies including the Ministry of Food, Agriculture and Fisheries. Other supporters and sponsors included Canada's Fisheries and Oceans, the US Department of Commerce's National Oceanic and Atmospheric Administration, Aquafish, and numerous Montpellier regional authorities. The theme for this year's conference was the *Economics of fish resources and aquatic ecosystems: balancing uses, balancing costs*.

There were about eight general sessions of relevance to the CURRA, in addition to keynote speeches by Dr. Anthony Scott, Dr. Susan Hanna & Dr. Serge Garcia. The general sessions of interest included: ecosystem-based fisheries approaches & Integrated Coastal Zone Management; fisheries co-management; marine conservation and protected areas; markets and marketing of seafood products; fisher behaviour; fishing rights; by-catch, discards and gear selectivity; food security; and the contribution of fisheries to socio-economic wellbeing.

My talk was part of the session on Markets and Marketing of Seafood Products (supply and value chain analysis). It was entitled "A Market Chain Analysis of Northern Gulf Cod Fisheries Pre- and Post-Collapse: Implications for Resource Sustainability and Economic Viability." Other talks in my session discussed the marketing of Icelandic cod and Norwegian cod, as well as Sri Lankan yellow-fin tuna. The presentations mostly focused on price differentials, product labelling, markets, trust and social relations between actors and

stakeholder groups, market power, distributional equity concerns, dock-side fish pricing, and institutional mechanisms with the potential to enhance the gains from seafood trade. One theme that struck me was the different models used for setting dockside prices in Norway, Iceland and in Eastern Canada. These models include a computerized auction system in Iceland, collective bargaining in Newfoundland and Labrador, and a minimum regulated price in Norway.

One of the central debates at this conference was about the relative importance of the biological sciences as compared to economics in effective fisheries management. Most fisheries biologists would argue that the natural sciences should play a key role in formulating fisheries policy and therefore deserve research priority. Fisheries economists, on the other hand, generally contend that commercial fisheries are multi-million dollar investments with the goal of profit maximization and sustaining human welfare. As such, economics should be given a greater role in fisheries decision-making.

Even with interdisciplinary approaches such as bio-economic analysis common in fisheries research, there are several shortfalls from society's point of view. Examples include:

- Most analyses are carried out at the level of the firm, often ignoring the other contributions such as rural small-scale fisheries and their potential spill over and multiplier effects in support of regional economic development;
- The role of various fisheries institutions (the state, the private sector and civil organizations) are not clearly spelt-out, particularly in terms of who pays for management cost and who benefits;
- Most supply and value chain models assume regular raw material supply, and do not always account for ecological constraints in their analysis, in addition to the effects of fishing down marine food webs, regime shifts, fisher behaviour, and changes in consumer preferences;

- The failure of fishing firms and other beneficiaries of the fish trade to internalize the costs of overfishing are not often addressed, raising concerns about who benefits and who loses along the supply chain;
- The techniques used to assess the relative cost and benefits associated with rebuilding fisheries, often do not take into account future benefits to society, the cost of business as usual, and the non-market values associated with fisheries such as cultural heritage or ecosystem services;
- Such issues as the threat of regulatory capture, procedural and distributional equity concerns, or government inefficiencies are understudied.

In my humble opinion, these gaps in existing frameworks and in the information that informs analyses and policy making are profoundly inadequate. I also believe that collaborative research with multiple stakeholder groups, such as the research we are doing through the CURRA can help to make these shortcomings visible and help us ensure valuable information is not lost.

Multiple stakeholder representation (including groups from outside the fishing industry itself) also helps ensure the decision-making process is pluralistic and inclusive; which can sometimes be 'clumsy' but productive (Khan and Neis, 2010).

New research frontiers at IIFET 2010 included research on the socioeconomic impacts of 'catch shares' in the US fishery, the role of adopting an integrative science approach in fisheries, the contribution of fisheries to socioeconomic wellbeing, and novel research on measuring productivity in fisheries.

A senior Scandinavian fisheries scholar observed regarding Canadian fisheries that he did not understand why the groundfisheries collapsed in the early 1990s and have not recovered fully, despite the fact that Canada has some of the world's best fisheries economists as well as some of the world's leading fisheries scientists. As I reflected on his comments, I thought to myself maybe there are needs for other social and natural science disciplines in the room, especially as we move towards ecosystem-based management and green economies that advocates for a human dimension and effective governance.

Fisheries, particularly collapsed fisheries require input from many different disciplines and stakeholder groups. If we are going to rebuild global fisheries – and the alternative is hardly worth contemplating - we cannot afford to ignore the insights that can come from environmental ethics, political economy, human geography, sociology, community planning, maritime law, social psychology, international relations, etc. They all provide crucial resources and insights for making the global seafood trade sustainable while also enhancing food security and local economies. These suggestions are not new, and have been repeatedly raised in the past (see Ludwig et al. 2001).

For further details of the 2010 IIFET conference proceedings, watch this website <http://oregonstate.edu/dept/IIFET/conferences.html>

References

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BBMS News

The Bonne Bay Marine Station officially opened its public aquarium this summer on May 22nd kicking off with Celebrate the Sea day as part of the Trails, Tales and Tunes Festival. Celebrate the Sea Day was a huge success seeing over 200 visitors to the station. The day included special guests such as the Coast Guard vessel, Cape Fox and Office of Boating Safety Mascot, Pukta the polar bear. Visitors had an opportunity to partake in activities such as a scavenger hunt, creating a yarn octopus or seashell wind chime, a turn on the bouncy castle, knot tying, face painting, wolfish presentation, songs and serenades along with the already exciting aquarium attractions.

Celebrate the Sea Day was also the first day of work for the Bonne Bay Marine station's new Marine Education Interpreters. This year's Marine Education Interpreters are former Bonne Bay field students Sandra Hamilton and Victoria Neville, SWGC student Ashley Humber, and University of Waterloo Co-op student Joanna Gilarski. This tourist season has also seen the addition of two new positions at the Bonne Bay Marine station. Long time employee who can handle any job, Laurie Haycock, is our new Residence Coordinator. We also welcome our new administrative assistant Sandy Cullihall who has returned home after many years in Ontario!

Our Ocean's day annual Wild Cove beach clean made the Bonne Bay Marine Station proud. 52 people showed up on Saturday June 12th to show their support and pick up garbage. Representatives from Parks Canada, DFO, RCMP, Norris Point town council all worked together with residents of Rocky Harbour and Norris Point to clean up Wild Cove. Many thanks go out to Marine Services and Parks Canada who contributed supplies. Participants gathered at the Norris Point Community Hall for pizza, prizes and games following the clean up.

Summer field courses were very successful this year, with a fine crop of students who enjoyed their days both out in the boats and conducting

experiments in the laboratory.

For more updates regarding the Bonne Bay aquarium please visit our Facebook Fan Page. If you enjoyed your time at the aquarium and would like to share your photos and comments with us please check out our Facebook fan page at <http://www.facebook.com/pages/Bonne-Bay-Marine-Station/115953541759074?ref=ss>

Click here to hear CBC's Kate Kyle reporting on the latest research at the Bonne Bay Marine Station!
http://podcast.cbc.ca/mp3/nlwcornshow_20100820_37041.mp3



Pierre LeBlanc—Fish Plants Photography



Pierre LeBlanc--2009-2010 Research Activities: Fish Plants

In the past year, I have had to contend with health issues and my research ground down to a halt while I tried to keep up with work while rebuilding my strength. Recently, I have returned to the dark room where I am in the midst of completing my printing from the 2009 shooting season. I now have more than 250 prints with another 50 or 60 on the way and am beginning to sort through them all and begin the editing process.

I have also been researching and experimenting with new digital printing processes with the goal of finding the best possible way to output the final selection of images. There have been pinhole issues with the films I have been using that could easily be corrected using digital technology. I am also becoming increasingly concerned with the environmental impact of using traditional wet lab technologies with its chemicals and extensive use of water.

This research is taking the work in exciting new directions and will positively impact the work as I move further towards resolution and exhibition. I have been in contact with Bruce Johnson, curator of contemporary art at the Rooms Provincial Art Gallery, and he has expressed interest in the work and symposium. I will be sending a proposal in

the Fall of 2010, once an initial selection of images has been completed.

In the coming weeks you can look forward to new updates to the Fish Plants blog at: <http://fishplants.blogspot.com/>.



The Northeast Atlantic Marine Alliance (NAMA) has launched the "Who Fishes Matters" campaign. There is a lot of interesting information that resonates with our province's fisheries. View the complete newsletter at:

<https://app.e2ma.net/app/view:CampaignPublic/id:1408120.6824078919/rid:d6e94a513da3c8e4d3a549d3d182607c>

Research on the Habitats of Juvenile Atlantic Cod in Bonne Bay

By Jeanette Bruce

The year class size of a cod stock is determined early in life. The size of a year class is based upon the survival of cod larvae in the plankton, as well as the survival of young cod after settlement. The survival of these young cod depends on two key factors: the availability of food and shelter. My B.Sc. thesis was concerned with determining the habitat of the juvenile cod living in Bonne Bay. While the eggs and larvae of Atlantic cod are pelagic (living within the water column), the juveniles and adults are demersal (living on or near the bottom of the water column). The young-of-the-year, or 0-group fish, settle out of the water column into a variety of different bottom habitats. The characteristic that these habitats share is structural complexity. There are a number of benefits for young cod to living in a complex environment, including increased feeding opportunities, less exposure to harsh environmental conditions, and increased opportunity for predator avoidance. The opportunity for predator avoidance appears to be one of the biggest benefits of a complex habitat.

Eelgrass habitat

It is important to consider the features of a habitat that contribute to complexity. A mixture of substrate types (for example, a combination of gravel, cobble, and boulders) or the presence of macrophyte vegetation like seaweed or eelgrass, contribute to complexity. Since the mid-1990s, the relationship between juvenile cod and eelgrass (*Zostera marina*) has been studied closely; prior to this, focus was placed upon the role of macroalgae (i.e. seaweed) in juvenile cod habitat. More recent studies conducted in Newfoundland and Labrador have shown an apparent relationship between juvenile cod and eelgrass, although their association with macroalgae and rocky habitat is also recognized. Eelgrass beds

have been shown to be important nursery grounds for Atlantic cod, based upon their ability to reduce predation rates, their association with higher densities of appropriate food and their location in sheltered areas. It has been shown that young-of-the-year cod are particularly associated with eelgrass, while age 1+ juveniles are associated with habitats characterized by macroalgae and rocky substrate.

Standardized sampling within Bonne Bay conducted during 2002 - 2009 found both juvenile and adult Atlantic cod (*Gadus morhua*) in the near shore waters of the bay. The hypothesis tested was that 0-group cod are found in a range of different habitats in Bonne Bay, characterized by different substrates and vegetation types. We predicted that 0-group cod would not associate with any particular type of vegetation or substrate, but would be present in diverse complex habitats in the near shore area. If our hypothesis was proven, this would mean that cod conservation efforts in Bonne Bay should include protection of the near shore zone generally, not only eelgrass habitat.

Using data obtained from standardized sampling surveys of the fish fauna of Bonne Bay conducted between 2002-2009, I found no statistically significant relationship between the year of collection and the abundance of young-of-the-year (0-group) juvenile Atlantic cod. Nor was there a statistically significant relationship between the sampling site location and the abundance of 0-group juvenile cod.

Although there are some shortcomings with the study that relate primarily to the data available, we were able to conclude that 0-group juvenile cod are found at all sites sampled. These results imply that juvenile cod occupy a range of habitats in Bonne Bay, i.e. they can be found in near shore waters with different seaweeds, different types of bottom

This suggests that the near shore waters of Bonne Bay in general, and not only those areas with eelgrass beds serve as a nursery ground for juvenile cod. This means that cod conservation would benefit from protection of the entire shoreline of Bonne Bay from human-induced disturbance and pollution, rather than concentrating conservation efforts on a single marine habitat type (for example, eelgrass beds) known to support juvenile cod.

The results of this study also showed no significant trend (up or down) in the abundance of juvenile 0-group cod in the East Arm of Bonne Bay over the years 2002-2009. The observed lack of trend is encouraging because it suggests that the biomass of the spawning cod responsible for the juvenile cod in the Bay has been relatively stable over the eight years. It is important to note, however, that scientific surveys of the standing stock biomass of cod in the northern Gulf of St. Lawrence indicate that this stock is significantly

reduced from the past and has yet to show any signs of recovery.

Conclusions

This research suggests that near shore waters throughout the Bonne Bay East Arm serve as a nursery ground for juvenile cod; the bay does not appear to support an abundance of large, adult cod. If Bonne Bay is, in fact, a nursery ground for Atlantic cod, then local stewardship efforts to protect the cod in the bay should be focused on preserving the habitats used by the juveniles.

The data on juvenile cod in Bonne Bay analyzed for my B.Sc. Honours thesis were collected by the students and professors (Dr. Joe Wroblewski and Dr. David Methven) of the field course Biology 3714 (Estuarine Fish Ecology) taught at the Bonne Bay Marine Station in Norris Point, Newfoundland during the summers of 2002-2009. Dr. David Methven and Arnault Le Bris collected data during October 2009.

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In August, the Station was president of Memorial Kachanoski, who began his term as Memorial's new president on July 1, 2010. At a small reception in his honour, Dr. Kachanoski met the mayor of Norris Point, the Superintendent of Parks Canada Western Field Unit and several local volunteer organizers and business people who accompanied him on a special tour of the facility by Dr. Bob Hooper. Dr. Kachanoski remarked that the Bonne Bay Marine Station is an excellent research facility and an important part of Memorial University's presence on the west coast of the province.

Dr. Kachanoski is a world-renowned soil scientist and an experienced university administrator. He is a past-president and a Fellow of the Canadian Society of Soil Science (1999), Fellow of the Soil Society of America (1997) and editor of the Canadian Journal of Soil Science. He was inducted into the Canadian Conservation Hall of Fame in 1997, an award that recognized his dedication and commitment to soil and water conservation in Canada. Dr. Kachanoski has more than 100 publications in refereed journals, papers and book chapters on his research in soil physics, focusing on the fate and movement of water, chemicals and gases through the soil and landscapes, and on water and soil management. He has also served as executive director of folkwaysAlive!, a joint initiative of the University of Alberta and the Smithsonian Institute that provides leadership and support for the creation, preservation, dissemination and application of knowledge about the musical cultural heritage of communities. In 2006, the Smithsonian, for his vision and leadership, awarded him an honorary gold record at the Kennedy Centre in Washington, D.C.

This year, the Bonne Bay Marine Station turned 40 years old. Dr. Hooper told the President that former students drop by the facility continually over the summer to recall happy memories of their time spent at the station.

"There are a lot of graduates out there who had their careers started here," he said. "This is where they discovered that marine science is something they were committed to and passionate about science and marine life. Part of the reason Memorial University was created was to study the oceans that surround us and shape our way of life. I think the quality of the education we have provided has increasingly depended on Bonne Bay Marine Station. I think the place only becomes more important with time."

In recent years, the Station has expanded its mandate to include a commitment to public interaction and education, for students, local businesses and communities, and tourists. This public programming for tourists is immensely important to improving scientific literacy, but also to raising the public profile of Memorial University on the west coast.

Starting with the next issue, The Western Shorefast will be shorter and will appear every six weeks. Please send your suggestions and comments to Anita Best at the Bonne Bay Marine Station in Norris Point (addresses below).



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