

HOOK, LINE AND THINKER

The Newsletter of the Fishermen and Scientists Research Society

Issue: 2011-4

Fall 2011

EFFECT OF OCEAN ACIDIFICATION ON ATLANTIC LOBSTER FOCUS OF PRESENTATION AT UPCOMING FSRS 19TH ANNUAL CONFERENCE

Elise Keppel will be presenting her work on *How Will Ocean Acidification Due to Climate Change Affect Atlantic Lobster?* at the FSRS Annual Conference in February. The following is an abstract of the work she will be presenting.

Abstract

Authors: Elise Keppel, St. Francis Xavier University, Department of Biology and Ricardo Scrosati, St. Francis Xavier University, Department of Biology; Simon Courtenay Research Scientist, Fisheries and Oceans Canada at the Canadian Rivers Institute, University of New Brunswick

Ocean acidification resulting from the global increase in atmospheric CO₂ concentration is threatening marine organisms, driving down seawater pH and carbonate saturation state. At particular risk are species that precipitate calcium carbonate in their shells and other skeletal structures. The effects of ocean acidification on the Atlantic lobster, as well as warming due to climate change, are largely unknown. Recent short term studies have shown that exposure to acidified water over a 60-day period may result in

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increased calcification rates and thicker shells in juveniles. However, it is unknown how this response could affect key demographic processes such as growth, reproduction and survivorship, crucial to persistence of the species, or if the same response will be expressed by lobster at other life stages.

As a first step towards understanding how Atlantic lobster will be affected by ocean acidification, we studied the effects on larval carapace length and moulting. We compared results between current ocean pH levels (control pH = 8.1) and those predicted to occur by the end of this century by the International Panel on Climate Change (acidified pH = 7.7). We created the acidified treatment by bubbling CO₂-enriched air into replicate experimental containers with seawater and larvae, while the control treatment was created by bubbling ambient air into other containers with seawater and larvae. All larvae (stage 1) were placed in their respective treatments within three hours of hatching at the beginning of the experiment. After 40 days, larvae in acidified water exhibited a shorter carapace length than those in controls, suggesting retarded growth of the larvae, which could indicate longer time to reach minimum marketable size and sexual maturity. Larvae in acidified water also took more time to reach moults 1 through 4, and some larvae did not reach moult 5 by the end of the experiment. Slower progress through larval moults would translate to more time spent in the water column, where larvae are vulnerable to pelagic predators. Furthermore, mortality after larval stage 3 was higher in acidified water than the control.

Testing the effects of ocean acidification on growth, development, and reproduction through the entire life cycle of the Atlantic lobster is necessary to predict how ocean acidification and warming ocean temperatures due to climate change could affect this resource and, thus, to develop adaptation strategies in the industry.

YOU'RE INVITED...
FSRS 19TH ANNUAL CONFERENCE
FEBRUARY 24 - 25, 2012

The Fishermen and Scientists Research Society (FSRS) is holding its **19th Annual Conference** on February 24 - 25, 2012 at the Best Western Glengarry Hotel in Truro, NS. The conference will include a range of workshop sessions, the Scientific Program Committee Report and Workplan for 2012/2013, and the Annual General Meeting. Planned workshop topics include:

- Update on Mackerel and Herring (tentative)
- Climate Change and Coastal Communities in Atlantic Canada - What is Coming Your Way and Its Impact on Lobster
- How Will Ocean Acidification Due To Climate Change Affect Atlantic Lobster?
- Update on Environmental Monitoring on Lobster Traps: Bottom Temperatures and Drifter Observations
- FSRS Nearshore Temperature Monitoring Project
- Understanding Lobster Population Connectivity - Who Is Helping Who?
- The C-Change ICURA: Community Adaptation To Coastal Climate

*Check out our website at www.fsrns.ca for more details as they become available.
We hope you can attend. See you there!*

CALL FOR POSTERS/DISPLAYS

In addition to the workshop sessions, the conference will include posters and displays. To reserve booth or poster space, contact Patty King or complete the Poster/Display Reservation Form below or on-line at www.fsrns.ca.

POSTER/DISPLAY RESERVATION FORM

Please return completed form to Patty King by January 31, 2012 Fax: 902-876-1320; E-mail: pmdservices@eastlink.ca

Organization	
Address	
Contact Name	
Phone	Fax
E-mail	
Posters	
Title	
Authors	
Brief Abstract	
Dimensions ___ feet wide x ___ feet high	
Displays	
Brief Description of Display	
Dimensions ___ feet wide x ___ feet high x ___ feet deep	
Setup Requirements	
Table	___ 3' x 6' skirted table (check if required)
Power Outlets	___ Power outlets required (standard 120v, indicate number of outlets required)
Other Requirements (Please specify)	

ATTENTION LOBSTER FISHERMEN: YOUR HELP IS REQUESTED

By Grand Manan Whale & Seabird Research Station

Help track berried female lobsters!

What are we doing?

- Attaching numbered zip ties to claws of berried females from around Grand Manan
- Asking lobster fishermen to report when and where they see these bands if females come up in traps – and to **leave the band on the lobster** (to see where she will go next)!



Why are we doing this?

- Determine where berried females of different sizes migrate to throughout the fall/winter/spring
- Follow up to 1980's tagging work, which showed some berried females can move >100 km
- Ocean temperatures and the fishery have changed in the last 30 years – do berried females still move around as much? Or are they more restricted?

How are we asking you to help?

- Let your crew know about our study and keep your eyes out for numbered blue bands on females
- If you see one, please note the number on the tag, the date, and your location, and **toss her back with the tag still on**
- Report your information: data sheet (available from fisheries association) or by email – koopman.heather@gmail.com



Tagged Berried Lobster Datasheet

Captain: _____
Boat: _____
Home port: _____
Contact info (phone/email): _____



Date	Lobster tag#	Location (lat/long, LORAN, etc)

Example of the Grand Manan Whale & Seabird Research Station *Tagged Berried Lobster Datasheet*.

For more information contact Heather Koopman, Grand Manan Whale & Seabird Research Station, 24 Route 776, Grand Manan, NB E5G1A1; (506) 662-3804.

FROM THE RESEARCH DESK

By Shannon Scott-Tibbetts, Research Biologist, Fishermen and Scientists Research Society



Since my return from maternity leave in September, there have been a number of meetings that I have attended on behalf of the FSRS. The usual suspects of LFA Advisory Meetings for LFAs 35, 33, and 34 were all well attended and very informative.

This year, the Maritimes Region Lobster Advisory was held at the Best Western Dartmouth on September 27, 2011. The meeting was opened by a greeting from the RDG of Fisheries and Oceans Maritimes Region and the presentations continued throughout the day. The Maritimes Region inshore lobster's Integrated Fishery Management Plan (IFMP) was reviewed along with the Atlantic Lobster Sustainable Measures (ALSM) funding program. DFO Science explained a bit more about the IFMP and using reference points and the precautionary approach to help manage the fishery. DFO Maritimes was also involved in the LFA 27-33 Assessment over the summer. The Framework document is available through the Canadian Science Advisory Secretariat website. The assessment makes use of the FSRS Lobster Recruitment trap data (in accordance with our confidentiality agreement) and recognizes it as a valuable contribution to lobster science. There was an interesting presentation on the Maritimes Region lobster fishery economic profile and that was followed up by an update from the Lobster Council of Canada. The afternoon sessions covered an update on the AVC-Lobster Science Centre and their current projects. The Professional Fishermen's Registration and Training Association introduced their Network Co-ordinator Program which has been funded until March 2014 to help fishermen get all the relevant training they need for their profession. The last, and probably the most discussed topic at this meeting, was a presentation by the Director for Aquaculture for DFO. She gave an overview of the Aquaculture program managed by her department. It was interesting to see the many different agencies involved and their roles within the program. There was so much discussion that it was deemed necessary to have a separate meeting with more aquaculture agencies involved so that everyone could get the full picture. The meeting was very informative and it was agreed that the next meeting would either be in the spring or next fall.

October and November were busy months for the FSRS technicians as we were involved in the Lobster Settlement Index project (Lobster Collectors). During the later half of the month and into November, Tricia and Shaun were out in the field helping DFO with the retrieval of the collectors from various areas (Lobster Bay, Port La Tour, St. Mary's Bay, False Bay). There will be an update on the study at the FSRS conference in February. Along with helping with the collector retrieval, Shaun and I met with our fishermen involved in the Lobster Recruitment Project to give an update on the previous year's results and to distribute their equipment for the coming lobster season.

The Lobster Science Centre's 7th Annual Workshop was held in Charlottetown, PEI, November 2-3, 2011. The theme this year was "On the Road Again: Optimizing Lobster Quality Throughout the Chain-of-Custody". The sessions were all very informative and opened with a keynote address from Dr. Roger Uglow of Hull University, UK. He spoke about aquatic animals and their responses to varying

environmental conditions. His primary work over the last couple of decades has focused on live crustaceans and their journey post harvest from capture to the final sale and how to improve the biological systems for a better quality product. The team from the Lobster Science Centre gave a number of presentations showcasing their projects in relation to lobster quality and health. John Garland and Stewart Lamont also gave informative talks on quality and survivorship of lobsters. The day was wrapped up with Geoff Irvine speaking about quality grading for the Canadian lobster industry and Dave MacEwen giving an update on the PEI Department of Fisheries, Aquaculture and Rural Development.

The final meeting attended this month was for the Canadian Fisheries Research Network's Lobster Node Project. It was held Nov 17-18th in Truro, NS. After introductions and welcoming remarks from Marc Allain, Network Facilitator, Canadian Capture Fisheries Research Network, a number of presentations by university students were given to the group and these generated many discussions. Various partners in the Lobster Node research summarized their work over the last year and gave some preliminary results. Industry involvement was very important to this project and the different regions gave updates and recommendations for the coming season's work. More discussions followed in breakout groups on how to improve the project and what other research was needed for the lobster industry. Overall it was a good turn out and lots of ideas were brought forward to the group.

Please feel free to contact me with any science questions or comments at shantibbetts@gmail.com or the FSRS office at 1-902-461-8119 (1-800-226-3777).

ESIP'S AQUATIC HABITATS FACT SHEET



Status of aquatic habitats in the Gulf of Maine.

The Gulf of Maine Council's EcoSystem Indicator Partnership (ESIP) has just released a fact sheet about aquatic habitats in the Gulf of Maine. The fact sheet summarizes data from the Gulf of Maine for three key indicators - eelgrass, salt marsh, and tidal restrictions - along with a snap shot of the indicator data.

The fact sheet introduces the concept of indicators as a means for tracking change. It demonstrates the value of indicators as a tool to better understand the wide-ranging effects being seen in the Gulf of Maine region. The fact sheet also provides examples on how this habitat data can be accessed and how it might be used for planning and decision-making purposes.

ESIP's Aquatic Habitat Indicators fact sheet is available at www2.gulfofmaine.org/esip.

You can use the same Web site to read about other ESIP activities including fact sheets on aquaculture and climate change indicators.

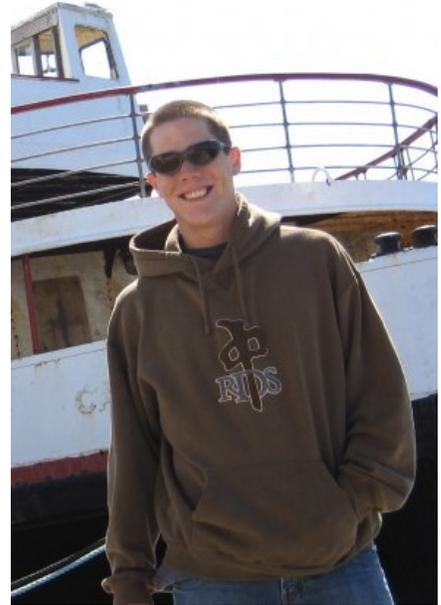
FSRS WELCOMES NEW UPPER BAY OF FUNDY LOBSTER MONITORING PROJECT TECHNICIAN

By Nathan Jenkins, Fisheries Technician, Fishermen and Scientists Research Society

Hello! My name is Nathan Jenkins and I am really excited to be a new member of the FSRS crew. I was hired as a Fisheries Technician in September 2011 and have loved every bit of it so far! I grew up in Riverview, New Brunswick but have spent the majority of my life out west, in Jasper, Alberta. I would have to say I love the outdoors as hiking and fishing and any other activity outside are my favourite hobbies. I have previously worked on fishing boats and as a cage technician for salmon farms based out of Grand Manan, New Brunswick.

I am currently working on the Lobster Recruitment Project and at-sea sampling to monitor the impact of the Petitcodiac River causeway gates opening on the commercial lobster fishery. I have had the chance to meet some very interesting people and continue to gain knowledge from the fishermen and crew on board. Every day is a new day and with my job no day is the same; this is one reason why I enjoy my job so much.

I am happy to have the opportunity to assist in this research. I look forward to working with everyone and hope to return next season!



CLARIFICATION OF “THE LEATHERBACK SEA TURTLE IN CANADIAN WATERS” ARTICLE FROM THE 2011-3 ISSUE OF THE HOOK, LINE AND THINKER

We wish to apologize to our readers and the Canadian longline industry for possibly having left an impression in the article "The Leatherback Sea Turtle in Canadian Waters" in our last issue that the Canadian pelagic longline fleet may pose the worst threat to Leatherback Sea Turtles globally. In fact, although in Canadian waters Leatherback sea turtles occasionally have been a by-catch of the pelagic longline fisheries for swordfish, by far the more serious threat to the Leatherback sea turtle globally is the loss of tropical nesting habitat and poaching from the nests. Additionally, Leatherback sea turtles have been found dead after being caught in shrimp trawls, and longlines and gillnets of various fisheries throughout the world (Lewison et al. 2004; James et al., 2005).

2011 4VSW SENTINEL MONITORING PROGRAM UPDATE

By Shannon Scott-Tibbetts, Research Biologist, Fishermen and Scientists Research Society

Starting September 1st, two longline fishing vessels contracted by the Fishermen and Scientists Research Society participated in a groundfish survey executed fully by the fishermen themselves. The fishermen surveyed 53 predetermined stratified random stations. The 4VsW monitoring program area encompasses the inshore waters from Sambro to Canso and the offshore waters including Emerald and Western Banks (Figure1).

2011 4VsW Sentinel Monitoring Stations

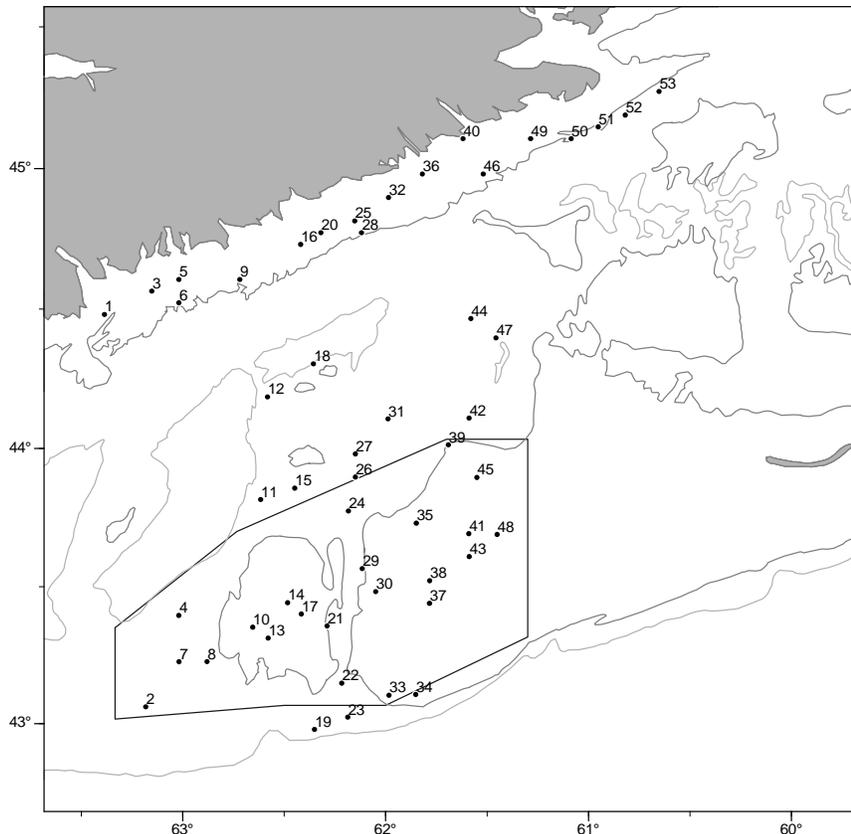


Figure 1: 2011 Map of 4VsW Sentinel Monitoring program stations

Following the 4VsW Survey protocols, the longline fishermen set 1500 number 12 circle hooks baited with mackerel. The fishermen gather all the scientific fisheries information themselves as well as oceanographic information via the use of CTD's and minilog temperature recorders. The fishermen must record where they set their gear, how long the gear fished, and number of hooks that were snarled - if any. They also record all species caught on the hooks, the number and weight of each species caught, and the length, sex, and stage of sexual maturity of the fish. The fishermen also remove the fish otoliths (used to age the fish) and remove the fish stomach if there are contents inside. All this work is completed by the fishermen on relatively small fishing vessels, 35 to 50 feet in length. Table 1 shows the two longliners employed to survey the chosen strata in the 2011 4VsW Sentinel Monitoring Project (Table 1). We would like to take this opportunity to thank the participants for their dedication and excellence.

Table 1: 2011 Sentinel Survey Participants.

Captain	Vessel
Randy Boutilier	Ashley & Travis
Jerry Creamer	Darcy Dean

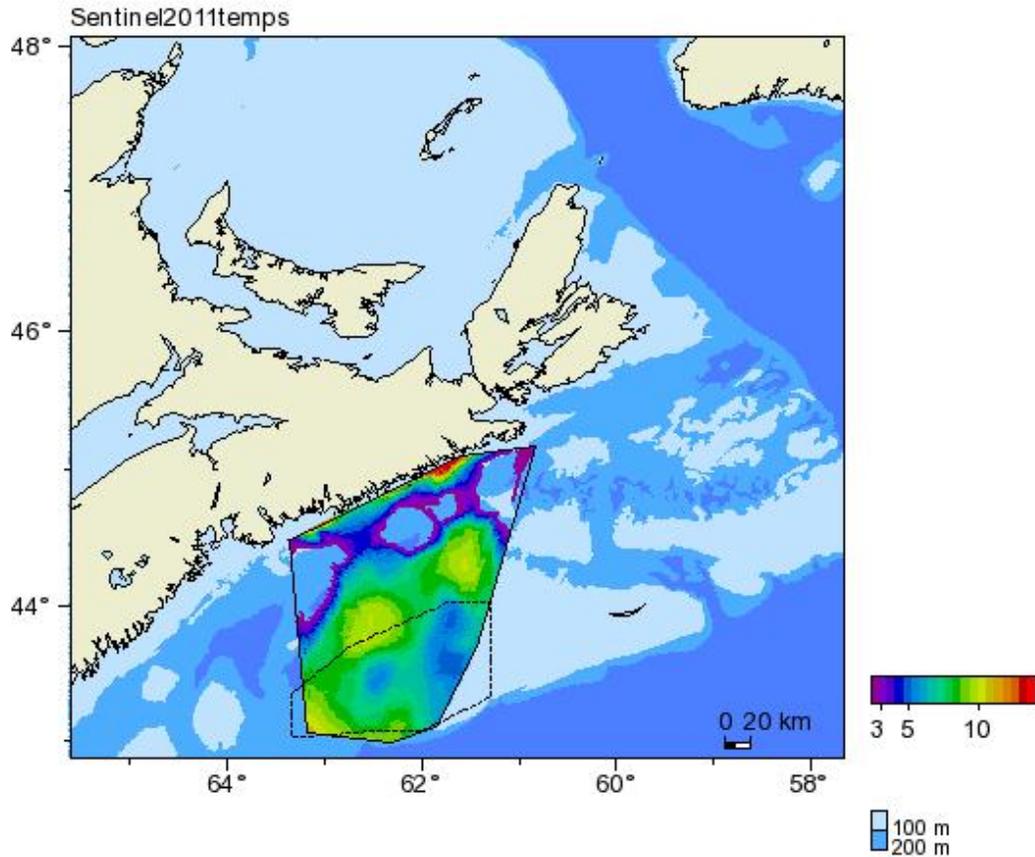


Figure 2: Temperatures recorded from the 4VsW Sentinel Monitoring Program

Preliminary analysis of the 2011 catch results compared to the last year’s indicated cod and haddock in the areas surveyed showed a decrease in catch for these two species. The participants caught a record number of barndoor skates, 434 in total number or 6300 pounds. As in previous years, the fishermen released alive all barndoor skates.

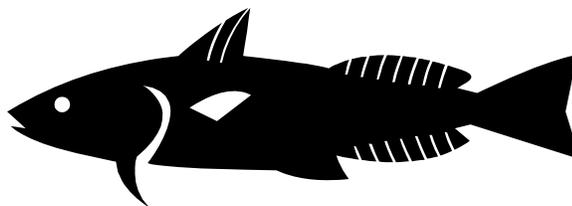
Table 2 includes the catch data from all sentinel sets completed in 2011. Kept weights and discarded weights are in round pounds. Total numbers of fish captured are the sum of the kept and discarded fish. Dogfish, sculpins, skate, invertebrates and all halibut and barndoor skates are allowed to be discarded. Commercial groundfish (cod, haddock, white hake, pollock, cusk, and redfish) which were badly damaged by seals, dogfish or sand fleas - i.e. no tail or no head were discarded and weights estimated by finding the average weight of that species for that set.

Table 2: 2011 4VsW Sentinel Monitoring Project Catch Results from all 53 Stations.

Species	Kept Weight (lbs)	Discard Weight (lbs)	Number caught
Cod	1785	2	844
Haddock	1000	22	704
Cusk	59	0	14
Barndoor Skate	0	6374	434
Halibut	0	512	29
White Hake	932	32	234
Wrymouth	0	4	3
Thorny Skate	0	446	65
Atlantic Wolfish	0	3	2
Spiny Dogfish	0	5	1
Pollock	16	9	11
Silver Hake	0	35	31
Red Hake	0	350	357
Blue Shark	0	430	11
Mako Shark	0	200	1
Monkfish	372	37	58
Longhorn Sculpin	0	41	61
American Plaice	0	1	1
Redfish	0	4	4
Hagfish	0	1	2
Sea Raven	0	3	1
Lobster	0	7	2
Jonah Crab	0	3	4
Shorthorn Sculpin	0	1	1
Toad Crab	0	0.7	1
Seal	0	300	1
Snow Crab	0	2	2
Crab	0	1	1
	28	4164	8825.7
			2880

Species	# of otoliths
Cod	350
Haddock	88
White Hake	33

471



Species	# of stomachs
Cod	65
Haddock	1
White Hake	1

67

FSRS GENERAL MANAGER ON THE MOVE

By Patty King, General Manager, Fishermen and Scientists Research Society

I am pleased to announce that Len and I have moved to a new, larger location in Hubley, NS. As many of you know, my company, PMD Services Inc., which is contracted by the FSRS to provide management and administration services to the FSRS, is based out of a home office. As some of you also know, my boyfriend Len Boyd is an artist, and our new home gives us the space we needed so that he could set up his studio and gallery. We hope you will drop by to see both the FSRS/PMD office in action and check out Len's gallery (which can also be seen on-line at www.skyzethelimitart.com). We are located at 50 Faune Lane, Hubley (exit 4 off Hwy 103). The phone number and e-mail remain the same.



LFAS 33/34 MOULT & QUALITY MONITORING PROJECT ~NOVEMBER 2011 UPDATE~



By AVC Lobster Science Centre

Monitoring of lobster blood protein levels, shell hardness and moult stage was initiated in the summer of 2004 with pre-season, during and post-season sampling. Over the course of the monitoring program, approximately 105,000 lobsters were sampled in 15 different sites in LFAs 33/34. The information collected for this project is available on the Internet and allows people to look at lobster sex, size, blood protein, moult stage and shell hardness by sampling location or dates.

Below is a breakdown of some of the pre-season sampling sites for **2011** compared to similar dates in 2010, 2009 and 2008.

Sampling date	Lobster Bay				Jacquard's Ridge				Sambro			
	Oct 27 2011	Oct 28 2010	Oct 28 2009	Oct 31 2008	Oct 28 2011	Oct 30 2010	Oct 27 2009	Nov 01 2008	Oct 24 2011	Oct 30 2010	Oct 27 2009	Nov 04 2008
Mean protein levels	8.8	10.3	8.5	10.0	8.8	9.0	9.3	9.8	8.8	10.4	10.2	9.5
% active pre-moult	1.6%	0%	0%	1.5%	1.6%	0%	3.2%	4.0%	0%	0%	0%	0.5%
% hard-shell	78.4%	80.0%	65.6%	70.9%	77.6%	93.6%	71.2%	77.5%	80.0%	92.0%	87.2%	85.0%
Sampling date	Yarmouth Inside				Yarmouth Outside				Port Latour Inside			
	Oct 26 2011	Oct 26 2010	Oct 28 2009	Oct 30 2008	Oct 25 2011	Oct 25 2010	Oct 27 2009	Oct 28 2008	Oct 26 2011	Oct 27 2010	Oct 29 2009	Oct 14 2008
Mean protein levels	8.0	8.6	9.4	9.7	7.8	8.3	8.7	9.0	8.1	6.6	7.6	8.1
% active pre-moult	3.2%	4.3%	0%	0%	0%	0.8%	0%	0%	1.6%	1.6%	0%	0%
% hard-shell	68.8%	93.1%	80.0%	69.0%	76.0%	88.0%	72.0%	32.1%	78.4%	83.2%	95.2%	91.3%
Sampling date	Cape Sable Island Inside				Cape Sable Island Outside				St Mary's Bay			
	Oct 28 2011	Oct 26 2010	Oct 28 2009	Nov 01 2008	Oct 27 2011	Oct 25 2010	Oct 27 2009	Oct 31 2008	Oct 28 2011	Oct 29 2010	Oct 29 2009	Oct 24 2008
Mean protein levels	6.3	6.9	6.3	7.9	6.0	6.1	6.6	7.8	10.9	11.4	9.4	10.7
% active pre-moult	0.8%	0.8%	1.6%	0%	0.8%	0.8%	0.8%	0.5%	1.6%	2.4%	0%	0%
% hard-shell	91.2%	84.0%	96.8%	47.5%	92.0%	76.0%	98.4%	52.0%	80.0%	79.2%	69.6%	83.5%
Sampling date	Moose Harbour											
	Oct 27 2011	Oct 29 2010	Oct 30 2009	Nov 01 2008								
Mean protein levels	7.9	8.1	8.3	7.9								
% active pre-moult	0%	0%	0%	0%								
% hard-shell	48.8%	58.4%	68.8%	73.0%								

What can we expect from the 2011 fall season?

Depending on the location, we have between 4-7 years of continuous data. We have looked at the information collected so far and tried to see if we could predict with some level of certainty what will be coming out of the water once the season opens at the end of November 2011. With an increasing number of companies and individual fishermen using blood proteins as an indicator of quality, it is important to keep in mind that *several factors can influence blood protein levels such as moult cycle, water temperature, health, diet, etc.* and therefore, caution must be used when making predictions.

Overall, based on the 2011 pre-season sampling, lobsters landed at the start of the season in Southwest Nova Scotia should be of similar condition, or slightly worse to those landed at the start of last year's season. Based on blood protein levels, lobsters caught around the Port Latour Inside could be more advanced in their recovery from the moult while lobsters from Cape Sable Inside & Outside areas have the lowest blood protein levels of all 10 sites sampled. However, Cape Sable Inside & Outside also show the highest proportion of hard shelled lobsters from all sample sites. When looking at the combination of blood protein, moult stage and shell hardness together from this pre-season sampling, it is possible that lobsters landed from Yarmouth Inside, Yarmouth Outside and Lobster Bay areas could be somewhat of lesser quality than last year. As advised in the past, extra caution should be taken when deciding what product can be stored for later sale.

BLOOD PROTEIN LEVELS - BRIX INDEX -When looking at the 2011 pre-season sampling conducted in those 10 sites, we see that only two sites have blood protein levels significantly below 8 on the Brix index: Cape Sable Island both inside and outside. Overall, we also notice that sampled lobsters from only one site, Port Latour Inside, have an average blood protein level that is higher than what was observed the last two years. On the other hand, it appears that lobsters from Lobster Bay and Sambro areas have seen a significant decrease in their average blood protein levels compared to last year's pre-season sampling. Therefore, based on blood protein levels alone, it appears that the 2011 pre-season sampling points toward a similar or slower recovery from the moult, with perhaps better conditions in Port Latour Inside.

SHELL HARDNESS & MOULT CYCLE - Overall, very few lobsters assessed were in active pre-moult. This is suggesting that the majority of lobsters have already moulted, while only an insignificant number will be moulting in the weeks or days prior to the opening of the fall season. When looking at shell hardness, only Cape Sable Island Inside and Outside had over 80% of the sampled lobsters classified as 'hard shell,' while the Moose Harbour sample had less than 50% of the lobsters in hard shell. Overall, 7 out of the 10 sites had a lower proportion of lobsters classified as hard shell compared to last year. Therefore, based on the shell hardness alone, the 2011 pre-season sampling indicates that the proportion of softer lobsters at the start of the fall season could be more significant than in the previous years.

Note: Only the latest sampling dates are shown here. The overall pattern throughout the year for the parameters monitored was considered when predicting the quality of the LFAs 33/34 2011 fall season. Confidence is highest for those locations where sampling was done closest to the start of the season.

WWW.LOBSTERSCIENCE.CA/MOULT

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LOCAL FISHERMAN ATTENDS ICES ASC 2011 IN POLAND

By Josh Fricker, Fisherman and Director, Fishermen and Scientists Research Society

In September I attended the ICES (International Council for the Exploration of the Sea) ASC 2011 held in Gdansk Poland. At this annual science conference there were many different theme presentations that you could pick and choose to view. Also there were many wonderful lectures and a poster session night. The first lecture I attended was at the opening session. The lecture, *Practitioners faster than scientists-marine nature conservation*, was given by Jan Marcin Weslawski.

During the ASC I sat in on many other fantastic presentations given by people from many different countries. There was a great variety of topics which kind of made it difficult to choose as there were several going on at the same time. Fortunately we were given a brief description of each presentation so we could plan where to go during each time slot and we were free to go back and forth to whatever theme we chose. It was well organized. Some of the theme sessions I attended were topics like: *Integrating top predators into ecosystem management*; *Recruitment process: early life-history dynamics - from eggs to juveniles*; *Linking the history to the present: understanding the history of fish, fisheries, and management*; and *The future of marine fish stocks and food webs*.

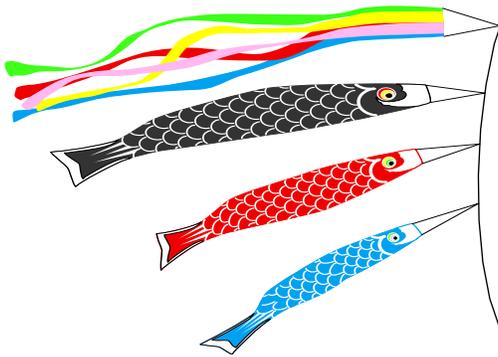
One of my favorite events was the poster session night in which dozens of people presented their work. There was a wide variety of different topics. For example, marine mammals, ecosystems, aquaculture studies, stock assessment, and even giant squids, plus many others were discussed. I found the poster session was a great way to socialize in a more relaxed atmosphere and socializing is a big part of the ASC. It is a wonderful opportunity to meet influential people and to listen and learn about each other's work and knowledge.

Another great night was when they held a "pecha kucha" event. It is basically a slide presentation competition in which each presentation is allowed to use 20 slides and each slide is only shown for up to 20 seconds; the idea was originally invented in Japan. It was very entertaining; everyone did a great job, and it was fun to watch both the serious presentations along with the humorous ones. At the end there was a vote and a winner was chosen. Everybody had a great time, and it was good to end the day with a few laughs.

But the highlight of the week was our excursion. We left Gdansk on a former fishing vessel and ventured out on the Baltic Sea to Hel. When we got to the harbour, we were given a tour of the wharfs and saw many local fishing boats. Some very small and others were quite large. One boat was being unloaded with a big catch of sprat "a small pelagic fish". I believe it was going to be processed for fish food. While there we got to taste the local seafood at one of their restaurants. I had the cod, which was delicious. After lunch we visited a seal aquarium where we were given a short presentation on their work and involvement there. Then we took a bus ride to a fish cannery where we were given a tour of the facility and witnessed all of the various processes of canning fish. It was great to see the industry in this part of the world and gain a new perspective.

I feel very privileged to have been able to attend the ASC in Gdansk. It was a very well planned out event and such a great networking opportunity. I learned a great deal. It is nice to see that there are so many people that care about the oceans and marine life. I was also very pleased to see that Canada was so very well represented. I would like to give ICES and the FSRs a sincere thanks for making this trip possible.

THE FSRS WELCOMES NEW MEMBERS



The Fishermen and Scientists Research Society would like to welcome the following members, whose applications were approved at the September 2011 Executive Committee meeting. We trust that the addition of these new members to the FSRS will prove to be beneficial to all involved.

Rick Alley
Aubrey Bush
Sara Ellis
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FSRS ATTENDS THE 9TH BAY OF FUNDY SCIENCE WORKSHOP

By Shaun Allain, Fisheries Technician, Fishermen and Scientists Research Society

This past September I had the opportunity to attend the 9th Bay of Fundy Science Workshop, a four day conference that took place in Saint John, New Brunswick. This year's event was titled "*Protecting the Watersheds and Estuaries of the Bay of Fundy*" and covered a large number of topics ranging from intertidal biodiversity to the management of marine protected areas. The sessions were packed with individuals from Maritime universities, government, and non-government organizations.

A number of presentations were centered on work being done out of the University of New Brunswick in Saint John on lobster collectors. It was great to see similar work that the FSRS is involved in taking part on the other side of the Bay and hear how students are using the biodiversity of the collectors as part of their individual research projects. Other presentations also made note of lobster science by using fishermen by-catch of cusk in lobster traps as an indicator of abundance.

It was very interesting to hear some of the work being done on the tracking of different marine species, such as sturgeon and herring, as they enter intertidal regions around the bay to spawn. Much research has been focused along areas that have man-made dams to determine potential human impacts on the reproductive ability of these species. Though sturgeon were mostly the topic of discussion, a number of references were made to other species such as Atlantic salmon that have seen a decline over the years and attributed dams and other unnatural barriers to a potential cause of this. Unrelated presentations also looked at how ecosystems and species abundance change when a dam is removed and the area is reverted back to how it was before barriers were created.

We also had the opportunity to take a mid-afternoon field trip and head out to different areas of Marsh Creek in the Saint John area as it flows through the city. The Atlantic Coastal Action Program in Saint John is currently undertaking the Marsh Creek Restoration Initiative to clean up the lower few kilometres of the creek where it enters into the Bay of Fundy. Flooding, as well as industry in the area, are two of the main causes of pollutants entering the water system. This can lead to serious problems for fish species making their way up the creek to spawn. Their goal is to alter the creek to allow it to hold more flood waters and reduce contamination so that the ecosystem can slowly start to regenerate. The initiative also has a lot of benefits for residents of the area by reducing health risks and making the area around the creek more aesthetically pleasing by installing boardwalks, gazebos and biking trails.

PEOPLE IN PLACES CONFERENCE: KEY MESSAGES & ONLINE PROCEEDINGS

By Madelaine Patterson, Coastal CURA Coordinator, Coastal CURA

The People in Places Conference, hosted by the Coastal CURA (Community-University Research Alliance), was held at Saint Mary's University in Halifax, NS from June 26-29, 2011.

The conference organizing team had three main objectives for People in Places:

- First, we wanted to examine and support the role of place-based communities in integrated natural resource management, by creating the opportunity for communities to share ideas with academics, NGOs and government, on how to improve their role in management.
- Second, we wanted communities to express the values they would like to see in policy and planning, and to encourage participants to talk over potentially contentious issues, and to share their experiences and values with one another.
- Third, we sought to showcase innovations in participatory research, and to share information and mutual experiences, such as those of Canada's community-university research alliances that are engaged on aspects of natural resource use and management.



Questions & Discussion during a Plenary Session.

What were the key messages coming out of the conference? The Coastal CURA organizers have identified four that relate specifically to natural resource and spatial management:

1. **Embracing community values in governance.** The People in Places conference was about values; values were at the root of most discussions. Values were related to the alleviation of poverty, placing priority on local needs, recognizing rights to access local resources, and acknowledging the ecosystem/food-web connections.
2. **Real community participation.** The Coastal CURA research program has examined and supported decision-making by place-based communities with respect to natural resources. People in Places participants brought their stories of either community success with or barriers that frustrated them in taking on resource management decisions. We heard that community-initiated governance enhanced equitable and efficient outcomes.
3. **Legal space for effective resource governance.** Legal space is a fundamental prerequisite for communities to take part both in resource management decision-making and in stewardship. A lack of this 'space' can lead to community opposition, when planning does not consider local needs and values. There must also be space for incorporating place-based knowledge into the planning process and for sharing information, to facilitate co-learning, with a 'level playing field' so economic or political clout does not have a disproportionate voice.

4. **The need for multiple scales of governance.** The governance of natural resources cannot take place at just one 'scale' of operation, as is often assumed by government resource managers.

There were also some key messages on community-university connections and participatory research:

1. This kind of meeting works. People in Places replaced the conventional conference format with inclusive keynote sessions, plenaries and workshops (with community, academic and government voices), a public film festival, special Talking Circles facilitated by First Nation participants, and community-planned field trips. Arts and culture played a significant role – including music from Fogo Island, Newfoundland, and Nuuchahnulth singing and drumming from the west coast of Vancouver Island. Overall, the conference participants – from NGOs, First Nations, governments, resource users and a range of communities – created remarkable energy and synergies, and engaged in networking that was valued by all.
2. Greater focus on participatory research and how to do it. Discussions at the conference, and especially among the student participants, reinforced the importance of the right research methods when working with communities. No matter what the specific topic being studied, the approach has to be different from that of conventional research. The conference presentations showed that there are many different approaches to community-based research, but the one key element required in all cases is a real respect for the community and the people involved.



Conference delegates on a field trip to Port Mouton, NS.

People in Places Online Proceedings:

We would like to thank our Canadian and International delegates for kindly allowing us to share their presentations with all those interested in Integrated Natural Resource Management.

This webpage will allow viewers to access pdf versions of paper presentations, rapporteur notes from keynote and plenary sessions, posters from the poster session, as well as information about the People in Places Film Festival. We hope these proceedings will be a valuable tool for academics, students, practitioners, and the general public!



Talking Circle Session, facilitated by Alice Martin, Walter Bayha, and Deborah Simmons.

View the proceedings here: http://coastalcura.ca/cap_follow2.html

BEACHCOMBING - What's New in The News

The latest issue of *The Lobster Newsletter* is now available

The *Lobster Newsletter* can be viewed on line at: [http://www.fish.wa.gov.au/the_lobster_newsletter/pdf/The%20Lobster%20Newsletter%2024\(2\)%20October%202011.pdf](http://www.fish.wa.gov.au/the_lobster_newsletter/pdf/The%20Lobster%20Newsletter%2024(2)%20October%202011.pdf)

Topic covered in this issue include:

- Session summaries from last June's International Conference & Workshop on Lobsters in Norway
- Announcements of new publications
- Late breaking developments in research and aquaculture

Lobster Council of Canada Announces Development of Pilot Project

The Lobster Council of Canada has announced a pilot project involving industry participants in three provinces that will “test the implementation of traceability in the lobster industry, with real life situations and challenges, from boat to plate.”

To learn more visit:
<http://lobstercouncilcanada.ca/news/press-releases/>

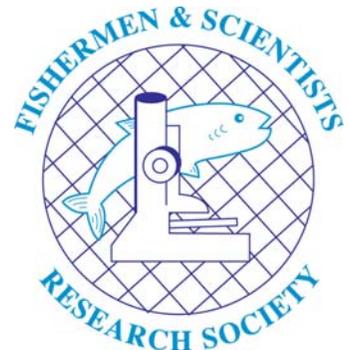
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UPCOMING EVENTS

Fishermen and Scientists Research Society 19th Annual Conference

February 24 - 25, 2012
Best Western Glengarry Hotel
Truro, NS

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