



# 7<sup>th</sup> Annual Lobster Science Workshop

## ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY

November 2<sup>nd</sup> & 3<sup>rd</sup>, 2011

The Mack Theatre  
Charlottetown, PE



**UPEI**  
UNIVERSITY  
of Prince Edward  
ISLAND

Thank-you to all our sponsors and partners!  
This event would not have been possible without you.

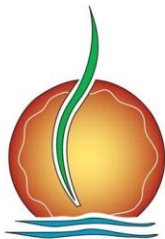
## SPONSORS



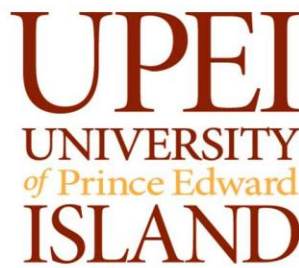
Fisheries and Aquaculture



Fisheries and Aquaculture



Mi'kmaq  
Confederacy of  
Prince Edward Island



PATHOLOGY AND  
MICROBIOLOGY



## PARTNERS



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada



# 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP



*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

## AGENDA:

WEDNESDAY, NOVEMBER 2 <sup>ND</sup>	
4:00 pm	<b>Registration</b>
7:00 pm	<b>Stand Up Reception</b>
THURSDAY, NOVEMBER 3 <sup>RD</sup>	
8:00 am	<b>Registration &amp; Breakfast</b>
8:45 am	<b>Introduction &amp; Words of Welcome</b> <i>Melanie Burton, AVC Lobster Science Centre</i>
9:00 am	<b>Overview &amp; Update of the AVC Lobster Science Centre</b> <i>Jerry Amirault, AVC Lobster Science Centre</i>
9:15 am	<b>Keynote Speaker</b> <b>Some Biological Inputs into Successful Live Crustacean Supply Chains</b> <i>Dr. Roger Uglow - Hull University, UK</i>
10:00 am	<b>Are my Lobsters Stressed during Live-Holding and Shipping?</b> <i>Fraser Clark, AVC Lobster Science Centre</i>
10:30 am	Health Break
11:00 am	<b>Hemolymph Biochemistry: An Indicator of Nutritional Status?</b> <i>Dr. Andrea Battison, AVC Lobster Science Centre</i>
11:30 am	<b>Aqualife Transport System; a Healthy Alternative to Air Freight</b> <i>Melanie Burton, AVC Lobster Science Centre</i>
12:00 pm	<b>Surviving in Air: How do Lobsters Cope and for How Long?</b> <i>John Garland, Clearwater Seafood Limited Partnership</i>
12:30 pm	Health Break
1:30 pm	<b>Quality Control in Atlantic Live Lobster from an Exporter's Perspective: "Getting it right from the Trap to the Plant, and on from there...."</b> <i>Stewart Lamont, Tangier Lobster Company</i>
2:00 pm	<b>Quality Standards: Lessons Learned from other Fish Species</b> <i>Robert Verge, Canadian Centre for Fisheries Innovation</i>
2:30 pm	<b>Lobster Sustainability from a Harvester Perspective</b> <i>Leonard Leblanc, Gulf Nova Scotia Fishermen's Coalition, LFA 26B</i>
3:00 pm	Health Break
3:30 pm	<b>Quality Grading for the Canadian Lobster Industry</b> <i>Geoff Irvine, Lobster Council of Canada</i>
4:00 pm	<b>The Department of Fisheries, Aquaculture and Rural Development and the Prince Edward Island Lobster Industry, The Quality Link</b> <i>Dave MacEwen, PEI FARD</i>
4:30 pm	<b>Closing Remarks</b>



# 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP

*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

## TABLE OF CONTENTS:

Words of Welcome.....	5
Workshop Organising Committee.....	6
List of Presenters	
Keynote Speaker.....	7
Presenters.....	8
Presentation Summaries.....	13
Acknowledgements.....	19

# 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP



*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

## WORDS OF WELCOME:

*Dear Participants,*

*On behalf of the entire organising committee, we welcome each of you to the 7<sup>th</sup> Annual Lobster Science Workshop! It is an exciting time for the AVC Lobster Science Centre (AVCLSC) as we continue to grow and adapt, remaining motivated and responsive to changing challenges within the industry.*

*The "Lobster World" is an exciting one to be working in and we will continue to meet and bring experts from each field together in forums such as this to ensure the industry moves forward together on best practices to assure lobster health throughout the chain-of-custody. This theme has progressively grown over the previous years due to a number of factors affecting the industry: financial changes, record low prices and the need to improve these conditions for everyone involved. Lobster quality has become the focus as a turning point in these hard times to make sure we get the best return possible for our product.*

*Employees, partners, and friends of the AVCLSC have continued to meet the challenges in our field and we feel this workshop will exemplify this through the diversity and quality of the presentations you will see. Goals of the workshop include, identifying key issues on lobster quality, and finding the next stepping stone to implementing an improvement plan to be used throughout the chain-of-custody.*

*We would like to thank each of you for attending our workshop and bringing your expertise to the table; we are convinced you will find this workshop an exciting and rewarding experience.*

*Welcome to Charlottetown, welcome to Prince Edward Island, welcome to The Mack Theatre, and again, welcome to the 7<sup>th</sup> Annual Lobster Science Workshop.*

*Jerry and Melanie*

Co-chairs  
7<sup>th</sup> Annual Lobster Science Workshop



# 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP

*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

## WORKSHOP ORGANISING COMMITTEE:

<b>Melanie Burton</b>	Field Biologist AVC Lobster Science Centre Tel: (902) 566-0839 <a href="mailto:mburton@upej.ca">mburton@upej.ca</a>	<b>Jerry Amirault</b>	Executive Director AVC Lobster Science Centre Tel: (902) 894-2887 <a href="mailto:jamirault@upej.ca">jamirault@upej.ca</a>
<b>Jean Lavallée</b>	Clinical Scientist AVC Lobster Science Centre Tel: (902) 628-4392 <a href="mailto:jlavallee@upej.ca">jlavallee@upej.ca</a>	<b>Lori Edwards</b>	Coordinator of Finance & Administration AVC Lobster Science Centre Tel: (902) 566-5043 <a href="mailto:laedwards@upej.ca">laedwards@upej.ca</a>
<b>Virginia Jackson</b>	Administrative Assistant & Data System Support AVC Lobster Science Centre Tel: (902) 894-2884 <a href="mailto:vmacswain@upej.ca">vmacswain@upej.ca</a>	<b>Natasha MacDonald</b>	Programmer Analyst AVC Lobster Science Centre Tel: (902) 566-0906 <a href="mailto:nmacdonald@upej.ca">nmacdonald@upej.ca</a>
<b>Andrea Battison</b>	Research Scientist - Clinical Pathology AVC Lobster Science Centre Tel: (902) 894-2845 <a href="mailto:abattison@upej.ca">abattison@upej.ca</a>		

# 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP



*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

## **KEYNOTE SPEAKER:**

### **Roger Uglow**

Hull University, UK

[R.F.Uglow@hull.ac.uk](mailto:R.F.Uglow@hull.ac.uk)

Dr. Roger Uglow was born into a trawler-owning family in Milford Haven, Wales. After completing a doctorate on crab physiology, he spent 41 years as a faculty member in the Department of Biological Sciences, Hull University, Yorkshire. His principal research interest has been the responses of aquatic animals to their environment. For the past 25 years, this has been directed more and more to the responses of live crustaceans to post-harvest treatments from point of capture to point of final sale -and particularly how improved, biologically-based systems can be developed to increase the chances of making final deliveries of quality, live products. Roger has lectured extensively overseas, published more than 80 articles, supervised 30 postgraduate doctoral students and is passionate about the practical application of his research to the crustacean industry. He was recently the 2010 Buckland Foundation Professor of Fisheries which has involved him giving lectures to catchers and buyers in major shell-fishing areas in the UK and is currently writing a book on biological inputs into the supply chains of live crustaceans.



## 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP

*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

### PRESENTERS:

#### **Jerry Amirault**

AVC Lobster Science Centre

[jamirault@upei.ca](mailto:jamirault@upei.ca)

Jerry Amirault, the Executive Director of the AVC Lobster Science Centre, continues to develop a new management model for the Centre based on industry inputs for research project recruitment and the required response. A key component to this position is to acquire and maintain financial contributions for all AVC Lobster Science Centre related activities so that fish, lobster, and crab research is available and remains at its strongest caliber. This often involves developing new and innovative ways to connect fish health research with the industry with the means to fund the work. Jerry believes that science and conservation of the crustaceans is paramount to a long term strength of all sectors in the industry. He remains very interested in the many aspects of the fishing industry, both in the areas of resource management and science that will contribute to science over the long term.

#### **Fraser Clark**

AVC Lobster Science Centre

[fclark@upei.ca](mailto:fclark@upei.ca)

Fraser Clark began working at the AVC Lobster Science Centre (AVCLSC) in 2005 after completing a MSc in the at Queen's University in Kingston Ontario. At the AVCLSC, Fraser has worked on a variety of genomic and proteomic projects related to crustacean disease and host response. In 2009 Fraser began his PhD at UPEI where his current research focus is on lobster genomics related to stress and immunity. Current immunologic studies include how the lobster immune system responds to bacterial, parasitic and viral infections and whether there is a specific or differential response to these different types of pathogens. Additionally, he is investigating how lobsters respond to physiologically stressful events including moulting, live-storage, air exposure during live-shipping and exposure to environmental pollutants. The use of modern DNA, RNA and proteomic techniques is greatly expanding our knowledge of lobster biology and we are excited that the application of these techniques can strengthen the lobster fishery.

# 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP



*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

## **Andrea Battison**

AVC Lobster Science Centre

[abattison@upei.ca](mailto:abattison@upei.ca)

Andrea received her DVM degree (1990), Master of Veterinary Science degree in Clinical Pathology (1994) and a Senior Diagnostic Fellowship (1996) from the Western College of Veterinary Medicine, Saskatoon, SK. Andrea achieved certification in Clinical Pathology by the American College of Veterinary Pathologists in 1997. After two years as a Clinical Instructor at the College of Veterinary Medicine, Cornell University, she returned to Canada to complete a PhD program (2003) at the Atlantic Veterinary College, Charlottetown, PE. Andrea's doctoral work involved examination of lobster hemolymph as a means to assess lobster health status. Many of the projects Andrea is currently working on at the AVC Lobster Science Centre use hemolymph biochemistry profiles as part of lobster and snow crab health assessments. These include assessment of nutritional, moult, and ovary maturation in lobsters as part of the Atlantic Lobster Moult and Quality project.

## **Melanie Burton**

AVC Lobster Science Centre

[mburton@upei.ca](mailto:mburton@upei.ca)

Melanie completed a BSc with a major in biology from St. Francis Xavier University in 2004, with a focus on marine biology and aquatic resources. She then moved on to complete her Graduate Certificate of Science with a major in Marine biology from James Cook University, Australia (2005). Prior to joining the Lobster Science Centre team in April, 2008, Melanie worked on the water with a whale watching company, as well as directly with the lobster industry at a lobster pound and processing plant. Her position with the Lobster Science Centre focuses on two main activities, field monitoring and the service unit. The field monitoring activity includes collection of biological data, such as hemolymph samples and pleopod clippings, while onboard fishing vessels and at various plants around the Maritimes. The service unit includes data collection from participating holding facilities throughout NS, NB, PE, NL and QC to help identify causes and risk factors for productivity losses and disease outbreaks.



## 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP

*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

### **John Garland**

Clearwater Seafoods Limited Partnership  
[igarland@clearwater.ca](mailto:igarland@clearwater.ca)

John Garland is the Senior Biologist, Food Safety & Quality Assurance for Clearwater Seafoods in their Lobster Research and Development group. John has been involved in the fishing industry most of his life, working as a deckhand on his father's commercial dragger as well as harvesting sea urchins. After obtaining his Bachelor of Science degree with an advanced major in Marine Biology at Dalhousie University he began working with Clearwater, eventually taking over the role of senior biologist. John has been with Clearwater for 17 years, involved in such activities as the design and construction of commercial - sized recirculated water lobster holding systems worldwide, development of a lobster quality grading system and investigating lobster physiological responses to storage, shipment and handling stress. He is currently working towards his PhD at the University of Hull, UK on physiological responses of lobsters to commercial handling practices.

### **Stewart Lamont**

Tangier Lobster Company Limited  
[stewart@tangierlobster.com](mailto:stewart@tangierlobster.com)

Stewart Lamont is Managing Director of Tangier Lobster Company (TLC). He has been in the lobster sector as a live lobster exporter for over 30 years. Stewart was born in Halifax, Nova Scotia, and completed schooling in Yarmouth, Nova Scotia. He attended Dalhousie University graduating with a Bachelor of Arts, a Bachelor of Law and a Masters in Public Administration. After graduation from university, he served as Legislative Assistant to the Minister of Justice for the Government of Canada. Subsequently he returned to Nova Scotia and was recruited to do Marketing Studies for the lobster sector in 1981. He has been in the lobster game ever since, developing core customer relationships in 16 countries worldwide. He chairs the Air Freighter's Group - a committee of companies in Canada and America whose primary business it is to air freight live lobster worldwide 52 weeks of the year. He also sits on the Board of Directors of the "Lobster Council of Canada". Finally, Stewart writes extensively about lobster issues and related topics in a casual blog entitled: "Lobster Lives".

# 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP



*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

## **Robert Verge**

Canadian Centre for Fisheries Innovation  
[RobertVerge@bellaliant.net](mailto:RobertVerge@bellaliant.net)

Mr. Verge is currently the Managing Director of the Canadian Centre for Fisheries Innovation. Prior to taking that position in 2010, he spent most of his career as a management consultant. In that role, he had a broad range of experience in the fishing industry, including projects in resource management, resource development, harvesting, processing, and marketing of fish products. Many of his projects were with private companies involved in the industry, typically with the objectives of improving productivity and profitability. Projects often included designing plants and production systems and introducing new technology, work methods, and process controls, including control of product quality. Because of his knowledge of the industry's operational issues, he was also retained by various federal and provincial government agencies, industry associations, and educational institutions. His work literally took him around the world, giving him an understanding of how the Canadian industry compared with those of other countries. From 1986 to 1988, he chaired a working group set up jointly by the Department of Fisheries and Oceans and the processing industry, which developed the HACCP-based Quality Management Program that has since become a mandatory requirement in the industry and been emulated in other food industries both in Canada and internationally. Following the collapse of groundfish stocks in the early 1990s, he worked with companies in the industry as they made the transition to operations based on crab, shrimp, scallops, and other previously underutilized species.

## **Leonard Leblanc**

Gulf of Nova Scotia Fishermen's Coalition  
[leonard.leblanc2@ns.sympatico.ca](mailto:leonard.leblanc2@ns.sympatico.ca)

Leonard LeBlanc is an Acadian lobster harvester who is one of 19 siblings from Cheticamp Nova Scotia. He has owned his own fishing enterprise for 25 years. President of the Gulf Nova Scotia Fishermen's Coalition, President of the Lobster Council of Canada, Board member of the Atlantic Lobster Sustainability Foundation, Executive member of the Nova Scotia Fishing Safety Association, Board member of the Nova Scotia Fisheries Sector Council, Former board member of the Canadian Council of Professional Fish Harvesters, Secretary/Treasurer of the Gulf Nova Scotia Fleet Planning Board. He has been actively participating in scientific endeavors with DFO science for over 20 years.



## 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP

*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

### **Geoff Irvine**

Lobster Council of Canada

[geoff.irvine@lobstercouncilcanada.ca](mailto:geoff.irvine@lobstercouncilcanada.ca)

Born in Quebec but raised and regimented in rural Nova Scotia, Geoff studied History and Political Science at Acadia University and has enjoyed a 15 year career in the seafood industry (with a four year "sabbatical" leave in university advancement). He has extensive experience with live, raw, salted and frozen seafood products in retail, raw material inspections, sales, marketing, international trading, event, project and business management. Geoff has developed his knowledge of the fishing and seafood business in large and small company settings and was Managing Director and partner in Harbour View Seafoods Ltd., from 1998 to 2006.

### **Dave MacEwen**

Prince Edward Island Department of Fisheries, Aquaculture and Rural Development

[dgmacewen@gov.pe.ca](mailto:dgmacewen@gov.pe.ca)

Dave MacEwen was born and raised in St. Peters, PEI. He attended UPEI and received his B.Sc with a major in Biology. He has previously worked with PEI Fishermen's Association and Eastern Fishermen's Federation. He was also a Federal Fisheries Officer based in Alberton during the 1990's before being employed with PEI Dept of Fisheries and Environment as Marine Fisheries Specialist in 1997. Dave is now the Manager of Marine Fisheries for the PEI Department of Fisheries, Aquaculture and Rural Development under which both the Lobster Resource Monitoring and the Future Fisher Programs are administered. Dave represents the Province in many of the regional advisory committees.

*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

## PRESENTATION SUMMARIES:

### **Keynote Address – Some Biological Inputs into Successful Live Crustacean Supply Chains**

***Roger Uglow***

University of Hull, East Yorkshire, UK

In recent years, the valuable, international trade in live crustacean shellfish has become more global in extent and much more complex with some supply chains being measured in months and thousands of miles. Despite these changes the market demand for high quality products has also increased in the face of increasing operating costs. Countering increased costs with increased catches is no longer a feasible option so it is particularly important that product quality selection is improved and that current supply chain systems and methods become more cost-effective and more effective in maintaining such quality through to final sale.

Some of the problems caused by the failure to identify product quality and prevent its loss will be mentioned as will some lesser-known aspects of the biology of the animals and the bearing these may have on understanding the animals' reactions to postharvest treatments. Brief mention will be made of European supply chains which, in many ways, differ from those in North America and the talk will conclude with predictions of possible future developments.

*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

### **Are my Lobsters Stressed During Live-Holding and Shipping?**

***Fraser Clark*<sup>1,2</sup>, *Adam Acorn*<sup>1</sup>, *John Garland*<sup>3</sup> and *Spencer Greenwood*<sup>1,4</sup>**

<sup>1</sup>AVC Lobster Science Centre, Atlantic Veterinary College, Charlottetown, PE

<sup>2</sup>Department of Pathology and Microbiology, Atlantic Veterinary College, Charlottetown, PE

<sup>3</sup>Clearwater Seafoods Limited Partnership, Bedford, NS

<sup>4</sup>Department of Biomedical Sciences, Atlantic Veterinary College, Charlottetown, PE

Lobsters go through a period of immense environmental and physiological change as they travel along the chain-of-custody from their point of capture to our dinner plates. Key events include hauling, handling at sea, landing at the wharf, grading, shipping, live-holding, air exposure and potentially large changes in temperature. We hear so much about DNA, genomes and genetic medicine in the media today that it is finally time to utilize our genetic knowledge to help the lobster industry understand how lobsters respond to key points along the harvest to plate chain. Our aim is to use lobster genetics to monitor the changes that are occurring at the molecular level, with the aim of increasing productivity and reducing mortality. Lobsters were examined in the winter of 2011 to determine how lobsters deal with live storage at 2°C for up to two months, and what kind of changes are occurring during this period of "hibernation" of torpor. We found that although there may be small alterations in a few stress-related genes, the majority of these changes that are occurring in genes involved in energy metabolism and relate to the extended period of food withdrawal. We also observed changes in genes involved in detoxification but not in genes associated with the lobster immune system. The second part of the study examined the changes that occur during live-transport. We found fewer gene expression alterations in this stage of the chain-of-custody although several genes related to air-exposure were increased. These findings begin to tell us more about how lobsters are responding to live-storage and live air-shipment and can begin to help us reduce the incidence of lobster mortality during these critical points in the lobster chain-of-custody.

*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

## **Hemolymph Biochemistry: An Indicator of Nutritional Status?**

***Michael Ciaramella*<sup>1</sup>, *Andrea Battison*<sup>1</sup>, *Barbara Horney*<sup>2</sup>**

<sup>1</sup>AVC Lobster Science Centre, Atlantic Veterinary College, Charlottetown, PE

<sup>2</sup>Department of Pathology and Microbiology, Atlantic Veterinary College, Charlottetown, PE

Hemolymph biochemistry profiles were examined as a potential non-lethal means to assess tissue energy reserves (lipid and glycogen) in the American lobster. Energy reserves are known to fluctuate over the moult cycle in the American lobster and other crustaceans. Tissue samples (hepatopancreas, crusher claw, pincher claw and tail muscle) were collected from 88 lobsters fished out of Georgetown, PE (LFA 26A) in May - September 2009 and 2010. Tissue lipid, glycogen, and water content were determined and then compared to hemolymph plasma biochemistry parameters to identify a parameter(s) that might be a useful indicator of nutritional status. Lipid was the more abundant energy reserve and was found predominantly in the hepatopancreas. Correlations between hemolymph parameters and hepatopancreas lipid content were affected by sex and moult stage of the lobster. The best correlations were found for total protein, cholesterol and triglyceride concentrations in intermoult male lobsters.

## **Aqualife Transport System; a Healthy Alternative to Air Freight**

***Melanie Burton*, *Jean Lavallée*, *Andrea Battison***

AVC Lobster Science Centre, Atlantic Veterinary College, Charlottetown, PE

Lobsters are air shipped overseas on a regular basis to a number of international locations. In recent years there have been a few questions surrounding alternatives to airfreight as reliable shipping methods (e.g. cancelled flights due to volcanic ash/bad weather). Up to this point, air shipment was the only method of getting lobsters overseas, but an alternative has now been presented. A preliminary research project was conducted using this alternative shipping method, Aqualife Live Seafood Transport System, with positive results. This method of shipment relies on ocean freight while the animals remain submerged in water for the duration of the trip rather than being exposed to air. This presentation will highlight the results of a one week static trial using 4,400 lbs of live lobsters in 6 Aqualife tanks.

*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

**Surviving in Air: How do Lobsters Cope and for How Long?**

***John Garland***

Clearwater Seafood Limited Partnership, Bedford, NS

Lobsters have the ability to live out of water for extended periods under ideal conditions, making it possible to land and ship live lobsters to profitable foreign markets without loss of quality and freshness. This talk will offer a review of what is known about how a lobster copes with surviving out of water, what limits must be imposed to maintain product quality and how standard industry practices impact on a lobster's out of water survival performance. Providing optimum environmental conditions is key to shipment success, whether it is a 6-hour trip on a fishing boat to the wharf, a short truck ride from the shore to a processing facility or a 48 hour airplane trip to lucrative foreign markets.

**Quality Control in Atlantic Live Lobster from an Exporter's Perspective:  
"Getting it right from the Trap to the Plant, and on from there ....."**

***Stewart Lamont***

Tangier Lobster Company, Tangier, NS

The really good news? Quality components in this process are easily identified and easily put into place. It ain't rocket science.

The really discouraging news? Very few of us, harvesters, shore buyers or live exporters do an outstanding job on quality control during this time frame. It takes diligence and commitment every single time. Sometimes it is after hours, frequently in bad weather, and always 7 days a week. It is not easy, but it is so very important: Pieces of the quality puzzle: a) Environmental, b) Biological, c) Handling practices, d) Transport from Shore, e) Plant Receiving, f) Plant Benchmarks, g) En Route to Market.

Conclusion: The Live Lobster Trade is a "100 Details" business – most of them associated with Quality Control. He/she who masters those details the best achieves the most success.....continuous sales, contented clients worldwide, and reasonable return on investment. If we want to raise the intrinsic value of our product, we need to raise the quality as well. Spread the word.....

*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

## **Quality Standards: Lessons Learned from other Fish Species**

***Robert Verge***

Canadian Centre for Fisheries Innovation, St. John's, NL

Compared to other seafood, consumers pay high prices for lobster. And they expect an extraordinarily good eating experience. Nevertheless, Gardner Pinfold identified marketability of lobsters and lack of quality standards as key issues.

How can the industry ensure it is meeting consumer expectations? Quality standards are essential. But there are many challenges in both developing and using them. This presentation will outline those challenges and show how experience with other species can provide some helpful principles to follow.

## **Lobster Sustainability from a Harvester Perspective**

***Leonard Leblanc***

Gulf of Nova Scotia Fishermen's Coalition, Cheticamp, NS

This subject can have a different meaning for different people. My definition has multiple layers. We have the sustainability of the resource the sustainability of the harvester and the sustainability of the coastal community.

I, personally, believe that we cannot have proper management or a proper marketing strategy without taking into account the above-mentioned. I will expand on all three subjects (at great length) from a harvester's prospective. We are now in an era of consumer knowledge. Therefore, there is a need to make sure that we have a factual story about the steps we are taking to harvest our resource in a sustainable manner.



## 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP

*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

### **Quality Grading for the Canadian Lobster Industry**

***Geoff Irvine***

Lobster Council of Canada, Halifax, NS

The presentation will highlight some of the recommendations and conclusions from the "Long term Value Strategy for Canadian Lobster" released by Gardner Pinfold Consulting Engineers in late 2010.

The study suggests that the lobster industry in Canada suffers from a "marketability" challenge in that live shippers and processors are often unable to offer consistent quality, price and supply of products, thereby making any effort to promote or market generically a waste of time.

I will present these findings and conclusions and provide an update on the next steps being taken by the industry to address these important issues.

The presentation will also highlight how quality grading provides the basis for price negotiations in the Northern Shrimp and Frozen H+G Groundfish industries around the world.

### **The Department of Fisheries, Aquaculture and Rural Development and the Prince Edward Island Lobster Industry, The Quality Link**

***Dave MacEwen***

Prince Edward Island Department of Fisheries, Aquaculture and Rural Development, Montague, PE

The department of Fisheries, Aquaculture and Rural Development will provide an overview of its programs and projects in the harvesting and processing sectors that have a potential influence on lobster survival. Programs in both the Marine Fisheries and Seafood Service sections will be outlined. The presentation will focus on the department's involvement with the lobster industry from the harvester to the end user.

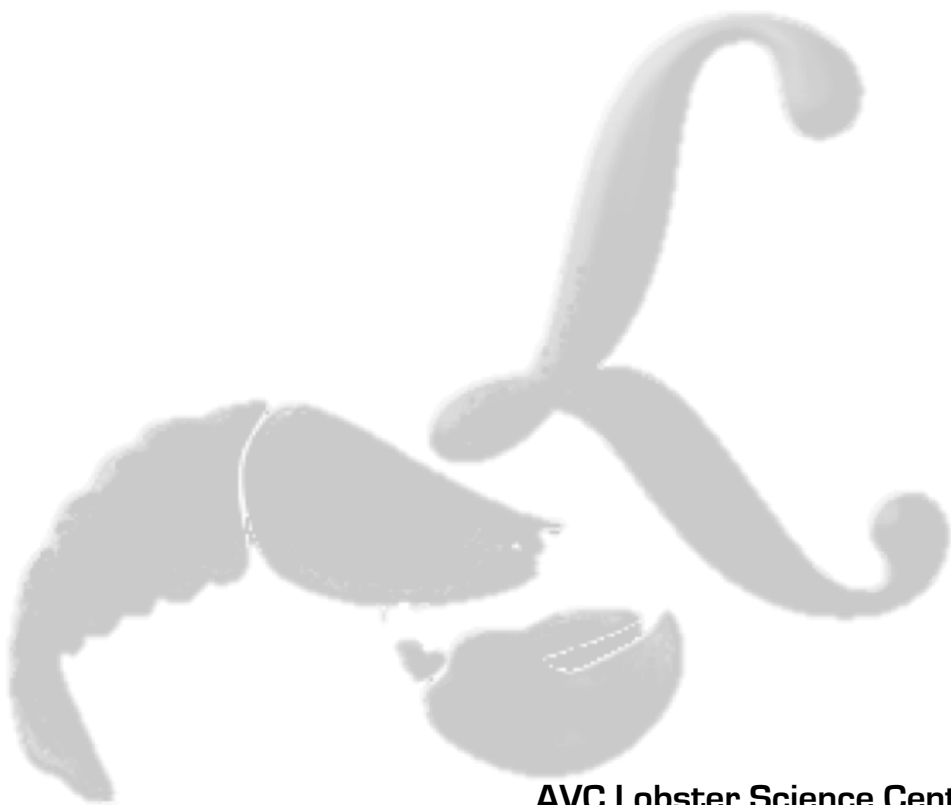
# 7<sup>th</sup> ANNUAL LOBSTER SCIENCE WORKSHOP



*"ON THE ROAD AGAIN: OPTIMISING LOBSTER QUALITY THROUGHOUT THE CHAIN-OF-CUSTODY"*

## Acknowledgements

*The AVC Lobster Science Centre, and especially the Workshop Organisation Team would like to take this opportunity to thank Dr. Roger Uglow, our keynote speaker and presenters for their valuable contributions to the successful delivery of this workshop. Additionally, the workshop would not have been possible without the generous contributions of our sponsors and partners. We want to extend our thanks to the staff of the Confederation Centre of the Arts, as well as Mavor's Bistro & Bar for their professionalism throughout the preparation and delivery of the Lobster Science Workshop. Finally, we would like to sincerely thank all attendees for participating in our workshop. We are confident that all stakeholders in the lobster industry will benefit from the 7<sup>th</sup> Annual Lobster Science Workshop.*



**AVC Lobster Science Centre**

550 University Avenue • Charlottetown • Prince Edward Island • Canada • C1A 4P3

Tel: (902) 894-2884 • Fax: (902) 894-2885 • lobster@upei.ca

[www.lobsterscience.ca](http://www.lobsterscience.ca)