

BiOLink

The Official Newsletter of the
Atlantic Society of Fish and Wildlife Biologists



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ASFWB 50th Annual General Meeting Review

The 50th Annual General Meeting of the ASFWB was held on October 29-30th, 2013, in Sackville, New Brunswick. Approximately 65 people attended the two day event, including nearly 40 who participated in the Business Meeting on October 30th.

A special thanks goes out to Jason Leblanc for setting the tone of the 50th AGM with a very interesting presentation of the history of the Society, recognizing the founders and early, active members.

The scientific program on the first day saw engaging talks on technological advances in fish and wildlife research, with topics ranging from passive acoustic detection of harbor porpoises (Peter Porskamp) to automated telemetry arrays used to track broad-scale movements of terrestrial organisms (Dr. Phil Taylor).

A dinner was held on the evening of the 29th, at which time many members took to the podium to reflect on their involvement in the society and share memories of past ASFWB meetings and seminars. A very successful silent auction raised money for the newest ASFWB scholarship (see Page 4).

Talks resumed on the second day of the AGM, with thought-

provoking presentations focused on management and conservation, including the spatio-temporal phenology of macroinvertebrates in coastal wetlands (Christine McLauchlan), and linking stewardship program participation to farmer engagement in conservation practices (Simon Greenland-Smith).

Continued on Page 3

Below Participants of the 50th AGM take advantage of the beautiful October weather, and gather for a group photo. (Photo: Becky Whittam)



Above Past presidents of the ASFWB gather in Sackville, NB, for the Society's 50th Annual General Meeting. From left to right: Al Smith (1986-87), Ross Alexander (1979-80), Jason Leblanc (2007-2010), Rosemary Curley (1994-96), Colin Mackinnon (1992-94), Mark Pulsifer (current president, 2012-2014), Andrew Boyne (2003-2006), and Rudy Stocck (1975-76).

(Photo: Becky Whittam)

Don't miss this!

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Changes to the ASFWB Executive

At the 2013 AGM, Christine McLauchlan became our new VP Student Affairs, as Danielle Quinn moved into the position of newsletter co-editor. Danielle is joined by Holly Lightfoot as co-editor. Stephanie Walsh renewed her position as VP Membership, and Past President Kirby Tulk has taken on the position of VP Programming.

Christine McLauchlan VP Student Affairs



Christine completed her BSc in Biology at the University of Prince Edward Island, with a semester at Mount Allison

University to complete a minor in Environmental Sciences. She is now working on her MSc with Dr. Mark Mallory at Acadia University, studying the phenology of waterfowl and their macro-invertebrate food prey in wetlands near Sackville, NB.

Christine has recently accepted the position of

Executive Director at the Petitcodiac Watershed Alliance, and is very excited to start! Her loves include her Samoyed dog Finnegan, playing drums, and Maritime culture.

Holly Lightfoot Newsletter Editor

Holly finished her BSc in Biology at Acadia University, where she had the opportunity to do research on Leach's



Storm Petrels. From there she jumped right into an MSc, also at Acadia, with Dr. Phil Taylor on avian migration.

Holly is currently working at Bird Studies Canada in Sackville NB, as the Acting Aerial Insectivore Program Coordinator, but has also worked on the Nocturnal Owl Survey and High Elevation Land Bird Program. In her down time she likes hiking, birding, and curling up with a good book!

2014 ASFWB Executive

President

Mark Pulsifer
pulsifmd@gov.ns.ca

Past President

Kirby Tulk
kirby.tulk@pc.gc.ca

Secretary/Treasurer

Nic McLellan
n_mclellan@ducks.ca

VP Membership

Stephanie Walsh
stephanie.walsh@nspower.ca

VP Programming

Kirby Tulk
kirby.tulk@pc.gc.ca

VP Student Affairs

Christine McLauchlan
cmclauchlan@upe.ca

Newsletter Editors

Danielle Quinn
danielle.quinn@acadiau.ca
Holly Lightfoot
hlightfoot@birdscanada.org

Web Site Manager

Greg Johnson
greg.johnson@stantec.com

The ASFWB Biolink is published twice a year. Articles and opinions do not necessarily reflect the views of the Society or its members. Thanks to all who have contributed photos and articles.

Visit our website at:

<http://www.chebucto.ns.ca/environment/ASFWB/>

ASFWB Spring Seminar Understanding and Managing Threats to Wildlife

April 24, 2014
10 am - 3:30 pm

Mount Allison University
Sackville, New Brunswick

Visit our website for more information!

In Memory of Richard “Ritchie” Harold Watkins of Shag Harbour, Nova Scotia (12 January 1943 - 13 December 2013)

Written by Colin MacKinnon

It was with great sadness that I heard that my old friend Ritchie Watkins had passed away. One has many mentors over a career and Ritchie was one of mine. As a young student his kindness was much appreciated and from him I learned much more than can be gleaned from books. His “traditional knowledge” of the local wildlife would put most schooled biologists to shame. My best recollection, to emphasize the point, was on a foggy boat trip in his small skiff to roam around the small cluster of islands to the north of Bon Portage. The fog was as thick as the proverbial “pea soup” and Ritchie, with only his box mounted boat compass at his feet, thought I would be interested in seeing some large flocks of Common Eider. Along the way, he postulated that there should be a hundred or



so eiders off Goodwin’s Island as it was mid-day, the wind was blowing steady from the southwest, and the sea was running hard on an ebb tide. Not long after this discussion, we appeared mysteriously out of the fog exactly where he intended; and yes, there were some 100 or so eiders loafing on the rocks! Nancy and I witnessed Ritchie perform these feats time and again, running his boat from the Shag Harbour wharf to the Bon

Left Ritchie Watkins, as I will always remember him, running his boat. The Bon Portage Island boat slip can be seen in the distance.

(Photo: Colin MacKinnon 1982)

Portage slip (a 3.5 km trip), in the thickest fog, he would be right on the money every time. A lobster fisherman most of his life, Ritchie also transported who knows how many students and visitors to and from The Morrill Richardson Field Station in Biology on Bon Portage Island. If you were fortunate enough to have met Ritchie, and even more so if you could have spent time with him, your life would have been richer for it. This short note is an all too inadequate expression of appreciation to a truly exceptional person; a quiet man with a big heart.

Colin MacKinnon is a Senior Wildlife Biologist with the Canadian Wildlife Service.

ASFWB 50th Annual General Meeting Review *(Continued from Page 1)*

As expected, student presentations were excellent, and the three best student presentations were given by: Tara Imlay (1st place), Freya Keyser (2nd Place), and Simon Greenland-Smith (3rd Place) (see Page 9).

Treasurer Nic McLellan provided a financial update at the Business Meeting, reporting a healthy bank balance at nearly \$8,000. The Society is in a great position to

make a contribution to the new PEI scholarship. A scholarship naming committee was established, and has since determined the name of the new scholarship to be The Atlantic Society of Fish and Wildlife Biologist’s Gilbert R. Clements Scholarship (see Page 4).

A huge thank you goes out to everyone who participated, and everyone involved in planning and coordinating the event,

especially Becky Whittam, David Lieske, and Anne Beniot, members of the local organizing committee.

We’re already looking forward to the **51st Annual General Meeting** at Terra Nova National Park in Newfoundland next fall. Mark your calendars, the likely dates are **October 21-23**. Hope to see you there!

The Atlantic Society of Fish and Wildlife Biologist's Gilbert R. Clements Scholarship

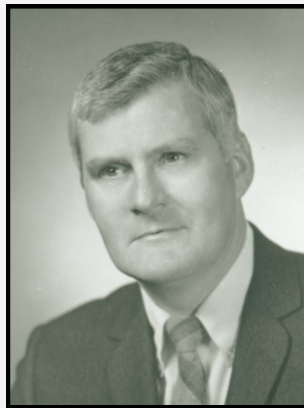
The Atlantic Society of Fish and Wildlife Biologist's Gilbert R. Clements Scholarship will be awarded annually, on the recommendation of Holland College, to graduating students entering the University of Prince Edward Island Wildlife Conservation Program as full time students.

Potential candidates should have combined scholastic ability with a demonstrated interest and aptitude in wildlife conservation or management.

Congratulations to Christine C. Gatti from Kleinburg, ON!

Christine was the recipient of the 2013-2014 David J. Cartwright Memorial Scholarship, valued at \$950.

She is in her 4th year of a Bachelor of Science in Environment and Natural Resources at the University of New Brunswick (Fredericton campus), and is a member of the UNB Woodsmen Team, the Treasurer/Secretary of the UNB Wildlife Society, and a volunteer in the UNB Forestry Equipment Room.



Gilbert Ralph Clements was first elected to the Prince Edward Island Legislative Assembly in 1970, and was re-elected for a total of 24 years of service. He held ministerial portfolios for both Premier Alex Campbell and Premier Joseph Ghiz. During his service he was also responsible for several Crown Corporations, including the Environmental Control Commission. Mr. Clements served as Chair of the Canadian Council of Ministers of the Environment on two separate occasions.

Gilbert Clements was a champion for wildlife and environmental protection, and wildlife management was a key part of his portfolio. Mr.

Clements collaborated with Ducks Unlimited to improve fish passage, and established the Morell River Conservation Zone in the mid-1970s, providing a three chain wide conservation zone for a valuable salmon and trout river. He also established a number of Wildlife Management Areas under the *Fish and Game Protection Act* and played a large role in shepherding *The Natural Areas Protection Act* through the Legislative Assembly in the mid-1980s. Under Mr. Clements leadership and at the urging of the Canadian and Prince Edward Island Wildlife Foundations, PEI became the first province to develop a provincial conservation strategy in the late 1980s. He established the Young Environmentalists Program, which allowed teams of high school students, led by university students, to work for the summer on environmental projects throughout the province.

Mr. Clements efforts were recognized; he was the only elected official to receive the Crandall Award (from the Travel Industry Association of Canada), given for the greatest contribution to preserving the environment in Canada. In 1987 he was granted an honorary membership in the Prince Edward Island Wildlife Federation, and in 1999 they presented him with a "Special Conservation Award". Mr. Clements was an initial member of the National Round Table on the Environment and the Economy. He was also responsible for the establishment and chaired the PEI Round Table on the Environment and the Economy. In 1992, Mr. Clements was an official member of the Canadian Delegation to the "Earth Summit" in Rio de Janeiro.

In 1995 the Hon. Gilbert R. Clements was appointed as the thirty-eighth Lieutenant Governor for the Province of Prince Edward Island. Throughout his tenure as PEI's Lieutenant Governor (from August, 1995, to May, 2001), Gilbert maintained his interest in the environment and was the 'Official Patron' of the Prince Edward Island Wildlife Federation. In 2003, the Island Nature Trust presented Mr. Clements with the Hon. J. Angus MacLean Award for outstanding efforts for protection of natural areas and wildlife. In 2006, he was selected by the Canadian Wildlife Federation for its Canadian Legislator Award.

The late Gilbert Clements has long been recognized for his many wildlife and environmental activities, both within Prince Edward Island and abroad. Mr. Clements passed away in November 2012.

To donate to the scholarship:

Mail:

140 Weymouth Street
Charlottetown, PEI
C1A 4Z1

Online:

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Phone:

902-566-9590

**Cheques are payable to the
Holland College Foundation.
Please include a note and/or
indicate the award name in
the cheque memo.**

Maritimes Butterfly Atlas Enters Final Year

Written by John Klymko

2014 is the fifth and final year of the Maritimes Butterfly Atlas (MBA). The MBA is a citizen science project documenting the occurrence of butterflies in the three Maritime provinces. The purpose of the MBA is to produce a snapshot of butterfly populations in the Maritimes today and provide a baseline dataset for the future.

Information gathered will inform conservation decisions, especially identifying species of conservation concern and their habitats. As scientists examine effects of climate change and other disturbances on native animal species, the MBA dataset will provide valuable baseline data about butterfly distribution and abundance in the Maritimes.

To date, over 300 volunteers submitted 18,000 records from across the Maritimes. There have been many exciting discoveries, including the first ever records of Crossline Skipper for the Maritimes. This species was discovered in 2012 at two sites in the Saint John River Valley. Other interesting finds include seven new provincial records (Fiery Skipper, American Snout, and Giant Swallowtail for NB; Dorcas Copper, Two-spotted Skipper, and Eastern Tailed-Blue for NS; and Eastern Comma for PEI).

Already over 1,000 rare species records submitted, significantly increasing our understanding of these species' distribution and abundance in

the Maritimes. For example, the MBA has produced 23 Baltimore Checkerspot records from PEI. This has nearly quadrupled the number of records for the island, indicating the species is not as rare there as previously thought.

The MBA has also documented some large scale changes in butterfly distribution. Little Wood-Satyr is a species that has spread eastward into the Maritimes in the past 25 years. MBA data shows that it is now common throughout New Brunswick and PEI, and found in Nova Scotia as far east as Pictou. It is probably a just matter of time before it is recorded in Halifax. Prior to the MBA, Eastern Tailed-Blue was thought to be more-or-less restricted to areas west of the Saint John River. In 2012, MBA participants recorded it from as far east as Miramichi and Alma, and in 2013 at four sites in Nova Scotia. So far the MBA has received no records of Greenish Blue, suggesting a



Above Little Wood Satyr. MBA data shows that this species, which only arrived in the Maritimes in the last 25 years, now occurs as far east as Pictou, NS (Photo: Peter Gadd)

westward contraction in this species range. Greenish Blue was previously considered common in northern New Brunswick, found in colonies on patches of Birdsfoot Trefoil, a common roadside weed.

Hopefully this final field season will be a banner year for the MBA. If you are already participating in the project please keep it up. If you haven't submitted a photo or specimen to the atlas then the time to act is now! A 15 minute drive could get nearly everyone in the Maritimes into a survey square where five or fewer species have been recorded.

Anyone interested in participating should John Klymko, the Atlas director, at jklymko@mta.ca, or visit accdc.com/butterflyatlas.html.

John Klymko is the MBA Director at the Conservation Data Center in Sackville NB

The MBA has received funding from Environment Canada's EcoAction Community Funding Program, New Brunswick Wildlife Trust Fund, the Gosling Foundation, NB Power Corporation, New Brunswick Department of Natural Resources, the Echo Foundation, the Prince Edward Island Department of Environment, Energy and Forestry, and TD Friends of the Environment Foundation.

Recent Literature

Looking for a summer reading list? Keep up to date with fish and wildlife research publications from Atlantic Canada and beyond.

Submitted by Rosemary Curley - thank you!

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The European Green Crab: Finding Alternative Uses of an Invasive Predator

Written by Luke Poirier

The growth of green crab (*Carcinus maenas*) populations threatens the sustainability of healthy aquatic systems and shellfish resources in Atlantic Canada, as well as the livelihood of communities in the region who rely on the harvesting or aquaculture of these resources. At the University of Prince Edward Island, we are currently developing novel mitigation measures that will not only help the sustainability of healthy shellfish and ecosystems, but also aid in providing alternative sources of income to local fishermen. A pilot project undertaken by DFO in the Maritime Region (Nova Scotia, South shore) has shown preliminary signs of success, and the same model is currently being implemented in Gulf Region (New Brunswick and PEI). However, its viability over time is questionable considering the low profit margins and lack of suitable marketable products. Currently, uses are limited to lobster bait or supplements to fish food with prices ranging from \$0.50 to \$0.85 a pound.

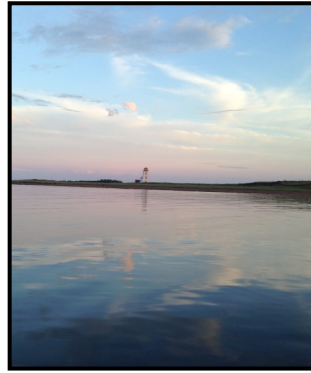


Photo: Luke Poirier

The development of a “soft-shell” product is an attractive option that could mimic the soft-shell Blue crab industry in the USA (\$5 per crab and currently worth over \$5 million annually). Such a product relies on being able to identify and harvest molting crabs, or on the induction of molting in small scale aquatic facilities. Profits, well above those expected from the harvesting of “hard-shell” green crabs, justify the development of basic research on molting cues and techniques. They are at the base of a potentially lucrative and sustainable new fishery that, in parallel, will provide substantial health benefits to our aquatic system by removing this opportunistic predator. This project will explore the external physical cues (i.e. colour changes) that indicate molting behavior, while also examining the environmental drivers (temperature, salinity etc.) behind this process. These as of yet unknown cues are being readily utilized within the original area of distribution of the green crab in Europe.



Currently in the Burano and Chioggia regions of Venice, Italy, molting crabs are being identified within large enclosures. Freshly molted crabs, locally known as “moleche” are then sold as delicacies (40 euro per kilogram) throughout that region. Initial contact with Italian colleagues has occurred and it is hoped that a transfer of techniques and knowledge will occur. It is anticipated that these preliminary studies at UPEI will be the starting point of the search for an economically viable and ecologically benefitting strategy based on molting recognition or induction in Green crabs.

Luke Poirier is a PhD student in the Biology Department at the University of Prince Edward Island under the supervision of Dr. Pedro Quijon (UPEI) and Dr. Sophie St. Hilaire (Atlantic Veterinary College). He can be reached by email at lpoirier@upeu.ca



Photo: Luke Poirier



Updates from the 2013 AGM Student Presentation Winners

Tara Imlay (1st Place)

*Where do migratory birds go?
Determining migratory
connectivity for swallows using
geolocators and stable isotopes*



Photo: Tara Imlay

The goal of my doctoral research is to understand the cause(s) of population declines for Bank, Barn, Cliff and Tree Swallows in the Maritimes. I am taking a life cycle approach that will examine reproductive success during the breeding season and conditions on the wintering grounds. Over the next couple years, I will look for long-term trends in the timing of breeding activities and reproductive success, and I hope to link this to climate and insect availability over a similar time frame. I will also use stable isotopes to identify wintering locations for Barn, Barn and Cliff Swallows and use corticosteroid levels in feathers to determine the 'stress' levels of overwintering birds. Ultimately, I hope this work can be used to determine the cause(s) of rapid declines for swallows and provide the necessary data for targeting recovery actions. I hope to complete my degree by 2017.

Freya Keyser (2nd Place)

*Temporal and spatial
movement patterns of striped
bass in the Minas Passage and
Minas Basin, Bay of Fundy*

Freya Keyser is a first-year master's student at Acadia University, under the supervision of Dr. Anna Redden. She is studying the movements of the endangered Bay of Fundy striped bass population in the Minas Basin and Passage, using a multi-year acoustic telemetry dataset. This research will help identify potential risks of tidal energy development to striped bass, and inform conservation efforts for the population. Currently, she is examining the winter activity of striped bass in the Minas Passage, and preparing her telemetry dataset for statistical analysis. She plans to graduate in May 2015, and would like to thank the ASFWB for their interest and support this far!

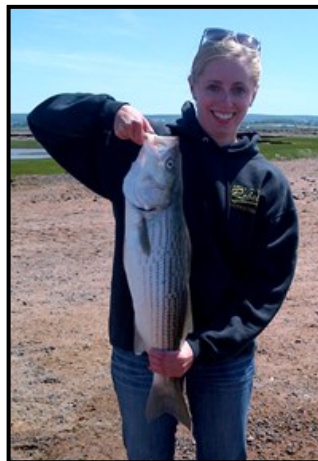


Photo: Freya Keyser

Simon Greenland-Smith (3rd Place)

*Understanding how farmers
value wetlands in Nova Scotia:
gauging private land
conservation potential*

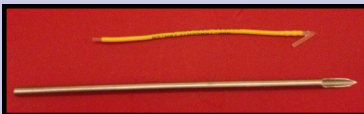
Simon Greenland-Smith is in the Master of Environmental Studies program at Dalhousie's School for Resource and Environmental Studies. He specifically studies farmer perception of wetland areas in an effort to better understand the motivations and concerns of those who are the direct stewards of very valuable areas, in terms of wildlife habitat and other ecological functions. He is currently focusing on analyzing interview data using the framework for Ecosystem Goods and Services, which is implicit in many conservation schemes. This allows for a direct comparison of the perceptions of farmers with conservation programs that are in progress. So far, it appears that farmers are receptive to the idea of ecosystem services but they view themselves as much as recipients of ecosystem services as the drivers of the services themselves. Simon plans on completing his degree by August, 2014.

Featured Creature: Striped Bass (*Morone saxatilis*)

Striped bass are an important component of the aquatic ecosystem, and contribute to the biodiversity and health of our marine environment. They are also culturally and economically important, and cooperative efforts are being made to bring researchers and community together to reach conservation goals.

Ongoing Tagging Programs

Julia Whidden and Danielle Quinn are tagging striped bass using dart tags at a commercial fishing weir in Bramber, Nova Scotia, and at various striped bass tournaments across Nova Scotia. The **Mi'kmaw Conservation Group**, in collaboration with the **Striped Bass Research Team**, hosted tagging workshops in six First Nations communities across Nova Scotia this winter, and will be beginning their community tagging program this upcoming season. The **Petitcodiac Watershed Alliance** will be tagging small striped bass using VIE tags this upcoming season.



There is also ongoing striped bass research using acoustic tags! **Colin Buhariwalla** is recording movement patterns of striped bass in Mira River, Cape Breton. **Freya Keyser** is evaluating migration and movement of striped bass in the FORCE tidal turbine test site in Minas Passage. **Jeremy Broome** is evaluating large scale movement patterns of striped bass around the Minas Basin, and has also tagged hundreds of striped bass using dart tags.



4th Annual Shubenacadie First Nation's Striped Bass Derby
May 3, 2014



Above Hunter (age 10) was the winner of the Bramber Bass Bonanza, with his 40" prize bass (July 2013)

Become a Striped AmbASSador!

For more details, or to find a tagging workshop near you, go to:
www.stripedbass.ca



www.stripedbass.ca



Dr. Jim Duston, from the Dalhousie University Agricultural Campus in Truro, NS, is working to characterize spawning characteristics of the Shubenacadie striped bass population. He hopes to quantify the timing of the spawning event, estimate retention rates of eggs and larva in the estuary, and measure the growth of young bass through the summer months.



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Staffing Changes in Sackville

Becky Whittam is the new Head of Population Management for CWS in the Atlantic. She has over 15 years experience developing and implementing bird monitoring and conservation programs for a wide variety of species, ranging from raptors to seabirds and landbirds. Becky has worked with many different types of teams and partnerships, both in her decade-long role as a regional program manager for Bird Studies Canada, as well as in her more recent role as Landbird Biologist for CWS Atlantic. She has a BSc in Biology from Queen's University, and an MSc in Biology from Dalhousie University, where she studied the impacts of predation on endangered Roseate Terns in Nova Scotia.



Laura MacFarlane-Tranquilla is the new Atlantic Program Manager for Bird Studies Canada. Laura joins BSC after finishing a MSc on the breeding physiology of seabirds at Simon Fraser University, and a PhD in seabird winter ecology at Memorial University. Laura has also worked as a research associate with Simon Fraser University, Environment Canada, BC Conservation Federation, and the Department of Fisheries and Oceans. Although Laura is currently working remotely from Saint John's, she is excited to be moving back to her home province this summer with her husband and two children.



Garry Donaldson has arrived in Sackville to fill the recently vacated Manager of Population Conservation position for CWS while a permanent replacement is sought. Garry's experience with CWS began with several years of contract work, including cataloging samples in the National Wildlife Specimen Bank, analysis of wildlife toxicological data, and field work at remote seabird colonies in the Arctic. More recently, Garry has been managing the Migratory Birds Conservation and Management section at the CWS office in Gatineau. He is happy to be in Atlantic Canada, and looks forward to learning more about the work that is being carried out in this region.



Cause of Grey Seal Die-Off Near Nova Scotia Identified

Written by Pierre-Yves Daoust
In March 2012, we reported a mortality event of young grey seals off the coast of Nova Scotia that members of the Canadian Wildlife Health Cooperative (CWHC), Atlantic region, and marine mammal biologists with Fisheries and Oceans Canada investigated. At the time, this mortality was attributed to severe acute liver damage caused by a protozoan parasite, although the exact identity of this parasite was not determined. Through close

collaboration between members of the CWHC, Atlantic region and British Columbia, and Dr. Michael Grigg and his graduate student, Katie Haman, at the National Institutes of Health, this parasite has now been identified as *Sarcocystis*, possibly a new species designated *Sarcocystis pinnipedi*. The life history of this new parasite seems far more complicated than was anticipated and may involve

the participation of ringed seals, an Arctic species, as reservoir of this parasite. The link between ringed seals and grey seals in the emergence of this apparently new disease is still obscure and will undoubtedly be the subject of extensive investigation.

Pierre-Yves Daoust is a Professor of Anatomic Pathology and Wildlife Pathology at the Atlantic Veterinary College and coordinator of the CCWHC for the Atlantic region. He has also been a member of the ASFWB for some time.

Upcoming Events

24 April 2014: ASFWB Spring Seminar, Mount Allison University, Sackville, New Brunswick
For more information, go to: www.chebucto.ns.ca/environment/ASFWB/

12 - 14 June 2014: Atlantic Canada Coastal and Estuarine Science Society (ACCESS), Saint Mary's University, Halifax, Nova Scotia. For more information, go to: <http://meeting1.mathstat.dal.ca>

15 - 19 June 2014: Coastal Zone Canada 2014 Conference, "Our Coasts: Legacies and Futures", Halifax, Nova Scotia. For more information, go to: <http://www.czca-azcc.org/czc-zcc2014>

17 - 21 August 2014: 114th Annual Meeting of the American Fisheries Society, Quebec City, Quebec
For more information, go to: <http://afs2014.org/>

Spring and Summer 2014: Striped Bass Tagging Ambassador Workshops, multiple dates and locations around Nova Scotia and New Brunswick. For more information go to: www.strippedbass.ca

ASFWB Fish and Wildlife Research Grant

The **ASFWB Fish and Wildlife Research Grant** was established in the fall of 1994 to assist members who are conducting or supervising wildlife or fisheries research in Atlantic Canada. The grant provides funding up to \$500 annually for research projects. Any aspect of fish and wildlife research will be considered, but projects with applied management goals will receive preference. Applicants must be members of ASFWB. Projects that are largely government sponsored or funded are not eligible for this award. For more information, go to: <http://www.chebucto.ns.ca/environment/ASFWB/researchgrant.html>

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