



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

Three Bat Species Endangered in Canada

Adapted from COSEWIC press release.

On February 3rd, an emergency assessment subcommittee of COSEWIC (Committee on the Status of Endangered Wildlife in Canada) assessed the status of the Tri-colored Bat (*Perimyotis subflavus*), Little Brown Myotis (*Myotis lucifugus*), and Northern Myotis (*Myotis septentrionalis*) in Canada. All three species were assessed as Endangered. The subcommittee concluded that the unprecedented mortality in Canada's native bat species from *Geomyces destructans*, the pathogen responsible for White-nose Syndrome, poses a serious and imminent threat to the survival of each of these species. Populations of all three species have recently declined precipitously due to the rapid spread of White Nose Syndrome. A

ASFWB Spring Seminar Integrated Resource Ecosystem Management

Wednesday, April 18, 2012 in
the Crabtree Auditorium at
Mount Allison University,
Sackville NB
Registration 9:30am, speakers
10:00am-3:30pm Cost is \$25
(\$10 for students).

See the web site for more
details!

<http://www.chebucto.ns.ca/Environment/ASFWB/springseminar.html>

recommendation has been made to the Minister of the Environment that an emergency order be issued placing these wildlife species on Schedule 1 of the Species at Risk Act.

The emergency assessment was based on the best available knowledge for the three bat species and the disease agent in Canada and in the United States. Although information on bats and the fungal disease is somewhat limited, the evidence of population collapse and rapid spread of the disease is clear. This is only the fourth emergency assessment carried out by COSEWIC in about ten years.

In Canada, the ranges of the Tri-colored Bat and *G. destructans* almost completely overlap. This bat is relatively rare, but direct counts of this species at a hibernaculum in Quebec show declines of 94% over two years. The disease risk to Tri-colored Bat is considered exceptionally high because it hibernates at temperatures considered optimal for the pathogen and for relatively long periods of time.

Although the range of Little Brown Myotis has so far only been partially impacted by *G. destructans*, the disease is spreading at rates between 200 and 400km/year and could encompass most of the species' range within two to three generations. Recent population counts of Little Brown Myotis at hibernacula in Canada show declines of 94-99% within two years of exposure.

For Northern Myotis, like Little Brown Myotis, the distribution of *G. destructans* does not include the full

range of the species but the evidence indicates rapid spread and very high mortality. Recent counts at hibernacula in Canada show declines of over 90% within two years.

Only three bat species were assessed by COSEWIC in February, however, to date White Nose Syndrome has been identified in nine species of bats in North America and there is conservation concern for these and other species where the disease has not yet been found.

Although there are no known links between the syndrome and human health, White Nose Syndrome is more than just a bat problem. Bats provide tremendous value to the economy as natural pest control for farms and forests every year, and may play an important role in helping to control insects that spread disease to people. US researchers have estimated that the bat die-off will cost North American agriculture \$3.7 billion dollars annually.

For the full article please see http://www.cosewic.gc.ca/eng/sct7/Bat_Emergency_Assessment_Press_Release_e.cfm



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Visit our Web site:
<http://www.chebucto.ns.ca/Environment/ASFWS>

ASFWS Has Joined Facebook!

Join our Facebook group (<http://www.facebook.com/#!/groups/267873249931567/>) to connect with other members across Atlantic Canada! Share photos and stories, chat live, and watch for updates about upcoming events like the 2012 Spring Seminar and AGM. Find out how to register for events online, receive personal invitations, and have access to an interactive map of the event location.

Financial Report

We continue to have a healthy bank balance due to some fundraising activities such as merchandise and event sponsors. Our current balance is \$6,749.40 and this is minus a \$1000 donation to the Donald Dodds Scholarship Fund. The executive voted on Jan 27th to bump up the contribution to an even \$1000 after

the fall AGM silent auction raised just over \$600.

PayPal – Your Newest Payment Option!

For those of you who no longer ever carry cash on you (and what IS a cheque book anyways?!) ASFWS would like to introduce the option of giving us your money through PayPal! You can now renew your membership fees this way, as well as pay for the Spring Seminar and the Annual General Meeting. All you have to do is log on to the ASFWS web site and choose the PayPal option under the appropriate section (ie. Membership). If you have a PayPal account you will be asked to enter your email address and password. If you do not currently have an account you will be asked to set one up. Once the payment is made you will be emailed a receipt and ASFWS will be notified of the payment. It's as easy (and convenient) as that!



Past Presidents at the 2012 AGM, L to R: Gerry Redmond, Rosemary Curley, Bob Bancroft, Jason LeBlanc

Atlantic Society of Fish and Wildlife Biologists
 49th Annual General Meeting
 October 23rd - 25th, 2012



The Canadian Cooperative Wildlife Health Centre is honored to host this year's ASFWS meeting at the Stanhope Conference Centre, Prince Edward Island. An informal reception on the 23rd will be followed by two days of presentations and discussions on wildlife research, management and conservation. A call for abstracts will follow soon. For information, to volunteer or become a sponsor, contact María Forzán (mforzan@ccwhc.ca)

Dual Parasitic Infection in Nova Scotia Snapping Turtle

Heather Fenton, Shannon Martinson, Gary Conboy, Canadian Cooperative Wildlife Health Centre

On November 17, 2011 an adult male common snapping turtle (*Chelydra serpentina*) was submitted for postmortem examination to the Canadian Cooperative Wildlife Health Centre (CCWHC) at the Atlantic Veterinary College (AVC) in Charlottetown, PEI. The turtle had been at the Hope for Wildlife Rehabilitation Facility in Seaforth, Nova Scotia since August 24, 2011.

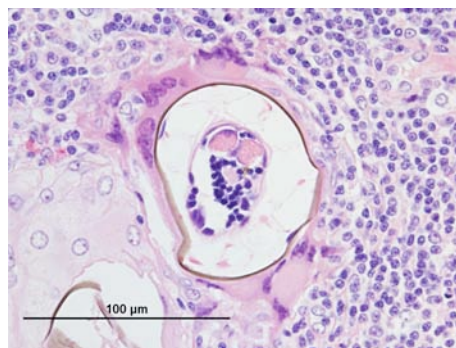
The turtle died after referral to the Atlantic Veterinary College. Unfortunately, the definitive cause of death of this turtle could not be determined, but there were a number of factors that may have contributed to the overall morbidity of this animal. The parallel linear pattern of the carapace lesions suggests previous collision with a boat, unfortunately a common cause of injury and mortality in large turtles. Extensive chronic pulmonary contusions, likely resulting from this injury, were identified during necropsy and could have compromised respiratory function. While the animal was not emaciated, the presence of lipid and vacuolar change in the liver and heart may suggest an energy imbalance or altered metabolism possibly related to the injury and an extended period in captivity.

Of interest, two parasitic infections were found. A parasitic arthropod was found in the wall of the cloaca, which was identified as *Cloacarus faini* based on morphology, host and organ location. The second infection consisted of numerous fluke (trematode) eggs found in multiple organs. These were identified as *Spirorchids* (blood flukes) based on size, morphology, host and organ locations. *Spirorchid* infection has been reported in a variety of species of turtles and appears to be relatively

common. Potentially fatal clinical disease may occur with heavy infections. Adult flukes inhabit blood vessels with life stages similar to the schistosomid trematodes in birds and mammals that are responsible for "swimmer's itch". Interpreting the effect of parasites on wild animals is often challenging because wild animals are frequently parasitized with no ill effects on body condition or overall health. In this case, endoparasitism likely did not cause the death of this turtle but may have contributed to the overall moribund state resulting from trauma from a boat collision and the stress of being held in captivity.



Cloacal mite *Cloacarus faini* found within the cloacal smooth muscle. 40X



Spirorchid trematode egg with two large eyespots within the small intestinal mucosa. 40X

For more information, please visit <http://atlantic.ccwhc.ca>. Special thanks to Marion Desmarchelier, Adriana Neilson, Hope Swinimer of Hope for Wildlife, Darlene Weeks, and numerous veterinary students for their assistance with this case.



Mature, male snapping turtle with parallel linear carapace wounds

Sad Day for Chimney Swifts

Originally published in *Bird Studies Canada's electronic newsletter Latest News* (www.birdscanada.org/organization/bscnewsarchive.html) on 16 December 2011

The Maritimes, Chimney Swift population suffered a blow in December 2011 when a major New Brunswick roost chimney was torn down. The freestanding brick chimney was located in a parking lot in the downtown area of Sussex, New Brunswick, and hosted over 300 Chimney Swifts per night during peak migration. The structure was in poor shape and was no longer used for venting, leading to the property owner's decision to tear the building down for safety reasons.

This unfortunate event highlights the continual threat of habitat loss that Chimney Swifts face. It also emphasizes the crucial role that landowners play in Chimney Swift stewardship and conservation. Of the 20 best-known roosts in the Maritimes, 5 have been capped, lined, or torn down in recent years. Bird Studies Canada (BSC) Atlantic staff and Maritimes SwiftWatch partners are discussing how to move forward after this major loss. For more information on BSC's Maritimes Chimney Swift Program visit the Bird Studies Canada web site at www.bsc-eoc.org and look for the link under Volunteer Programs.

Daryl Guignon and Keith Ashfield, Minister of Fisheries and Oceans



Daryl Guignon Receives Award

On January 25, 2012 Minister of Fisheries and Oceans Keith Ashfield and Minister of National Revenue Gail Shea presented PEI's own Daryl Guignon with a 2011 National Recreational Fisheries Award. In his article on the award, Bob Sexton of Outdoor Canada hails Guignon as an "inspirational educator and environmental activist who has devoted much of his own time for three decades to bettering the recreational fishery on Prince Edward Island. He helped found the Island Nature Trust and the Morell River Management Co-op, and has lobbied over many years for effective legislation and environmental practices to conserve waterways for trout and salmon.

As an educator, he trained many teachers who, in turn educated their students about conservation and preservation of the environment. His work to establish the only legislated Conservation Zone in Prince Edward Island along the Morell River is a highlight among the many projects to which he has contributed. By combining his scientific research background, his interest in recreational fish management, his educational capabilities and his ability to see projects through, Mr. Guignon has contributed vastly to the conservation and enhancement of the

recreational fishery in Prince Edward Island."

We couldn't have said it better ourselves! Congratulations Daryl on this very prestigious award!

For the full Outdoor Canada article and to see the other recipients of the award visit

<http://outdoorcanada.ca/18519/news/articles/dfo-announces-first-three-2011-recreational-fisheries-awards>.

2012 Executive Changes

The Executive for the ASFWB will have some changes for 2012. First and foremost, we would like to extend our sincere gratitude to the executive members who are leaving us in their respective positions; Glen Parsons (VP Membership), Rosemary Curley (Newsletter Editor) and Kerry-Lynn Atkinson (VP Student Affairs). You will be missed on the executive and we wish you all the best. Taking up the positions are Mark Pulsifer-VP Membership Danielle Quinn-VP Student Affairs, and Jennifer Roma-Newsletter editor. Maria Forzan has also joined the executive as VP Programs for the 49th AGM on PEI.

Mark Pulsifer graduated from Acadia University in 1986 with a MSc in Biology. In 1988 he moved to Antigonish to work with the provincial Department of Natural Resources as a Regional Wildlife Biologist. Over the past 24 years in that position Mark has been interested in the conservation biology of wood turtles,

mainland moose and freshwater mussels. He is currently a member of the Integrated Resource Management Team for the Eastern Region.

Danielle Quinn grew up in the woods and swamps of Hampton, New Brunswick, where she first fell in love with bugs and frogs. She completed her BScH in Biology at Acadia University in 2010, during which time she had the opportunity to work at Coldbrook Biodiversity Facility and decided to enter the field of fish biology and ecology. She is currently a Master's student at Acadia University. Her project focuses on the use of mathematical models to explore the dynamics of fish community structure and invasive species using historical datasets. When she's not immersed in these massive datasets, she enjoys fishing (especially fly fishing!), skiing, and is a lifelong Habs fan.

Jennifer Roma graduated from the Holland College Wildlife Conservation Technology program in 2007. She has worked for an ecological forestry project doing property surveys and boundary delineation, a PEI watershed where she created a watershed management plan for the area, and most recently as a Wildlife Technician for the Canadian Cooperative Wildlife Health Centre at the Atlantic Veterinary College at UPEI.

Maria is a native of Mexico City, Mexico. She attended the National University of Mexico (UNAM) in Mexico, and graduated in 1996. She completed an MSc program at the Atlantic Veterinary College (AVC) after which she went through a residency in Veterinary Pathology between the University of Connecticut and the AVC. She ventured to work in England for a couple of years, then returned to Canada and wildlife pathology and has been working with the Canadian Cooperative Wildlife Health Centre, Atlantic Region, at the AVC, since 2007.

Welcome to our new members. We look forward to an exciting year ahead!

UNB MSc Students Defend Theses

Two students recently completed and successfully defended their theses at the University of New Brunswick in Fredericton. Katharina Batchelar's thesis was titled, "Effects of mercury on the general and reproductive health of yellow perch in Kejimikujik National Park, Nova Scotia" and Meredith Clayden's thesis was "Mercury biomagnification through acidic lake food webs in relation to lake characteristics and elemental composition of aquatic organisms". Abstracts for both theses are included below. Congratulations to Katharina and Meredith!



Katharina Batchelar and Karen Kidd

MSc Defence by Katharina Batchelar, December 16, 2011. In aquatic systems, mercury (Hg) can be methylated to methyl Hg (MeHg), which bioaccumulates in biota and biomagnifies through food webs, resulting in concentrations known to affect fish health. Kejimikujik National Park and National Historic Site is a biological Hg "hotspot" known to have high concentrations of Hg in yellow perch (*Perca flavescens*). For this thesis, the effects of Hg on the general and reproductive health of yellow perch from 12 lakes within the park were evaluated; as measured by condition, liver somatic index, macrophage aggregates in the kidney, liver and spleen, gonadosomatic index, germ cell development of the

ovaries and testis, and sex steroid concentrations. These health measures were compared among lakes and related to measured tissue Hg concentrations. Our results indicate that the general and reproductive health of these perch is adversely affected at the cellular level, which raises concerns for the health of these fish.



Meredith Clayden and Karen Kidd

MSc Defence by Meredith Clayden, December 15, 2011. Kejimikujik National Park and National Historic Site (KNPNHS) has been identified as a biological mercury (Hg) hotspot due to high levels of this contaminant in common loons and to increasing Hg concentrations in yellow perch from the park since the mid-1990s. In this study, Hg biomagnification rates (slopes of log-Hg versus nitrogen isotopes, $\delta^{15}\text{N}$, of fishes and invertebrates) were compared across eleven lakes in KNPNS and found to be negatively related to dissolved organic carbon and nutrients, but not to pH or physical attributes of lakes. The y-intercepts of these relationships were positively related to lake chemistry and Hg concentrations in primary consumer invertebrates, suggesting that they approximate Hg levels at the base of aquatic food webs. The total nitrogen and sulfur content (crude measures of protein and sulfur amino acids, SAAs, respectively) of organisms was measured and found to predict their Hg concentrations,

which may reflect the binding of Hg to SAAs in biota.

Winter Habitat and Woodland Caribou

Doug MacNearney, MSc Forestry candidate at Lakehead University is studying winter habitat use by woodland caribou in Gros Morne National Park, Newfoundland. Caribou in Gros Morne use two distinct wintering ranges, which offers an opportunity to examine wolf-free habitat preference in relation to variation in snow conditions, forage abundance, and density of conspecifics. The winter range along the coast is frequently blown clear of snow, which allows access to terrestrial lichens throughout the winter. However, some caribou move inland where the energetic costs of deeper snow are much higher. Doug's research aims to examine the relationship between lichen quantities and snow accumulation in habitat selection by caribou to gain insight into the choices caribou make when faced with forested and non-forested habitats. This research feeds into the development of a holistic understanding of landscape-level caribou ecology in Gros Morne, and will benefit current efforts to predict responses of Newfoundland caribou to environmental changes due to climate and resource development.



Doug MacNearney

David Cartwright Scholarship

Miss Rebecca A. Standen is the 2011-12 recipient of the David J. Cartwright Memorial Scholarship valued at \$950. She is a fourth year student in the science program majoring in environmental biology on the Fredericton campus of UNB. Rebecca is a member of the UNB/STU Navigators and "Let's Talk Science," a program that visits rural communities and schools to do hands-on science activities with kids. She is a youth group leader at her church where she works with a team to organize activities and discussions.



Student Awards 2012 AGM, L to R: Holly Lightfoot, Jason Power, Travis White and Mark Pulsifer

Student Winners at 2011 AGM

The student award winners at the 48th Annual General Meeting of the ASFWB, held in Antigonish in October 2011, were as follows:

1st Place: Travis White - Habitat selection, site fidelity, and communal behaviour of overwintering wood turtles (*Glyptemys insculpta*) in Nova Scotia.

2nd Place: Holly Lightfoot - Patterns of fall songbird migration around the Bay of Fundy.

3rd Place: Jason Power - Prevalence, mean intensity and life history implications of worm infections in coyotes of Nova Scotia.

Congratulations to all three winners!



Monarch Butterfly (Butterflies of Canada web site)

Decoding the Monarch Butterfly

Of the many animals that migrate the Monarch Butterfly (*Danaus*

plexippus) is surely one of the most amazing, traveling up to 4,000 km between Northeast North America and Mexico. Many researchers are fascinated with how animals migrate and now for the first time this butterfly species has had its genomes decoded to try to understand how this works.

The research focused on pathways known to be critical for Monarch migration, including vision, the circadian clock, and oriented flight as well as how the butterflies' brains incorporated information in time and space. What researchers found was that Monarchs have different genetic patterns in visual areas, which might help them use the sun to guide them. They also found differences genetically with how their circadian clock works, helping them respond to light to help them travel.

Interestingly this research may help with human research, as understanding the circadian clocks of butterflies and other animals may shed light on diseases such as heart disease, depression and Seasonal Affective Disorder, in which circadian rhythms seem to play a pivotal role.

For the full article on this research, see the latest edition of Insectary Notes (Nov/Dec

2011) at

<http://www.gov.ns.ca/natr/forestprotection/foresthealth/insect-notes/>



*Bank Swallow
(Photo Credit; Dwaine Oakley)*

Fines Laid for Destroyed Nests

More habitat loss for another bird species. In June of last year the Pointe-du-Chêne Yacht Club destroyed approximately 40 Bank Swallow nests while making repairs to their club. They recently pleaded guilty and were charged \$6,500 for this activity under the Environment Canada Migratory Birds Act.

For the full press release visit

<http://www.ec.gc.ca/alef-ewe/default.asp?lang=En&n=F7DE4BD5-1>

Bird Song App Identifies Feathered Friends by Tweets

Original article written by Chris Barncard and published on the University of Wisconsin-Madison web site at <http://www.news.wisc.edu/19882>

NB: The designers hoped to release this app in time for 2012 spring migration. Unfortunately it will not be ready as originally intended. When it is published, however, Biolink will be one of the first to know and will pass on the information to you, our members!

Squinting into wind-blown trees and bushes is for the birds, especially if it's the birds you're looking for. "You have to listen. There's no way around it," says Mark Berres, a University of Wisconsin-Madison ornithologist. "The most difficult aspect of bird-watching is call identification, but calls are the most important tool for identifying birds."

Even the most experienced birders have trouble matching more than a handful of songs with species, but by melding his background in our feathered friends, teaching and genetics, Berres may have answered the prayers of bird-watchers, researchers and even the most casual naturalist.

Naturally, salvation comes in the form of a smartphone app. And naturally — for a university professor — the inspiration started with a graduate student, one that stepped into Berres' office a few years ago to show off a nifty iPhone trick.

"He recorded a short bit of music coming from the radio in my office, tapped an 'identify' button, and in a few seconds it told him the name of the song we're listening to," Berres says. "Right away, I thought, 'We can use this for birds.'"

For more than a year, Berres (and his graduate students, of course) have been testing and improving the fruit of that inspiration: WeBIRD, the Wisconsin Electronic Bird Identification Resource Database.

Like music-identification apps

Shazam and MusicID, WeBIRD allows anyone with a smartphone and a mysterious bird nearby to record the bird's call, submit it wirelessly to a server and (after a few seconds) receive a positive ID on the species of bird tweeting away within earshot.

Analyzing birdcalls, however, is a little like trying to match a live cover of "Bridge Over Troubled Water" to the version Simon and Garfunkel recorded for their 1970 album.

"When a bird sings, the song itself may have varying amplitudes and frequencies," Berres says. "It can also speed up a little bit, slow down a little bit. They may throw in a note here or take out a note there."

Birds also differ their calls throughout the day. And a bird of a particular species on UW-Madison's lakeside campus may develop an accent of sorts, distinct from birds of the same species living just a few miles away at the UW Arboretum.

The WeBIRD algorithm dices bird calls into time-ordered chunks of frequency and energy, using data-organization techniques more often applied by geneticists to jumbled bits of DNA to "align temporally misaligned data, working around a lot of the variation," Berres said.

"With an app like this, you can get confirmation of what you think you're hearing along with pictures and videos and range maps for the birds in your backyard or the park," Berres says. "You'll learn more about the world around you, and there's nothing but good in that."

New Brunswick's Newest Wetland Strategy

Based on NB Department of Environment News Release Feb 13, 2012
By Rosemary Curley

A Long-Term Wetland Management Strategy was announced by the New Brunswick Department of Environment on February 13, 2012, following a round of public consultation. It is a work in progress, or lack thereof. While things are being fixed, nothing has changed and wetlands are still

being lost or degraded.

The Department will regulate all Provincially Significant Wetlands regardless of their size. The Watercourse and Wetland Alteration Regulations may need amendment. Compensation for wetland loss will be required. The Department will work with Stakeholders to develop a process that allows proponents the option to meet wetland compensation requirements, through a third party partnering organization(s).

The Department will establish a working group to map wetland boundaries. The group will work with the most recent data sets, aerial photograph interpretation, and LiDAR to create mapping at a desktop level that will then be verified. Stakeholders will be engaged in mapping verification. Mapping for areas with high development pressures including in and around municipalities will be completed first, followed by provincial wide coverage. The toolbox includes field verification of wetland boundaries as required.

The Department will engage stakeholders in the development of a balanced wetland management system whereby maintaining hydrology, water quality and biodiversity in a given area will be incorporated in the decision making process. Environmental, social, and economic factors will be considered.



NB Wetland Strategy (Con't)

The Department will develop a standardized delivery of a multi-site permitting process for ongoing routine projects, eg. utility company maintenance work. It will broaden the current Watercourse and Wetland Alteration Regulation provisional permit process, which applies to lower risk watercourse alterations, to include work undertaken in or near wetland areas.

The department hopes to develop a process with municipalities that allows for the issuance of one permit for common municipal projects, allowing for multiple alterations (and fewer wetlands?) within their boundaries; certify frequent users to include wetland crossings; and engage the agricultural community to promote the importance of wetland protection, identifying existing requirements. A narrow five-meter buffer is mentioned. Specific guidelines for wetlands management will be developed in consultation with the NB Federation of Woodlot Owners.



Nova Scotia's Wetland Conservation Policy

Nova Scotia's Wetland Conservation Policy was released last September available at <http://www.gov.ns.ca/nse/wetland/conservation.policy.asp>

"This policy has been shaped through conversations and extensive consultation with a variety of industry, academic, and nongovernmental organization stakeholders, First Nations organizations, individual Nova Scotians, and federal, provincial, and municipal government staff."



Brian Dalzell birding from his car.

A Tribute to Brian Dalzell

In November of 2011 the birding community in the Maritimes suffered a significant loss when Brian Dalzell passed away.

Brian grew up in Moncton, New Brunswick, the oldest of four boys, but his father was from Grand Manan Island, and the family spent summers at the homestead on Bancroft Point Road, enjoying nature to its fullest. Brian always had a passion for birds, and began watching birds at age 11. He attended his first Moncton Naturalist Club meeting when he was 14, and was the youngest person in New Brunswick to see 300 different species of birds, until his good friend Alain Clavette surpassed his record.

After graduating from Holland College in 1987, Brian worked as a journalist for a number of years. For the last few years he served as winter season editor for the Atlantic Canada Region in *North American Birds*. Brian was the driving force behind the

establishment of a bird observatory and landbird banding station on Grand Manan in 1995, after spending time at the Long Point Bird Observatory to become a Master Bander. The Grand Manan Whale and Seabird Research Station helped to administer this short-lived Grand Manan Bird Observatory (GMBO) until it was dissolved to create the Fundy Bird Observatory (FBO). Brian loved to involve children in birding adventures when possible and, for a number of years, he also provided birding tours for the Elderhostel programs run from the Marathon Inn on Grand Manan.

Brian maintained detailed bird sighting records for Grand Manan and New Brunswick. He was a founding member and first secretary of the New Brunswick Bird Records Committee. The Christmas bird count was another of Brian's passions. He participated in many counts each year, often leaving the Grand Manan count to the end of the period so he could take part in others. He was compiler at Moncton 1979-86 and Grand Manan 1979-2005, and was a regional editor in 2010. Brian also conducted a number of volunteer Breeding Bird Survey routes in southwestern New Brunswick.

Brian was a real student of bird distribution throughout the region and enjoyed visiting more remote or seldom-birded locations within the Atlantic Provinces. He had a special interest in the birds of Labrador where he visited on numerous occasions and in all seasons, and also made frequent trips to Prince Edward Island.

Brian's passing is a loss to the Maritimes birding community. His contributions to bird education and conservation in the Maritimes will live on, however, in the many records he contributed to both Maritime Breeding Bird Atlases, and to other bird research and monitoring projects throughout the Maritimes.

Adapted from a tribute to Brian compiled by Maritime Breeding Bird Atlas Coordinator, Kate Bredin, with input from Laurie Murison, David Christie, Halton Dalzell, and Alain Clavette in the MBBA Latest News, February 20, 2012 (www.mba-aom.ca)

RECENT LITERATURE

Allen, Craig R., Graeme S. Cumming, Ahjond S. Garmestani, Phillip D. Taylor, and Brian H. Walker. 2011. Managing for resilience. *Wildlife Biology* 17 (4): 337-349.

Andrew, Margaret E., Michael A. Wulder, Nicholas C. Coops. 2011. Patterns of protection and threats along productivity gradients in Canada. *Biological Conservation* 144 (12): 2891-2901.

Baggs, Eric M., Stephanie H. Stack, Jean R. Finney-Crawley, and Neal P. P. Simon. 2011. *Peromyscus maniculatus*, a Possible Reservoir Host of *Borrelia garinii* from the Gannet Islands Off Newfoundland and Labrador. *J. Parasitology* 97(5): 792–794.

Bowlby, Heather D., and A. J. F. Gibson. 2011. Reduction in fitness limits the useful duration of supplementary rearing in an endangered salmon population. *Ecological Applications* 21: 3032–3048.

Buxton, Rachel T. and Jones, Ian L. 2012. Measuring nocturnal seabird activity and status using acoustic recording devices: applications for island restoration. *Journal of Field Ornithology* 83(1): 47-60.

Chaulk, Keith G. and Matthew L. Mahoney. 2012. Does spring ice cover influence nest initiation date and clutch size in common eiders? *Polar Biology* In Press.

Craik, Shawn R., Jean-Pierre L. Savard, Michael J. Richardson and Rodger D. Titman. 2011. Foraging Ecology of Flightless Male Red-Breasted Mergansers in the Gulf of St. Lawrence, Canada. *Waterbirds* 34(3): 280–288.

Crowell, Nathan, Webster, Timothy, and O'Driscoll, Nelson J. GIS Modelling of Intertidal Wetland Exposure Characteristics. *Journal of Coastal Research* (): 44-51. 2011.

Friars, Katie A. and Diamond, Antony W. 2011. Predicting the Sex of Atlantic Puffins, *Fratercula arctica*, by Discriminant Analysis. *Waterbirds* 34(3): 304–311.

Friedland, K. D., Manning, J.P., Link, J.S., Gilbert, J.R., Gilbert, A.T., and O'Connell, A.F. 2012. Variation in wind and piscivorous predator fields affecting the survival of Atlantic salmon, *Salmo salar*, in the Gulf of Maine. *Fisheries Management and Ecology*, 19: 22–35.

Friedland, Kevin D. and Christopher D. Todd 2012. Changes in Northwest Atlantic Arctic and Subarctic conditions and the growth response of Atlantic salmon. *Polar Biology* In Press.

Garbary, D.J., Ferrier, J, and Taylor, B.R. 2011. Late blooming of plants from Northern Nova Scotia: response to a mild Fall and winter. *Proceedings NS Institute of Sci.* 46(2): 149-167 (in memory of Sam Vander Kloet).

Gibson, A., Jamie F., Bowlby, Heather D., Hardie, David C. & O'Reilly, Patrick T. 2011. Populations on the Brink: Low Abundance of Southern Upland Atlantic Salmon in Nova Scotia, Canada. *North American J Fisheries Management* 31(4): 733-741.

Gratto-Trevor, C., Amirault-Langlais, D., Catlin, D., Cuthbert, F., Fraser, J., Maddock, S., Roche, E. and Shaffer, F. (2012), Connectivity in piping plovers: Do breeding populations have distinct winter distributions? *The Journal of Wildlife Management*, 76: 348–355.

Heard, Stephen B., Emily K. Kitts 2012. Impact of attack by *Gnorimoschema* gallmakers on their ancestral and novel *Solidago* hosts. *Evolutionary Ecology* Online First.

Hicks, Barry. 2011. Pollination of Lowbush Blueberry (*Vaccinium angustifolium*) in Newfoundland by native and introduced bees. *J Acadian Entomological Society* 7: 108-118.

Houde, Aimee L. S., Dylan J. Fraser, Patrick O'Reilly and Jeffrey A. Hutchings. 2011. Relative risks of inbreeding and outbreeding depression in the wild in endangered salmon. *Evolutionary Applications* 4(5): 634-647.

Iqbal, Javed, Chris R. Hennigar, David A. MacLean. 2012. Modeling insecticide protection versus forest management approaches to reducing balsam fir sawfly and hemlock looper damage. *Forest Ecology and Management* 265: 150-160.

Kirk, Heather, Candace Connolly, and Joanna R. Freeland. 2011. Molecular genetic data reveal hybridization between *Typha angustifolia* and *Typha latifolia* across a broad spatial scale in eastern North America. *Aquatic Botany* 95(3): 189-193.

Krakowetz, Chantel N., L. Robbin Lindsay, Neil B. Chilton. 2011. Genetic diversity in *Ixodes scapularis* (Acari: Ixodidae) from six established populations in Canada. *Ticks and Tick Borne Diseases*: 2 (3): 143-150.

Klymko, John, C. Sean Blaney, and Don G. Anderson. 2012. The first record of Dorcas Copper (*Lycaena dorcas*) from Nova Scotia. *J. Acadian. Entomological Society* 8: 41-42.

Ledwell, Wayne, Kristina Curren, Julie Huntington and Catherine Hood. 2010. The Whale man of Newfoundland and Labrador: Jon Lein, 1939-2010. *Canadian Field- Naturalist* 124(4): 384-398.

Lenky, Crystal C. and Becky Sjare. 2011. Changes in Seal Habitat Use of Nearshore Waters around Newfoundland and Southern Labrador: Implications for Potential Predation on Salmon. *The Open Conservation Biology Journal*, 5: 13-24.

Lucas, Z and A Hebda. 2011. Lasiurine bats in Nova Scotia. *Proceedings NS Institute of Sci.* 46(2): 117-137.

MacDonald, Asha M., Jeremy T. Lundholm and Stephen R. Clayden. 2011 Saxicolous Lichens on a Nova Scotian Coastal Barren. *Northeastern Naturalist* 18 (4): 475-488.

McGuire, L. P., Guglielmo, C. G., Mackenzie, S. A. and Taylor, P. D. (2012), Migratory stopover in the long-distance migrant silver-haired bat, *Lasiurus noctivagus*. *Journal of Animal Ecology*, 81: 377-385.

McNair, D. B., and I. C. T. Nisbet. 2011. Movements of juvenile Blackpoll Warblers prior to autumn migration in Newfoundland. *Condor* 113: 709-710.

Michaud, J, and CT Taggart (2011) Spatial variation in right whale food, *Calanus finmarchicus*, in the Bay of Fundy. *Endangered Species Res* 15: 179-194.

Mills, Eric L. and Lance Laviolette. 2011. The birds of Brier Island, Nova Scotia. *Proceedings NS Institute of Sci.* 46(1): 1-107.

Mitchell, Greg W., Philip D. Taylor and Ian G. Warkentin. 2011 Movements of Juvenile Blackpoll Warblers Prior to Autumn Migration in Newfoundland Reconsidered. *The Condor* 113(4): 711-712. 2011.

Mycroft, Erin E., Aaron B.A. Shafer and Donald T. Stewart. 2011 Cytochrome-b Sequence Variation in Water Shrews (*Sorex palustris*) from Eastern and Western North America. *Northeastern Naturalist*, 18 (4): 497-508.

Montevecchi, William, David Fifield, Chantelle Burke, Stefan Garthe, April Hedd, Jean-François Rail, and Gregory Robertson. 2011. Tracking long-distance migration to assess marine pollution impact. *Biol. Lett.* published online before print October 19, 2011.

Smith, Matthew J., Graham J. Forbes and Matthew G. Betts. 2011. Evidence of Multiple Annual Litters in *Glaucomys sabrinus* (Northern Flying Squirrel). *Northeastern Naturalist* 18 (3): 386-389.

Spence, C. Eiry and David A. MacLean. 2011. Comparing growth and mortality of a spruce budworm (*Choristoneura fumiferana*) inspired harvest versus a spruce budworm outbreak. *Canadian Journal of Forest Research*, 41(11): 2176-2192.

Steenweg, Rolanda J., Robert A. Ronconi and Marty L. Leonard. 2011. Seasonal and Age-Dependent Dietary Partitioning between the Great Black-Backed and Herring Gulls. *Condor* 113(4): 795-805.

Stewart, Rebecca L.M., Mélanie F. Guigueno, and Spencer G. Sealy 2011. How small is too small? Incubation of large eggs by a small host. *Canadian Journal of Zoology* 89:968-975.

Taillon, Joëlle, Vincent Brodeur, Marco Festa-Bianchet and Steeve D. Côté. 2011. Variation in Body Condition of Migratory Caribou at Calving and Weaning: Which Measures Should We use? *Ecoscience* 18(3): 295–303.

Usvyatsova, Sima, James Watmoughb & Matthew K. Litvakc. 2012. Modeling the Effect of Environmental Parameters on Feeding Ecology of the Shortnose Sturgeon in the Saint John River, New Brunswick. *Transactions of the American Fisheries Society*. 141(1): 238-256.

Vanderlaan, Angelia S.M., R. Kent Smedbol, Christopher T. Taggart. 2011. Fishing-gear threat to right whales (*Eubalaena glacialis*) in Canadian waters and the risk of lethal entanglement. *Canadian Journal of Fisheries and Aquatic Sciences* 68: (12) 2174-2193.

Venier, L. A., Holmes, S. B., Pearce, J. L. and Fournier, R. E. (2012), Misleading correlations: The case of the Canada warbler and spruce budworm. *The Journal of Wildlife Management*, 76: 294–298.

Wiersma YF and R Skinner. 2011. Predictive distribution model for the boreal felt lichen *Erioderma pedicellatum* in Newfoundland, Canada. *Endangered Species Res* 15: 115-127.

Marta B. Wolniewicz, Julian Aherne and Peter J. Dillon 2011. Acid Sensitivity of Lakes in Nova Scotia, Canada: Assessment of Lakes at Risk. *Ecosystems* 14(8): 1249-1263.

Wyatt, Stephen, Stephanie Merrill, David Natcher. 2011. Ecosystem management and forestry planning in Labrador: how does Aboriginal involvement affect management plans? *Canadian Journal of Forest Research*, 2011, 41: (11) 2247-2258.

Upcoming Events

April 18th, 2012: ASFWB Spring Seminar, Integrated Resource/Ecosystem Management. Crabtree Auditorium, Mount Allison University, Sackville NB. See <http://www.chebucto.ns.ca/environment/ASFWB/> for more information.

April 27th, 2012: Sciences Atlantic 50th Anniversary Celebration. The Discovery Centre, Halifax, NS. <http://scienceatlantic.ca/>

May 10-13th, 2012: The ACCESS (Atlantic Canada Coastal and Estuarine Science Society) 2012. Dalhousie University, Halifax, NS. www.cerf-access.ca for more information.

May 16-17th, 2012: Nova Scotia Energy Research & Development Forum 2012. Halifax, Nova Scotia, Canada. <http://www.offshoreenergyresearch.ca/>

June-13-14th, 2012: Geomatics Atlantic. Halifax, Nova Scotia, Canada.

June 20-22nd, 2012: 36th Annual Conference of the Center for Oceans Law and Policy "The Regulation of Continental Shelf Development: Present Status and Future Directions". Halifax, Nova Scotia, Canada. <http://www.virginia.edu/colp/annual-conference.html>

July 20-22nd, 2012: Celebrating 50 years of Wildlife Biology at Acadia University. <http://biology.acadiau.ca/wildlife50years>

October 23 -25th, 2012: ASFWB Annual General Meeting. Stanhope Lodge, Prince Edward Island. See <http://www.chebucto.ns.ca/environment/ASFWB/> for more information.

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