

THE HALIFAX FIELD NATURALIST



No. 138
March to May, 2010

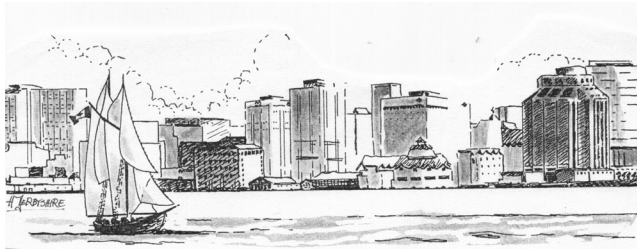


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Return address: HFN, c/o NS Museum of Natural History, 1747 Summer Street, Halifax, NS, B3H 3A6

HFN is incorporated under the Nova Scotia Societies Act and holds Registered Charity status with Canada Revenue

Agency. Tax-creditable receipts will be issued for individual and corporate gifts. **HFN** is an affiliate of Nature Canada and an organisational member of Nature NS (Federation of Nova Scotia Naturalists), the provincial umbrella association for naturalist groups in Nova Scotia. **Objectives** are to encourage a greater appreciation and understanding of Nova Scotia's natural history, both within the membership of HFN and in the public at large, and to represent the interests of naturalists by encouraging the conservation of Nova Scotia's natural resources. **Meetings** are held, except for July and August, on the first Thursday of every month at 7:30 p.m. in the auditorium of the Nova Scotia Museum of Natural History, 1747 Summer Street, Halifax; they are open to the public. **Field Trips** are held at least once a month; it is appreciated if those travelling in someone else's car share the cost of the gas. **Participants** in HFN activities are responsible for their own safety. Everyone, member or not, is welcome to take part in field trips. **Memberships** are open to anyone interested in the natural history of Nova Scotia. Forms are available at any meeting of the society, or by writing to: Membership Secretary, Halifax Field Naturalists, c/o N.S. Museum of Natural History. Members receive the quarterly **HFN Newsletter** and **HFN Programme**, and new memberships received from September 1st to December 31st of any year are valid until the end of the following membership year. The regular membership year is from January 1st to December 31st.



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GRAPHICS All uncredited illustrations are by H. Derbyshire or from copyright-free sources. **Front Cover** - Coltsfoot, *Coptis trifolia*, Keith Vaughan; p.16 - Wolf, Mike Dodge; **Back Cover**, - Monarch Butterfly, *Danaus plexippus*, Bob McDonald; **Tide Table** - Canadian Hydrographic Service, Fisheries & Oceans Canada.

HFN ADDRESS

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Secretary	Richard Beazley.....429-6626
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Web Design	

FEES 2010/2011

Student	\$15.00 per year
Individual	\$20.00 per year
Family	\$25.00 per year
Supporting	\$30.00 per year
Nature NS (opt.)	\$5.00 per year

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N.S. Wild Flora – Plant Watch, Bryology, Cape Split	
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HFN NEWS AND ANNOUNCEMENTS

EDITORIAL – Stephanie Robertson

More than the usual number of news items, our year-end reports, four HFN monthly presentation write-ups, two HFN field trip reports, and a packed Almanac herald the lengthening days of spring and the beginning of increased naturalist society trips and activities.

In Point Pleasant Park the songbirds are trilling their spring chorus, and the rivulets and freshets are running down to the ocean with their melted snow burden, glinting in this unaccustomed sunshine.

Our February Nature Notes reveal that Regine Maass's Witch Hazel began blooming in January, and along the edge of our property fence, the first spikes of Coltsfoot and daylilies can be seen, along with swelling apple tree and climbing hydrangea buds! Bring on Spring!



SABLE ISLAND UPDATE

"Sable Island: National Park or National Wildlife Area?" On January 25th, Jim Prentice, Federal Environment Minister and Minister for Parks Canada, along with John MacDonell, Nova Scotia's Natural Resources Minister, announced that measures are being considered to permanently protect Sable Island. March 3rd found a packed audience at St. Mary's University for the "Sable Island Update: Sixth Annual Public Meeting."

Several speakers, including Kevin McNamee of Parks Canada and Mark Butler of the Ecology Action Centre, outlined the pros and cons of the two options. During the question and answer part of the discussion, MLA Leonard Preyra spoke about making sure that the outcome is in the best long-term interest of Sable Island. Perhaps the key to success will be a thoroughly developed (and followed) management plan that addresses conservation, ongoing funding, collaboration of researchers and the public, and maintenance of the Sable Island Station.

A committee of three civil servants has been established to make a recommendation to government re 'Wilderness Area' or 'National Park'. The committee has three months to weigh all the information and make its recommendation. Stay tuned to listen and respond to the next steps for Nova Scotia's special place, Sable Island.

For much more detailed information, go to www.greengreenhorsesociety.com.



SILENCE OF THE SONGBIRDS

At Dalhousie Campus, 7:00 p.m., on Wednesday, May 12th, come and meet Bridget Stutchbury who will share her research findings on declining species of birds associated with continuing threats such as pesticides, loss of habitat, and the bright lights of urban areas. Her book, *Silence of the Songbirds*, was a 2008 Governor General Non-fiction nominee. Her newest book, *The Bird Detective*, describes the social lives and sexual antics of birds and the curious reasons for their strange behaviour, bright colouring, and elaborate songs. She will also discuss the threat of climate change on bird survival.

HFN has partnered with the Ecology Action Centre for this Halifax visit. For more detailed venue information, go to their website.

NATURE NOVA SCOTIA: 2010 CONFERENCE AND AGM

May 28th-30th, Sherbrooke, Nova Scotia This year we will be joining the St. Mary's River Association and the Nova Scotia Nature Trust for a weekend of camaraderie and exploration of nature on the Eastern Shore. We'll start on the evening of Friday, May 28th with a 'Meet & Greet', followed by some owling and stargazing. On Saturday, May 29th, we're planning some walks and talks with local naturalists, followed by a communal supper and more natural history in the evening. Sunday morning will feature breakfast and the AGM, and Sunday afternoon field trips will round off the weekend.

For more details as they come to fruition, go to the Nature Nova Scotia website: naturens.ca.

OCEANS DAY

On June 4th, from 10:00 a.m. until 4:00 p.m., 'Oceans Day' will be celebrated at the Maritime Museum of the Atlantic on Lower Water St. There will be a 'touch tank' and other interesting activities. For more detailed information as it becomes available, go to the Maritime Museum of the Atlantic's website.

PLANT SALE

On Saturday, June 5th, from 9:00 a.m. to 12:00 p.m., the popular yearly Plant Sale at the Harriet Irving Botanical Gardens at Acadia University will take place. Learn more about gardening with native plants, and enjoy a guided tour of the Gardens. Plant material grown by volunteers from seed collected in the Gardens will be available for sale, as well as a great selection of plants from several local nurseries. A variety of information booths from local groups will be displayed in the main lobby. Everyone is welcome. See you there!

MARITIME BUTTERFLY ATLAS

The Atlantic Canada Conservation Data Centre is launching the Maritimes Butterfly Atlas, the first comprehensive butterfly survey of the Maritime provinces. This five-year initiative will use the efforts of amateur naturalists to map current distributions of our butterfly species. Anyone with an interest in butterflies is welcome to participate. Atlas findings will identify species of conservation concern; allow for better conservation decisions; and produce a baseline dataset to which future efforts can be compared.

For more information please visit <http://accdc.com/ButterflyAtlas/Home.html>; or, contact John Klymko, Project Director, jklymko@mta.ca, 1-506-364-2660.

(more HFN News & Announcements on p. 16)



NEW AND RETURNING

Maryann Burbidge
Mark Butler
Emily Gregus
Bobbie Wilson and Karla Henderson

SPECIAL REPORTS

YEAR-END REPORTS FROM THE PRESIDENT



Due to unexpected demands, David Patriquin was not able to attend the AGM. His President's Report will appear in the next issue.

CONSERVATION



– *Peter Webster, Conservation Chair*

HFN has participated in a number of conservation efforts during the year, and we continue to work cooperatively through the Federation of Nova Scotia Naturalists (Nature Nova Scotia) on issues of provincial concern. Activities this year included the following:

We continue to work toward the protection of the Blue Mountain, Birch Cove Lakes Wilderness Area, and expanded protection of wild lands in the Birch Cove Lakes watershed.

We have joined with other groups in supporting the designation of crown lands in the central Chebucto Peninsula as a Wilderness Protected Area.

We were very excited at the creation of the Five Bridge Lakes Candidate Wilderness Area late last year.

HFN members have made written submissions to the Nova Scotia Natural Resources Strategy Forum (Phase 2), on Biodiversity, and on Provincial Parks Policy.

Peter Webster and Joan Czapalay were also invited to follow up written submissions with an in-person presentation on Provincial Parks Policy, on behalf of Nature Nova Scotia member organisations.

We are also excited to note the release in November of the Colin Stewart Forest Forum final report. This report sets out a plan for the protection of public lands in Nova Scotia. A number of HFN members have contributed to its development over the last several years. The Forest Forum planning process was initiated by former HFN Conservation Chair, the late Colin Stewart.

HFN continues to have representation on the MacNab's Island Public Advisory Committee appointed by the Minister of Natural Resources. Over the last year, this group has focused on environmental cleanup and trails restoration on McNab's Island.



THE COLIN STEWART CONSERVATION AWARD

– *David Patriquin, President*

Richmond Campbell was nominated for the Colin Stewart Conservation Award for his role in the conceptualisation, development, and maintenance of The Bluff Wilderness Hiking Trail.

Completed in 2005, it consists of four stacked loops that begin inside the Woodens River watershed and then climb onto the high ground, 'The Bluff', between the Woodens River watershed and the Nine Mile River watershed to the east, then descends in the vicinity of

Upper Five Bridge lake to the transitional area between barrens and the forest which extend southward across the Old Coach Road to Shad Bay. It is a true wilderness trail – narrow, cut back once a year or when vegetation gets high, and without special construction except where it crosses very wet areas or where foot traffic has begun to cause some deterioration. 'Leave No Trace' principles are promoted.

The trail takes hikers through barrens, oak & red maple woodlands, black spruce stands, mixed red spruce/hardwood forest (including two old growth stands by Pot Lake), and by bogs, fens, and lakeshores. The area is frequented by the 25-30 mainland Moose making up the Chebucto group of this legally protected species.

The express purpose of the trail is "to allow the Woodens River community and the public generally to become aware of the extraordinary natural assets of this area, on the principle that awareness is the first step in protection. We believe that once people have experienced this wildness, most will understand its importance to their lives and the lives of their children, and therefore will not let it be destroyed."

The trail has its origins in the late 1980s, when Richmond and spouse Sue Sherwin moved to the Hubley area. They began to explore the adjacent crown land wilderness by foot, canoe, skis, and snowshoes. Richmond became concerned about ensuring its conservation and Sue encouraged him to take on an advocacy role. He was one of the originators of WRWEO (Woodens River Watershed Environmental Organisation), formed in 1995.

Writes one of his long-standing colleagues in this organisation, "We all joined forces with others, and WRWEO took on the job to oppose and rehabilitate the devastation which Junky Jim's junk yard wreaked on Five Island Lake; to rehabilitate and remediate Sheldrake Lake; and to create the Hubley Wildlands Trust which was spun off into the Five Bridges Wilderness Heritage Trust, The Bluff Trail, and many more. Each one of these initiatives had Richmond's fingerprints all over it."

From another colleague: "Perhaps his most important contribution over the years was the vital role he played in constructing and maintaining a set of wilderness hiking trails, now known as The Bluff Wilderness Hiking Trail. This extraordinary 32 km series of four loops is located on Crown Land on the Chebucto Peninsula and in 2008 was rated by Explore: Canada's Outdoor Magazine as one of eight best urban escapes in Canada. While there were many volunteers who put countless hours and enormous energy into bringing this project to fruition, I believe that in great measure, it was the determination, passion, and relentless efforts of Rich Campbell that made this dream a reality. The Bluff Trail is a jewel in the regional trails community and hundreds of people every year are deriving enjoyment from hiking on it. Many of these hikers have become strong advocates of preserving as much of the natural habitat as possible in the area."

Recently, an extremely important step has been taken to ensure the ongoing preservation of the wilderness in the region. In 2008, Rich was instrumental in helping to form the Chebucto Wilderness Coalition (CWC) to protect the portion of the Chebucto Peninsula traditionally known as the Five Bridge Lakes Wilderness Area (FBLWA), under the Wilderness Areas Protection Act. The Coalition has worked diligently in garnering the support of the community at large, of regional environmental groups, and of government agencies towards this important initiative. Its efforts were rewarded in October 2009 when the Nova Scotia government declared the FBLWA a Candidate Wilderness Area. Soon, the entire area of The Bluff Wilderness Hiking Trail, and much more, will be protected forever, fulfilling Richmond's dream and benefitting all of us.

To quote Richmond himself, "On behalf of all the wild things that make this land their home, and with reverence for the first people who preserved this land before us, we dedicate the Bluff Wilderness Hiking Trail to wilderness preservation. We do this in trust that we can learn its deep beauty, in trust that we can understand and delight in the wildness in ourselves that we share with the rocks, earth, water, and teeming life and spirits that surround us, and in trust that we will work together to protect this sacred heritage."



MEMBERSHIP

– Lillian Risley

In 2009 we experienced a small decrease in membership, declining from 127 to 121. By category, that 2009 roll of 121 was comprised of 68 Individual, 34 Family, 17 Supporting, and two Student memberships. In addition, we had four dues-paying institutional members (all libraries). 53 of our members also chose to join Nature Nova Scotia when joining or rejoining the HFN.

This year the number of members who have provided us with their email addresses remained at 95. We have been able to use this communication option to provide members with information on special events and notification about opportunities to participate in public consultations. We've had some helpful feedback and welcome your comments at any time.

Once again, thanks to Doug Linzey for maintaining the membership database and newsletter labels.

TOTAL MEMBERSHIPS BY YEAR

2005	2006	2007	2008	2009
123	129	129	127	121



PROGRAMME

– Burkhard Plache

Last year, the programme committee grew to include Jim Medill, Bob McDonald, and Wendy McDonald. This increase was not only in numbers but also in interests and ideas, which led to new topics and activities being offered.

We had a total of nine presentations, with three by

HFN members sharing their nature experiences abroad. Other talks covered ecology and conservation topics – from Nova Scotia, to the Tropics, and to polar regions. Our field trips were closer to home; amongst others, we saw wintering birds in Halifax Harbour and shorebirds at Martinique Beach, butterflies at Mount Uniacke, looked for minerals near Cheverie, paddled the Shubenacadie River, and walked at Gaff Point.

A number of HFN members participated at the BioBlitz and represented the Field Naturalists with a display.

A big 'Thank you' goes to the trip leaders and organisers who volunteered their time and shared their knowledge with the interested participants.



NEWSLETTER

– Stephanie Robertson

This year, thankfully, there have been no major problems with costs, printers, computer crashes, data losses, or other issues. We happily continue on with DalPrint for the 'innards' of the Halifax Field Naturalist, and UPS Dartmouth for our colour covers.

The past four issues of The Halifax Field Naturalist, from #134 March 2009 to #137 February 2010, were comprised of 64 pages in total. They included eight HFN talk write-ups and 13 HFN field trip reports. A sincere thank you to all who submitted these.

In the Fall 2009 Issue #136, we inaugurated the first of our YNC pages. This is a feature that showcases articles, illustrations, and reports by the young naturalists of the Young Naturalist Club of Nova Scotia, established in 2006 by Karen McKendry.

Issue #135 had another short article by Ursula Grigg emphasising the importance of Latin species lists to pin down accurate identification of our botanical and zoological findings. In issue #137 Pat Leader brought us up to date on the latest developments on the Bedford Waterfront. It also included a fascinating report by Bernice Moores about her wonderful trip in November, 2008 to Bhutan; "...increasingly renowned as one of the Earth's last precious unspoiled spots, where Buddhist culture is integrated into every aspect of daily life, and where its wise and farsighted leadership have propelled Bhutan into the 21st Century with much of its natural heritage intact and its unique culture undiluted."

Our local HFN News and Announcements, seasonal Tide Table, Nature Notes, and Pat Chalmers' useful and informative Almanac rounded out another year of The Halifax Field Naturalist for you, the HFN membership.

Please make any suggestions for any changes you would like to see, or submit articles, reports, or tidbits on anything you yourself think is important to the natural history of Nova Scotia and/or to the Halifax Field Naturalists. Don't forget, this is your newsletter!



FINANCES

The financial statements for 2009 are shown on the following page.

**Halifax Field Naturalists
Financial Statement (Balance Sheet)
As At December 31, 2009**

	2009	2009	2008	2008	2007	2007
Assets						
Cash Royal Bank		\$6,556		\$1,106		\$1,158
Accounts Receivable and Accrued Income		\$914		\$765		\$531
Inventories and Prepaids		\$724		\$724		\$734
Investments		\$6,544		\$12,480		\$12,288
Fixed Assets						
		<u>\$14,737</u>		<u>\$15,074</u>		<u>\$14,711</u>
Liabilities and Surplus						
Accounts Payable - General						
- NSN		\$430		\$270		\$0
Surplus						
Restricted		\$6,544		\$6,480		\$6,288
Unrestricted		\$7,763		\$8,324		\$8,423
	\$14,307	<u>\$14,737</u>	\$14,804	<u>\$15,074</u>	\$14,711	<u>\$14,711</u>

**Halifax Field Naturalists
Statement of Income and Surplus
Year Ended December 31, 2009**

Actual	2009 Actual	2008 Actual	2007 Actual	2006 Actual
Revenues				
Membership	\$2,005	\$2,519	\$2,440	\$2,218
Product Sales			-\$82	\$16
GIC	\$0	\$0	\$0	\$0
Interest	\$24	\$157	\$198	\$162
Donations	\$0	\$60	\$0	\$70
DF List	\$0	\$5	\$59	-\$21
	<u>\$2,029</u>	<u>\$2,741</u>	<u>\$2,616</u>	<u>\$2,444</u>
Expenses				
Field Trips	\$0	\$0	\$0	-\$31
Special Projects	\$147	\$31	\$0	\$0
Socials	\$0	\$16	\$33	\$91
Grants/Donations	\$25	\$370	\$25	\$125
Insurance	\$200	\$200	\$225	\$225
Meetings	\$343	\$45	\$403	\$139
Memberships	\$280	\$464	\$400	\$555
Miscellaneous	\$0	\$0	\$0	\$0
Newsletters				
Postage	\$330	\$436	\$405	\$367
Production	\$1,265	\$1,279	\$1,326	\$1,100
Office Supplies & Expenses	\$0	\$0	\$30	\$187
	<u>\$2,590</u>	<u>\$2,840</u>	<u>\$2,846</u>	<u>\$2,758</u>
Net Income	-\$561	-\$99	-\$230	-\$314
Surplus, beginning of year	\$8,324	\$8,423	\$8,653	\$8,967
Surplus, end of year	<u>\$7,763</u>	<u>\$8,324</u>	<u>\$8,423</u>	<u>\$8,653</u>

– Janet Dalton, Treasurer

BEETLE-MANIA – AGAIN

 – **Stephanie Robertson**

In the Oct. 14th, 2009 issue of the Chronicle Herald, there appeared an overly dramatic (as usual) article with CFIA reports of the presence of the Brown Spruce Longhorn Beetle, *Tetropium fuscum*, (BSLB) in Cape Breton.

In the October 21st issue, Friends of Point Pleasant Park member and entomologist Christopher Majka wisely, calmly, and scientifically replied:

“Before becoming overly alarmed by Canadian Food Inspection Agency (CFIA) reports of the presence of brown spruce longhorn beetle (BSLB) in Cape Breton (Oct. 14 article), Nova Scotians should take a deep breath and consider the facts.

A number of independent scientists, myself included, have for several years been drawing attention to the fact that there has been no scientific evidence produced by the CFIA to indicate that the ecological impact of BSLB is in any substantive way different from that of the large suite of native longhorn beetles and other wood-boring insects present in Nova Scotia. These so-called ‘saproxyllic’ insects are a natural component of forest ecosystems responsible for the breakdown of wood, and they naturally feed on dead and dying trees.

The relatively simple comparative experiments which would help decide if the BSLB was different from native beetles, in terms of its impact of spruce forests, have not been conducted by the CFIA. Moreover, the considerable research on this insect in Europe (where it is native) and in Nova Scotia all indicates this is very unlikely to be the case.

If the scientific research which could answer this question is not conducted, the BSLB issue will continue to bedevil Nova Scotians from now until eternity. It has been almost two decades (since 1990, *not* 1999 as Canadian press stories indicate) since the BSLB was first found in Canada. It is extraordinary that in all that time, although there has been an ocean of ink spilled on this subject, the relatively simple question – Is the BSLB a ‘pest’ deserving of any special course of action or not? – has not only *not* been answered, but the experiments to ascertain this have not been conducted.

I urge Gerry Ritz, the federal minister responsible for CFIA, to ensure that the CFIA conducts such experiments as expeditiously as possible, so that this matter can be settled on the basis of science, and not supposition, panicked over-reaction, and politicized agendas.”

–**Christopher Majka, Friends of Point Pleasant Park**

Not only was the BSLB found in Point Pleasant Park in 1990, *not* 1999 as the CFIA keeps on reporting, my own ‘historical paper research’ revealed it had been found some years *before* 1990, in imported wood packing material, in both Montreal and Vancouver.



FIVE BRIDGE WILDERNESS AREA

The Five Bridge Wilderness area was briefly mentioned on p. 5 under the Colin Stewart Conservation Award article – “In 2008, Rich was instrumental in helping to form the Chebucto Wilderness Coalition (CWC) to protect the portion of the Chebucto Peninsula traditionally known as the Five Bridge Lakes Wilderness Area (FBLWA), under the Wilderness Areas Protection Act.”

Finally, in October 19, 2009, Minister of Environment Sterling Belliveau announced the government’s intent to designate the Crown lands of the Five Bridge Lakes of Halifax Regional Municipality (HRM) as a wilderness area. It’s a 8,266 hectare (20,425 acre) candidate wilderness and is located between Highways 103 and 333.

Public consultation for this candidate wilderness area is now underway and there is a website Consultation Newsletter providing details on the process. You have an opportunity to be involved:

- Visit information displays between March 1st and March 31st at these HRM locations: Alderney Landing Public Library; Tantallon Public Library; and Spring Garden Road Memorial Public Library.
- Provide written comment, or attend an open house – there have been two already, and the third takes (or took – depending upon the printing and delivery dates of this issue to members) place Saturday, March 27th, at St. Timothy’s Church in Hatchet Lake from 11:00 a.m. to 2:00 p.m.

You can also contact the ‘Nova Scotia Canada, Environment, Wilderness Areas’ website, gov.ns.ca, to arrange a meeting. Ensure *your* views are considered by providing them to Nova Scotia Environment by April 30th, 2010. There is a consultation newsletter with details on the process to download, a Five Bridge Lake area map, a comment sheet, and past news releases.

The department will prepare and release a summary of comments received, and before the candidate area is designated, a socio-economic study on the effects of designation will be completed by an independent consultant. This study will take into account the results of the public consultation, and you’ll have an opportunity to comment on the findings of the socio-economic study as well.

NSEN AWARDS



On Friday, March 5th at the Nova Scotia Public Archives, the Nova Scotia Environmental Network (NSEN) gave out some well-deserved awards. Following are some highlights of that ceremony:

The Nickerson Lifetime Achievement award went to **Beth McGee**, Chair, Five Bridges Wilderness Heritage Trust, while the Eco-Heroes Group of the Year was awarded to the **Avon Peninsula Watershed Preservation Society (APWPS)**. The chosen Eco-Hero Environmentalist of the Year (Individual) was **Marilyn Cameron**, Chair of the Biosolids & Wastewater Group. The Cole Award for Excellence in Environment and Health was received by **Helen Jones & Maureen Reynolds**, Real Alternatives to Toxics in the Environment (RATE) group, for their long-time pesticide-ban work (yay!). The Marshall Award for Aboriginal Environmental Leadership went to **Ikanawtiket**, of the Initiative of the Maritime Aboriginal Peoples Council, and the Youth Environmental Leadership Award was received by **Janice Ashworth**, a volunteer with the Energy Issues Committee of the EAC. The Award for Environmental Political Will? – **Mark Parent**, former Conservative N.S. Minister of Environment and Agriculture. Lastly, the well-deserved Langille Honour in the Woods Award went to **Jamie Simpson**, Forestry Program Coordinator, EAC.



HFN TALKS

URBAN ECOLOGY

4 DEC.

– David Patriquin

When Jeremy Lundholm took up a position at Saint Mary's University (SMU), in 2004, he didn't waste any time delving into the regional ecology, beginning right in HRM.

He classifies urban habitats into four types: (i) remnant natural habitats; (ii) converted habitats such as vacant lots and crevices in sidewalks; (iii) constructed habitats, which are mostly hard surfaces; and (iv) links/corridors which facilitate movement of species between larger habitat areas, e.g., a stream or the vegetated median of a highway.

POINT PLEASANT PARK; A REMNANT HABITAT

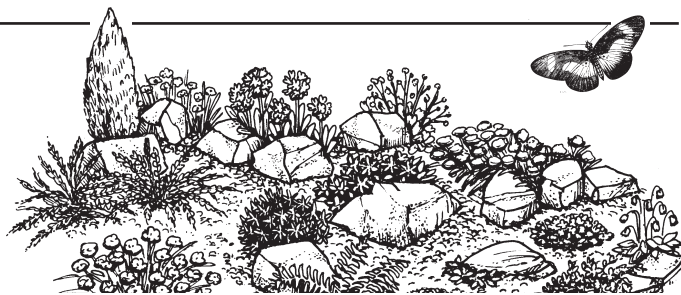
In 2004, Point Pleasant Park (PPP, or 'the Park') was just beginning its recovery from Hurricane Juan. While altered over the years by human activities, the Park is a remnant of the native Acadian forest and it now lies within our urban area. Jeremy and SMU students, including Scott Burley and Sarah Robinson, wanted to assess the damage and recovery from the hurricane, and to determine how PPP soils compare to sites that have had much less intense human use. They couldn't do 'before and after' studies, but as the hurricane had left some patches almost intact, they *could* compare disturbed (blowdown) sites with the almost intact patches.

Amongst the conclusions: soil quality variables had not been affected substantially by the hurricane, nor were the soils of PPP highly depleted (as some had suspected) compared to non-park forest sites. Nutrient levels, except for phosphorus, tended to be higher in the PPP soils. Seedbanks were also similar between blowdown and intact sites. In 2005, early successional species (Paper Birch, Red Maple, Mountain Ash, White Pine) appeared as seedlings, and Jeremy predicted that the park would recover well, left to its own devices. Under the PPP Management Plan, steps subsequently were taken to accelerate the recovery and also to alter the species composition from the previous mix. However, the natural regeneration has continued, as Jeremy predicted.

Jeremy & Co. were on the lookout for the possibility of increased occurrence of invasive, exotic plant species after the hurricane. But, except for movement of Norway Maples about 30 m beyond introduced trees, and weedy species immediately adjacent to roads and some pathways (both not related to the hurricane), invasives do not seem to be a serious issue in PPP. However, they did find a new invasive there, Himalayan Balsam, *Impatiens glandulifera*, which will bear watching. This is an escaped horticultural species which has also been seen elsewhere in HRM. The take-home message from the PPP studies – urban forest vegetation can be quite resilient to long-term human presence.

URBAN SPONTANEOUS VEGETATION

Jeremy moved on to talk about 'urban spontane-



ous vegetation' (USV) such as that found in vacant lots. Studies by Jeremy and student Sarah Robinson showed that USV sites are species-rich in regard to both plant species and invertebrates, in comparison to lawns and remnant forest sites. The insects included a first maritime record for a native Canadian Ladybird Beetle, *Hyperaspis inflexa*. Many of the USV plant species are weedy, and exotic. Jeremy suggests we should not get too upset about exotics in human disturbed habitats, as they perform important ecosystem services. Further, as shown by the PPP studies, remnant native habitats seem fairly resistant to exotics.

HARD SURFACES & GREEN ROOFS

Finally, Jeremy talked about his true urban ecology passion (at least that's the writer's interpretation): vegetation of hard surfaces – including those of natural habitats such as barrens and cliffs; and the hard surfaces of constructed habitats – such as sidewalks and buildings. His research includes a very useful component: green roofs. He set up an experimental green roof facility at SMU in order to screen different plant species and to look into various modes of green roof construction, measuring their effects on temperature and water capture.

Jeremy looks to our coastal barrens for candidate native species for green roofs, as the barrens plants have evolved under conditions similar to those presented by roofs. The generally slow growth of barrens species is a potential drawback, so they look for 'the fastest of the slow', such as the Three-tooth Cinquefoil. Reduced heat flow is a major benefit of green roofs, resulting in lower interior temperatures in summer and less heat loss in winter. Jeremy & Co. are finding that such benefits are maximised by using mixtures of species with different life forms, rather than monocultures of a single life form.

INSECT HABITAT & A FLIGHTLESS GLOWWORM

Green roofs benefit conservation by providing habitats for native species and by helping to create wildlife corridors through urban areas.

Sharing Jeremy's enthusiasm for urban ecology, graduate student Scott MacIver talked about the ecosystem services of green roofs, with particular reference to insects. An initial study revealed approximately 200 species of insects in the SMU green roof testing facility alone. In 2009, he sampled insect populations in five pairs of green roof sites and adjacent ground habitats. (Green roofs are not yet the rage in residential Halifax, but they are common on tops of tiered parkades and some commercial buildings.)



Amongst the species he encountered was one he didn't know, but realised was something special. Entomologist Chris Majka, at the Nova Scotia Museum of Natural History, identified it as a Lampyridae, *Phosphænus hemipterus*. It is the only diurnal flightless firefly known and is endangered in its native range in Europe. Scott and Chris documented populations at three neighbouring sites in the area of Fort Massey Church on Queen Street, including two cemeteries, and a strip of lawn on top of a parking garage. It eats earthworms, so is not a threat to native vegetation.

This discovery was hot off the press: the paper by Chris and Scott reporting the discovery appeared in the journal *ZooKeys* a week later, and it was the subject of a Chronicle Herald article on December 12th. "If you've ever been convinced you saw a glowing apparition in a Halifax cemetery, it might not have been your imagination!", began the article by reporter Ian Fairclough.

The captivated HFN audience peppered Jeremy and Scott with questions throughout, and we definitely went away with some new information and insight into our urban habitats and their residents!

Following is a list of some relevant papers in the scientific literature:

Burley, S., Robinson, S.L., and Lundholm, J.T. 2008. "Post-hurricane vegetation recovery in an urban forest." *Landscape and Urban Planning*, 85: 111-122.

Lundholm, J.T. and Peck, S.W. 2008. "Introduction: Frontiers of green roof ecology." *Urban Ecosystems*, 11:335-337. (editorial)

Majka, C.G. and Robinson, S. (2009). "Hyperaspis and Brachiacantha (Coleoptera: Coccinellidae): two poorly known genera of native lady beetles in the Maritime Provinces." *Journal of Acadian Entomological Society* 5:3-11.

Majka, C.G. and MacIvor, J.S. 2009. "Otorhynchus porcatus (Coleoptera: Curculionidae): a European root weevil newly discovered in the Canadian Maritime Provinces." *Journal of Acadian Entomological Society*, 5:27-31

Majka, C.G. and MacIvor, J.S. 2009. "The European lesser glow worm, *Phosphænus hemipterus* (Goeze), in North America, (Coleoptera, Lampyridae)." *ZooKeys* 29:35-47

Oberndorfer, E.C., and Lundholm, J.T. 2009. "Species richness, abundance, rarity and environmental gradients in coastal barren vegetation." *Biodiversity and Conservation*, 18:1523-1553.

Wolf, D., and Lundholm, J.T. 2008. "Water uptake in green roof microcosms: effects of plant species and water availability". *Ecological Engineering*, 33:179-186.

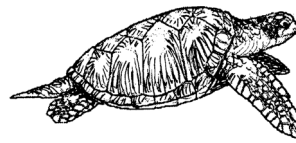
SEA TURTLES

7 JAN.
– Jim Wolford

"Sea Turtles of Atlantic Canada" was presented by Laura Bennett of the Canadian Sea Turtle Network (CSTN), (formerly the Nova Scotia Leatherback Turtle Working Group [NSLTWG]).

This topic drew an impressive crowd of turtle lovers, and Laura had a good strong voice and infectious enthusiasm that made the microphone and its speakers superfluous. And – her presentation included many great photos as well as informative videos.

Four species of sea turtles have occurred in Atlantic Canadian waters (and shores). In ascending order of number of occurrences, they are Green Turtles, *Chelonia mydas*, Kemp's Ridley's, *Lepidochelys kempii*, Loggerhead Turtles, *Caretta caretta*, and Leatherback Turtles, *Dermochelys coriacea*.

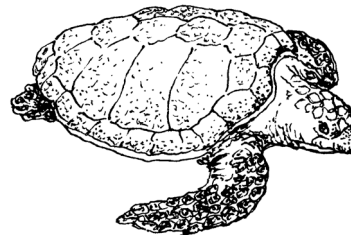


Green Turtles are seldom seen in Atlantic Canadian waters, with only nine total sightings in Canada (three were in the Pacific). These and individuals of the next species are nearly all juveniles and are frequently 'cold-stunned' into inactivity by our frigid North Atlantic waters.

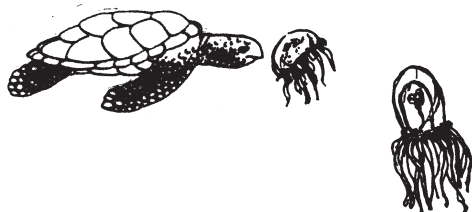
Laura showed us photos and diagrams which illustrated the specific differences in the scutes that make up the shells, along with shape of shell, sizes, etc. Green Turtles show starburst patterns of markings on their dorsal scutes; they feed on sea grasses and their meat is green. Laura mentioned a turtle farm on Grand Cayman Island that raises Green Turtles for both meat and for wild releases (approximately half and half).

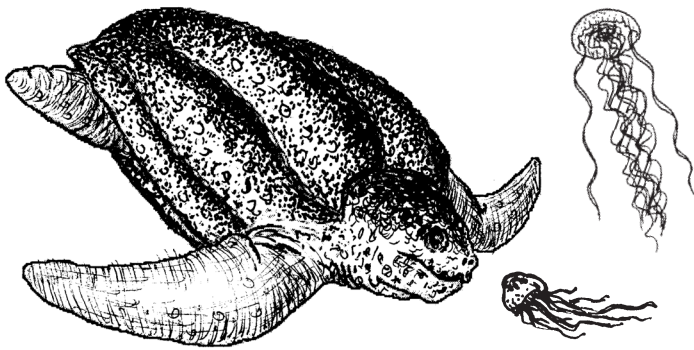


Kemp's Ridley Turtles are the smallest turtle (up to two feet long, and weighing 150 lbs.), and the rarest species of sea turtle (all species of the world's sea turtles are considered at risk). Its shell shows five lateral dorsal scutes, and this turtle is known to occur along the coast of the northeastern United States. There have been ten occurrences in Nova Scotia, six of them since 2005, all in the Bay of Fundy, especially near Morden. These have all been juveniles of the species, and many have been found as moribund and cold-stunned; the majority were dead when discovered. Cold-stunned individuals usually die. One local teenager has found four of them, and one is featured on a 'You-Tube' video.



Loggerhead Turtles are quite regular in our waters but are usually further offshore than Leatherbacks, and usually they are juveniles. One Green-X-Loggerhead hybrid has been seen. CSTN does not tag Loggerhead Turtles, though they have had some sightings reported by fishermen. The carapace, or dorsal part, of the shell of the Loggerhead shows five medial scutes, and the head is relatively huge – Laura had brought with her an impressively large skull. Loggerheads feed primarily on shellfish.





Leatherback Turtles are very easy to identify by the extraordinary shell which has no scutes, but instead seven long prominent ridges from the front end to the back. Also, it is very, very large – up to 6.2 feet long and 500 to 2,028 lbs.! The top of the head shows a weird but useful (to us) ‘pink spot’; its function is unknown, but it is highly variable and therefore aids in the recognition of different individuals.

Leatherbacks’ dives can be extremely deep, often deeper than 1,000 m, and as deep as 2,008 m! With massive lung capacity, they can stay submerged for up to 86 minutes.

Leatherbacks are adapted for swimming very long distances, e.g., up to 20,000 km on their migratory round trip in the Pacific, and swimming speeds have been measured up to nine to 14 km per hour.

Its nesting season is usually March to July. Atlantic Leatherbacks nest every other year, as opposed to every three to four years in the Pacific. They make about eight nests per nesting year, with about 100 eggs in each nest. There is lots of predation on the eggs, including by beetles, snakes, birds, and mammals. One leatherback was shown on a beach, and we also saw a photo of a hatchling, which is tiny and weighs only 44 grams.

Building developments on beaches are huge threats. One example of this is the lighting around buildings, because the nesting female turtles get disoriented and lose their ability to find the water after they have laid their eggs. Researchers in Florida are working on different kinds of lights to mitigate this threat.

Laura especially singled out the early work of Dr. Sherman Bleakney on historical records of sea turtles in Atlantic Canada, especially on leatherbacks. Sherman is retired, but still active in Wolfville where he grew up and taught in Acadia University’s Biology Department. He was Canada’s chief herpetologist at the National Museum in Ottawa in the middle of the 20th Century. He documented the problems with plastic bags for Leatherbacks as early as 1963, which are engulfed by mistake while foraging for jellyfish, their primary prey. Laura showed us a video from a camera mounted on a swimming leatherback, and we watched it encounter and chew up a Lion’s-mane Jellyfish.

Laura mentioned 1995 as a ‘big year’ because 18 Leatherbacks were found dead or stranded on Nova Scotian beaches. In the 1990s, Dr. Chris Harvey-Clark was the veterinarian at Dalhousie University’s Aquatic

Research facility, and, concerning those dead Leatherbacks, contacted Dr. Tom Herman of the Acadia Biology Department. At that time Mike James was Dr. Herman’s student, and ever since then he, Kathleen Martin, and many others have been actively researching sea turtles, especially Leatherbacks. Laura’s group began with Mike James’s early studies, and is based in Halifax.

www.seaturtle.ca is their website, and is a great place to obtain more information about Leatherbacks. Tracking maps for them can be found at www.seaturtle.org. (All sorts of other tracking maps can be found there as well, such as for the Greater Shearwaters, banded in the Bay of Fundy, that migrate to the southern hemisphere for their nesting as do many of the Leatherbacks). The tagged leatherbacks have been traced now to 12-13 beaches in several different subtropical and tropical islands and countries. Trinidad and French Guiana are big sites for nesting.

Laura mentioned a survey of nesting female leatherbacks which indicated a huge decline in the last 15 years – from 100,000 to 35,000, in the Pacific, where this species is severely at risk. One of the main reasons they are endangered in the Pacific is the very destructive gill nets that exist in its southwestern area. This is where many leatherbacks migrate in their non-breeding season.

Laura’s group has an active educational programme, and has visited over 4,000 elementary and 583 high school students. They also have a fishing community outreach programme, with 265 wharf visits, 6,700 km travelled, 500 members, and 1,500 sightings accumulated. It’s worth mentioning here that groups of fisherpeople have volunteered their boats, time, etc. and not only keep track of sightings and photos, but also transport Mike James and others on the tagging expeditions in the areas of St. Margaret’s Bay in mid-summer, and Neil’s Harbour, eastern Cape Breton, in late summer.

Over the years, Leatherbacks have been caught, measured, and outfitted with various kinds of tags – flipper tags, more recently P.I.T. tags (passive integrated transponder), plus satellite tags. In 2009 they caught one individual that had a Canadian flipper tag. P.I.T. tags are injected into the shoulder, and a scanner is needed to detect and read the tag for individual identification.

About 80 Leatherbacks have had satellite tags attached to them in Nova Scotia waters; the Leatherback known as ‘Helen’ was shown with hers (the newer tags are now much reduced in size). Satellite tags transmit data when the tagged turtles surface to breathe.

Leatherbacks are solitary swimmers (not social), but one spot south of southwest Nova Scotia is a popular spot for foraging. Offshore Cape Breton is a critical foraging area, and the Gulf of St. Lawrence is used also to some extent. They migrate south from October to February/March. Laura mentioned a turtle race with 11 turtles, all with sponsors!

Jellyfish, sea turtles’ main prey, are 95 percent water and only five percent organic. Leatherbacks in North Atlantic waters are thought to be almost constantly foraging and therefore consume very large quantities of jellies. Laura had brought a portion of a gullet/esopha-



gus with big, backward-pointing spines that prevent ingested items from being ejected. Mistaken ingestion of plastic bags is thought to be problematic and perhaps frequently fatal to the sea turtles.

Laura and others are supervising a programme of beach surveys for jellyfish – for Lion’s Mane Jellies, Moon Jellyfish, and Comb-jellies or Ctenophores (the most common of these are ‘Sea Gooseberries’). She showed us some data on dates and sizes for the different kinds of jellyfish, with population peaks in August. Leatherbacks also eat Salps, which can be solitary or colonial, are relatives of tunicates, and are also ‘made’ of jelly, just like jellyfish.

Last year a living Leatherback was found on the sand near Risser’s Beach. It was disoriented, and Laura and Mike got it out to deeper water, but sadly, later, it again stranded itself and died.

QUESTIONS; ANSWERS; OTHER CONCERNS:

What about males?

Why dive so deep? Perhaps the females are trying to get away from the males?

What measures are being used to conserve the turtles? On nesting beaches in some places there is some ‘harvesting’ that occurs (of both eggs and adult females?), with established quotas, but there are still lots of poaching problems.

What about entanglements in fishing gear? Gill nets are not checked for days in some areas. Pacific Leatherbacks in particular are in huge trouble; they could be extinct in 20 years.

What about incubating eggs and head-starting babies and later releasing them as juveniles? (as for Blanding’s turtles in N.S. fresh water). This is not done with Leatherbacks, partly because they cannot be kept successfully, like the Blanding’s can, in captivity. However, it is important to note that some hatchery programmes do exist; the eggs are removed from vulnerable nests and hatched in a hatchery. Once hatched, the hatchlings are quickly returned to nesting beaches to make their own way to the ocean.

Laura also mentioned that Leatherbacks, externally, have diatoms and parasitic or symbiotic barnacles on their shells.

(A point of great interest from Jim by email, which he has discovered since Laura’s talk, is the following: Leatherback turtles are adapted for cold water by being able to become warm-blooded, as can Bluefin Tuna and Great White Sharks. Being warm-blooded enables the generation of heat from the swimming use of their muscles; they are then able to regulate and maintain a body temperature that is higher than that of the sea water. – ed.)



BIRDS – AND COFFEE

4 FEB.

– Allan Robertson



“A Wake-Up Call: Our disappearing migrant songbirds and your morning coffee.”

Mark Butler of the Ecology Action Center (EAC), and Satya Ramen of Just Us! Development & Education Society (JUDES), presented a talk about a link many of us wouldn’t have thought existed – between coffee and migrant songbirds!

Mark introduced the presentation, indicating that even though he tends to focus on fish, birds were among his earliest nature interests, and that after joining the EAC he looked for ways to incorporate birds and bird issues into his work. One of his concerns is the declining number of migrant songbirds. At an international bird conference at Dalhousie in 2008 he was pleased to see a focus on identifying priorities regarding how best to address the decline in the numbers of bird migrants. This focus would include making the public more aware of the issue, mounting initiatives like prizes for a migrant ‘birds back’ contest, and publicising a count of birds killed by flying into glass office tower windows in the spring and fall. It is clear that bird migrants are in trouble and one link, surprisingly enough, is with respect to the production of coffee, and – we can help.

Mark first described for us the link between songbirds and ecological diversity, pointing to their roles in pollination, seed dispersal, insect control, and in filling many different niches. While the focus of the presentation was on songbird migrants, shore and ocean birds, as well as raptors, also migrate.

Birds migrate northward in the spring where there are abundant food sources and nesting sites. When winter approaches, the scarcity of food and lower temperatures forces migration back to warmer climes. The distances traveled by migrating birds are substantial. The typical Wood Thrush, for example, travels an average of 1,000 to 6,000 km each way when migrating, and a Cliff Swallow can travel from 2,000 to 11,000 km!

Even very small birds travel extensively – the Ruby-throated Hummingbird covers from 2,000 to 4,500 km each way, and though only four to five cm long, travels about 100 km each day. They are capable of covering even larger distances; when crossing the Gulf of Mexico, for example, they travel 800 km in one flight.

There are about 200 species of songbirds that migrate annually from Nova Scotia to the southern United States, Mexico, and Central and South America. Out of 180 species that over-winter in South America, 28 breed here in Nova Scotia.

The populations of most migrant songbirds are declining, according to figures drawn from the North American

1966-2005 Breeding Bird Surveys. In general, the data appears to show declines of from one to two percent per year for more than half of the species. Chimney Swifts appear to be declining at approximately seven percent per year, and Bank Swallows and Common Nighthawks show similar decreases. Flycatchers appear to be least affected with in the one percent per year range. Experts point out that, by some estimates, we may have already lost almost half the songbirds that filled the skies only 40 years ago.



But what does this have to do with coffee? Well, many of the migrant songbirds with declining populations spend their winters in coffee-growing areas in Mexico and South America. And in these areas the migratory songbirds are facing deforestation, habitat fragmentation, outright habitat loss, and deadly pesticides. In many areas, tropical forest ecosystems have already disappeared or are on a path to near-term extinction. By the late 1980s, for example, only an estimated one-fourth of the primary moist tropical forest in Colombia remained. This deforestation occurs because of infrastructure expansion, agricultural extension, and wood cutting. Many pesticides are used in coffee growing areas, including those that have been banned in North America (including DDT). Endosulfan, for example, is used to fight a coffee pest in Colombia, where there have been over 100 human deaths associated with its use.



Coffee production is big business. Plantations cover approximately 10 million hectares worldwide; roughly 20 times the size of Nova Scotia. In many countries it is a main export as well as a cash crop for local farmers. It's the second most valuable legally traded commodity on the world exchange, second only to oil, with approximately \$10 billion worth of exports. While it represents big money and big business however, it is mostly characterised by small farmers tending farms of less than ten hectares in size.



Coffee can be broadly characterized as 'sun-coffee' and 'shade-coffee', and herein lies the link between coffee and the declining populations of some songbird migrants. Sun-coffee includes varieties of the Arabica species which grow best in direct sunlight in large cleared areas. High, open areas are best (clearcuts, anyone?) which lead to soil run-off, poor soil quality, and an overall drastic reduction in biodiversity.



Shade-coffee includes varieties of the Robusta species, which prefer lower, shady areas where intercropping is common and agro-forestry is often practiced. It provides habitat for birds which themselves feed on many insects that would attack the coffee crops. This approach is essentially sustainable agriculture; it protects species, provides natural pest control, conserves soil, and protects watersheds.



Satya Ramen told us about an annual visit she makes to farmers in Chayotepec, Mexico. They farm in a nationally protected cloud forest, with some of the largest White Pines in the region. In the 1970s, this area had no access roads. A large logging company told the community that if they could log, the company would build roads for them. The community shortly recognised that

the logging company was tearing apart the ecosystem by logging all the large white pines. They stopped seeing the jaguars and monkeys they normally saw. Thirty-seven farmers lost their lives in armed confrontations with the logging company, but ultimately the farmers managed to regain control over their land. They now farm organic Robusta coffee in the area, as both a cash crop and for export.

In growing shade coffee it is important to distinguish the type of shade by different kinds of tree cover. There are four categories: rustic shade; traditional poly-culture shade; commercial poly-culture shade; and monoculture shade. Rustic shade contains trees of at least 30 m in height under which a second level of broad-canopied trees of roughly 15 to 20 m grow, and where even smaller trees and crops grow at ground level. This type of shade provides from 70% to 100% of shade cover. Traditional poly-culture shade is one step down in shadiness; there are still 30m high trees, but none at the 15m to 20m height. This type of shade generally provides from 40% to 70% of shade cover. Commercial poly-culture shade is described as an area with no high trees, but with some cover at roughly 10 to 15 m in height; it generally provides from 30% to 40% shade cover. The fourth type of shade, monoculture shade, contains trees no higher than 10 m in height and provides only from 10% to 30% of shade cover.

Studies have shown that growing coffee in shaded areas conserves soil (rustic and poly-culture types of shade are preferred). Typical loss of soil in shade-grown coffee plantations is approximately 240 kg per hectare. By contrast, a hectare of hayfield will typically lose 20 to 25 tons of soil per year, and cornfield soil loss can be as much as 860 tons per hectare each year.

Surveys in Colombia and Mexico have identified 90% fewer bird species in sun-grown plantations than in shade-coffee areas. Soil organic matter is also higher in shaded coffee plantations, and plantations growing coffee, cocoa, bananas, citrus, papaya, spices, and woody trees show retention of significant bird species – as much as 74% greater than in sun-grown plantations.

The growth of coffee is more complicated than other large commercial crops. Pineapples for example are grown quickly in large scale plantations by transnational companies; this results in deforestation and significant ecological damage. Coffee, by contrast, is fairly difficult to grow, takes seven years to attain full production, and is harvested by hand from four to six times per year, with a significant amount of sorting done manually as well. Prices are low – half of all the output is purchased by four of the largest international companies that market coffee, and its the individual farmers who must absorb the risk of price variations. As we can imagine, the bottom line rules – companies can pay as little as seven cents per pound for coffee which is ultimately sold for \$15.00 a pound in major markets.

Satya and Mark recommended that we buy only bird-friendly coffee – coffee with an organic certification grown under high-shade conditions. They referred to three different types of certification: Rainforest Alliance Certified; Fair Trade; and Fair Trade Certified. The lat-

ter two certifications ensure not only that the coffee is grown under the right natural conditions (thus protecting bird habitat) but that prices are fair, labour practices are appropriate, and that some kinds of environmental practices have been followed.

Thank you, Satya and Mark, for a marvelous and eye-opening presentation. Those of us not already buying Fair Trade Certified coffee will no doubt change our ways!



MEMBERS' SLIDE NIGHT 4 MAR.

– **Stephanie Robertson**

After our short AGM, six of our members showed some of their beautiful, interesting, and informative natural history slides. They covered a wide range of topics, focusing on different aspects of and reasons for photographing them. Here are some of the highlights:

Jack Warkentin – Jack was our first presenter, and his first slide, out of three taken on a farm near Sarnia, Ontario, showed what looked like two large masses of an amazing bee swarm on a Manitoba Maple taken in May, 2009; his second was of two High-bush Cranberry, *Viburnum trifolium*, sporting a plethora of huge red berries; the third was of an immense Virginia Creeper, *Parthenocissus quinquefolia*, slowly overwhelming a very tall conifer taken at a distance. Then, from the Historic Gardens, Annapolis Royal, July, 2007, we saw a magnificent Dawn Redwood, *Metasequoia glyptostroboides*. The genus *Metasequoia* was first described as a fossil from the Mesozoic era in 1941. Thought extinct until a small stand was discovered in China in 1944, it was finally described as a new, living species in 1948. Harvard University sent an expedition to collect seeds, and soon after, seedlings were distributed world wide for growth trials. From the La Have River area, we saw a wonderful close-up of an Indian Pipe, *Monotropa uniflora*, which feeds on roots and decaying vegetation; then from a Brier Island whale-watching boat, a Great Blue Heron, *Ardea herodias*, ungainly and comically perched on a large conifer. Next was a view of Cape Split from Baxter's Harbour. Most impressive to see were seventeen Bald Eagles on a large, bare deciduous tree north of Upper Canard, taken in January, 2009 during 'Eagle Watch' weeks; then one of a Crow, which, like the observing humans, were also watching the eagles at a feeding site.



Maryann Burbidge – Maryann had some wonderful animal shots from all over the world. First – in her arms a small Brown Kiwi named 'Toejam', *Apteryx mantelli*, from New Zealand's North Island; (later this particular bird was found killed by a ferret, introduced into New Zealand to get rid of the surplus of rabbits, which were also introduced). Then, from Upsala, Sweden, a comical picture of a Fieldfare, *Turdus pilaris*, doing a falcon impression; and from the UK, a Grey Squirrel, *Sciurus*

carolinensis, in a London park. There was a very good close-up shot of an Eastern Chipmunk, *Tamias striatus*; a Raccoon, *Procyon lotor*, with the backs of its eyes reflecting back the light, taken in the Valley near the Annapolis River; an excellent feeder shot with Blue Jays, *Cyanocitta cristata*, and Evening Grosbeaks, *Coccothraustes vespertinus*, (she has had up to 150 to 200 birds at a time at her feeder); an excellent American Goldfinch close-up, *Carduelis tristis*; and a six-week old kiwi chick named 'Marino' with black plumage. She also snapped a Red-bellied Woodpecker, *Melanerpes carolinus*; a Rose-breasted Grosbeak, *Pheucticus ludovicianus*; a Downy Woodpecker, *Picoides pubescens*; a Red Fox, *Vulpes vulpes*; and a close-up of a hybrid duck, all from Brickton, N.S. From the Netherlands, she showed jackdaws and a different species of gull, also a comical image of a common blackbird, *Turdus merula*, hiding in an eavestrough under some clay roof tiles.



Lesley Jane Butters – Lesley has a small, digital Sony Cyber-shot (7.2 megapixels), and has been practicing and experimenting with its macro capabilities. What lovely shots she managed to get, and with such excellent focus. The first was of a Red-breasted Nuthatch feeding from her own other hand (she doesn't use a tripod). Next, a beautiful shot looking down onto the heart of a yellow tulip; and then a frog half-submerged in glistening water at Albany New, Queen's Co. There was a fascinating close-up of a red poppy in the process of opening. Lesley waited and waited all day to snap the different stages, and she said she could actually hear the crinkling noises of its petals as it slowly blossomed. There was a wonderful shot of an oddly-shaped yellow spider on a yellow squash flower petal (camouflage?) eating/attacking? a small black beetle. Then another close-up of a more traditional-looking brown and grey hairy spider. Two beautiful close-ups – Devil's Paintbrush and Tamarack; two flies mating; a 'wooly' caterpillar (yellow and black); a very colourful and strangely-shaped, long, hairless caterpillar (I remember green, white, blue and red); and three beautiful, large, golden tree fungi growing on a horizontal log. On Hobosh Island, Mexico, where Lesley attended a yoga retreat, she had snapped a black and white sea slug on some sort of organic orange 'goop' on the sand; a very comical close-up of a dead, fully inflated puffer fish storm-tossed on the beach; dolphins; birds; a horseshoe crab burrowing into the sand; a black and mud-grey iguana; coconut flowers; and a very artistic and beautiful close-up of a grey sand beach with half of a tropical lobster, orange-red coral, and dark sea urchins.

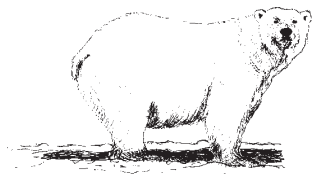


Charles Cron – Charles travelled to Churchill, Manitoba, in November, 2009 to see Polar Bears. With nothing but praise for the charter airline, NOLINOR (it was a very smooth landing), his first shot was of a very large stone Inukshuk on the snow. Polar Bear alert signs were

shown all around the area, and if the bears don't leave when stimulated to do so, they are live-trapped and then put in large, enclosed quonset type buildings (polar bear jail). Seal oil soaked cloths draws the bears into the traps. Females with young are kept separate from the males because they will eat the young, so their presence makes the females nervous. Inside the building, they have mattresses to sleep on. The bears are taken out and away when the ice forms. Churchill used to be a military base (thus the quonset huts).

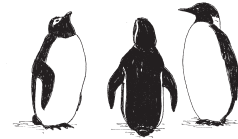
The diorama shown of a mother bear with its young in hibernation in a snowy hole had been constructed by Blake Maybank. The tundra trees, one side ice-blasted and now branchless, were shown as well, and there were Willow Ptarmigans, all females. We saw the 'tundra buggies' with wheels six feet high; bears standing upright can reach to the bottom of the buggies' windows! When the tundra buggies take the tourists out to see the bears, the vehicles group together to form a 'Tundra Buggy Lodge'. These vehicles are powered and heated with propane tanks; inside there are dormitories with bunkbeds, and a dining car with kitchen.

Charles spent a week there; it was usually -3 to -4°C, with a wind chill of -22°. There was a mother and cub which always hung around his buggy, and there were many good shots of bears up against the buggies as well. Churchill is on the Hudson Bay shore, and Charles ended his presentation with a breathtaking shot of neon-green northern lights.



Ingrid Plache – Ingrid and Burkhard travelled to the 10 km-long island of Langeoog in the North Sea off the coast of Holland (one of a group of seven small islands), where Burkhard had spent many of his summer holidays with his schoolmates. The main village sported red brick roads, all in good shape (the climate is warmer than Nova Scotia!). There were large tracts of dense, plant-covered dunes; they had taken good close-ups of many of the dune plants – a local Beach Oats and European Sea Rocket being two of them. There were also shots of flocks of plovers and sanderlings on a beach (some in

flight), and a Eurasian Oystercatcher and Black-headed Gull. We saw Sea Buckthorn, which comprises the major percentage of stabilising dune vegetation, and there was a close-up of a Wild Rose as well; it has been introduced, and is not liked there. More slides were a Honeysuckle vine with its yellow flowers; heather; a little blue flower (Ingrid had not taken a plant guide); a pea-family flower; and Sea Lavender that looked a lot like the same plant found in Nova Scotia. A horse-drawn covered buggy; a dike; a partridge-type bird; a butterfly; salt marsh; and Burkhard up to mid-calf in mud with a friend rounded out their interesting pictures of this very small island.



Bob McDonald – Bob showed slides from a November, 2009 Antarctic tour to South Georgia Island and the Falklands, where he reported the best pelagic birding ever. First slide – a stunning Black-browed Albatross; then – an unusual picture of the very perfectly triangular Shag Rocks, 500 km from any land. He showed a map and gave us a brief rundown of Shackleton's infamous and tragic journey (later – a slide of Shackleton's grave-stone). There was a view through one of their ship's portholes; the ocean was very rough, and only six out of 100 participants had made it to breakfast that day! We saw a Cape Petrel (the commonest kind); mountains on S. Georgia, and also its capital Grytviken, where there are remains of an enormous whaling station, now a research facility which belongs to the UK. There were seals – the Elephant and the Antarctic Fur Seal; and lots of penguins – Gentoo and King. Antarctic bird pictures were the the Yellow-billed Pintail, the Antarctic Tern, South Polar Skua, and a Snowy Sheathbill. The latter are scavengers which really keep this part of the world very clean as they feed upon all the dead seals. There were huge Southern Giant Petrels, and a picture of the waterfall that Shackleton had to walk down. There is a herd of introduced Reindeer there, however it's a stable population and doesn't seem to interfere with the natural balance in the area. More birds shown were a Yellow duck, a Light-mantled Sooty Albatross, and a Snow Petrel. There was a *very* impressive giant colony of King Penguins – 50,000 at least, with all ages and lots of downy young in various stages!

Thanks to all for the wonderful slides.

FIELD TRIPS



AN AFTERNOON AT THE MUSEUM

– Wendy and Bob McDonald

Date: Sunday, January 24th

Place: Nova Scotia Museum of Natural History

Weather: Sunny, 0°C

Leaders: Marian Munro and Frances Anderson

Participants: 12

Although there was a long waiting list for participants to attend this event, it appeared that the sunny weather enticed some folks to spend the day outdoors rather

than participate in the Museum visit. However, smaller numbers meant that we all had a better look at the displays and cabinets of materials.

Although the Museum is officially closed while undergoing structural improvements to its 40-year-old building envelope, we were able to follow through with our planned visit. After climbing to the top of the building (the elevator was out of order), we were greeted by Marion Munro, Curator of Botany. She explained the role of herbaria in general and the Museum herbarium in

particular. She also gave us some fascinating history of the various collections from private and other sources, which are now housed in many cabinets, some of which had been transferred from the former Museum site on Spring Garden Road!

We then split into two smaller groups and had a look at some of the botanical and lichen collections, where cool, dry air in the storage rooms prevents any insects from destroying them.

Among the botanical specimens we viewed was Water Arum, *Calla palustris*, collected in 1920 in Yarmouth Co. by Fernald, an early botanist from Harvard, who helped to define the coastal plain flora species that are so important here in Nova Scotia and Canada. Nearby was a collection of Skunk Cabbage, *Symplocarpus foetidus*, one of our very early bloomers, and a large bulky specimen to store. The plant press and other tools used by the botanists today have changed little over the generations. All stored specimens are mounted on acid free paper, labelled as to location (more recently with latitude and longitude through the use of hand-held GPS units), the date of collection, and the name of the collector.

Lichens are gathered and stored in a similar manner. However, because of the three dimensional nature of most of them, storage in their particluar cabinets is in folded envelopes. We looked at one or two specimens through microscopes, and tested one with chemicals to confirm the identification! Research Associate Frances Anderson described her tour of museums in the region and further afield in an attempt to gather data regarding distribution of lichen species. Early annotations were often quite crude; for example the notes made by one collector of an early specimen read simply "rock near pond in King's Co". However, this kind information *will* help to complete the database for Nova Scotia lichens. We can look forward to a Nova Scotia checklist for lichens in the near future.

The role of the museum volunteers was extolled, including our long time HFN member, Doris Butters, who has spent long hours researching, cataloguing, and categorising many specimens. Marion challenged HFN to assist the Museum in an ongoing botanical imaging project. Details will be provided in a future newsletter.

Due to the popularity of this event, we can expect a repeat visit, arranged by the Museum, perhaps in the fall.



SEWER STROLL II

– Suzanne Borkowski

Date: Saturday, February 13th

Place: Halifax/Dartmouth area

Weather: Chilly and wintery!

Interpreter: Suzanne Borkowski , Bob McDonald

Participants: 30





Thirty participants gathered at McCormack's Beach on a chilly, wintery morning for the combined HFN Sewer Stroll and the NSBS Sewer Stroll II. Both societies were well represented among the participants. Birds of interest included all three Scoter species seen from Shore

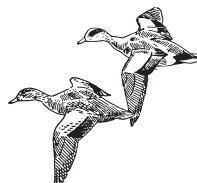
Road in Eastern Passage; two Rough-legged Hawks (one dark phase, one light phase); a Northern Harrier at Hartlen Point; a Peregrine Falcon that did a fly-by at Tufts Cove; and Purple Sandpipers at Point Pleasant Park.

Land species were down this time compared to the Bird Society Sewer Stroll I in early January. This was evidenced by a complete lack of warblers, no winter finches, and only one lone Downy Woodpecker heard drumming late in the day at Point Pleasant Park. Our total for the day was 44 species.



SEWER STROLL SPECIES

Eurasian Wigeon		<i>Anas penelope</i>
American Wigeon		<i>A. americana</i>
American Black Duck		<i>A. ribripes</i>
Mallard		<i>A. platyrhynchos</i>
Greater Scaup		<i>Aythya marila</i>
Lesser Scaup		<i>A. affinis</i>
Common Eider		<i>Somateria mollissima</i>
Surf Scoter		<i>Melanitta perspicillata</i>
White-winged Scoter		<i>M. fusca</i>
Black Scoter		<i>M. niger</i>
Long-tailed Duck		<i>Clangula hyemalis</i>
Bufflehead		<i>Bucephala albeola</i>
Common Goldeneye		<i>B. clangula</i>
Barrow's Goldeneye		<i>B. islandica</i>
Red-breasted Merganser		<i>Mergus serrator</i>
Ring-necked Pheasant		<i>Phasianus colchicus</i>
Common Loon		<i>Gavia immer</i>
Great Cormorant		<i>Phalacrocorax carbo</i>
Bald Eagle		<i>Haliaeetus leucocephalus</i>
Northern Harrier		<i>Circus cyaneus</i>
Red-tailed Hawk		<i>Circus cyaneus</i>
Rough-legged Hawk		<i>Buteo lagopus</i>
Merlin		<i>Falco columbarius</i>
Peregrine Falcon		<i>F. peregrinus</i>
Purple Sandpiper		<i>Calidris maritima</i>
Black-headed Gull		<i>Chroicocephalus ridibundus</i>
Ring-billed Gull		<i>Larus delawarensis</i>
Herring Gull		<i>L. argentatus</i>
Iceland Gull		<i>L. glaucooides</i>
Great Black-backed Gull		<i>L. Marinus</i>
Black Guillemot		<i>Cepphus grille</i>
Rock Pigeon		<i>Columbia livia</i>
Mourning Dove		<i>Zenaida macroura</i>
Downy Woodpecker		<i>Picoides pubescens</i>
Blue Jay		<i>Cyanocitta cristata</i>
American Crow		<i>Corvus brachyrhynchos</i>
Common Raven		<i>Corvus corax</i>
Black-capped Chickadee		<i>Poecile atricapillus</i>
Golden-crowned Kinglet		<i>Regula satrapa</i>
European Starling		<i>Sturnus vulgaris</i>
Song Sparrow		<i>Melospiza melodia</i>
Dark-eyed Junco		<i>Junco hyemalis</i>
American Goldfinch		<i>Carduelis tristis</i>
House Sparrow		<i>Passer domesticus</i>



NATURE NOTES

JANUARY

Jim Wolford reminded us that it was 'Eagle Watch' time again in Sheffield Mills in the Annapolis Valley.

Karen McKendry was winter-canoeing in the North West Arm in the evening and she could hear **seals** breathing around her canoe.

John Carpenter, at Sambro Harbour on December 22nd, saw rafts of **Mergansers**, **Loons**, and **Black Guillemots**; more recently he observed mating behaviour among some **Red-breasted Mergansers**.

Janet Dalton reported an abundance of **American Goldfinch** at her feeder, at least three dozen.



Verna Higgins had a lot of **American Goldfinches** and up to a dozen **Evening Grosbeaks** on January 6th at her feeder in Middle Musquodobit.

Charles Cron saw a pair of **Red Fox** near the Dingle tower and on the Dingle Road.

David Patriquin had an email about a **Great-horned Owl** sighting.

Pat Leader alerted us to a TV series about Hope Swinimer's 'Hope For Wildlife Centre' in Seaforth; this will be on 'Oasis', an HD TV channel.



FEBRUARY

Mike Bradfield heard **Purple Finches** in the York Street area before the colder weather began.

Pat Chalmers heard a **Song Sparrow** in full song in the Quad area of King's College.

Marion Sensen saw a **Baltimore Oriole** in Clayton Park.

Joan Czapolay has **Baltimore Orioles** visiting her area regularly. She had also heard both **Song Sparrows** and **Black-capped Chickadees** in full song.

Burkhard Plache said that he and Ingrid had been walking near Purcell's cove in the burned-over area and they saw a **Black-backed Woodpecker** on the dead trees.

Bob McDonald told of some 'rubbish' being sucked into his fresh air ventilator; it turned out to be a **wasps' nest!**

Janet Dalton reported gatherings of close to **60 American Goldfinches** at the feeders in her yard.

Shirley McIntyre reported that her son had been photographing **Bald eagles** near Grand Pré and he saw four **Coyotes** in a field.

The first flowers on the **Witch Hazel** in Regine Maass' yard bloomed two weeks ago (late January).

Mark Butler saw a **murder of Crows** attacking a bird of prey that was carrying something in its talons. Also, his six-year old son, Abush, was walking with him and was proud to have spotted a **woodpecker** before he did.

Leslie Butters spotted a **brown Mink** attacking a **crab** in the Waegwoltic Club area.

Jim Wolford reported that the people participating in the annual Eagle Watch in the Valley on January 31st counted **427 eagles and other hawks**, and **three Coyotes**.

Richard Beazley sighted **30 Bald Eagles** while in the Melanson area and saw **Ravens** attacking them.



HFN NEWS AND ANNOUNCEMENTS (cont'd from p. 3)

NSNT DINNER & AUCTION

Nova Scotia NatureTrust will have our own Dr. George Archibald as the guest speaker at their annual fundraiser, Oct. 28th, at the World Trade & convention Centre. Dr. Archibald, co-founder of the International Crane Foundation in Baraboo, Wisconsin, has received many, many honours for his work. One of the most recent was having a Eurasian Crane subspecies named after him – *Grus grus Archibaldi*. As in other years, there will be tables held for members of the Halifax Field Naturalists and the Nova Scotia Bird Society and their guests.

From now until August 1st, the price of tickets is \$100; after that they will be \$125.

ERRATA



In the last issue, on page nine, it was reported that the Black-necked Crane, *Grus nigricollis*, "...breeds at 550 m on the plateaus of Tibet and China..."; instead, it should have read, "...breeds from 3,500-5,000 m across the Tibetan Plateau...".

N.S. COASTAL MANAGEMENT

The N.S. Government has made coastal management a priority with the release of its "State of Nova Scotia's Coasts" report. This document provides baseline information on our coastal areas and their resources. This will be used to develop a coastal strategy. Also, it will outline how we'll take action to address coastal issues that matter most to Nova Scotians. The report's priorities are: coastal development; working waterfronts; public coastal access; sea-level rise and storm events; coastal water quality; and sensitive coastal ecosystems.

The future "Coastal Strategy" will be based upon information in the above report, input from coastal stakeholders, and the general public. Early in 2010, the Government plans to engage the public to hear what Nova Scotians have to say about the future of their coasts.

Watch for dates in your community – or, you can respond in the comfort of home to the online survey at <https://gov.ns.ca/coast/feedback.htm>.



ALMANAC



This almanac is for the dates of events which are not found in our HFN programme: for field trips or lectures which members might like to attend, or natural happenings to watch for, such as eclipses, comets, average migration dates, expected blooming dates, etc. Please suggest other suitable items.

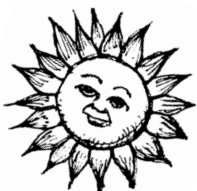
‘The snow usually begins to go about the beginning of March. Their spring is generally cold, and something later than in England. When their vegetables of any kind once begin to grow, they make a more rapid progress than any we ever observed in England; and it is really astonishing how a close of grass or corn will spring up in a few days.’

– John Robinson & Thomas Rispin, in **A Journey Through Nova-Scotia Containing a Particular Account of the Country and its Inhabitants (1774)**

NATURAL EVENTS

- 20 Mar.** Vernal Equinox at 14:32 : Spring begins in the Northern hemisphere.
- 29 Mar.** Full Moon rises at 19:33 AST.
- 16 Apr.** The daily minimum temperature at Shearwater is above zero.
- 22 Apr.** Earth Day.
- 28 Apr.** Full Moon. Moonrise at 20:59 ADT.
- 8 May** Nova Scotia Spring Migration Count Day.
- 27 May** Full Moon. Moonrise at 20:59 ADT.
- 28 May** The date of last spring frost in Halifax (Environment Canada says there is only a 1:10 chance that a spring frost will occur after this date); look forward to 155 frost-free days.
- 8 Jun.** World Oceans Day.
- 14-16 Jun.** The earliest mornings of the year: Sun rises at 05:28 ADT.
- 21 Jun.** Summer Solstice at 08:29 ADT. Summer begins in the Northern hemisphere. The longest day of the year, with 15 hours and 34 minutes of daylight at Halifax.
- 22-30 Jun.** The latest evenings of the year: Sun sets at 21:04 ADT.
- 26 Jun.** Full Moon. Moonrise at 21:24 ADT.

SUNRISE AND SUNSET ON SPRING AND EARLY SUMMER SATURDAYS FOR HALIFAX: 44 39 N, 063 36 W

6 Mar.	6:43	18:09	3 Apr.	6:52	19:44
13 Mar.	6:31	18:19	10 Apr.	6:39	19:53
20 Mar.	7:18	19:27	17 Apr.	6:27	20:02
27 Mar.	7:05	19:36	24 Apr.	6:15	20:11
					
1 May	6:04	20:19	5 Jun.	5:30	20:56
8 May	5:55	20:28	12 Jun.	5:28	21:01
15 May	5:46	20:36	19 Jun.	5:28	21:04
22 May	5:39	20:44	26 Jun.	5:30	21:05
29 May	5:33	20:51			

– Sources: Atmospheric Environment Service, Climate Normals 1951-80 Halifax (Shearwater A) N.S.; Blomidon Naturalists Society’s 2010 Calendar; United States Naval Observatory Data Services.

ORGANISATIONAL EVENTS

Blomidon Naturalists Society: Indoor meetings are the 3rd Monday of the month, in the auditorium of The K.C. Irving Environmental Science Centre, University Avenue, Wolfville, 7:30 p.m. Field trips usually depart from the Wolfville Waterfront, Front Street, Wolfville. <http://www.blomidonnaturalists.ca/>.

- 25 Apr.** “Wolfville Area Birding”, with leader Jim Wolford, 542-9204; jimwolford@eastlink.ca.
- 19 Apr.** “It’s the End of the World As We Know It”, with speaker Patrick Kelly, editor of The Observer’s Handbook.
- 1 May** “Herbert River Canoe Trip”, with leader Patrick Kelly, 472-2322, patrick.kelly@dal.ca.
- 17 May** “The Butterflies of Nova Scotia and the New Maritimes Butterfly Atlas”, with speaker John Klymko.
- 23 May** “Blomidon Provincial Park”, with leader Jim Wolford, 542-9204; jimwolford@eastlink.ca.
- 5 Jun.** **Rain Date 6 Jun.** “Palmetoer’s Woods”, with leader Judy Tufts, 542-7800 and Nancy Nickerson, 542-9332.
- 21 Jun.** “Sea Turtles in Nova Scotia”, with speaker Laura Bennett of the Canadian Sea Turtle Network.

Burke-Gaffney Observatory: Public shows at the Burke-Gaffney Observatory at Saint Mary’s University are held on the 1st and 3rd Saturday of each month, except from June through September when they are held every Saturday. Tours begin at 7:00 p.m. between November 1st and March 30th, and at either 9:00 p.m. or 10:00 p.m. (depending on when it gets dark) between April 1st and October 31st. Phone 496-8257; or go to <http://apwww.stmarys.ca/bgo/>.

Friends of McNabs Island: For more information, go to <http://www.mcnabsisland.ca>.

Industrial Heritage Nova Scotia: Indoor meetings take place on the 1st Mon. of the month, Sept. to May, at the Maritime Museum of the Atlantic, 7:30 p.m.

5 Apr. "Development of the Halifax Water Supply", with Carl Yates, Halifax Water Commission; co-author of [Downstream: an historical reflection of the Halifax water supply system.](#)

Maritime Museum of the Atlantic: For more information, 424-7490, or go to <http://museum.gov.ns.ca/mma/index.html>.

20 Apr. "Home", a film by Yann Arthurs-Bertrand about evolution and the challenges facing earth. Stunning photography!

Nature Nova Scotia: <http://www.naturens.ca>.

28-30 May "Nature Nova Scotia AGM", in Sherbrooke, Guys. Co. Visit <http://www.naturens.ca> for more programme details.

Nova Scotia Bird Society: Indoor meetings take place on the 4th Thurs. of the month, Sept. to May, at the NSMNH, 7:30 p.m. For more information, Chris Pepper, 829-3478, cpepper@ymail.com, or go to <http://nsbs.chebucto.org>.

27 Mar. "Baccaro & Blanche Peninsula", with leader Donna Ensor, 875-4269, smokeytow@yahoo.ca.

3 Apr. "New Birders' Walk", with leader Bonnie Carmichael, bonniecarmichael@hotmail.com.

10 Apr. "Martinique Beach, Halifax County", with leader Ian McLaren, 429-7024, iamclar@dal.ca.

22 Apr. "The Atlantic Canada Nocturnal Owl Survey", with speaker Greg Campbell of Bird Studies Canada.

1 May "Cape Sable Island, Shelburne County", with leader Murray Newell, 745-0801.

1 May "New Birders' Walk, Point Pleasant Park", with leader Bonnie Carmichael, bonniecarmichael@hotmail.com.

8 May "Nova Scotia Spring Migration Count", organised by Chris Pepper, 829-3478, cpepper@ymail.com. **Pre-Registration is necessary!**

15 May "Atlas Workshop", in Upper Economy, Colchester County, with speakers Becky Stewart and Joan Czapalay.

19 May "Fred Dobson Warbler Walk, Halifax Co.", with leader Patricia Chalmers, 422-3970, plchalmers@ns.sympatico.ca.

21-24 May "Bon Portage Island, Shelburne Co." with leader Claire Diggins, 825-6152, claire_diggins@hotmail.com.

Pre-Registration is necessary!

22 May "Port L'Hebert, Shelburne Co.", with leaders Dorothy Poole, 354-4844, dpoollex@ns.sympatico.ca; and Clyde Stoddart, 745-2105.

23 May "Conquerall Mills, Lunenburg Co.", with leader James Hirtle, 764-2182, jrhbirder@hotmail.com.

24 May "Historic Hants County" with leader Suzanne Borkowski, 445-2922, suzanneborkowski@yahoo.ca.

29 May **Storm date 5 Jun.** "Kejimikujik Seaside Adjunct, Queens Co.", with leaders Gary Hartlen, 354-7250, garych@eastlink.ca; and Peter Davies, 354-5389, p.davies@ns.sympatico.ca.

30 May "Beginning Birders' Trip" (Truro), with leader Ross Hall, 893-9665, ross.hall@ns.sympatico.ca.

5 Jun. "Amherst Point Bird Sanctuary, Cumberland Co.", with leader Kathleen Spicer, 392-2815, kbspicer@ns.sympatico.ca.

5 Jun. "Beginning Birders' Trip", (Middle Musquodoboit), with leader Verna Higgins, 384-2286, vjhiggins@xplornet.com.

5 Jun. "Beginning Birders' Trip", (Halifax), with leader Bonnie Carmichael, bonniecarmichael@hotmail.com.

12 Jun. "Shubenacadie, Hants/Halifax Counties", with leader Kathleen MacAulay, 758-3364, roughlegged_hawk@yahoo.ca.

Pre-Registration is necessary!

19 Jun. "Dawn Chorus, Jerry Lawrence Prov. Park, Hfx Co.", with leader Cindy Staicer, 494-3533, 478-3635, cindy.staicer@dal.ca.

25 Jun. "6th Annual Tern Festival, Yar. Co." with leader Bernice d'Entremont, 762-3380, musee.acadien@ns.sympatico.ca.

Nova Scotia Department of Natural Resources: Many outings that will take place in Provincial Parks are listed in the "Parks are for People" Programme, available at museums, parks, and tourist bureaus; also on the web at <http://www.novascotiaparks.ca>.

Nova Scotia Museum of Natural History: The museum is closed for repairs and now estimates it will reopen on 4 June. For more information, 424-6099, 424-7353, or go to <http://museum.gov.ns.ca/mnh/>.

Nova Scotia Wild Flora Society: Meets 4th Mon. of the month, Sept. to May, at the NSMNH, 7:30 p.m. For more information phone Heather Drope, 423-7032, or go to <http://www.nswildflora.ca>.

22 Mar. "Plant Watch", with speaker Melanie Priesnitz, Nova Scotia Plant Watch Coordinator.

27-29 Apr. "Bryology 101: How to identify common mosses of Nova Scotia", with speaker Anne Mills, at Mersey River Chalets.

26 Apr. "AGM and Presentation"

16 May "Spring Wildflowers at Wolfville Watershed Park".

TBA May "Cape Split".

6 Jun. "Avon Peninsula Watershed Commons".

Nova Scotian Institute of Science: Meets 1st Mon. of the month, Sept. to Apr., usually at the NSMNH, 7:30 p.m. For more information, go to <http://www.chebucto.ns.ca/Science/NSIS/index.html>.

5 Apr. "Genetics; Scale; Conservation: Reptiles at risk in N.S.", with speaker Steve Mockford, Dept. of Biology, Acadia.

Royal Astronomical Society of Canada (Hfx Chapter): Meets 3rd Fri. of each month, Room L176, Loyola Academic Bldg., St. Mary's, 8:00 p.m. For more information, go to <http://halifax.rasc.ca>.



– compiled by Patricia L. Chalmers

A monarch butterfly with vibrant orange wings and black markings is perched on a yellow flower. The background is a soft-focus green and yellow, suggesting a natural outdoor setting.

! NEW – MARITIME BUTTERFLY ATLAS !

(See page Three for more details)

NEXT DEADLINE

21st of May for the June Issue

Send contributions to 'Newsletter', c/o NS Museum of Natural History, or
email submissions to sdhaythorn@ns.sympatico.ca