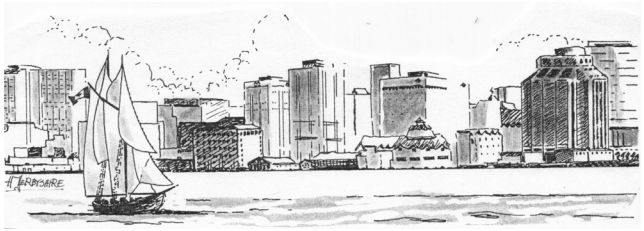
THE HALIFAX FIELD NATURALIST

No. 155
June to August, 2014

In This Issue 2
News & Announcements 3
Nature Notes 3
Special Reports 4
Talks 8
Field Trips 10
Almanac 13
Hfx Tide Table: April to June 15

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 the 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 Nova Scotia, the provincial umbrella association for naturalist groups. **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 Halifax Field Naturalist**, along with its included **Programme**, quarterly. Our membership year is from January 1st to December 31st, and new memberships received from September 1st to December 31st of any year are valid until the end of the following membership year.



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CSC Award	Doug Linzey	582-7176
	David Patriquin	423-5716

FEES	**2014**
Student	$15.00 per year
Individual	$20.00 per year
Family	$25.00 per year
Supporting	$30.00 per year

IN THIS ISSUE

HFN News and Announcements 3
HFN's 40th! – take part; share *your* favourites 3
NSNT – pristine island archipelago saved 3
Nature Notes – May; Mayflowers, owls, bumblebees .. 3
New Members – six more 3
Special Reports 4
NNS – 2014 AGM/Conference; good times 4
Emissions Reduction – all the info you need 5
HFN Talks 6
Sackville River – a successful restoration 6
Errata – incorrect plant ID 6
E. African Savannah – the Serengeti and more 7
Butterfly Atlas – still time to take part 9
HFN Field Trips 10
Laurie Park Hike ; – the history 10
Waterfalling – getting high on nature 10
Cape Split – zillions of Spring Beauties 11
Nature Notes – April/June; birds, butterflies, racoons ... 12
Almanac 13
Natural Events 13
Significant seasonal phenomena 13
Organisational Events 13
Blom. Nat. Soc. – amethysts, milkweed/Monarchs 13
Burke Gaffney Observatory – 1st & 3rd Saturdays 14
N.S. Bird Society – seven birding trips 14
N.S. Dept. Nat. Resources – Parks for People 14
N.S. Museum Natural History – Sable horses 14
N.S. Wild Flora – Yarmouth flora 14
Royal Astron. Soc. – Nova East 2014 14
YNC – every 3rd Saturday 14
Halifax Tide Table – Jul. to Sept.; **all times AST**! 15

GRAPHICS All uncredited illustrations are by H. Derbyshire or from copyright-free sources. **Front Cover** - Monarch(s?), Keji Adjunct, Richard Beazley; **p. 10** - waterfall photo, Nancy Covington; **Back Cover** - Pairing Monarchs, Keji Adjunct, Richard Beazley; **Tide Table** - Cdn. Hydrographic Service, Fisheries & Oceans Canada.

HFN NEWS AND ANNOUNCEMENTS

HFN's 40TH ANNIVERSARY

! CALLING ALL HFN MEMBERS !

HFN's 40th Anniversary Committee invites you to take up pen and paper, or to turn on your computer, to compose a 250-300 word description of, or a poem about, your favourite Nova Scotia natural place or wild species, whether it be animal or plant. Or – write about any exciting nature encounter or exceptional discovery you may have had. Be sure to include the exact location of the place or species seen. With these 'pieces' you'll be contributing thereby to the celebration of HFN's 40th year!

Submit your write-ups to Stephanie Robertson, HFN Newsletter Editor; they will be published in the Winter 2014 and Spring 2015 issues. **The deadline for submissions is November 21st, 2014**.

By email – **sdhaythorn@ns. sympatico.ca**; by mail – **Stephanie Robertson, Editor, HFN, c/o N.S. Museum of Natural History, 1747 Summer St., Halifax, N.S., B3H 3A6**.

UNTOUCHED ISLANDS

The Nova Scotia Nature Trust has launched a $7-million campaign to preserve a 30-kilometre archipelago of 100 Eastern Shore coastal islands, comprising 46,000 acres of wilderness stretching from Clam Harbour to Mushaboom Harbour. Every Nova Scotian coastal habitat type is represented, incredibly ecologically rich and diverse, and completely undeveloped. It's one of the few places in Nova Scotia where one can experience the beauty of truly pristine coastal areas – featuring barrens, forests, wetlands, salt marshes, and breathtaking white sandy beaches with crystal clear turquoise water.

The Nova Scotia Nature Trust has been quietly working on this project for several years. Last fall, the group acquired the archipelago's flagship island — the 215-hectare Borgles Island. It has already raised $4 million through foundations, businesses, and individuals, including an initial anonymous donation of $1.5 million! Both private land owners and the Crown have already committed to protecting 70 percent of the islands, but $3 million more is needed to secure the remainder.

MYSTERY DONOR

...and, at this point, the anonymous donor reappeared! In addition to an initial gift of $1.5 million, this Nova Scotian has offered to match further donations for what is needed to complete the campaign. Even before the public launch, the donor gave another $500,000, and is now offering to match additional public funds for a further $1.5 million. Every donation will be matched dollar for dollar to help save the islands. He was quoted as saying that he just really believes in what the Nature Trust is doing, and he realised what a unique and one-time opportunity this is.

Local campground owner Brian Murphy said the group has been going about it the right way. "I was a bit hesitant at first because when things start happening you're not sure if things are going to happen the way you want them to," he said. "But over the years they assured me that they are going to preserve these islands and they're going to be there for the local residents to use and for tourism and I basically think it's going to be a great thing for the Eastern Shore."

NATURE NOTES

MAY ***– Lillian Risley***

Regina Maass reported **Forsythias in bloom**. Walter Eagan told us that the **Osprey is back at the Bedford Commons**. This has been recurring for at least five years.

Lesley Jane Butters had three sightings: on the Friday after the April HFN meeting, she found her **first Coltsfoot** of the year; on Easter Saturday, **an Osprey**, **a Kingfisher**, and **a Barn Swallow** were sighted at the upper Medway River; and – **Mayflowers were in full bloom** after the river retreated.

Janet Dalton had read that **a Mayflower** takes 100 years from sprouting from a seed to producing seeds of its own! She also mentioned that her father had said that **Bluebirds** were plentiful in the 1990's; now their populations are much smaller, but they seem to be coming back again.

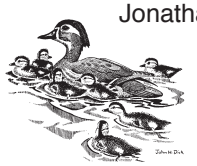
Marion Sensen had **a Mourning Dove** visiting for a week. Clarence Stevens Sr. was on a walk in Shelburne County (Upper Ohio) where they saw **66 species of birds** (including **five species of owls**), and – **lots of bumbebees**! Clarence Stevens Jr. reported **a nesting pair of Bluebirds** – Brier Island is a good area to see them and a pair were seen using a nesting box in Ste. Croix as well.

Ingrid Plache reported that sightings of **Pileated Woodpeckers** have become more frequent.

Clarence Strevens mentioned that an entry on "How Wolves Change" has been added to our HFN website.

(see page 12 for April and June's Nature Notes)

NEW MEMBERS



Jonathan & Judith Davies
Suzanne Gauthier
Doug Guptill
Lindsay Hart
Emma Poirier

SPECIAL REPORTS

NATURE NOVA SCOTIA 2014

– Doug Linzey

CONFERENCE & ANNUAL GENERAL MEETING

Friday, May 30th – This year we journeyed once more to the Gaelic College at St. Ann's, Cape Breton. Having enjoyed the hospitality of the staff there in 2011, and with Jim O'Brien again a willing organiser, *and* with a hard-to-beat package price, we were happy to go back.

We checked in on Friday in time for the opening reception at 7:00 p.m. It was good to be reunited with fellow naturalists whom we seldom see throughout the year, and to enjoy a glass of wine together along with the eclectic mix of music from St. Ann's luthier Otis Thomas and friends. Later that evening, a small group retired to the MacLeod House lounge for a wee dram and some stimulating conversation. A few folks heard the calls of American Woodcock and a Northern Saw Whet Owl in the adjoining forest.

Saturday, May 31st – The usual 6:00 a.m. birding walk enticed a few keeners into a windy but otherwise dry and not-too-cold outdoors. At 7:45, we all gathered in MacKenzie Hall for breakfast, following which the young naturalists went off to their various activities and the rest of us grabbed coffees and settled down for some great presentations.

Deanne van Rooyen is an assistant professor of geology at Cape Breton University. She gave by far the best and most cogent explanation I've ever heard of plate tectonics and the formation of present-day Nova Scotia over the millennia. Among other things (like being a world-class harpist), she specialises in the geochronology (the gathering of clues from rock to put together geological history) of Cape Breton and south-central B.C.

Eric Muntz gave us an intimate look into the lives and habits of Cape Breton Coyotes, including analysis of the fatal attack on a young woman in 2009. For the most part, Coyotes and humans coexist without problems. Eric gave us advice on how to behave when confronted by a Coyote in the wild. He does Coyote research in Cape Breton Highlands National Park, using both GPS tracking and traditional snow tracking. Like Deanne's geology lesson, this was one of those talks you wish could have gone on for another hour or so.

Peter Austin-Smith rounded out the morning with a talk on the American Marten, a species that would be a lot healthier in Nova Scotia if only we could stop destroying its habitat.

Following lunch, we departed the college in various directions to partake of a choice of field trips. The birders went off with local birder Bethsheila Kent; the botanists accompanied Minga O'Brien to Uisge Ban Falls; a small, brave group sailed off in a Zodiac to explore the ocean bottom with Bruce Hatcher; and the rest of us took a woodland tour with Peter Christiano.

The bird and plant people reported having a good time – the weather was fine and the conditions were good for walking. The boat people had a bumpy, chilly ride, but a marvellous exposure to some ocean science in action.

About 15 or 20 of us drove over to Middle River to the Finewood Flooring & Lumber facility, where the owners, Peter and Candace Christiano, took us for a walk through some of their 75 acres of forest on the flanks of the Cape Breton Highlands. The Christianos have been at this location for 30-plus years and have been gradually restoring the forest to a state that can ultimately support sustainable harvesting of fine-grade hardwoods for value-added production. Peter showed us a number of sites using particular silviculture methods, including openings, weeding, planting, trimming, girdling, and judicious thinning. He practices low-impact harvesting with horses and power winches. The property encompasses a range of elevations, soil types, and previous logging methods. The bones of a once-healthy Acadian forest are here – Sugar & Red Maple, American Beech, Yellow Birch, Red Spruce, White Ash, and Ironwood. Mostly, regeneration is a matter of giving what's already there a fighting chance.

The weather was perfect (18-20˚ degrees in the woods), and the blackflies were tolerable. Our group was nicely mixed, young and old and in-between, even a babe in arms. There were lots of questions, and we all came away having learned a lot. On the way out, via a long driveway through the woods, we stopped to yield the right-of-way for a dust-bathing Ruffed Grouse.

Back at the college, the fancy tablecloths were out. We had cocktails and settled down to a banquet of steak and lobster! Preceding the meal, a special guest, elder Lawrence Wells from the Membertou First Nation, said a traditional prayer, which, in its addressing the 'creator' of the nature we'd been enjoying and learning about, seemed very appropriate for the occasion. After dinner, Bob Bancroft gave a lighthearted slideshow and told stories of encounters with wildlife. Unfortunately, there was just enough cloud cover to prevent stargazing, so the after-dinner group, led by the inexhaustible Joan Czapalay, returned to the MacLeod lounge for further conversation and contemplation of the state of the natural world.

Sunday, June 1st – Early-morning birding again (confession – I slept in), and it was looking like a fine day. After breakfast, we had a real treat – Wally Ellison. A born raconteur, he has been chasing Cape Breton waterfalls for many years, and he introduced to us a good selection of them (photos of course). Again, we could have hung around all morning listening to Wally's stories and historical vignettes, but the annual general meeting called.

At 10 a.m., 25-30 Nature Nova Scotia members assembled for the AGM. President Bob Bancroft gave the directors' report of activities over the past year, and we heard from the Blomidon Naturalists, the Halifax Naturalists, the Cape Breton Naturalists, the Wild Flora Society, the Bird Society, and the Young Naturalists Club (which

continues to grow, with branches throughout the province). For all the reporting clubs, membership numbers and activities seem to be fairly healthy this year. Minga O'Brien offered to serve as Vice President of NNS, which was welcome news, and added some fresh blood to the executive. Minga replaces Robin Musselman, who has been concentrating – very successfully – on building the Young Naturalists Club. Jim Wolford was re-elected as representative for the members at large. Bob Bancroft, Jean Gibson Collins, and Pat Kelly continue for another year in their roles of President, Treasurer, and Secretary, respectively.

Following a hot lunch, the group disbanded, a fairly large contingent going off to a boat tour of Bird Island (we hear it was successful) and another, smaller bunch to visit a property in the Lake Ainslie area, before heading home.

Attendance this year was not quite up to last year's at Milford House (just as well we didn't plan to go *there* this year), but on the whole we were pleased with the response. We had 43 Nature Nova Scotia members and 17 young naturalists, who brought along 13 parents or guardians – for a total of 73 people grooving on nature for a fine weekend.

EMISSIONS REDUCTION: WHAT PAYS, WHAT COSTS

Published Tuesday, May 27, 2014 in the New Brunswick Telegraph Journal

McKinsey and Company is a global management consulting firm with a unique specialty: it conducts financial analyses of all the technologies that can be used to reduce global carbon emissions. That might not sound exciting, but it's hugely important: McKinsey's work identifies which technologies yield the biggest bang for the buck, which are most costly, and where everything else falls in between. That information can be very helpful in guiding our individual and collective choices as we work to break our fossil fuel addiction and solve our climate crisis.

SPEND A LITTLE OR SPEND A LOT?

When faced with a problem, most of us would choose the most cost-effective solution available. For example, we'd rather patch a rust spot than replace a fender; we'd rather install a few new shingles than replace an entire roof. No surprise here; it's just logical human behaviour.

So it makes sense that, when dealing with a huge challenge like climate change, we'd apply the same logic: we'd look for the solutions that provide the best return for the money we spend. That applies not only to personal choices, but to larger societal choices too.

That's where McKinsey's work comes in. The company financially analyses every known strategy for reducing carbon emissions, and then assigns a dollar value to each: the amount of money involved in preventing a tonne of carbon emissions. Some things cost; some things pay. From this work has come McKinsey's "Global Greenhouse Gas Abatement Cost Curve" – an easy-to-understand chart that ranks everything from the best return on investment to the worst. (See it at **www.tinyurl.com/emissioncostcurve**.)

Before getting into McKinsey's results, it's worth remembering an important principle. There are two primary ways to reduce carbon emissions: one is by replacing fossil fuel-fired energy with energy from non-fossil fuel sources; the other is by using less energy in the first place.

THE BEST INVESTMENTS

So, of all the available technologies out there, what provides the very best return on investment? Surprise – it's efficient lighting: replacing incandescent light bulbs with LEDs. According to McKinsey, preventing one tonne of carbon dioxide via this simple act actually pays back about $240.

Not far behind is the practice of upgrading residential electronics and appliances to ENERGY STAR models; those actions return about $200 per tonne carbon dioxide prevented.

Next, in order of payback, come more efficient industrial motor systems; hybrid cars; upgrading residential air conditioning; adding insulation to buildings; constructing highly efficient new buildings; generating electricity from landfill gas; improving industrial efficiency; and recycling. Per tonne of carbon emissions saved, all of these provide a positive return on investment.

It's interesting to note that, with few exceptions, the best paybacks identified by McKinsey come not from generating alternate sources of energy but from efficiency: using less energy in the first place.

THE WORST INVESTMENTS

On the other end of the cost spectrum is carbon capture and storage (CCS) – compressing the CO^2 that normally goes up a power plant's smokestack and storing it deep underground. According to McKinsey, every tonne of CO^2 captured this way costs $75. (Ironically, CCS is the cornerstone of Canada's current emissions reduction strategy. Ottawa and Alberta have spent over $2 billion dollars subsidising the technology, which remains rife with risk and uncertainty in spite of that investment.)

Solar, wind and even nuclear power can reduce emission for less than half the cost of CCS.

The key messages: when it comes to curing our addiction to fossil fuels, there are cheap solutions and expensive solutions. Most people would choose cheap over expensive, and efficiency, in big ways and small, is almost always a better investment than capturing carbon or finding alternate sources of energy. When it comes to making choices, McKinsey's work is very enlightening and instructive.

HFN TALKS

SACKVILLE RIVER 1 MAY

– Lillian Risley

Walter Regan, President of the Sackville River Association (SRA), first became a volunteer in September, 1988, was Executive Director in 1995, and has been President since 2000. With the help of the SRA's Volunteers, he cleans up the Sackville River Watershed to bring back the Atlantic Salmon to the Sackville River. In 2012, the Ecology Action Centre presented him with their Sunshine Award.

The Sackville River Association has been working for 26 years to protect and restore the environment of the Sackville River, to raise awareness of the river's importance, to establish corridors for fish travel, and to provide training and advice to groups in undertaking similar activities. The length of the Sackville River from its headwaters to Halifax Harbour is over 40 km, and it is the largest generator of fresh water flow into Halifax Harbour.

The Association has worked closely with the federal Deptartment of Fisheries and Oceans (DFO) from the very beginning. When DFO recommended an ecological inventory of the Sackville River from its headwaters to the Bedford Basin, it was decided to use the wild Atlantic Salmon as a biological indicator within the river's overall picture.

DFO also recommended that a physical and chemical survey of the river be undertaken. This survey (carried out in 15 sites within its watershed) found that there was significant loss of water quality, quantity, and habitat. Factors involved were continuing urbanisation, continuing affects from acid rain, and other factors such as storm run-off and oil/chemical spills, as well as climate change – which had brought increased floods and droughts.

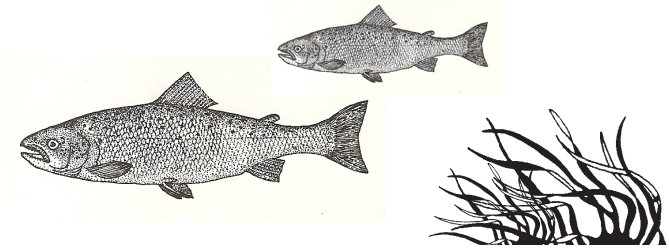
Urban growth had generated substantial impacts on the river – Sackville and Forest Hills were early examples of this. Road building materials (rock and earth) had been removed from the river and its banks in order to build roads, and the water quality had been negatively affected in terms of increased acidity, temperature, and turbidity. Also, significant erosion was experienced along with with increased stream siltation, and these suspended solids reduced food supplies in the aquatic food chain by negatively affecting the insects that the fish fed on. Also, salting of roads was a negative factor – 20,000 to 25,000 tons are used every winter in Sackville alone.

Because of the effects of all of these deleterious acitivities, the community undertook the task of "Save the River!" in concert with DFO. A Watershed Management Plan was developed which would involve all resources – governments, businesses, and individuals. Both the Little Sackville River and the Sackville River were to be included and a committee was set up. It was decided to concentrate on restoration, while keeping in mind that the best restoration is prevention. Environmental clean-up groups were created; one clean-up had 110 people participating, collecting 50 bags of rubbish. The most vulnerable areas – the river's banks and beds – were reinforced with rocks, and angled 'digger logs' were used to reduce erosion and create pools. In addition, artificial spawning beds were created, and dams and culverts were redesigned and modified to minimise any further damage and to create a more natural presence.

A number of adjustments have been created over the past 25 years of activity. In 1990 DFO levied a habitat and destruction charge on Fundy Gypsum for habitat alteration. The fine paid was used to build a fish ladder in the river. In 1960, when Hwy 102 was being built, the builders had taken all of their needed gravel from the river behind the DND rifle range. The River Association trucked in peat and black soil to replace it, and also built a fish ladder to restore the habitat of this damaged section. Fish ladders provide opportunities to monitor the number and varieties of fish which make their way up the river.

As mentioned above, one of the best 'pillars' of all these activities is the recognition that the best restoration is prevention which led naturally to education, providing impetus for the concept of the 'River Rangers' and 'Fish Friends' for local school children. There are in-school programmes in the fall months, classroom fish tanks with local fish species, and assignments regarding conservation along with associated field trips to release salmon into the wild. Also, a 40 km Multi-use Active Transition Corridor from Bedford's Fort Sackville to Mt. Uniacke is envisioned in order to increase public awareness, act as a buffer to construction, increase tourism, and improve people's health. Additionally, a Bedford-Sackville Connector Greenway has been created to provide opportunities for people to enjoy the out-of-doors on the trails and the river throughout all seasons.

Overall, there have been so many positive outcomes for the river and the land around it, and for the local residents and visitors, that we would wish that this example could encourage other parts of the municipality and the province to find ways to care for and enhance their own natural surroundings.



ERRATA

The flower on the front cover of the last issue, #154, was cited as being Flax *(p.2);* that was incorrect, it is Cranesbill Geranium, *Geranium* sp.

E. AFRICAN SAVANNAH 3 APR.

– Stephanie Robertson

Peter and Gillian Webster are both librarians who have been HFN members for over 15 years. Peter has been HFN's Vice-President; a member of the Long Lake Planning Committee; HFN rep for NNS; and a member of the McNab's Island Committee. Gillian is retired, often volunteers tutoring English language skills, and is currently on our Programme Committee.

For their 25th wedding anniversary in June, 2013, Peter and Gillian went to Africa's famous Serengeti Plain for a seven day safari. They flew from Halifax to New York's LaGuardia Airport,transferred over to JFK airport, then flew on to Amsterdam, from where they had a 10-hour flight to Nairobi, Kenya. They had hoped to be there when one of the great Wildebeest migrations took place, but they were a few weeks too early.

Peter and Gillian took turns with their slide show presentation, and Peter started off by showing us a map of the eastern African grasslands they visited, which included the very large Serengeti Plain, large parks such as the Masai Mara, interesting alkaline lakes, and Olduvai Gorge. They had taken all the usual and necessary precautions against yellow fever, malaria, typhoid, hepatitis A and B, etc., in order that there be no health problems issues while they were there. But ironically, Peter, and then Gillian, had contracted some kind of respiratory bug before they left, and both were prescribed antibiotics. They did recover about four days into their ten-day trip in Africa; Peter got better first and gave his last antibiotic tablet to Gillian. All tourists are warned against tap-water, and are provided with lots of bottled water.

The couple had pre-arranged driver/guides who often seemed to drive at top speeds. In fact, this turned out to be the norm for all drivers! The rainy season had ended, but Peter and Gillian didn't expect it to be quite as dry as it was. The unpaved roads in protected areas were often dusty as well as bumpy. Their first driver, Michael, was very friendly and spoke several East African languages fluently, in addition to English. This meant he could communicate well with other driver/guides so as to help each other find particular animals. The first destination was the East African Rift Valley on the western border of the Masai Mara National Reserve at the Esoit (Siria) Escarpment. The Masai Mara National Reserve is a large game reserve in Narok County, Kenya, contiguous with the Serengeti National Park in the Mara Region, Tanzania. It is named in honor of the Masai people (the ancestral inhabitants of the area) and their description of the place when viewed from afar: 'mara' – which is Maa (Maasai language) for 'spotted', an apt description for the circles of trees, scrub, savannah, and cloud shadows that mark the large area.

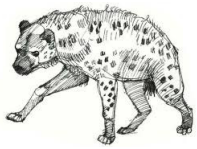
The Masai Mara National Reserve is globally famous for its exceptional population of Lions, Leopards, and Cheetahs, and the annual migration of Zebras, Thomson's gazelles, and Wildebeest to and from the Serengeti every year from July to October – known as the 'Great Migration'. The Great Migration is one of the most impressive natural events worldwide, involving some 1,300,000 Wildebeest, 500,000 Thomson's Gazelles, 97,000 Topi Antelopes, 18,000 Elands, and 200,000 Zebras. These migrants are followed by hungry predators along this annual, circular route, most notably Lions and Hyenas. Peter and Gillian had arrived in Kenya just before the greatest of this impressive migration would have shown up from north-east Tanzania, on up into south-west Kenya, in mid-July. By following the Great Rift Valley at the end of the first rainy season (the second migration is in late fall), Wildebeest and other herbivores follow the relative abundance of the different types of grasses influenced as they are by the succession of rainy and dry seasons – some animals preferring the longer, fresher growth, some the shorter pre-grazed grass cover.

Besides the exciting wildlife, Peter and Gillian also saw the local farmers' many Brahmin cattle and goats, which are very well-adapted to dry seasons. They stayed at their first Kenyan campsite for several nights. Each hut consisted of standing 'permanent' tents (tents erected within permanent wooden structures). The sleeping arrangements consisted of foldable cots with mosquito netting, and there was a small bathroom behind a partition. Kenya has installed electricity in their camps, as well as hot water, but they are both strictly rationed.

Night falls fast at the Equator, and the couple became well-adapted to the rapid succession of showering, eating supper, then getting into their sleeping bags aided only by flashlight. They did see many Wildebeest and Giraffes, and Gillian mentioned how beautifully quiet it all was (when they weren't driving around at top speeds!). The audience was shown photos of Zebras which they had encountered, and of course, more Wildebeest. There was one picture of a Topi Antelope in amongst a group of Zebras, and close-ups of Water Buffalo and a Lioness lying down. There were also Cheetahs and herds of African Elephants to be found. Without a driver/guide, Gillian and Peter said they would have seen much less wildlife if they had beon their own.

After a half day's drive from the camp, Gillian and Peter visited the Mara River which runs through both Kenya and Tanzania. The river was narrow, with shallows. They saw young Hippos with their families wallowing in the water and lying peacefully on the river edge. The older Hippos protectively surround their young, so that the youngsters are never alone. Crocodiles watch from the opposite rocks, basking on the banks. The Masai Mara wildlife area is not a national park, but a Wildlife Reserve. The local people are agricultural, and food is scarce, so their goats and Brahmin cattle compete with the wild herbivores for grazing on the perimeters of the reserve.

We followed a sequence of photographs showing a Lioness with an Eland kill. The male Lions get to eat first, then the females, followed by Lion cubs, Hyenas, Golden Jackals, and lastly, Vultures. Unfortunately, Gil-



lian and Peter did not get to see a live Eland until a few days later, at another wildlife reserve, Lake Naivasha.

Near the campground was a Maasai village. Tourists on safari are offered visits with the expectation that they will buy traditional trading goods such as bracelets, necklaces, and blankets. There is no radio or TV in the Maasai people's homes. They saw one shop that served drinks, but it seemed to Gillian and Peter that there was no electricity or running water in any of the mud huts that the families lived in. By contrast however, they do have pick up trucks and cell phones for buying and selling of animals in local towns.

The Maasai farmers' lives are hard and tribal life looked very difficult; their days seem filled with work for almost everyone but the youngest. Slides of young children showed happy, carefree, smiling faces, while the older boys' expressions perhaps reflected their awareness of the difficult lives they would have to face. The teenage boys/young men were the herders of their animals, which needed protection twenty-four seven. The savannah grasslands can look harmless, but they are home to many deadly snakes; all the young herders walk with thick sticks, and they are out all day long with little to eat or drink. In Tanzania, the guide would routinely stop the jeep and their cook would hand over his lunch leftovers to the one or two young herders, so Gillian and Peter followed suit when the little herders stood by the side of the road. Traditionally, work is divided; the girls/women worked hard both at home, and at tourist points, attempting to sell such things as locally-made earrings (the price of the same goods varied widely from place to place) and small amounts of lettuce and other such produce. Modern day health care and education are being introduced into the traditional culture by the Kenyan government, Gillian and Peter were told.

Most lakes in the areas visited were typically alkali. Gillian and Peter visited Lake Naivasha, a large fresh water lake next to an alkali one. Before Gillian and Peter arrived, floods had occurred, and the water levels were still high in some areas. They saw Yellow-bellied Stork, Flamingos (past being an 'intense pink' – they need a great abundance of the special algae that only grow in alkali lakes to be at their 'pinkest'), several kinds of ibis including an African Sacred Ibis and Hadada Ibis (with green bellies!), a Marabou Stork, and African Spoonbills. We were shown Great White Pelicans which nest on alkali lakes (fewer predators?), but of course fish only in fresh ones. Peter took photos of a Kingfisher and was very pleased when one of the photos translated on the big screen to a Kingfisher with a large fish in its mouth! There was also an African Fish Eagle, a cute Vervet Monkey with black face and hands, Waterbuck, and three Hippopotami with heads and ears just above water level, obligingly staring at the camera.

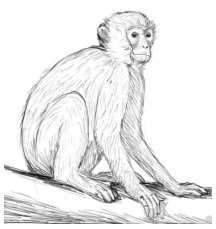
Travelling from one reserve or park into another one meant line-ups for jeeps and vans. This was when the guides went along to the check points in order to show their tourists' documents; luckily, the tourists were all allowed to get out and stretch their legs! There were many families of bold Baboons; we saw them on the roads beside the pulled-over vehicles, and there was an endearing shot of a pair with a small infant. Gillian said they could be very noisy, and – very entrepreneurial in their begging for, or stealing food. There were few opportunities to walk around freely; poisonous snakes, lived throughout the area, and tourist and guide safety was paramount. Once, when Gillian's sunhat flew off, the guide very cautiously walked back to get it, since the hat hadn't gone too far. Another reason for caution is that human scent is usually only acceptable to wildlife when it is mixed in with diesel smells. Also, the vehicles were basically without any back-up support during the day, and breaking down in the middle of a reserve was a real cause for concern, especially in the dry, arid season. Drivers maintained their vehicles very well, not only for safety but also out of a sense of great pride.

The night before Peter and Gillian left for Tanzania, they stayed at Kibo Safari Camp on the Kenyan side of the border. They photographed two beautiful, ubiquitous Acacias on the grassy plain *(think MPBN's "Nature" intro)*. That evening, Peter and Gillian were given a surprise 25th anniversary cake, along with a ceremony consisting of daubing of the cake's colourful frosting on their cheeks. There was a 'banquet hall' and robust tent huts here, with carpets and much more time for hot water showering!

The next morning was spent at the border. Border areas between Kenya and Tanzania were very 'complicated' (noticeable delays, lots of red tape, and difficulty in finding the right line-ups, etc.). Kenyan guides are not allowed to guide tourists into Tanzania, so Peter and Gillian found themselves with a new guide. This time, perhaps because the camps were not year-round, they had their own personal cook as well, who was marvelous and prepared wonderful dishes. He understood some English but did not speak it; the guide did speak English, but not as fluently, or as loudly, as Gillian would have liked. It's hard to hear anyone in a jeep, especially in a very noisy one! As before, vehicle maintenance was a huge issue and the guides would go every evening after dark to have their gas tanks filled and their jeeps/vans checked over.

In Tanzania, Gillian and Peter were taken to the famous, lush, Lake Manyara National Park, stretching for 50 km along the base of the rusty-gold, 600-metre high Rift Valley escarpment, and were there only for one hour. We were shown the sorry result of a recent flash flood at the end of the spring rainy season – a newly constructed visitor/interpretation centre – completely ruined. Apart from that, Gillian said that the whole area had a cheerful and happy atmosphere, heightened by being able to exit the vehicle, also by being able to get close up to a large herd of splashing Hippos!

(to be cont'd in the next issue)



BUTTERFLY ATLAS 5 JUN.

– Brian Ferguson

What I previously knew about butterflies can be summed up briefly – all butterflies were Monarchs except moths! But, after John Klymko's presentation, I now know that both butterflies and moths belong to the same family, the Lepidoptera, and that some butterflies look like moths – and vice versa.

John is the director of the Maritime Butterfly Atlas (MBA), now in the final months of a five year project. John is from Ontario, and obtained his MA from the University of Guelph, majoring in fly taxonomy. He has conducted studies on bees, dragonflies, and birds.and for the last five hears has worked out of the Atlantic Canada Conservation Centre in Sackville, N.B.

John was very informative about the purpose of the Maritime Butterfly Atlas, and it was made obvious that the topic was very attractive to many; John's lecture was fairly well attended, despite the "Sable Island Ponies" exhibit's opening and reception happening at the same time upstairs in the Museum.

An abundance of various species of butterflies is a good indicator of the state of the environment. And, butterflies are of interest to both scientists and amateurs as they are easily accessible for both studying and surveying. Amateurs are encouraged to take part in the Maritime Butterfly Atlas survey; with a donation of $20 to $30 they will be outfitted with kits and butterfly nets in order to captures and identify various species throughout the Atlantic Provinces.

The Atlas itself is made up of grids 10 km by 10km. Each grid is colour-coded. For example, a particular colour, such as red, would indicate the preponderance of one particular species; thus, the Atlas will indicate by the shading of colour in each grid the scarcity of a particular species in one area or the abundance of a species in another. Photos will be included so that the reader will be able to identify the various types of butterflies in their particular locations; it will also include graphs indicating the variations of populations of individual species.

This Atlas is going to become very valuable as a field guide for all butterfly enthusiasts. Up to this point (June 2014), 20,000 records have been submitted, including 7,900 specimens. These records also include 28 rare species which are found only in Nova Scotia.

The Monarch *(Danaus plexippus),* is the most well known of the migratory butterflies. It feeds on Milkweed which grows in meadows and roadside ditches, and they migrate to Mexico and back every year. But, due to environmental factors, they are becoming less numerous. Their habitat in Mexico is being encroached upon by agricultural land clearing and other individual interests, and, because Milkweed is considered a noxious plant which is dangerous to livestock, it is slowly being eradicated in farming areas not only by mechanical means because of its toxicity, but also because of the deleterious effects of 'Round-up' (a herbicide) upon Milkweed.

Some examples of species recorded so far include:

Crossline Skipper, *Polites origenes* – found in the St. John River valley;

American Snout, *Libytheana carinenta* – fairly rare; found in New Brunswick;

… and Giant Swallowtail, *Papilio cresphontes* – expanding its range in the Maritimes although the host plant for its caterpillar is hard to locate.

Some species are making a comeback, for example the Little Wood Satyr, *Megisto cymela,* wasn't present here 25 years ago. Other observed species include the Bronze Copper, *Lycæna hillus,* found in wetlands in early spring.

There have been changes in distribution of the Eastern Tailed Blue, *Cupido comyntas*, recorded in four sites in Nova Scotia. It propagates two broods of caterpillars a year, and is expected to expand its territory.

The number of species are too numerous to mention in one article. Watch for this wonderful Atlas to come out – which will be sometimes in 2015.

Thanks again to John Klymko for an extremely informative presentation.

MONARCHS 28 JUN.

– Stephanie Robertson

The Halifax Chapter of the Young Naturalists Club arranged a showing of a truly beautiful movie, "Flight of the Butterflies", a 3D IMAX Canadian documentary with Megan Follows and Gordon Pinsent. It follows Dr. Fred Urquhart's nearly 40-year-long scientific investigation into the Monarch butterfly, *Danaus plexippus*, tracking the details of what is considered one of the longest known insect migrations – the flight of the Monarchs from Central Mexico to the United States and Canada and back.

This poignantly done, truly spectacular film weaves factual information with a dramatic re-enactment of the search for where Monarchs go to spend the winter. It follows Urquhart as a child fascinated by butterflies; his years of research together with his wife and collaborator Norah into their life and migration; and their later recruitment of a pair of amateur naturalists in central Mexico. In addition to finding the overwintering sites in Mexico, he discovered that it takes two or three ordinary generations for the Monarchs to reach Canadian breeding grounds, while only one much-longer-lived 'supergeneration', incubated here, makes the 4,000 km(!) return trip south.

The 3D IMAX format, along with state-of-the-art close-up animal photography, was ideal for showing off butterfly flight, habitat, and their amazing millions flying about in Mexico, high up in their special mountain eyries. About 100 people attended, with many children's hands trying to pluck at the 3D butterflies from the air in front of them!

HFN FIELD TRIPS

LAURIE PARK HIKE

– Shirley McIntyre

Date: Sunday, April 6th
Place: Laurie and Oakfield Provincial Parks
Weather: Cloudy/Sunny, 7°C
Leader: Shirley McIntyre
Participants: 12, nine of whom were HFN members

"Hiking in Two Provincial Parks" Ever wondered why there are two provincial parks so close together on Shubenacadie Grand Lake? I did, so I went looking for information, and here is what I was able to glean from several sources.

John Wimburn Laurie, a military and political man, was born in London, England in 1835. He immigrated to Canada in 1862 and a year later married Frances Collins, daughter of Enos Collins, of banking fame in early Halifax. In 1865, Laurie purchased 800 acres of lake-shore land and brought twenty families from England who built cottages, a school, and a church, the latter being the predecessor of the present day St. Margaret's Church. Thus began the village of Oakfield.

In 1866, Laurie acquired an additional 3,000 acres of lake-shore land on which he established a model farm that was noted for its Guernsey cattle. It seems that Laurie was a kind, generous man; when his farm workers retired, he gifted each one of them a house! When Laurie returned to England in 1889 he retained ownership of this land, two parts of which have since become Laurie and Oakfield Provincial Parks.

At 10:30 a.m. on a long-awaited mild, spring-like day with sunny breaks, 12 intrepid people eager for a hike arrived at the entrance to Laurie Park, two of whom applied for membership in HFN before the hike began!

The previous day's rain had cleared most of the snow from the park's roadways and trails, so the walking was easy. First we explored the picnic area where, on a high outcrop of slate bedrock, we found the stiff breeze blowing off Shubenacadie Grand Lake to be very cold. The lower, sheltered beach was more comfortable. We followed a pleasant, well-made trail along the shoreline and noted that very little new-growth plant material was visible other than patches of Wintergreen and a mystery clump resembling Indian Ghost Pipe. The latter were brown and had woody stems, so we were left wondering about its true identity. Having looped back to the park entrance, we took the road around the campground, noting the generous space between the recently renovated campsites. While eating our lunch at a picnic table, a passer-by asked, "First picnic of the season?"!

After lunch we drove three kilometres north to Oakfield Park. We passed an old barn on Oakfield Park Road, probably dating from John Laurie's time, and some Pussy Willows which were partially open. Because the road is gated during the off-season, we chose to start on the roadway to the left. We then turned right into a very straight, long and narrow road, lined on each side with trees; this no doubt was the driveway into Laurie's home. A good portion of this road was heavily shaded, so we had to watch our footing on the snowy/icy surface. We then skirted the edge of the picnic park, which is available to all, particularly for group picnics.

The walk back to our cars on a clear, dry, sun-bathed gravel road was easy. All in all, it was a pleasant day to explore these two provincial parks, made possible by the generosity of the Laurie family.

WATERFALLING

– Avery Bain

Date: Saturday, April 26th
Place: Gaspereau to Kentville
Weather: Sunny, 2˚ to 10˚C
Leaders: Richard and Grace Beazley
Participants: 17

A beautiful sunny day with Deer frolicking in fields, Bald Eagles soaring overhead, and Cardinals loudly proclaiming that the Coltsfoot may finally have gotten it right – Spring is here!

Whether it was spring fever or the eager anticipation of what Richard and Grace had in store for us, the energy of all 17 participants exuded throughout the vineyards of the Gaspereau Valley as we ascended the South Mountain towards our first destination.

The Wolfville Watershed Nature Preserve Falls is located within the 245-hectare property managed by Nova Scotia Nature Trust. There were actually three waterfalls to visit along the 20-m-deep ravine through which Duncanson Brook flows. The first was reached by rappelling down the steep-sided gorge with a rope provided by our adventurous leaders. Those without faith in knots chose to view the falls from above while listening to several ravens cheerleading the rappellers, perhaps in anticipation of a future meal! Once down, we were treated to a 4-m-high by 3-m-wide waterfall over a black slate rock face, all surrounded by old growth forest.

The second falls revealed the purpose of an abandoned road lined with old-growth Hemlock. A concrete dam had been constructed in 1931 to hold back the water of Duncanson Brook thereby forming a reservoir which provided Wolfville with water for many years. But, over time, a large crack has developed in the dam – and this has resulted in a spectacular, man-made, 7-m-high waterfall.

Richard hinted of a third waterfall further downstream, but decided against leading the entire group onward to find it. While he led most participants back to their cars, a small group decided to find the third one; they were rewarded when they arrived at a 3-m-high by 3-m-wide waterfall cascading over a rock face surrounded by mosses and mature Hemlock. A newly constructed log bridge crossed the stream immediately above the falls, giving the entire scene a Walden-like appearance. When these explorers met up with the main group, it was obvious that they had indeed witnessed something special, perhaps bordering on a religious experience.

Wildlife reported on this leg of our journey included a Flicker, a Ruffed Grouse, Ravens, Crows, a Downy Woodpecker, and a Barn Swallow. The broad-leaved rosette of Curled Dock, *Rumex crispus,* was the lone spring plant sighted.

Further along South Mountain by car convoy we were guided to Tinker Brook Falls. Tinker Brook cascades down the mountain through a stand of stately Hemlocks with mossy undergrowth. In summer locals gather here for family picnics, and to gain respite from the valley heat. Gradually at first, then more steeply, the ravine rises to 15 m in height. A curving, rock-strewn cleft in the slate bedrock provides the location for a long narrow waterfall. Here the group gathered for lunch while soaking up the energy and positive ions which, some suggest, falling water generates. In the mini-pools below the falls, we observed 'water boatmen' and were awed by their ability to walk on water.

After lunch we drove to the south end of Sunken Lake on our way to Little River Falls. As the group prepared for a two km hike in rubber boots, our leader advised that we would experience the good, the bad, and the ugly! The bad and ugly lay immediately before us in the form of a multi-acre, clear-cut massacre of a mature forest (within the past seven years). As we slogged through snow and mud beside this poorest of examples of forest management, we were heartened to hear the croaking of frogs emanating from the deep ruts created by the massive wheels of logging equipment. On further inspection, frog egg masses were observed. Perhaps our children's children may live to see this forest as it was five years ago.

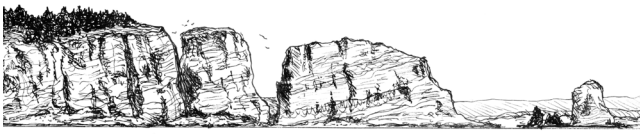
Past the clear-cut, we were led into a minimally flagged path, through a minimally cleared trail, through a forest of mainly conifers; this was in stark contrast to what we had just left! The good got better as we approached a granite outcrop well above the roar of the falls below. Here was a place where fairies dance on warm summer nights, the remains of their campfire as solid evidence. They come from all four corners of the world to celebrate the beauty of the earth and leave behind nothing save a few enhancements so that mortals like us could fully appreciate this sanctuary.

A secure rope to aid us down the 65-degree slope to the river was a welcome addition. The falls is about 10 m high and up to 4 m wide, surrounded by high granite cliffs towering vertically 12 to 18 m on both sides of the falls, beautifully decorated with ferns and lichens. Participants who remained on top at the meditation site observed Mayflowers in bud, Sumac in near leaf, and 'raisins on a stick' (biological name unknown, perhaps slime mould).

The final two falls were located within a stone's throw of highway 101. The first, Highbury Gardens Falls, is accessible by permission through Highbury Gardens RV park. This pretty, multi-tiered falls has crystal clear water falling over black bedrock and is shaded by mature Yellow Birch, Beech, maple, ash, and Hemlock. The second, Moores Brook Falls, actually consists of three falls separated by, and accessible from, highway 101. The two falls on the north side of the highway are reached by bushwhacking and by following the sound of rushing water.

Our leaders had obviously saved the most spectacular falls for the end of the day. To descendits ravine of loose shale some used a sledding technique, while others preferred a downhill skiing method. The option to stay above and look down didn't seem the appropriate choice for the majority, who were entranced by this beautiful, 15 m vertical drop of water which created its own micro-climate at its base.

Time seemed to have lost its importance for all of us awestruck falls enthusiasts, but of course time indeed *had* been passing, so after a scramble back up the ravine and then through the bushes, we ventured nimbly across the highway to view the 6-m-high by 30-m-long waterslide. Though anticlimactic, it did provide a wonderful debriefing spot and an opportunity to 'climb down' from our highs of the day, offer our thanks to Richard and Grace, and say goodbye to our fellow adventurers.



CAPE SPLIT

– Jim Wolford

Date: Sunday, May 11th
Place: Cape Split, Scott's Bay, Blomidon
Weather: Cool and foggy, then sunny in the afternoon
Leaders: Jim Wolford and Patrick Kelly
Participants: 15

Our 15 participants including two very energetic young girls; Mark Thompson (whose partner Molly MacGregor was a student of mine long ago); Douglas Guptill; and naturalist-photographer Paul Murray, who later sent us a group of his photos from the walk.

We had dense fog for our morning drive to Scott's Bay, with overcast, cool conditions. The sound of wailing foghorns came possibly both from the Parrsboro Shore and from Baxter's Harbour. In the early afternoon, the sun finally broke through; then the day became sunny, causing many of the Spring Beauties to open up.

Our group saw a Snowshoe Hare early in the walk, and then after the walk, closer to Scott's Bay, I saw another one! Also, several Red Squirrels were seen or heard.

For plants, besides the zillions of gorgeous Spring Beauties in flower, there were also Red or Purple Trillium (nearly all were still closed up, but at least one open flower was photographed); Toothwort had flower-buds; Wild Lily-of-the-Valley had leaves up; a tiny patch of White Violets was seen; and Beaked Hazelnut shrubs were in bloom.

One barkless tree trunk showed the black, strap-like rhizomorphs of the Honey Mushroom. Another possible fungus was found on the seemingly recently cut surfaces of some birch branches (due to trail clearing) – two of these surfaces were covered with a creamy, frothy, foamy layer, which we could only guess was some sort of fungus.

Birds listed included Blue-headed Vireo, Yellow-rumped Warbler, Black-and-white Warbler, Raven, Double-crested Cormorant at nests at the end of the Split, along with Great Black-backed Gulls and Herring Gulls there as well.

After the walk, I checked the Bald Eagle nest on Huntley Rd. in Scott's Bay behind the community hall and fire station. An adult was on/in the nest, standing, and a few times it showed interest in something in the cup, probably at least one small eaglet? But, I never definitely saw a chick in the 15 minutes or so that I was there and scoping in the late afternoon.

NATURE NOTES

APRIL ***– Allan Robertson***

Brian Ferguson reported seeing **a Crow** on Brunswick Street ripping branches from a tree for nesting material rather than picking wood up from the ground.

Pat chambers saw **four Grackles** while walking between the museum and the hospital; seven other members had seen Grackles recently too. There were also sightings of **Mergansers** and possibly **Red-wing Blackbirds** as well.

Lesley Jane Butters reported seeing **a Beaver** a month before at Black River Lake. She filmed it chewing industriously, taking down a tree (which almost fell on her!). She also saw **a white Snowy Owl** at Lawrencetown Beach on Sunday afternoon. Other sightings included **earthworms** present on the sidewalks, presumably indicating that spring was here, as well as the **first pussy willows** of the year. A survey of members indicated that 12 people saw **pussy willows** recently as well.

Shirley McIntyre reported seeing **a Crow** in Laurie Park building a nest with sticks.

Patricia Chalmers saw a large, incoming **flock of Robins**, estimated at about roughly 100 per minute. Another member reported that Robins were very plentiful in Kentville on April 3rd. Twenty members saw **spring Robins** (brighter than those with winter plumage). Spring Robins tend to feed on lawns, whereas winter Robins are still going for the berry bushes. When the soil reaches an average temperature of 1°C, the worms begin to come to the surface, and the Robins pounce.

Peter Welles reported **lots of finches** near his place. They appeared to be purple and green, and quite small. He surmised they were probably female finches wearing their winter plumage.

Clarence Stevens reported an item on the February 25th news that **a Bobcat** had been sighted in Eastern Passage (it's most unusual to see them during daylight hours). He also mentioned that the recent showery weather would likely thaw the ground, bringing out Yellow-spotted Salamanders, Spring Peepers, and Wood Frogs.

Judy Hayes reported seeing **male Purple Finches** at her feeder on April 2nd, and surmised that they must be part of the flocks of new arrivals.

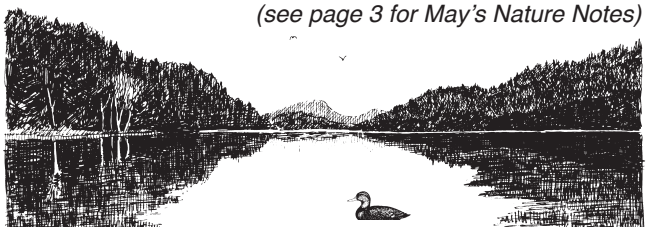
Bob Macdonald said that **Purple Finches** had just appeared over the past few days in many parts of the city. There were also **lots of Goldfinches**, and a few people saw **Pine Siskins**. There were reportedly **a lot of Pine Siskins** in Cape Breton this winter, and there were many Facebook reports of **Woodcocks** and **Snipes**.

Stephanie asked about the effect of the very cold weather on hibernating snakes in central Canada. She referred to a television presentation about snakes in Manitoba, and how they over-winter in very deep holes. She thought the cold weather this year may have frozen the ground more deeply than usual, and that perhaps the snakes were in danger. There was a general feeling that the extreme cold temperatures could be handled by the snakes by them going even deeper than usual.

Phyllis Bryson reported seeing roughly **30 caterpillars** in Point Pleasant Park recently. They were subsequently identified as **Woolly Bears**, which must have been fooled into coming out by the sun shining on a piece of bark, perhaps. They were clearly too early.

Matt Salisbury reported seeing **a Mink** on his back deck recently – possibly going after mice or even seeds and suet from his bird feeder.

(see page 3 for May's Nature Notes)



JUNE ***– Allan Robertson***

Clarence Stevens reported finding four Painted Turtles in the pond at the end of his road recently.

Stephanie Robertson asked about the affect of the recent poor weather on the apparent paucity of butterflies she had seen (only one or two Cabbage Whites), but it was determined to be a localised effect only (she lives near the Halifax Harbour, with more cloud and lower temperatures than inland). Clarence Stevens said he'd seen **14 butterfly species** so far this year, whereas last year he had seen only seven. Several observers reported the following sightings: **Mourning Cloaks** – nine observers; **Spring Azures** – ten; **Silvery Blues** – two; **Canadian Tiger Swallowtails** – nine.

John Klymko, Director of the Maritime Butterfly Atlas, reported seeing a number of other species as well: **Elfins (Eastern Pine, Hoary, Brown, Henry's); Skippers; Hobomarks; Dreamy Dusky Wings; American Painted Ladies; Painted Ladies (including some juveniles)**; and Verna Higgins reported seeing **a Grey Comma**.

Stephanie Robertson reported that **a good-sized turtle** (most probably **a Red SIlder** according to herpetologist John Gilhen) seen in a pond in Point Pleasant Park over the last few years was found dead this spring by one of her grandchildren. She said it had been swimming in a strange fashion last year. Discussion followed about the large number of turtles found in various urban ponds, as well as non-native fish, concluding with the assumption that pets were being inappropriately released.

Joseph Purcell reported seeing **an albino Crow** near Grand Désert recently. It was reported that albinism is an increasingly common condition being seen in wildlife, probably caused by introduction of chemicals into our water courses.

Clarence Stevens Sr. reported **94 species of birds** at a recent bird survey in Pictou County in which he participated. He also reported seeing **a full-grown Deer spotted like a fawn**. Another member said he saw **an albino Deer** last year.

Arthur Morris told us of **a Raccoon family** he and Dorothy found living in their garage. After checking with Hope Swinimer of Hope for Wildlife, they followed her advice by leaving a light on, a radio playing, and the garage door open. Sure enough, the mother carried each pup, one by one, to a location in the nearby woods.

Pat Leader reported seeing **a mature Red Fox** walking down the middle of her street in the early morning a few weeks ago. On June 7th, Pat saw the Fox again under the same circumstances, and the Crows were shouting out madly. Also about the end of May, she came home to find a beautiful **Cedar Waxwing** dead on her front deck and later noticed it must have been one of the many excited Waxwings which were eating the pink blossoms from her three ornamental apple trees.

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 seasons, etc. Please suggest other suitable items.

"Thursday July 22nd [1813] I saw the first Humming Bird I have seen this year, it was flying around the Honeysuckle under my window. We saw some of the orchids in bloom, both white and purple. Sir John went to town & returned as usual - very hot - walked to see the Turtle [in the Pond at Prince's Lodge] in the evening."

– A colonial portrait: the Halifax diaries of Lady Sherbrooke, 1811-1816

NATURAL EVENTS

14 Jun. **-16 Jun.** The earliest mornings of the year: Sunrise at 5:28 ADT.

21 Jun. Summer Solstice at 10:51 GMT. Summer begins in the Northern hemisphere. The longest day of the year, with 15 hours and 34 minutes of daylight at Halifax.

23 Jun. **-30 Jun.** The latest evenings of the year: Sunset at 21:04 ADT.

12 Jul. Full Moon: Moonrise at 20:53.

13 Jul. Moon at close perigee. Large tides follow for next few days.

19 Jul. Canada's "Parks Day" – look for events at local parks.

5 Aug. **-12 Aug.** Average dates of the hottest days of summer (average daily maximum is 22.5 C).

9 Aug. Moon at close perigee: Large tides follow for the next few days.

10 Aug. Full Moon: Moonrise at 20:08. 'Largest' full moon of 2014.

11 Aug. **-12 Aug.** Perseid Meteor showers peak.

13 Aug. Average date for temperatures to start decreasing.

8 Sept. Full Moon: Moonrise at 19:14.

8 Sept. Moon at close perigee: Large tides follow for the next few days.

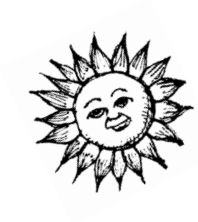
22 Sept. Autumnal Equinox at 23:29 ADT: Fall begins in the Northern Hemisphere.

28 Sept. Eleventh anniversary of Hurricane Juan.

30 Sept. Average date for first frost in Halifax (i.e. Environment Canada says that there is only a one in ten chance that we will have frost before this date.) Look forward to 210 days of frosty weather.

– Sources: Atmospheric Environment Service, Climate Normals 1951-80 Halifax (Shearwater A) N.S.; Blomidon Naturalists Society 2014 Calendar; United States Naval Observatory Data Services.

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



7	**Jun.**	5:30	20:57	**5**	**Jul.**	5:35	21:02
14	**Jun.**	5:28	21:01	**12**	**Jul.**	5:41	20:59
21	**Jun.**	5:29	21:03	**19**	**Jul.**	5:47	20:54
28	**Jun.**	5:31	21:04	**26**	**Jul.**	5:54	20:47
2	**Aug.**	6:02	20:39	**6**	**Sept.**	6:43	19.42
9	**Aug.**	6:10	20:29	**13**	**Sept.**	6:51	19:29
16	**Aug.**	6:18	20:18	**20**	**Sept.**	6:59	19:16
23	**Aug.**	6:26	20:07	**27**	**Sept.**	7:07	19:03
30	**Aug.**	6:36	19:53				

ORGANISATIONAL EVENTS

Blomidon Naturalists Society: Indoor meetings are held on the 3rd Monday of the month, in Room BAC241 of the Beveridge Arts Centre, Acadia University, 7:30 p.m. Field trips usually depart from the Wolfville Waterfront, Front Street, Wolfville. For more information, go to **http://www.blomidonnaturalists.ca/**.

5 Jul. "Amethyst Cove Rockhounding and Photography", with leader Chris Sheppard.

25 Jul. "Swift Night Out", with leader James Churchill 681-2374, **jamesLchurchill@gmail.com**.

2 Aug. "Milkweed and Monarchs", with leaders Larry and Alison Bogan.

16 Aug. "Minas Basin Shorebirds", with leader Rick Whitman 542-2917; **rick.whitman@ns.sympatico.ca**.

15 Sept. "Leatherback Turtles: Treks of the Titans", with speakers Kathleen Martin & Mike James of the Canadian Sea Turtle Network.

20 Sept. "Paddle the Historic Cornwallis River!", with leader Dusan Soudek, **soudekd@ns.sympatico.ca**.

Burke-Gaffney Observatory: Public shows at the Burke-Gaffney Observatory at Saint Mary's University are held on the 2nd and 4th Friday of each month, except from June through September when they are held every Friday. 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. For more information, 496-8257; or go to **http://www.smu.ca/academics/departments/astronomy-physics-burke-gaffney-observatory.html#tours**.

Friends of McNab's Island Contact Faye Power, 443-1749, or go to **http://www.mcnabsisland.ca/**.

Nature Nova Scotia For more information, go to **http://www.naturens.ca/**.

Nova Scotia Bird Society: Indoor meetings usually take place on the 4th Thursday of the month, September to April, at the N.S. Museum of Natural History, 7:30 p.m. For more information, phone Kate Steele, 476-2883, or email **fieldtripcoordinator@nsbirdsociety.ca**. You can also email the trip leader, or go to **http://www.nsbirdsociety.ca/**.

15 Jun. "New Birder's Walk, Windsor"; with leader Patrick Kelly, 494-3294, 472-2322, **patrick.kelly@dal.ca**. **Pre-registration is required!**

5 Jul. "Beginning Birders Field Trip, Taylor Head Provincial Park", with leader Jim Cameron, 885-2970, **jim.cameron@ns.sympatico.ca.**

13 Jul. "Low Impact Birders Field Trip", with leader Jim Cameron, 885-2970, **jim.cameron@ns.sympatico.ca**.

26 Jul. "Mahone Bay, Lun. Co.", with leader James Hirtle 530-2101, **jrhbirder@hotmail.com**.

2 Aug. "NSBS Walk", with leader Jim Cameron, 885-2970, **jim.cameron@ns.sympatico.ca**; **Warren Parsons, 772-2207, rosalieeast@ns.sympatico.ca**.

7 Sept. "Early Fall Migrants, Taylor Head Provincial Park", with leader Jim Cameron, 885-2970, **jim.cameron@ns.sympatico.ca**; **Warren Parsons, 772-2207,** rosalieeast@ns.sympatico.ca.

14 Sept. "Pelagic Birds, Sambro", organiser David Currie, 476-6616, 876-8745, **david_currie@ns.sympatico.ca**.

25 Sept. TBA

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

Nova Scotia Museum of Natural History: For more information, 424-6099, 424-7353; **http://naturalhistory.novascotia.ca**.

6 Jun. -13 Oct. "Roberto Dutesco: The Wild Horses of Sable Island"

Nova Scotia Nature Trust: For more information, 425-5263, or **http://www.nsnt.ca**.

5 Jul. "Bon Portage Island Clean-up".

26 Jul. "Borgles Island Paddle".

26 Jul. "Property Celebrations on the Eastern Shore".

9 Aug. "Hemeon's Head Guided Walk – Shorebirds and Plants".

9 Aug. "St. Mary River Property Celebration".

Nova Scotia Wild Flora Society: Meets the fourth Monday of the month, September to May, at the Nova Scotia Museum of Natural History, 7:30 p.m. For more information, email **nswildflora@yahoo.ca**, or go to **http://www.nswildflora.ca**.

1 Aug. -4 Aug. "Yarmouth/Coastal Plain Flora Field Trip".

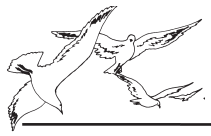
Royal Astronomical Society of Canada (Halifax Chapter): Meets the third Friday of each month, (except July and August) in Room AT101 of the Loyola Atrium Building at Saint Mary's University, 8:00 p.m. For more information, go to **http://halifax.rasc.ca/**.

22 Aug. -24 Aug. "NOVA EAST 2014", Atlantic Canada's longest-running star party will be held at Smiley's Provincial Park.

Young Naturalists' Club: A fun, free nature club for children seven to 12 years. Meetings take place every 3rd Saturday of the month (excepting July and August), at the Museum of Natural History, 1747 Summer St., from 10:30 - 11:30 a.m. Field trips take place every fourth Sunday, at 1:00 p.m. For more information, Karen McKendry, 404-9902, **ynchalifax@yahoo.ca**; or, go to **http://nature1st.net/ync**.

– compiled by Patricia L. Chalmers

HALIFAX TIDE TABLE



July-juillet

Day	Time	Feet	Metres	jour	heure	pieds	mètres
1	0428	**1.3**	0.4	**16**	0509	**0.0**	0.0
	1039	**5.6**	1.7		1056	**6.2**	1.9
TU	1652	**2.3**	0.7	WE	1749	**1.0**	0.3
MA	2243	**5.6**	1.7	ME	2309	**5.9**	1.8
2	0502	**1.6**	0.5	**17**	0606	**0.3**	0.1
	1116	**5.6**	1.7		1145	**6.2**	1.9
WE	1736	**2.3**	0.7	TH	1850	**1.0**	0.3
ME	2321	**5.2**	1.6	JE			
3	0541	**1.6**	0.5	**18**	0001	**5.6**	1.7
	1154	**5.6**	1.7		0705	**0.7**	0.2
TH	1826	**2.3**	0.7	FR	1234	**5.9**	1.8
JE				VE	1949	**1.0**	0.3
4	0001	**5.2**	1.6	**19**	0056	**5.2**	1.6
	0625	**1.6**	0.5		0803	**1.0**	0.3
FR	1234	**5.6**	1.7	SA	1327	**5.6**	1.7
VE	1918	**2.3**	0.7	SA	2048	**1.0**	0.3
5	0045	**4.9**	1.5	**20**	0157	**4.9**	1.5
	0715	**2.0**	0.6		0902	**1.3**	0.4
SA	1318	**5.6**	1.7	SU	1426	**5.6**	1.7
SA	2012	**2.0**	0.6	DI	2145	**1.0**	0.3
6	0138	**4.9**	1.5	**21**	0307	**4.9**	1.5
	0809	**2.0**	0.6		1001	**1.6**	0.5
SU	1408	**5.2**	1.6	MO	1531	**5.2**	1.6
DI	2106	**1.6**	0.5	LU	2241	**1.0**	0.3
7	0241	**4.6**	1.4	**22**	0421	**4.9**	1.5
	0905	**2.0**	0.6		1059	**1.6**	0.5
MO	1504	**5.6**	1.7	TU	1635	**5.2**	1.6
LU	2201	**1.3**	0.4	MA	2335	**1.0**	0.3
8	0350	**4.9**	1.5	**23**	0525	**4.9**	1.5
	1002	**2.0**	0.6		1154	**1.6**	0.5
TU	1603	**5.6**	1.7	WE	1731	**5.6**	1.7
MA	2257	**1.0**	0.3	ME			
9	0454	**4.9**	1.5	**24**	0025	**1.0**	0.3
	1100	**1.6**	0.5		0617	**5.2**	1.6
WE	1700	**5.9**	1.8	TH	1244	**1.6**	0.5
ME	2353	**0.7**	0.2	JE	1819	**5.6**	1.7
10	0551	**5.2**	1.6	**25**	0110	**1.0**	0.3
	1158	**1.3**	0.4		0703	**5.2**	1.6
TH	1755	**6.2**	1.9	FR	1328	**1.6**	0.5
JE				VE	1904	**5.6**	1.7
11	0047	**0.3**	0.1	**26**	0151	**1.0**	0.3
	0644	**5.6**	1.7		0744	**5.6**	1.7
FR	1255	**1.3**	0.4	SA	1405	**1.6**	0.5
VE	1849	**6.6**	2.0	SA	1945	**5.9**	1.8
12	0139	**0.0**	0.0	**27**	0226	**1.0**	0.3
	0736	**5.9**	1.8		0823	**5.6**	1.7
SA	1352	**1.0**	0.3	SU	1438	**2.0**	0.6
SA	1942	**6.6**	2.0	DI	2024	**5.9**	1.8
13	0231	**−0.3**	−0.1	**28**	0258	**1.0**	0.3
	0827	**6.2**	1.9		0859	**5.6**	1.7
SU	1449	**1.0**	0.3	MO	1508	**2.0**	0.6
DI	2035	**6.6**	2.0	LU	2102	**5.9**	1.8
14	0322	**−0.3**	−0.1	**29**	0327	**1.0**	0.3
	0918	**6.2**	1.9		0934	**5.6**	1.7
MO	1547	**0.7**	0.2	TU	1539	**2.0**	0.6
LU	2127	**6.6**	2.0	MA	2139	**5.9**	1.8
15	0415	**−0.3**	−0.1	**30**	0356	**1.3**	0.4
	1007	**6.6**	2.0		1008	**5.6**	1.7
TU	1648	**1.0**	0.3	WE	1615	**2.0**	0.6
MA	2218	**6.2**	1.9	ME	2214	**5.6**	1.7
				31	0427	**1.3**	0.4
					1041	**5.6**	1.7
				TH	1656	**2.0**	0.6
				JE	2250	**5.6**	1.7

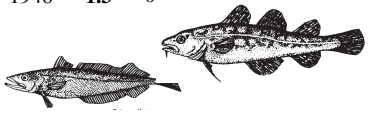
August-août

Day	Time	Feet	Metres	jour	heure	pieds	mètres
1	0503	**1.6**	0.5	**16**	0640	**1.0**	0.3
	1116	**5.6**	1.7		1205	**5.9**	1.8
FR	1743	**2.0**	0.6	SA	1923	**1.0**	0.3
VE	2327	**5.2**	1.6	SA			
2	0546	**1.6**	0.5	**17**	0031	**5.2**	1.6
	1152	**5.6**	1.7		0739	**1.3**	0.4
SA	1836	**2.0**	0.6	SU	1255	**5.6**	1.7
SA				DI	2020	**1.0**	0.3
3	0009	**5.2**	1.6	**18**	0127	**4.9**	1.5
	0637	**2.0**	0.6		0839	**1.6**	0.5
SU	1233	**5.6**	1.7	MO	1352	**5.2**	1.6
DI	1932	**2.0**	0.6	LU	2117	**1.3**	0.4
4	0056	**4.9**	1.5	**19**	0234	**4.6**	1.4
	0734	**2.0**	0.6		0938	**1.6**	0.5
MO	1320	**5.6**	1.7	TU	1458	**5.2**	1.6
LU	2030	**1.6**	0.5	MA	2213	**1.3**	0.4
5	0154	**4.9**	1.5	**20**	0353	**4.6**	1.4
	0834	**2.0**	0.6		1035	**2.0**	0.6
TU	1417	**5.6**	1.7	WE	1610	**5.2**	1.6
MA	2129	**1.3**	0.4	ME	2307	**1.3**	0.4
6	0304	**4.9**	1.5	**21**	0503	**4.9**	1.5
	0935	**2.0**	0.6		1130	**2.0**	0.6
WE	1523	**5.6**	1.7	TH	1711	**5.2**	1.6
ME	2228	**1.0**	0.3	JE	2358	**1.3**	0.4
7	0419	**4.9**	1.5	**22**	0556	**5.2**	1.6
	1037	**1.6**	0.5		1219	**2.0**	0.6
TH	1631	**5.9**	1.8	FR	1801	**5.6**	1.7
JE	2327	**0.7**	0.2	VE			
8	0525	**5.2**	1.6	**23**	0043	**1.3**	0.4
	1138	**1.3**	0.4		0640	**5.2**	1.6
FR	1734	**6.2**	1.9	SA	1301	**1.6**	0.5
VE				SA	1844	**5.6**	1.7
9	0024	**0.3**	0.1	**24**	0123	**1.0**	0.3
	0623	**5.6**	1.7		0719	**5.6**	1.7
SA	1238	**1.0**	0.3	SU	1336	**1.6**	0.5
SA	1832	**6.6**	2.0	DI	1923	**5.9**	1.8
10	0118	**0.0**	0.0	**25**	0157	**1.0**	0.3
	0716	**6.2**	1.9		0755	**5.6**	1.7
SU	1337	**0.7**	0.2	MO	1408	**1.6**	0.5
DI	1927	**6.6**	2.0	LU	2001	**5.9**	1.8
11	0210	**−0.3**	−0.1	**26**	0227	**1.0**	0.3
	0807	**6.6**	2.0		0828	**5.6**	1.7
MO	1434	**0.7**	0.2	TU	1438	**1.6**	0.5
LU	2020	**6.6**	2.0	MA	2037	**5.9**	1.8
12	0301	**−0.3**	−0.1	**27**	0255	**1.0**	0.3
	0857	**6.6**	2.0		0901	**5.6**	1.7
TU	1531	**0.3**	0.1	WE	1511	**1.3**	0.4
MA	2111	**6.6**	2.0	ME	2113	**5.9**	1.8
13	0353	**−0.3**	−0.1	**28**	0324	**1.0**	0.3
	0945	**6.6**	2.0		0934	**5.9**	1.8
WE	1628	**0.3**	0.1	TH	1546	**1.3**	0.4
ME	2202	**6.2**	1.9	JE	2148	**5.6**	1.7
14	0446	**0.0**	0.0	**29**	0356	**1.3**	0.4
	1032	**6.6**	2.0		1007	**5.9**	1.8
TH	1726	**0.7**	0.2	FR	1626	**1.3**	0.4
JE	2251	**5.9**	1.8	VE	2223	**5.6**	1.7
15	0542	**0.3**	0.1	**30**	0432	**1.3**	0.4
	1119	**6.2**	1.9		1041	**5.6**	1.7
FR	1825	**0.7**	0.2	SA	1711	**1.3**	0.4
VE	2340	**5.6**	1.7	SA	2300	**5.2**	1.6
				31	0516	**1.6**	0.5
					1117	**5.6**	1.7
				SU	1803	**1.6**	0.5
				DI	2341	**5.2**	1.6

September-septembre

Day	Time	Feet	Metres	jour	heure	pieds	mètres
1	0609	**2.0**	0.6	**16**	0058	**4.9**	1.5
	1158	**5.6**	1.7		0812	**2.0**	0.6
MO	1901	**1.6**	0.5	TU	1317	**5.2**	1.6
LU				MA	2043	**1.6**	0.5
2	0027	**5.2**	1.6	**17**	0201	**4.9**	1.5
	0710	**2.0**	0.6		0911	**2.0**	0.6
TU	1245	**5.6**	1.7	WE	1422	**4.9**	1.5
MA	2002	**1.6**	0.5	ME	2138	**1.6**	0.5
3	0123	**4.9**	1.5	**18**	0318	**4.9**	1.5
	0814	**2.0**	0.6		1007	**2.0**	0.6
WE	1343	**5.6**	1.7	TH	1537	**4.9**	1.5
ME	2103	**1.3**	0.4	JE	2231	**1.6**	0.5
4	0232	**4.9**	1.5	**19**	0431	**4.9**	1.5
	0918	**2.0**	0.6		1101	**2.0**	0.6
TH	1452	**5.6**	1.7	FR	1643	**4.9**	1.5
JE	2204	**1.0**	0.3	VE	2321	**1.6**	0.5
5	0352	**5.2**	1.6	**20**	0526	**5.2**	1.6
	1021	**1.6**	0.5		1148	**2.0**	0.6
FR	1608	**5.9**	1.8	SA	1735	**5.2**	1.6
VE	2303	**1.0**	0.3	SA			
6	0503	**5.6**	1.7	**21**	0006	**1.3**	0.4
	1124	**1.3**	0.4		0609	**5.2**	1.6
SA	1716	**6.2**	1.9	SU	1229	**1.6**	0.5
SA				DI	1818	**5.6**	1.7
7	0001	**0.7**	0.2	**22**	0045	**1.3**	0.4
	0601	**5.9**	1.8		0646	**5.6**	1.7
SU	1225	**1.0**	0.3	MO	1305	**1.6**	0.5
DI	1816	**6.2**	1.9	LU	1857	**5.6**	1.7
8	0055	**0.3**	0.1	**23**	0120	**1.3**	0.4
	0654	**6.2**	1.9		0720	**5.6**	1.7
MO	1323	**0.7**	0.2	TU	1338	**1.3**	0.4
LU	1911	**6.6**	2.0	MA	1935	**5.6**	1.7
9	0148	**0.0**	0.0	**24**	0151	**1.0**	0.3
	0744	**6.6**	2.0		0753	**5.6**	1.7
TU	1419	**0.3**	0.1	WE	1411	**1.0**	0.3
MA	2003	**6.6**	2.0	ME	2011	**5.6**	1.7
10	0239	**0.0**	0.0	**25**	0222	**1.0**	0.3
	0832	**6.9**	2.1		0826	**5.9**	1.8
WE	1513	**0.3**	0.1	TH	1446	**1.0**	0.3
ME	2054	**6.6**	2.0	JE	2047	**5.6**	1.7
11	0330	**0.0**	0.0	**26**	0255	**1.0**	0.3
	0919	**6.6**	2.0		0859	**5.9**	1.8
TH	1607	**0.3**	0.1	FR	1523	**1.0**	0.3
JE	2143	**6.2**	1.9	VE	2124	**5.6**	1.7
12	0422	**0.3**	0.1	**27**	0330	**1.3**	0.4
	1005	**6.6**	2.0		0934	**5.9**	1.8
FR	1701	**0.3**	0.1	SA	1604	**1.0**	0.3
VE	2230	**5.9**	1.8	SA	2201	**5.6**	1.7
13	0516	**0.7**	0.2	**28**	0409	**1.3**	0.4
	1050	**6.2**	1.9		1010	**5.9**	1.8
SA	1756	**0.7**	0.2	SU	1649	**1.0**	0.3
SA	2318	**5.6**	1.7	DI	2239	**5.6**	1.7
14	0613	**1.3**	0.4	**29**	0456	**1.6**	0.5
	1135	**5.9**	1.8		1049	**5.9**	1.8
SU	1852	**1.0**	0.3	MO	1742	**1.3**	0.4
DI				LU	2321	**5.2**	1.6
15	0006	**5.2**	1.6	**30**	0554	**2.0**	0.6
	0713	**1.6**	0.5		1132	**5.6**	1.7
MO	1223	**5.6**	1.7	TU	1841	**1.3**	0.4
LU	1948	**1.3**	0 4	MA			

ALL TIMES ARE AST



NEXT DEADLINE

21st of May for the June, 2014 Issue
Send submissions to 'Newsletter', c/o NS Museum of Natural History,
or by email to sdhaythorn@ns.sympatico.ca