

# THE HALIFAX FIELD NATURALIST



No. 101

December to February 2000/2001



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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 Revenue Canada. Tax-creditable receipts will be issued for individual and corporate gifts. It is an affiliate of the Canadian Nature Federation and an organisational member of the 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. 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. Meetings are open to the public.

**FIELD TRIPS** are held at least once a month, and it is appreciated if those travelling in someone else's car share the cost of the gas. All participants in HFN activities are responsible for their own safety. Everyone, member or not, is welcome to take part in field trips.

**HFN POST** Halifax Field Naturalists

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**MEMBERSHIP** is open to anyone interested in the natural history of Nova Scotia. Memberships are available at any meeting of the society, or by writing to: Membership Secretary, Halifax Field Naturalists, c/o NS Museum of Natural History. New memberships starting from 1 September will be valid until the end of the following membership year. The regular membership year is from 1 January to 31 December. Members receive the HFN Newsletter and notices of all meetings, field trips, and special programmes. The fees are as follows:

Individual	\$15.00 per year
Family	\$20.00 per year
Supporting	\$25.00 per year
FNSN (opt.)	\$ 5.00 per year

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# HFN NEWS AND ANNOUNCEMENTS

## EDITORIAL ❄️

We have come to the end of Year 2000 already; where has it gone?

As Shirley points out, this was HFN's 25th year. A quarter-century ago, the first issue of the Newsletter appeared. The Newsletter has become The Halifax Field Naturalist, and the current issue, numbered consecutively with the earlier series, is No. 101. We have done well.

Our once lonely voice in defence of parks and wild spaces is being reinforced with community committees having ecological, aesthetic, and scientific expertise to back up their evaluation and sometimes criticism of authorities' decisions based on out-dated or mistaken information.

We have been joined by other naturalist groups through the Federation of Nova Scotia Naturalists, which we helped to found, and which provides us with one of our best excursions annually (p. 4).

Some early HFN members are still with us, some on the board of directors (where more present members should join them...).

Well, in the year 2000 we had our first Spring Social, on a wet day at Mount Uniacke, and afterwards had dinner, with nature quizzes and a speech from Nick Hill. He told us how important we naturalists are to the local community and to scientific research, as we observe the seasons yearly, and the way living organisms respond to them.

Our kind of natural history is a tradition of long standing in the European countries the founders of Canada came from. Lest we forget our forebears, Michael Downing offers some humorous quotations from the past (p. 5). Many of the names will be familiar to older HFNers. I remember stopping at Jack Miner's Ontario oasis for migrating waterfowl, with my husband and two small daughters, to see the immense flock being fed. I didn't know of Miner's hatred of raptors, and his efforts to have them extirpated; Michael remembers seeing photographs of rows of dead hawks hanging upside down from fence wires, a true gamekeeper's gibbet for 'vermin'.

Thanks to all the people who helped this year, with programmes and meetings, and helped produce and distribute our magazine.

Let's look forward to a fulfilling year in 2001!

— Ursula Grigg

## FIRST NEWSLETTER ISSUE

A little late to bring this to our attention, but I looked up our old newsletters and issue No. 1, was dated Nov. 1975; No. 2 was dated Dec. 1975. Both were combined into one.

There was an October meeting with Dr. Paul Brodie, a biologist, speaking on whales in the Arctic. They also had a field trip to Martinique Beach in that same month. The President was Paul Keddy; Secretary – Winnifred Cairns; Newsletter Editor – Debra Burleson; Program Committee – Scott Cunningham, Anne Linton, plus others. Neil van Nostrand was a speaker at the February 1976 meeting.

Newsletters became bi-monthly for awhile. It looks like HFN passed its 25th anniversary unannounced!

— Shirley McIntyre

## FNSN AGM 2001 ❄️

Mark your calendars now! The Federation of Nova Scotia Naturalists AGM – “2001; a South Shore Odyssey” – will take place on June 1 - 3 in Lunenburg and will be hosted by the South Shore Naturalists Society. Details will be forthcoming in late winter.

Contact: Jill Comolli, 902-766-4697

## SIERRA CLUB OF CANADA ❄️

On January 19, 20, and 21, 2001, the Sierra Club of Canada, Atlantic Canada Chapter, will be hosting in Halifax: “Environmental Issues and Skill Building: Making a Difference in Your Community.”

We are pleased that Elizabeth May, Executive Director, Sierra Club of Canada, has accepted our invitation to attend the weekend event.

To apply to attend, go to:

<<http://www.sierraclub.ca/eastern/chebucto/>>

## NO-CHEMICAL GARDENING ❄️

Trainers operating at the community level will be part of Halifax Regional Municipality's public education programme to help residents cope with the new pesticide bylaw.

Please contact me if you, or any other gardener you know, is interested in becoming a trainer to help teach other people how to garden without pesticides.

Or, phone me if you want to know more details about the ‘Sustainable Gardening and Landscaping Programme’.

Contact: Marjorie Willison 477-6102

## PROGRAMME COMMITTEE ❄️

We need volunteers for the Programme Committee for next year (March 2001)! This committee forms a ‘sub-club’ and gives you wonderful chances to meet local naturalists and scientists. Come and plan the trips that *you* would like to go on!

## RAILWAY GREENWAY ❄️

The Halifax Urban Greenway Association is being formed to preserve a green ‘rail-trail’ through the former City of Halifax from Chebucto Road to Young Avenue.

Contact: Janet Doyle, 420-0017

## NEW AND RETURNING

David and Janey Hughes  
Mary Joyce  
Sterling Levy



# SPECIAL REPORTS

## FNSN BOARD MEETING

The Federation of Nova Scotia Naturalists (FNSN), of which HFN is one of 11 federate members, holds board meetings approximately every three months. On 18 November, we met in Wolfville, and here is a report of that meeting.

At the AGM in June, two new board members were elected by members-at-large. They are Elizabeth Kilvert, who works at the Museum of Natural History in Halifax (she's spearheading the upcoming MacKay phenology survey), and Mark Brennan of Pictou County.

Board member Barry Sawyer (Wild Flora Society) has expressed interest in representing the federation on a province-wide committee on ATV use on trails.

Roland Chiasson, community conservation planner for the Maritimes region of the Important Bird Areas program, has attended the last few meetings of our board. He confirmed that three Nova Scotia sites have received community funding: The Brothers (Roseate Tern protection); The Bird Islands; and Pomquet (Piping Plover habitat).

Roland filled us in on various meetings he has had with sponsoring groups in Clark's Harbour and Queens County. We discussed the role of FNSN in the important issue of coastal habitat protection. One of the areas in which the federation can help local groups is with grant applications through organizations with wider, more established bases. One particular application is for hiring a student next summer to develop an educational strategy for the use of vehicular traffic, such as ATVs on the beaches on the south shore, with a view to Piping Plover habitat protection.

The federation has been a prime supporter of the Nova Scotia Herp Atlas project, about to enter its second year. We agreed to continue to provide bridge funding to the Herp Atlas Committee, which is represented on the FNSN board by its past-president Tom Herman.

For the past few years, FNSN has been the vehicle for funding the World Wildlife Fund Endangered Spaces campaign in Nova Scotia. Colin Stewart has been our coordinator for that program. Our direct participation is now coming to an end.

FNSN president, Martin Willison, has been a prime mover in the newly organized Public Lands Coalition, which will represent the naturalist and conservation community in meeting with DNR on its Integrated Resource Management initiative. Martin emphasised that there is a need to maintain public land in such a way that biodiversity is the prime consideration. All FNSN federate members have been encouraged to appoint their own members to the coalition. The more of us there are, the more effective we can be.

Jill Comolli, president of the South Shore Naturalists, announced that her group will host the 2001 FNSN AGM

in Lunenburg.

Martin reported that the Deep Sea Coral conference was a great success, attracting scientists and interested people from around the world. Coral depletion has become an emergency situation and the new-found attention is welcome indeed. Fallout from the conference includes upcoming features on both CBC Country Canada and Quirks and Quarks.

Joan Czapalay, FNSN vice-president, will represent the federation at the next CNF Affiliates Conference in Ottawa at the end of January.

— Doug Linzey



## FPPP

From 1996, Dr. Iain Taylor had watched with dismay the regular cutting of trees in Point Pleasant Park behind his back garden. Concerned, he had gathered a neighbourhood group of people interested in the health and welfare of the Point Pleasant, who met informally every once in awhile to discuss what was occurring in the Park, and its management history.

At the same time, he and neighbour Dr. Richard Wassersug, a resident scientist with the Discovery Channel, were communicating with HRM their serious concerns with park management and the continuous history of cutting. Their pleas seemed to fall on deaf ears. Dr. Taylor had recently retired from Environment Canada and is an adjunct professor of Geography at St. Mary's University.

Then, in May of 2000, the Canadian Food and Inspection Agency (CFIA) released the alarming, militaristic ('ground zero', 'infestation', 'invasion', 'clear and present danger', 'necessity to cut 10,000 trees') headlines in the local newspapers. The neighbourhood group, plus other concerned citizens, gathered once again. From this meeting a decision was made to form the Friends of Point Pleasant Park Association (FPPP).

Once again, as in 1990 with the alleged Spruce Bark Beetle infestation in the Park, investigative research and field work was initiated, this time by the FPPP.

Waiting to be brought 'on-side' by what one would expect to be impeccable proof of a heavy infestation of the



Brown Spruce Longhorn Beetle (BSLB - *Tetropium fuscum*), with insect collections from traps, etc., we were shocked and sadly disappointed with our findings. Attempts to obtain scientific data and other information from, and to set up a meeting with, the CFIA were rebuffed; documents had to be obtained through other channels.

One of the most inaccurate, persistent pieces of media information was, **"A Brown Spruce Longhorn Beetle jumped ship in 1990 at the Park..."**; but, with a casual, partial count of 17 individuals in 1990, the beetle would have had to arrive much longer before then to establish a level of population that allowed for that small sampling to have been counted. With Halifax's long history of being a major port and also a way station for millions of European immigrants for hundreds of years; with the Park's importation of thousands of European trees species in the 1800s, including Norway Spruce, the BSLB's preferred host; it is possible that the BSLB has been around for 200 or more years. It could have been declared by the CFIA to be an already 'established' species.

Another was, **"50 BSLB trapped in the summer of 1999..."**, but, 50 BSLB were not trapped in 1999; the CFIA's 16-trap, 12-week, summer 1999 trapping program trapped no adult BSLB; and there were no records kept of other insects that might have been trapped. However, 43 laboratory-incubated adults, protected from the cold and the many natural predators in Point Pleasant Park, emerged in a lab in February, 2000, from 40 woodbolts taken from the Park the previous fall.

Subsequent releases stated, **"The BSLB population is at the explosive stage..."**, but, 17 adult BSLB were collected as a casual sample from the Park by HFN's sticky stovepipe traps in 1990; 0 adult BSLB were trapped in the Park by the CFIA's sticky stovepipe traps in 1999; and 4 adult BSLB were trapped in the Park by the CFIA in the summer of 2000 (only 2 were collected in their sticky stovepipe traps). Extrapolating to make trap-nights and the number of traps equivalent, the population of the BSLB is down by about 86%. How can a population that has decreased by 86% be described as exploding?

And then, it was repeatedly stated that there were **"No predators..."** for the BSLB, but the CFIA's Pest Risk Assessment (PRA) # 00-09 reports, "There are natural biological control agents that already occur in Canada which are known to attack *T. fuscum*." Listed in the PRA are the following parasitic insects: *Rhyssa persuasoria* L., *Xylonomus irrigator* F., *Atanycolus denigrator* L., and *Clistopyga sauberi* Brauns. Woodpeckers also eat larvae. "These biological mortality factors can drastically reduce beetle populations." So, for three months during the



summer, field observations of insect behaviour, and a hand- and net-trapping survey, was carried out by FPPP to assess the Park's insect species, particularly any Longhorn Beetle parasites/predators.

We collected 4 species of **Cerambycidae**, (long-horned wood-boring beetles), – there were many of 3 of those species; 3 species of **Bupestridae**, (metallic wood-boring beetles), – 2 of those species were abundant in numbers; and 2 species of **Siricidae**, (wood-boring wasps).

All of these beetles produce the same size-range of exit holes as *T. fuscum* and also cause rivers of sap to flow from conifers. In fact, literature research on resin flow in conifers revealed that all conifer-attacking beetles produce this phenomena.

Other bark beetles (Scolytidae) and moths were also trapped.

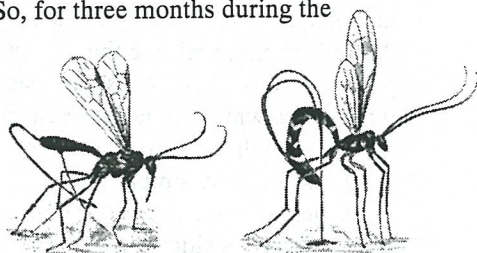
As for the predators and parasites of long-horned wood-boring beetles, we observed extremely abundant populations of, and also trapped – 4 species of the **Cleridae**, (the checkered beetles; both adults and larvae are particularly voracious predators of cerambycid eggs, larvae, and adults); abundant numbers of 3 species of the **Braconidae**, (parasitic egg-laying wasps of cerambycids); an abundant population of an undetermined number as yet of the **Ichneumonidae**, (parasitic egg-laying wasps of cerambycids); and a very abundant, beautiful, and interesting species of **Pteromalidae** (parasitic egg-laying wasps of cerambycids), *Habrocytes* sp.

Literature research as well revealed that for cerambycids there were 13 families of parasitic fungi and insects; 5 families of predatory beetles, 2 predatory fly families, 1 predatory bug family; carpenter ants; spiders; flycatchers; nighthawks; shrews; bats; mice; skunks; and several other vertebrates. The predominant parasites seem to be the braconid wasps, which drill through bark or stems to lay their eggs inside the larvae. The most important predators appear to be the clerid beetles (their larvae, as well as the adults, hunt and feed upon all stages of cerambycids in their burrows), and woodpeckers. There is also evidence that cerambycids are themselves threats to other wood-feeding insects, most notably certain bark beetles.

The media reported that there were **"No chemicals..."**, but the agency's PRA # 00-09 states, "Lindane, pyrethrins or p-dichlorobenzene dissolved in trichlorethylene; applied as sprays over the wood pile have been used in the past to treat logs to reduce or eliminate cerambycid infestations. Also, p-dichlorobenzene crystals applied as a powder is effective."

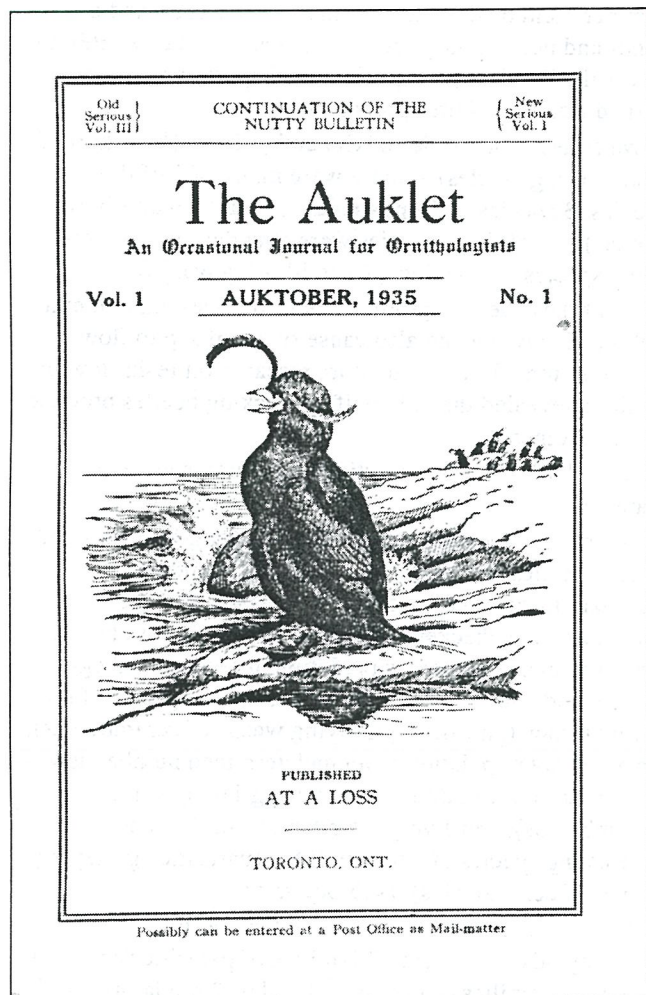
FPPP's research on the 'chemicals', and some more of the history of FPPP's activities, will be continued in the next issue. For a pertinent short history of Point Pleasant Park, and its effect on its present ecological health, go to: <http://www.biotype.biology.dal.ca>.

– Stephanie Robertson





# SPECIAL ARTICLES



## THE AUKLET

Most of us are aware of the American Ornithologists' Union's highly regarded journal The Auk, North America's most prestigious publication for bird research for over a hundred years. But it is less widely known that the AOU also publishes an occasional companion journal, named The Auklet. One such volume appeared at the annual meeting of 1935, held at the Royal Ontario Museum of Zoology (since merged into the general identity of the ROM).

Unfortunately, the press run was small, the issues it addressed were submerged in the more pressing business of the meeting, and it was subsequently forgotten. It might well have been lost to science, were it not for a copy which has survived among my father's papers. I now propose to bring it out of obscurity to the wide attention it deserves through the pages of 'The Halifax Field Naturalist'.

Many of the references may escape our younger members, but our veterans will recognise some venerable names. The renowned ornithological artist Terry Shortt was at the ROMZ in 1935, and from what I know of his

style I am very much inclined to attribute the artwork, including the front cover reproduced on the left, to him. (This cannot be definitely established, as all the contributors humbly declined ostentatious display of their identities, Shortt himself is long dead, and it is unlikely that any of his descendants could be prevailed upon to reveal the truth.)

Space prohibits the reproduction of the entire journal, but I assure the reader that the papers and notes I offer here accurately represent the rigorous research standards and the high spirit of scientific inquiry which characterises the whole.

— Michael Downing

## SELECTIVE NEST INCUBATOR FOR WILD BIRDS

Any plan or invention that will reduce the infant mortality of wild birds should appeal to every naturalist and conservationist. At the outset, it might be stated that there is no surer road to popularity than that of supplying to a large number of people the thing that appeals to them most. The author, who is of retiring disposition, launched upon the present scientific achievement in spite of this distasteful hazard, and respectfully requests the readers to give all the credit to anybody else.



The present invention is the first of its kind that has ever been produced and is absolutely unique in every respect. It is a sort of heatless incubator which may be attached to the nest of any species of wild or domestic bird to ensure the selective and successful hatching of the eggs of the desired species, omitting those of cowbirds or other parasites. It consists of a small metal case no larger than a wrist watch which contains the mechanism and a dial like that of a watch but marked with the numbers of the A. O. U. check list. You simply turn the indicator to the number of the desired species and attach the device to the nest in some obscure position so as not to disturb the birds, and



nature does the rest. The machine is now all completed except the mechanism within the little case. After the right kind of mechanism has been designed and installed, it is proposed to try successful experiments with all our native birds.

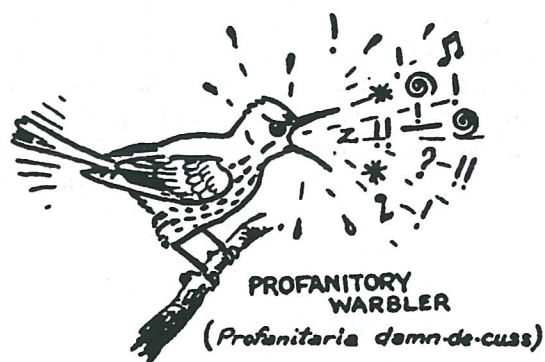
— B. Aldwin  
Ornithological Laboratories, Cleveland, Ohio.

## GENERAL NOTES

### Some Bird-like Remains

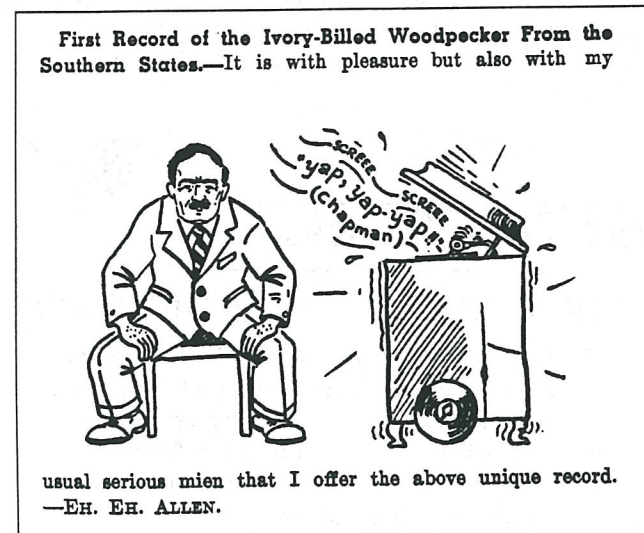
Recently while performing some hasty excavations, I discovered an object of peculiar interest. Extracting it from the accumulated debris, I saw at once that the object could be interpreted as roughly conforming to the shape of a bone of some bird. The specimen is of a grey-green colour, unfossilised, in fact slightly plastic. Although its exact age has been forgotten, it is undoubtedly of Plasticine origin. Further excavations among the deeper layers of my office desk may yield some clue as to its origin and purpose. — I. M. Morwet.

### A Method for the control of the Profanitory Warbler



The various churches and social welfare organizations which believe that obscene language is demoralizing to children if acquired too rapidly are becoming alarmed over the recent increase of this brightly coloured and innocent looking little bird. As a result, many preventoriums are concentrating their scientific knowledge on the prevention of this so-called warbler. The writer believes that the remedy lies in the use of stronger language by all persons in the open, which should have the effect of causing the bird to become ashamed and discouraged by its own attempts. If such a control method were attempted, it would provide practical employment for golfers and Mr. Fred Kenard. — I. Swear

## First Record of the Ivory-Billed Woodpecker From the Southern States



## RECENT LITERATURE

### Taverner's 'Birds of Canada'

To begin with, let us preface our brief comments on this work by stating that this hurts us more than it will Mr. Taverner. The author's book is nothing more or less than a flagrant case of plagiarism. We recall two publications, one on the "Birds of Eastern Canada" and the other on the "Birds of Western Canada", the authors of which we do not remember for the moment, both of which have been quoted verbatim! Mr. Taverner has apparently attempted to shield this fact by shuffling the systematic arrangement of the groups and species and by inserting a few distracting illustrations. The one feature of the book which appears to be original is that it can be cut in equal halves horizontally and one then possesses the "Birds of Northern Canada" and the "Birds of Southern Canada".

### May's 'Hawks of North America'

This is a medley of tunes familiar to most of us which should have the desired effect of soothing the savage breast. It is certainly not written in a Miner key and the pictures are not characteristically Major after the censor finished with them.

"Many of the birds pictured full-face in the May Hawk Book seem to have either a wistful, a petulant, or an indignant expression. It is no wonder that they do so, for, after having provided them with appropriate prey, Allan Brooks, upon request, obliterated all of said prospective repasts. No one can look cheerful just after his dinner has been taken away. If an all-day sucker or an aspirin tablet had been substituted the effect would have been soothing and harmless." — Editor, the Auklet

(I don't know it for a fact, but I find this story entirely believable. In my own copy of May [also an inheritance from my father] I find thirty-seven Brooks illustrations of raptors in habitat. The only prey species shown are a few



snails for the Everglade kite, and a carcass, with a bird on top, in the background of the Audubon's Caracara plate. There are places in many of the others however where prey might be appropriately added, and one of two actually look a little suspicious. – Michael Downing)



## HFN TALKS

### FUNDY TIDES

5 OCTOBER

Dr. Bishop teaches Physics at Acadia University, and has been Editor of the Observer's Handbook for 19 years. His talk on the Fundy Tides was very appropriate for a club whose members depend on tide tables for planning their outings, and on the marine environment for some of their most interesting observations.

Tidal cycles are due to the gravitational influences of earth, moon and sun on the oceans; the moon's influence is stronger than the sun's because it is closer to earth. The earth turns under bulges of water piled up on the sides toward the moon and away from it; the distribution depends on the difference between gravitational pull at the centre of the earth and at its surface. The sun's pull may enhance that of the moon, or oppose it. Movements of the heavenly bodies are predictable, but tidal patterns are not repeated each month or even each year. Changes in tidal range occur in several cycles, one of which produces extra high and low tides in the Minas Basin every 18th year, while another cycle repeats every 26,000 years. There are at least a dozen other predictable influences – astronomical, local, and ephemeral – plus such unpredictables as the Coriolis force, the earth's wobble, and the weather. Tide tables are constructed from all the predictables, tempered by historical records and a dash of intuition!

The moon traverses its orbit every 29.5 days, while the earth turns completely once a day, so there is a 50-minute difference between times of high tide from one day to the next. Because the earth tilts on its axis the day-time tides in Minas Basin are higher than the night-time tides, and the night-time tides are higher in June. The pattern is not immutable. The moon is gradually moving away from earth, enlarging its orbit and decreasing its gravitational pull. Millions of years hence, there will be no more solar eclipses.

The Bay of Fundy and the Gulf of Maine form one unique tidal system. It is on the continental shelf, and has a land boundary; it is a body of water some 600 km. long with a depth of about 200 m. (an excellent fishing ground). This system has to fill and empty within about 13 hours, by which time the next tidal pulse will arrive. The two forces combined create a system very close to natural resonance for the physical conditions, rather like rocking water gently in a hand-basin until waves build up. Then the water level at high tide becomes higher than anywhere else on earth; the tides move at highway speeds



### Other Ornithological Publications

Schorger, A. – 'Brewer's Blackbird in Wisconsin'. (Auk, hic.). – Thish incurshion will reach a sasheration of numbersh in Milwaukee, hic.

'Relations Between the Sexes in Song Sparrows'. (Wilson Bulletin). – This is a nice paper notwithstanding its title.

– Michael Downing

at mid-tide, some at 94 kph. This system has existed for less than 4,000 years.

Tides are higher in Minas Basin than around the Flower Pots outside, so the Basin has to fill and empty faster through the channel off Cape Split than in the Bay of Fundy. At mid-tide that channel has a flow equal to all the rivers and streams on the planet, and flows at about eight knots. At low and high tide, the current stops cold, and there is no movement at all.

The mouth of Minas Basin is formed of basalt and is flushed right to the bottom during every cycle, mixing all layers of water. This cool, nutrient-rich water supports forests of algae where rocks are not scoured too harshly, and productivity and biodiversity in the Basin are very great.

Dr. Bishop says we should all go and look at the tidal bores in this system, best seen off Cape Split or Cap d'Or at half tide. In fact we should watch a full tidal cycle from Cape Split, at least once in a lifetime! It's one of the world's wonders.

Nova Scotia tilts with the tides. Dalhousie students set up instruments in a cave on the Rawdon Hills some years ago, and recorded a small but definite change in angle, in time with the tidal cycle.

Ursula Grigg



### INTRODUCED BEETLES 2 NOV.

Some invaders are very invasive!

Dr. David McQuorcodale of UCCB talked on introduced beetles in Nova Scotia. Beetles are the largest group of species in the world; there are more than 40 million species, with 350,000 in North America! They are also a very diverse group in every way – habitat use, anatomy, and life histories – but none are marine.

In Nova Scotia, 1,320 spp are recorded, in 73 families. But even this is an incomplete inventory. 11% (244) are ground beetles; 6% (103) are leaf beetles; and 39% (519) are weevils, of which 91 are introduced!

Beetle invasion began, with immigration, before 1700 – from Denmark, Spain, France, and the British Isles; mostly in food, wood, and ballast.





The latter is very important because ballast was often discharged on shore where the ship docked.

People soon changed the habitat where they settled, and the insects they brought with them preferred these disturbed places – it was a habitat just like the one they left behind in Europe - a habitat disturbed by people. The indigenous species tended to stay in the wild places.

How can one tell if a species is introduced? Ask if it is widespread in Europe; if it is confined to disturbed habitat; if it feeds on an introduced plant; if it has a limited range in North America; and if it has been first recorded recently in north America.

30-50% of our recorded species are introductions! For instance, looking at the Sydney tarponds as a distinct nature reserve, 60% of the species associated with it are introduced. The local species prefer bogs, old growth forests, regenerating forests, streams, ponds, lakes, and beaches.

More specifically for instance, of ladybugs there have been four recent introductions. The 7-spotted ladybug seems to have largely replaced our 2-spotted Holarctic native, (which in the U.K. has varieties in numbers of spots!); the 14-spot arrived in the 1970s; with the 9-spot being replaced in much of Nova Scotia.

Some invaders are menacing, such as the Balsam Woolly Adelgid (came in 1910); the Gypsy Moth (1924); the smaller European Bark Beetle (1940) which brought Dutch Elm Disease; and Beech Scale (1980), which has reduced beeches to small trees.

With regard to the Brown Spruce Longhorn Beetle, the options are:

1. To eradicate, these questions have to be asked: What is its past history? Disease potential? Does it displace natives species?

2. To accept it as an established species, we must ask: What is its probable impact on forests? Is it hard to kill? Will it spread?

But long-horned beetles are specialists on stressed trees, so the educated guess is that this is not a danger! Also, it would be hard to eradicate. Canadians have done little research in the past, and aren't doing much now so there are no answers yet. Of note, the climate is sufficiently like Scandinavia for survival in E. N. America. The food supply is questionable – in Scandinavia it is Norway Spruce and Larch (hackmatack). There are lots of natural enemies here, and lots of competition from other long-horned beetles.

The general guess from David is to leave it alone. There will always be other and new invaders. Some will stay; some will cause economic problems. Quick eradication may reduce impact, but the best defence is healthy natural ecosystems.



– Ursula Grigg



## HUMMINGBIRDS 7 DECEMBER

On a snowy December evening, Harry Thurston came from Tidnish Bridge to share his thoughts about that quintessential bird of sunshine and summer gardens, the Hummingbird. The numerous members of the family Trochilidae, known for their jewel-like colours, minute size, and aerial agility, are found only in the New World, and were viewed with wonder by European explorers. Our speaker, a well-known author and writer for environmental magazines, expressed a certain diffidence in addressing our group, since he acknowledged that there were probably many in the audience who know more about the biology of these birds than he did himself. However, Thurston has recently published a new book – his twelfth – entitled The Nature of Hummingbirds: Rainbows on Wings with photographer Wayne Barrett, whose beautiful slides were shown during the presentation. Thurston's fascination with the birds began as a child, though he remarked that he sees far more hummingbirds now as an adult that he ever saw in childhood. The remarkable popularity of hummingbird feeders has brought them more readily to our gardens, where we may easily observe them. Whether such human activity has led to an increase in the hummingbird population is not clear.

The hummingbird's hovering flight is thought to be an evolutionary adaptation to nectar feeding. They probably began as insect eaters, and were drawn to flowers for the insects which are also attracted there. Finding a bonus source of energy in the nectar, they became specialists in their feeding, although they still require some protein from incidental insects, to supplement their sucrose diet. At the same time they have assumed one of the roles we usually associate with insects, becoming the pollinators of some of their favourite flowering plants. Gardeners routinely include some of the red, tubular flowers known to be preferred by hummingbirds in their plantings. Wayne Barrett's photographs, many taken in Costa Rica, usually captured his gorgeous subjects in repose, sitting quietly upon a branch. This seems uncharacteristic to us, as we think of hummingbirds as constantly on the move, buzzing about from flower to feeder. We assume that small birds must need to feed constantly to maintain body heat. And yet, studies have shown that hummingbirds have a very efficient metabolism, and can spend up to 80% of their time perching. Anyone with a good view of a well-placed feeder will, with patience, observe that the birds have favourite roosts nearby, to which they habitually return after a feeding. After the evening's talk, a graduate student in biology remarked to me that she had particularly enjoyed it, because, unlike the strictly academic lectures to which she is accustomed, it had reawakened in her an admiration and sense of wonder in these remarkable little birds.

– Patricia L. Chalmers



# FIELD TRIPS

## SHUBENACADIE WILDLIFE PARK

**DATE:** Saturday, 10 November

**PLACE:** Shubenacadie Wildlife Park

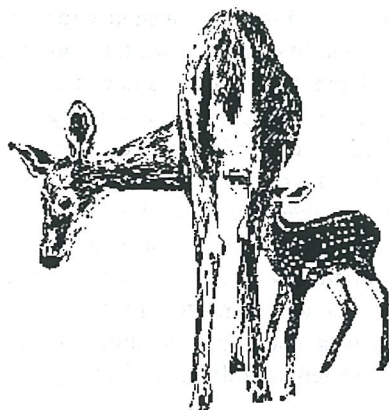
**WEATHER:** Dull, heavy overcast but no actual rain.  
Little wind, moderate temperature.

**INTERPRETER:** Bill Woodsworth

**PARTICIPANTS:** About 20

Bill Woodsworth, who is employed all year round in the interpretation of the Park and care of the animals, was introduced to us at about 10:30 a.m., with a chorus of Canada geese honking in the background. We proceeded on a tour of captive animals on display. What we were to see was therefore entirely predictable, and the Park most certainly has a list of the species it maintains, so I will provide scientific names as I go along. We walked through the Park, and what follows is an enumeration of what we saw, enriched mostly by summaries of some of Bill's comments.

Our first stop was to view a community of six or seven groundhogs (*Marmota monax*). They all live and burrow within an enclosure of about six by twelve yards, and manage it territorially, occasionally defending boundaries with aggressive behaviour. Across the path the Park keeps its herd of twelve white-tailed deer (*Odocoileus virginianus*), including two bulls showing signs of rut. The enclosure is large enough to let growth of vegetation keep up with the deers' browsing, allowing a rich and natural looking habitat. Most of these deer came in as orphans, and Bill pointed out that people frequently assume too quickly that a fawn is an orphan, and interfere where they should not. A fawn lying still, alone in the woods, is probably doing exactly what it normally does for its survival when its mother is not immediately present, that is, keeping a low profile. Orphaned fawns taken in will imprint on humans, and can't be released later. We proceeded along the path, passing a wild turkey (*Meleagris gallopavo silvestris*), not a native of Nova Scotia but a possible candidate for introduction, and a rhea (*Rhea americana*).



A longer stop was made to discuss the Park's western cougars (*Puma concolor*). They were hand raised from cubs, the female born in the Park and the male brought in from Montreal. There have as yet been no cubs from the pair. They now live in a large, wooded enclosure. They approached at the sound of Bill's voice, hoping that perhaps it was feeding time, and this allowed us an excellent view. As we were discussing them, we heard a fine chorus of wolf howls in the background. Bill explained that the wolves in the Park, as well as the foxes, are particularly attentive and responsive to what is happening about them, far beyond the boundaries of their own living areas. Trains pass the Park at some distance, too far away to be heard by people, but the wolves hear them and howl back.

We went on by the fallow deer (*Dama dama*), and then the old cougar cage, now occupied by turkey vultures (*Cathartes aura*), and one black vulture (*Coragyps atratus*). A little farther on was a pond occupied by five subspecies of Canada goose (*Branta canadensis*). The other waterfowl species, too many to list, actually live throughout the Park, though their descriptions are posted here. The Park is also visited by wild waterfowl; indeed the line between Park birds and wild birds is not absolute. During hunting season, feeding is timed to avoid encouraging ducks from outside to pass over the shooting grounds at the most dangerous hours.

The next stop was by the caribou (*Rangifer tarandus*) compound. The Park animals are from the Laplands, and are not of the same subspecies as the woodland caribou of northern Canada. There was a fine bull present with a grand set of antlers still showing a little shredded velvet. Members remarked on the great size of the rack relative to that of the animal. The production and carrying of it must represent an investment of an enormous proportion of his energy flow in sexual display. The writer finds this budgeting comparable to that involved in garish, noisy, over-powered recreational vehicles and ghetto-blasters amplifiers on car radios.

The Park's original pair of Sable Island horses (*Equus caballus*) has died, and the present herd of eight females are all their descendants. They are young and healthy, and though the herd will obviously eventually die out if a new stallion is not brought in, this is not seen as an immediate issue. Next to them are the Dall sheep (*Ovis dalli*). These were brought in from Western Canada as a more appropriate replacement for the Mouflon sheep (*Ovis musiman*), not native to Canada. After that is a herd of Barbary sheep (*Ammotragus lervia*).

Several canids and felids were next. It was noted that the wolf (*Canis lupus*) display is not part of The Canadian Centre for Wolf Research, a separate institution nearby. Two animals raised from orphan kittens brought in by a woods contractor, and a third injured in a trap, make up the Park's bobcat (*Lynx rufus*) display. Conveniently



placed for comparison are the lynx (*Lynx canadensis*), representing our other confirmed resident wild cat. The bobcat is a mainland woods animal, while the lynx hunts hare in the highlands. The Park is holding five lynx forced down into lowland Cape Breton during a hare slump several years ago and captured in poor condition. They are strong now, and will soon be released.

Old Bill, Shubenacadie's only moose (*Alces alces*), is in a decline now, at ten years of age, after a career including three movies, four commercials, and countless television appearances. A tame animal, inclined to approach his human caretakers, he is one of the very few moose in North America who can be made to move somewhere on cue. His pride in his achievements shows in his calm, noble bearing, despite his arthritic legs and shoulders and the annual decline in his antler size. Though his antlers are still impressive, Bill decided this year that it would be more appropriate for a moose of his dignity and years to forgo the annual frivolity of rutting. The Park's female moose died of pneumonia last year anyway. (Antibiotics are seldom used on the large herbivores, because they destroy the bacteria needed for digestion). Shubenacadie is considering trying to get another pair of moose.

After passing a display of another non Nova Scotian species, the magpie (*Pica pica*), we came to a very large enclosure, heavily wooded and built into the woods, where a pair of coyotes (*Canis latrans*) lives. This is a wonderful example of a display of a captive animal which shows how it appears in its natural habitat, and Bill was able to induce the pair to walk around the fence and give us a good view.

We moved on to the pine marten (*Martes americana*). This is an old growth pine forest animal, not numerous anywhere, found in Nova Scotia mainly in the Kejimikujik and Tobeatic areas, and Shubenacadie offers a rare chance to look at one. The next enclosure held some red foxes (*Vulpes vulpes*) hand raised from kits. Bill pointed out that the Park's skunks (*Mephitis mephitis*) are descended and that when people think they smell the skunks in the park, what they are really smelling is the foxes. We then came to a fine pair of fishers (*Martes pennanti*), from which Shubie hopes to be able to raise young to send to the other parks. The two male arctic foxes (*Alopex lagopus*) were originally fur ranch animals. I make no attempt to enumerate the inhabitants of the show bird house, with its bright ornamental pheasants, bred for colour.

It was somewhat ironic to come to the raccoon (*Procyon lotor*) cage, since we had been seeing traps for raccoons all morning. Wild raccoons come after some of the feed, and what is worse, the young waterfowl, and for most individuals of this species the effort is directed towards keeping them out, not keeping them in.

The beaver (*Castor canadensis*) will soon be prepared for winter. Bill explained that in a week or two many tree branches will be placed in a dry area of their quarters, and they will build their own lodge there. Their diet is mostly natural with fresh logs daily, needed to keep the growth of

their teeth under control. Both the beaver and the river otter (*Lontra canadensis*) have large ponds, and both were marvelous to watch in them; the otter seems to dart and slide through water like a fish, a particularly quick and slender fish, and to achieve the impossibility of turning almost 180 degrees without losing momentum. As if that weren't enough, she likes to spin around on her longitudinal axis as she does it. This must be one of the greatest water shows in the world. Her motion is constant, and she moves like a thing without weight. She is tame, but Bill describes her as all muscle, and the hardest animal to hold. She has no fat layer. Her metabolism keeps her warm all winter. In terms of what we might call aerobic conditioning and muscle tone, I think here we have the Queen of the Park. Yet if this is so, this lifestyle didn't save her King from dying suddenly two weeks ago, Bill suspects of a heart attack! His death is still being investigated.

A few minutes later, the black bears (*Ursus americanus*) provided a striking contrast, formidable animals indeed, displaying claws and teeth which made the heavy fencing between them and me very comforting. This armament is backed up by three hundred pounds of bear, but not three hundred pounds of muscle. Here must be a fat layer that would do credit to a market hog. They were very handsome animals, but handsome in a different way from the aerobic otters, and in perfect condition for surviving the winter in a different way, with their fat to keep them warm and a layer of thick, clean, glossy fur over that. They did not appear likely to perform aerobics without a very good reason. They look every ounce they weigh. Bill told us that when they were found as babies by a woods contractor in Shelburn about eight years ago, one weighed eighteen and the other twenty-two ounces!

The bears fittingly occupied the position of honour at the end of our visit, but I must add that between them and the otters we visited mink (*Mustela vison*), and several raptors. The bald eagles (*Haliaeetus leucocephalus*) are sometimes brought in weak from a bad winter, but the most common reason is wing injury, and the most common cause is collision with a hydro wire. There were red tailed hawks (*Buteo jamaicensis*), and there were three species of owl – the Barred (*Strix varia*), the Snowy (*Nyctea scandiaca*), and the Great-horned (*Bubo virginianus*).





Animals are not generally captured from the wild for display at the Shubenacadie Wildlife Park. They are obtained from other parks, brought in as orphans or injured animals, bred within the Park, or occasionally obtained from suppliers. Injured animals are normally released if they can attain a physical and psychological state in which their survival is likely. All the caged birds, in particular, are injured and have not recovered enough for release.

Bill (the moose, not the interpreter) is not the only movie star in the Park. Shubenacadie supplements its budget by giving professional and amateur filmmakers, photographers and photography clubs access to the animals and sometimes assistance in working with them. Some income also comes in from selling young animals

to other institutions. Bill (the interpreter, not the moose), mentioned several other minor ways in which they are coping with budgetary pressures. One of his final comments was that people generally come to the Park at the worst time, between 11:00 a.m. and 2:00 p.m. on sunny summer days, when the animals are resting and avoiding the heat, and they are sometimes overwhelmed by the crowds. The animals are more likely to be active at the beginning or end of the day, and in many cases in cooler weather and in the winter. The Park is now open on weekends in the winter.

The outing ended at 12:30 with a well-deserved round of applause for the interpreter.

– Michael Downing



## NATURAL HISTORY

### SALT MARSH RESTORATION

...sent to NatureNS on 22 November by Jim Wolford:

**November 6** – Today I attended an interesting workshop at the Old Orchard Inn on the Restoration of Salt Marshes. Tony Bowron and others of the Ecology Action Centre organized this, with interested and experienced parties having come in from New Hampshire, Maine, and the Maritime Provinces. This afternoon we had a short field trip along the Cornwallis River dyke just west of Middle Dyke Road. There we stood above a plastic culvert pipe that had replaced an old square-bored wooden one that we could see nearby. From about 4:00 to 4:40 p.m., we could watch the hordes of American Crows flying west along the north edge of the Cornwallis Valley, obviously heading for Kentville.

**November 7** – East of Wolfville along hwy. 1, just east of Eye/Dyke Roads, at 10:30 a.m., Roman Bartkiw saw about 20 Bald Eagles all gathered in one small area — this is one of the winter feeding stations for the eagles/hawks/ravens/crows/gulls/ & starlings. (Over the past couple of weeks, it's been suspected that the migrant eagles have been arriving and accumulating in the Wolfville area to join some of our local breeders and their youngsters. At the same time, because our local breeders have become more and more common in recent years, noting when the migrants arrive is difficult.)

Today (7 Nov.) was the last and second day of the Salt-Marsh Restoration Workshop at the Old Orchard Inn. This workshop went very well, in spite of continuing nasty, cold, rainy, windy weather. In late afternoon about 8-10 of us went on a final field trip to Kingsport. From the wharf parking lot we walked to the salt-marsh edge at low tide, and there were many thousands of Mud Snails on the wet mud surface (impressive for our guests). Also at the low-water line we could see oodles of Black Ducks, many of them foraging by apparently eating/filtering? the mud (for worms & crustaceans?), plus about 40 Canada Geese in the water.

Then we walked south along the upper beach and cottages to the south end of the sand-spit, where there's an interesting narrow tongue of peat from an old piece of salt-marsh, sticking out from the dune toward the east. At the seaward end of the peat, still in the upper intertidal zone, were several ancient tree stumps, no doubt the 3500-4500-year-old counterparts of the stumps at the east end of Evangeline Beach at Grand Pré (The Guzzle). Standing at the upper stumps, we could easily see a straight line of more stumps, extending out to the low-water line (today was a very mediocre low tide, i.e., a high low tide).

I must apologize to the Halifax Field Naturalists, for whom I led a field trip a few months ago at Kingsport — I didn't know about these stumps then! Live and learn!

– Jim Wolford










# ALMANAC

This almanac is for the dates of events which are not found in our 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.

January 1st: 1936 has snivelled in. The darkness held hard as though the first day did not want to start. It did not blow or bluster; it just wept down-heartedly as if it did not know quite what was the matter. I wonder will it find out before the year ends.

– Emily Carr, Hundreds and thousands: the Journals of Emily Carr (1966)

## NATURAL EVENTS

- 21 Dec. Winter Solstice (Sun reaches its most southerly declination) at 9:36 AST: Winter begins in the Northern Hemisphere. But tomorrow the sun rises a little higher and a little longer.
- 24/25 Dec. Annual nocturnal circumglobal migration of Arctic Reindeer (*Rangifer tarandus*). 
- 25 Dec. Partial Solar Eclipse, 12:30-15:30. Maximum eclipse at about 14:00 AST.
- 7 Jan. Daily maximum temperature at Shearwater goes below 0°.
- 9 Jan. Full Moon – the 'Wolf Moon'.
- 9/10 Jan. Total Lunar Eclipse – in our area, visible in its final phases as the moon rises on the evening of the 9th.
- 13-24 Jan. 'January Thaw' (the temperature stops falling, and the average actually rises 0.2°).
- 27/28 Jan. 'Eagle Days' in Sheffield Mills, King's County.
- 6-8 Feb. Coldest days of winter (average daily minimum -9.4°).
-  8 Feb. Full Moon – the 'Snow Moon'.  
- 9 Feb. Average temperatures start increasing.
- 22 Feb. Venus will be at its greatest brilliancy in the evening sky. 
- 22 Feb. Daily maximum temperature above 0°. 
- 9 Mar. Full Moon – the 'Worm Moon'.
- 20 Mar. Vernal Equinox at 9:27 AST: Spring begins in the Northern hemisphere.
- 23 Mar. Daily average temperature above 0°.
- late Mar. Look for the first blooms of Coltsfoot (*Tussilago farfara*), our earliest wildflower. 
- 1 Apr. Daylight Savings Time begins at 2:00: turn clocks ahead one hour.
- early Apr. Venus reappears in the morning sky after a brief disappearance from the evening sky.

– Sources: Atmospheric Environment Service, Climate Normals 1951-80 Halifax (Shearwater A) N.S.; Colombo's Canadian Global Almanac 2001; and the personal observations of the compiler.



## SUNRISE AND SUNSET ON WINTER AND EARLY SPRING SATURDAYS



2 Dec.	7:33	16:35	6 Jan.	7:51	16:50
9 Dec.	7:40	16:34	13 Jan.	7:49	16:58
16 Dec.	7:45	16:35	20 Jan.	7:45	17:07
23 Dec.	7:49	16:38	27 Jan.	7:39	17:16
30 Dec.	7:51	16:43			
3 Feb.	7:31	17:26	3 Mar.	6:48	18:05
10 Feb.	7:22	17:36	10 Mar.	6:36	18:14
17 Feb.	7:11	17:46	17 Mar.	6:23	18:23
24 Feb.	7:00	17:56	24 Mar.	6:10	18:32
31 Mar.	5:57	18:41			

– courtesy David Lane, Burke-Gaffney Observatory, Saint Mary's University



## ORGANISATIONAL EVENTS

**Blomidon Naturalists Society:** Indoor meetings take place on the third Monday of the month at Room 241 in the Beveridge Arts Centre, Acadia University, 7:30 p.m. Field trips usually depart from the Robie Tufts Nature Centre, Front St., Wolfville. For more information go to: <<http://www.go.ednet.ns.ca/~bns/home.htm>>.

**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 1 and March 30, and at either 9:00 p.m. or 10:00 p.m. (depending on when it gets dark) between April 1 and October 31. For more information phone 496-8257; or go to: <<http://apwww.stmarys.ca/bgo/>>.





**Friends of McNabs Island:** For more information call Cathy McCarthy, 434-2254, or Mike Tilley at 465-4563; or go to: <http://chebucto.ns.ca/Environment/FOMIS/>.

**17 Feb.** "Annual Dinner and Silent Auction" at Royal Artillery Park. Phone Victor Dingle, 463-4761.

**Heritage Trust of Nova Scotia:** Indoor meetings take place on the third Thursday of the month at the Nova Scotia Museum of Natural History, 7:30 p.m. Phone 432-4807.

**15 Mar.** "Tree-rings: a Powerful Tool for Dating Heritage Buildings and Assessing Past Changes in the Climate", with Alan Ruffman.



**Nova Scotia Bird Society:** Indoor meetings take place on the fourth Thursday of the month, October to April, at the Nova Scotia Museum of Natural History, 7:30 p.m. For more info phone 852-2428 (recording), or Fulton Lavender, 455-4966; or go to: <http://www.chebucto.ns.ca/Recreation/NS-BirdSoc/>.

**6 Jan.** "Sewer Stroll I, Halifax/Dartmouth area", with leader Terry Paquet.



**25 Jan.** "Members' Slide Night".



**27 Jan.** "Pictou Harbour Overwintering Gulls and Waterfowl", with leader Ken McKenna, 752-7644.

**3 Feb.** "Sewer Stroll II, Halifax/Dartmouth area", with leader Blake Maybank, 852-2077.

**22 Feb.** "Dancing in Mud: Ecology and Conservation of Shorebirds in the Bay of Fundy", with speaker Dr. J. Sherman Boates of the N.S. Department of Natural Resources.

**22 Mar.** "The History and Current Status of the Peregrine Falcon Recovery Programme in the Bay of Fundy", with speaker Diane Amirault of the Canadian Wildlife Service.

**31 Mar.** "Baccaro and Blanche Peninsula", with leader Donna Ensor, 875-4269.



**Nova Scotia Museum of Natural History:** For more information about programmes phone 424-6099, or 424-7353; or go to: <http://museum.gov.ns.ca/mnh/>.

**18 Jan.-11 Feb.** "The Ark", an exhibition of paintings by Peter Gough in support of the Gulf of Maine Council on the Marine Environment.

**24 Jan.** "Escape to Warm Waters", with speaker Calum Ewing, scuba diver and Museum staffer.

**31 Jan.** Exotic Nova Scotia ... Underwater", with speaker Lawrence Taylor of Biodiverse Canada.

**3 Feb.** "An Afternoon on the Gulf of Maine", with three speakers – author Harry Thurston, artist Peter Gough, and Museum botanist Alex Wilson.



**14 Feb.** "A Valentine Bouquet – Gardening with Flowers from Around the World", with Museum botanist Alex Wilson.

**7 Mar.** "Oil and Gas Geology: All You Ever Wanted to Know (but Didn't Know Who to Ask)", with two speakers – geologist Hans Wielens and geophysicist Chris Jauer of the Geological Survey of Canada.

**21 Mar.** "What is NABCI: Who are the Players", an overview of the North American Bird Conservation Initiative, with speaker Richard Elliot of the Canadian Wildlife Service.

**28 Mar.** "Shorebird Connections", with speaker Peter Hicklin of CWS.

**4 Apr.** "Bicknell's Thrush: One of Our Rarest and Least Known Songbirds", with speaker Dan Busby of CWS.

**11 Apr.** "Sea Ducks: A Joint Venture", with speaker Keith McAloney of CWS.

**18 Apr.** "The Hidden Species of Coastal Marshes", with speaker Al Hanson of CWS.

**25 Apr.** "Terns: How Are They Doing This Year?", with speakers Andrew Boyne of CWS and Ted D'Eon of West Pubnico.

**2 May** "The Piping Plover: Needs All the Help We Can Give", with speaker Diane Amirault of CWS.

**Nova Scotia Wild Flora Society:** Meets fourth Monday of the month, September to May, at the Nova Scotia Museum of Natural History, 7:30 p.m. For more info phone Heather Drope, 423-7032; or go to: <http://www.chebucto.ns.ca/~nswfs/>.

**22 Jan.** "Member's Slide Night".

**27 Feb.** "British Wildflowers", with photographer Keith Vaughan.



**Photographic Guild of Nova Scotia:** Meets second Monday of the month, as well as the first and third Sundays of the month, at the Nova Scotia Museum of Natural History, 7:30 p.m. Shows are held at Saint Mary's University, Theatre A, Burke Education Centre. For more information phone Kenneth Moore, at 826-1121, or <http://www.chebucto.ns.ca/Recreation/PGNS/>.

**Royal Astronomical Society of Canada (Halifax Chapter):** Meets the third Friday of each month at the Nova Scotia Museum of Natural History, 8:00 p.m. For more info, go to: <http://halifax.rasc.ca>.



– compiled by Patricia Chalmers





# HALIFAX TIDE TABLE



## January-janvier

## February-février

## March-mars

Day	Time	Feet	Metres	jour	heure	pieds	metres	Day	Time	Feet	Metres	jour	heure	pieds	metres	Day	Time	Feet	Metres	jour	heure	pieds	metres
1	0010	5.2	1.6	16	0055	5.9	1.8	1	0050	5.6	1.7	16	0205	5.2	1.6	1	0615	1.6	0.5	16	0030	5.2	1.6
MO	0635	2.3	0.7		0805	1.6	0.5		0750	2.0	0.6		0930	1.6	0.5		1155	5.2	1.6		0750	1.6	0.5
LU	1210	5.2	1.6	TU	1310	5.2	1.6	TH	1310	4.9	1.5	FR	1450	4.6	1.4	TH	1820	1.6	0.5	FR	1310	4.9	1.5
	1850	1.6	0.5	MA	2020	1.3	0.4	JE	1950	2.0	0.6	VE	2145	2.3	0.7	JE				VE	2015	2.3	0.7
2	0050	5.2	1.6	17	0150	5.6	1.7	2	0140	5.6	1.7	17	0310	5.2	1.6	2	0015	5.6	1.7	17	0120	4.9	1.5
TU	0730	2.3	0.7		0905	1.6	0.5		0850	1.6	0.5		1025	1.6	0.5		0715	1.6	0.5		0850	1.6	0.5
MA	1255	4.9	1.5	WE	1415	4.9	1.5	FR	1415	4.9	1.5	SA	1610	4.6	1.4	FR	1245	4.9	1.5	SA	1410	4.6	1.4
	1940	1.6	0.5	ME	2115	1.6	0.5	VE	2050	2.0	0.6	SA	2245	2.3	0.7	VE	1925	2.0	0.6	SA	2115	2.3	0.7
3	0140	5.2	1.6	18	0250	5.6	1.7	3	0240	5.6	1.7	18	0420	5.2	1.6	3	0105	5.6	1.7	18	0225	4.9	1.5
WE	0830	2.3	0.7		1000	1.6	0.5		0950	1.6	0.5		1120	1.6	0.5		0820	1.6	0.5		0945	1.6	0.5
ME	1355	4.9	1.5	TH	1530	4.9	1.5	SA	1525	4.9	1.5	SU	1720	4.9	1.5	SA	1345	4.9	1.5	SU	1535	4.6	1.4
	2030	2.0	0.6	JE	2215	2.0	0.6	SA	2155	2.0	0.6	DI	2340	2.3	0.7	SA	2030	2.0	0.6	DI	2215	2.3	0.7
4	0235	5.2	1.6	19	0355	5.6	1.7	4	0350	5.6	1.7	19	0520	5.2	1.6	4	0205	5.6	1.7	19	0340	4.9	1.5
	0925	2.0	0.6		1100	1.3	0.4		1050	1.3	0.4		1210	1.3	0.4		0925	1.3	0.4		1040	1.6	0.5
TH	1500	4.9	1.5	FR	1640	4.9	1.5	SU	1640	5.2	1.6	MO	1810	4.9	1.5	SU	1500	4.9	1.5	MO	1650	4.6	1.4
JE	2125	2.0	0.6	VE	2315	2.0	0.6	DI	2300	1.6	0.5	LU				DI	2140	2.0	0.6	LU	2310	2.3	0.7
5	0330	5.6	1.7	20	0455	5.6	1.7	5	0455	5.9	1.8	20	0030	2.0	0.6	5	0315	5.6	1.7	20	0455	4.9	1.5
FR	1020	1.6	0.5		1150	1.3	0.4		1150	0.7	0.2		0615	5.6	1.7		1030	1.0	0.3		1135	1.6	0.5
VE	1610	4.9	1.5	SA	1740	4.9	1.5	MO	1745	5.6	1.7	TU	1255	1.3	0.4	MO	1620	5.2	1.6	TU	1745	4.9	1.5
	2225	1.6	0.5	SA				LU				MA	1855	5.2	1.6	LU	2250	1.6	0.5	MA			
6	0430	5.9	1.8	21	0005	2.0	0.6	6	0005	1.6	0.5	21	0110	2.0	0.6	6	0430	5.6	1.7	21	0000	2.0	0.6
SA	1120	1.3	0.4		0545	5.6	1.7		0555	6.2	1.9		0700	5.6	1.7		1130	0.7	0.2		0550	5.2	1.6
SA	1710	5.2	1.6	SU	1240	1.3	0.4	TU	1250	0.3	0.1	WE	1335	1.0	0.3	TU	1730	5.6	1.7	WE	1220	1.3	0.4
	2325	1.6	0.5	DI	1830	5.2	1.6	MA	1840	5.9	1.8	ME	1935	5.2	1.6	MA	2355	1.3	0.4	ME	1830	5.2	1.6
7	0520	6.2	1.9	22	0055	2.0	0.6	7	0105	1.3	0.4	22	0145	2.0	0.6	7	0540	5.9	1.8	22	0040	2.0	0.6
SU	1215	0.7	0.2		0635	5.9	1.8		0650	6.6	2.0		0740	5.9	1.8		1230	0.3	0.1		0635	5.2	1.6
DI	1805	5.6	1.7	MO	1325	1.0	0.3	WE	1340	0.0	0.0	TH	1405	1.0	0.3	WE	1830	5.9	1.8	TH	1300	1.3	0.4
				LU	1915	5.2	1.6	ME	1935	6.2	1.9	JE	2010	5.6	1.7	ME				JE	1905	5.2	1.6
8	0020	1.3	0.4	23	0135	2.0	0.6	8	0200	1.0	0.3	23	0215	1.6	0.5	8	0050	1.0	0.3	23	0115	1.6	0.5
MO	0615	6.6	2.0		0715	5.9	1.8		0745	6.9	2.1		0815	5.9	1.8		0640	6.2	1.9		0715	5.6	1.7
LU	1305	0.3	0.1	TU	1400	1.0	0.3	TH	1430	0.0	0.0	FR	1435	1.0	0.3	TH	1325	0.0	0.0	FR	1335	1.0	0.3
	1900	5.9	1.8	MA	1955	5.6	1.7	JE	2030	6.6	2.0	VE	2045	5.6	1.7	JE	1920	6.2	1.9	VE	1940	5.6	1.7
9	0115	1.3	0.4	24	0210	2.0	0.6	9	0250	1.0	0.3	24	0250	1.6	0.5	9	0145	0.7	0.2	24	0150	1.3	0.4
TU	0705	6.6	2.0		0755	5.9	1.8		0840	6.9	2.1		0850	5.9	1.8		0735	6.6	2.0		0750	5.6	1.7
MA	1400	0.0	0.0	WE	1435	1.0	0.3	FR	1520	0.0	0.0	SA	1505	1.0	0.3	FR	1415	0.0	0.0	SA	1405	1.0	0.3
	1950	6.2	1.9	ME	2035	5.6	1.7	VE	2115	6.6	2.0	SA	2120	5.9	1.8	VE	2010	6.6	2.0	SA	2015	5.9	1.8
10	0210	1.0	0.3	25	0240	2.0	0.6	10	0345	1.0	0.3	25	0320	1.6	0.5	10	0240	0.7	0.2	25	0225	1.3	0.4
WE	0800	6.9	2.1		0835	5.9	1.8		0930	6.9	2.1		0925	5.9	1.8		0825	6.6	2.0		0825	5.6	1.7
ME	1450	0.0	0.0	TH	1505	1.0	0.3	SA	1610	0.0	0.0	SU	1540	1.0	0.3	SA	1500	0.0	0.0	SU	1440	1.0	0.3
	2045	6.2	1.9	JE	2115	5.6	1.7	SA	2205	6.6	2.0	DI	2150	5.9	1.8	SA	2055	6.6	2.0	DI	2045	5.9	1.8
11	0305	1.0	0.3	26	0310	2.0	0.6	11	0440	1.0	0.3	26	0355	1.3	0.4	11	0330	0.7	0.2	26	0300	1.0	0.3
TH	0850	6.9	2.1		0915	5.9	1.8		1020	6.6	2.0		1000	5.9	1.8		0915	6.6	2.0		0900	5.6	1.7
JE	1540	0.0	0.0	FR	1535	1.0	0.3	SU	1705	0.3	0.1	MO	1610	1.0	0.3	SU	1550	0.3	0.1	MO	1510	1.0	0.3
	2135	6.6	2.0	VE	2150	5.6	1.7	DI	2250	6.6	2.0	LU	2225	5.9	1.8	DI	2140	6.6	2.0	LU	2115	5.9	1.8
12	0400	1.3	0.4	27	0345	2.0	0.6	12	0540	1.0	0.3	27	0435	1.3	0.4	12	0420	0.7	0.2	27	0335	1.0	0.3
FR	0945	6.9	2.1		0950	5.9	1.8		1105	6.2	1.9		1035	5.6	1.7		1000	6.2	1.9		0940	5.6	1.7
VE	1635	0.0	0.0	SA	1605	1.0	0.3	MO	1800	0.7	0.2	TU	1650	1.3	0.4	MO	1635	0.7	0.2	TU	1545	1.3	0.4
	2225	6.6	2.0	SA	2220	5.6	1.7	LU	2335	6.2	1.9	MA	2255	5.9	1.8	LU	2220	6.6	2.0	MA	2150	5.9	1.8
13	0500	1.3	0.4	28	0420	2.0	0.6	13	0635	1.3	0.4	28	0525	1.6	0.5	13	0510	0.7	0.2	28	0415	1.0	0.3
SA	1035	6.6	2.0		1025	5.6	1.7		1155	5.6	1.7		1115	5.6	1.7		1045	5.9	1.8		1015	5.6	1.7
SA	1730	0.3	0.1	SU	1645	1.3	0.4	TU	1855	1.3	0.4	WE	1730	1.6	0.5	TU	1725	1.0	0.3	WE	1625	1.3	0.4
	2315	6.2	1.9	DI	2255	5.6	1.7	MA				ME	2330	5.6	1.7	MA	2300	6.2	1.9	ME	2225	5.9	1.8
14	0605	1.3	0.4	29	0500	2.0	0.6	14	0020	5.9	1.8					14	0600	1.0	0.3	29	0505	1.0	0.3
SU	1125	6.2	1.9		1100	5.6	1.7		0735	1.3	0.4					WE	1130	5.6	1.7		1055	5.6	1.7
DI	1825	0.7	0.2	MO	1720	1.3	0.4	WE	1245	5.2	1.6					ME	1820	1.6	0.5	TH	1710	1.6	0.5
				LU	2330	5.6	1.7	ME	1950	1.6	0.5						2345	5.9	1.8	JE	2305	5.9	1.8
15	0005	5.9	1.8	30	0550	2.0	0.6	15	0110	5.6	1.7					15	0655	1.3	0.4	30	0555	1.3	0.4
MO	0705	1.6	0.5		1140	5.2	1.6		0830	1.6	0.5						1215	5.2	1.6		1135	5.2	1.6
LU	1215	5.6	1.7	TU	1805	1.6	0.5	TH	1340	4.9	1.5					TH	1915	2.0	0.6	FR	1805	2.0	0.6
	1925	1.0	0.3	MA				JE	2045	2.0	0.6					VE				VE	2350	5.6	1.7
				31	0010	5.6	1.7																
					0650	2.0	0.6																
				WE	1220	5.2	1.6																
				ME	1855	1.6	0.5																



## NATURE NOTES

### OCTOBER

Peter Payzant saw a flock of **migrating Grackles** feeding on the forest floor, a **Double-crested Cormorant** on a diving float in Williams Lake, and **butterflies** coming to a banana feeder. There were **salamanders** under rocks on Beaufort Drive (mostly Red-Backed, but one Blue-spotted), and enormous **spiders**. Stephanie Robertson saw a **Pileated Woodpecker** near her feeder. **Admiral and American Copper Butterflies** visited Bernice's New York Asters. **Painted Ladies** visited a feeder.

### NOVEMBER

The Payzants still have **butterflies** coming to a banana feeder, and squirrels are raining spruce cones on their roof. They watched a cat trying to catch a squirrel. Lesley Butters saw **5 immature Bald Eagles** on MacDonald's Lake. Regina Maass found a **dead immature Red Phalarope** (taken to the Museum); her west window has **ladybugs** sheltering in it, but windows on other sides of the house do not. She has seen **Lambkill** in bloom still. Ian saw **Winter Moths** out in the rain. Joan Czapalay saw **blueberries** in Colchester County. Pat Chalmers saw a **Yellow-breasted Chat** on Dorothea Drive in Dartmouth, but no Cardinals or Orioles. (**Cardinals** are reported from around Sullivan's Pond). **8 seals** have been seen off Point Pleasant Park; **Walruses** are being watched for!

CWS has given permission for a duck to be caught on Mount St. Vincent's pond, where **oiled birds** have been seen, for analysis of the oil. The particular duck wanted is too wily to be caught!

### DECEMBER

The Payzants are seeing **Winter Moths**, and **Goldeneye** on Rocky Lake. Regina saw a **wasp** in mid-November, and **two foxes** trotted through her garden! Lesley saw **Pussy Willows** in bloom, and a flock of over **30 Mourning Doves** with **10 Ovenbirds** feeding on the ground near her cottage. Pat Chalmers had an Oriole feeding on the grapes on her backyard fence. Joan Czapalay saw a **MacGillivray's Warbler** (*Oporornis tolmiei*, a mountain bird) in a bush behind the tennis courts at the bottom of Jubilee Road.

### ! NEXT DEADLINE !

#### 1 MARCH FOR MARCH ISSUE

contributions to the Editor, HFN  
c/o NS Museum of Natural History  
Please phone 455-8160 to alert the Editor

### ! HUNTING SEASON IS UPON US AND HUNTERS ARE ABROAD !

Snowshoe Hare Season ..... 15 November - 15 February

REMEMBER, IT'S HUNTING SEASON, SO DRESS TO BE SEEN IN THE WOODS!