



**Blomidon Naturalists Society**  
Spring 2007 – Volume 34 Number 1

## **Blomidon Naturalists Society**

*The primary objective of the Society shall be to encourage and develop in its members an understanding and appreciation of nature. For the purpose of the Society, the word "nature" will be interpreted broadly and shall include the rocks, plants, animals, water, air, and stars.*

(from the BNS constitution)

### **BNS Executive**

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The Blomidon Naturalists Society is a member of the Sable Island Preservation Trust and the Federation of Nova Scotia Naturalists (Nature Nova Scotia) and is an affiliate member of the Canadian Nature Federation (Nature Canada).

The Blomidon Naturalists Society is a registered charity. Receipts (for income tax purposes) will be issued for all donations.

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Contributions to the BNS newsletter are always welcome. Members are encouraged to share unusual or pleasurable nature stories through the pages of the BNS newsletter. If you have a particular area of interest, relevant articles and stories are always welcome. Send them to Jean Timpa by mail (25 Gaspereau Ave., #1, Wolfville, NS B4P 2C5) or by e-mail <jtimpa@ns.sympatico.ca>.

## **Upcoming newsletter deadline**

Summer, June 15, 2007

## **Editorial Board**

Chair: Jean Timpa (902 542-5678)

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## Editorial

# Out and About

In November I was honoured by the executive of the Blomidon Naturalists Society, when the position of newsletter editor was elevated to the status of official, voting member of the executive. I have attended the four yearly meetings of the executive for a number of years now in order to give a report on the status of the newsletter and to accept suggestions and ideas for material to include in future issues.

John Harwood, our esteemed president, suggests that I have been long-suffering waiting for this change. This is hardly the case, as it has always been a great source of satisfaction to serve BNS in any way that I can. I was there for the first organizational meeting on March 5, 1974, not long after the much-touted Comet Kohoutek was declared an astronomical failure. It may not have brightened in that sense, but it drew together a small group of people who invited more to come out and form one of the very first natural history societies in Nova Scotia. Kohoutek should be remembered for a different legacy, a shining example of all the good we have been able to do and will continue to do in a similar vein, hopefully for as long as life shall be in this area.

However, I would not want the executive or John to think that becoming a full-fledged member of the executive is a trivial matter to me or to any of my successors. I certainly do appreciate these opportunities to effect the necessary changes and growth in BNS to keep it viable.

In September 1974 I took the bull by the horns and declared to myself and to a few others that we needed some sort of mechanism to keep us glued together on a regular basis. That most often is, of course, a newsletter. Such an endeavour can range from a simple update of events to come and other urgent business, or it can mushroom into a partial history of the organization, at the very least. It might include the documentation of various field trips, review of publications by members, articles by those who can and like to explain local research and interesting phenomena, and even reviews of our monthly lecture series, of which we probably do not do as much as we should. Pleas for suggestions by members as to what they would like to see in the newsletter or happen in the society

has never elicited much of a response. You do seem to be a comfortable armchair lot!

A newsletter is also a way to share information with like organizations and keep in touch with members who live inconvenient distances away and cannot always participate in our activities. We swap newsletters with a number of natural history groups, mostly but not entirely in Nova Scotia. We sometimes pirate, with permission, relevant articles from those newsletters. We are also members of Nature Nova Scotia and Nature Canada, so we are known on a much larger scale, even across Canada. All this adds to the fun of putting together the newsletter; like a jigsaw puzzle, the larger picture does eventually appear. I was editor for 14 years, and then others took up the responsibilities, which always gives a publication a change and a face lift. A few years ago the executive dug me out of the closet, supposedly on a temporary basis, so here I am, yet again, having more fun than ever!

I could not begin to create our newsletter alone, however, and I do have a great deal of help from an editorial committee and another group who faithfully do the drudge work of mailing out the final product. However, I am not sure how many of you realize that our production editor really does the bulk of the work on our collective musings. In the first place he patiently puts up with me changing my mind too often and having to remind me to check the attachment box on the computer program. He insists on making our writings more readable by tackling the grammatical and readability editing, and fitting in all the stuff I send his way, so that we do not go over our one-stamp limit. Calmly he bears the bad news that sometimes we do have to leave material out and asks me for a decision (what in Creation is that!!?). Most importantly he cajoles me into writing my editorials when I plead writer's block. He is obviously the one who is long suffering, if anyone is. So a resounding thanks to Doug Linzey, who rarely gets the credit due for his behind the scenes efforts that really make the Blomidon Naturalists Society Newsletter the fine publication that it consistently is.



Jean Timpa, editor

# Blomidon Naturalists Society

## Spring 2007

### Meetings

Unless otherwise noted, all meetings are held at 7:30 p.m., usually on the third Monday of each month (note the extra make-up meeting April 30), in the auditorium of The K.C. Irving Environmental Science Centre on University Avenue, Wolfville. Parking is available at Wheelock Dining Hall, along Crowell Drive immediately east of the Centre, at the Acadia Arena, the Student Union Building, or on Westwood Avenue. Everyone is welcome.

**\*Monday, April 16, 2007 – Painting Nature.** Twila Robar-DeCoste will explore the subject of nature illustration and the people who work in this art form, especially those who have influenced her work. She will bring samples of her own work to help illustrate some of the topics, possibly including a work in progress. Twila's love of nature is the driving force in her creation of realistic paintings of many subjects: birds, butterflies, flowers, landscapes, and seascapes. She works in watercolour, acrylic, and ink. BNS members are most likely to be familiar with her work as illustrator for sixteen books, nine of which are Merritt Gibson's nature books, including his latest, published last fall: *Nature Walks: Within the View of Blomidon*. [\* Originally scheduled for the January meeting, which was cancelled due to the weather.]

**\*Monday, April 30, 2007 – Annual Show and Tell.** Open to all. Come to view or bring along slides, pictures, specimens, collections, fossils, videos, computer stuff, favourite books and magazines, or anything that might be of interest to fellow naturalists. [\* Originally scheduled for the February meeting, which was cancelled due to the weather.]

**Monday, May 21, 2007 – The Black River Hydro System and Fish Management Strategies,** by Ken Meade, manager of environmental services at Nova Scotia Power Inc. The presentation will provide an overview of Nova Scotia Power's operations on the Gaspereau-Black River system and the specific measures that are in place for protection

of multiple fish species and fish habitat. These include state-of-the-art monitoring facilities, a working relationship with the Department of Fisheries and Oceans for recovery of the endangered Atlantic Salmon (specifically the Live Gene Banking program), and working with several groups including the Kings County Wildlife Association and the Gaspereau River Advisory Committee.

**Monday, June 18, 2007 – Enchanted Isles: The Galapagos**, by Peter and Linda Payzant. Not just another pretty archipelago: Why are they called the Enchanted Isles? How were these strange islands formed? Why do the birds and animals have no fear of man here? Why are there so few species? What is a Darwin's Finch, and how did it lead Darwin to his stunning insight? Why do you need a wet suit to go snorkelling on the equator? Peter and Linda Payzant visited the Enchanted Isles last June, and will join us tonight to answer these questions and others, in a presentation accompanied by lots of their photos and video.

## Field Trips

Unless otherwise indicated, all field trips will begin at the Wolfville waterfront park. Everyone is welcome.

**Saturday, March 31, 2007 – Radiation in Nature.** Dr. Svetlana Barkanova (<[svetlana.barkanova@acadiau.ca](mailto:svetlana.barkanova@acadiau.ca)>), from the Acadia University physics department, will look at radiation and radioactivity in nature. While most people associate radioactivity with nuclear power and nuclear weapons, there are many common sources of radiation all around us. In addition to some of the more unexpected sources, Nova Scotia is particularly prone to radon gas. Meet at 10 a.m. in Room 10 of the Huggins Science Hall at Acadia University.

**Wednesday April 11, 2007 – Fossil History of Blue Beach and Joggins.** Join Peir Pufahl of the Acadia geology department for a look at some of the discoveries that have been made at the two best-known fossil locations in Nova Scotia. Meet in room 57 in the basement of Huggins Hall (the science building on University Avenue) at 7:30 p.m. (main doors should be open at 7 p.m.)

**Saturday, April 14, 2007 – Pond Life Through a Microscope.** Todd Smith (<todd.smith@acadiau.ca>) and H  l  ne D'Entremont of the Acadia University biology department will lead this popular indoor field trip to observe the fascinating and incredible diversity of living organisms found in pond water. Individual microscopes and one connected to a television set will be set up in a lab in the Patterson Hall, the biology building, from 1 p.m. to 3 p.m. You can expect to see representatives from many phyla, including bacteria, algae, diatoms, ciliates, flagellates, hydras, flatworms, roundworms, and rotifers. Meet at Patterson Hall.

**Sunday, April 29, 2007 – Early Spring Birds.** Join Jim Wolford (902 542-9204, <jimwolford@eastlink.ca>) on a joint trip with the Nova Scotia Bird Society pond hopping for ducks, early migrants, and possibly Barred Owls in the Wolfville area. Meet at the Wolfville waterfront at 10 a.m. Dress warmly and bring a lunch.

**Sunday, May 6, 2007 – Lichens.** Karen Casselman (902 633-2837) has invited us to her property in Cheverie to explore the world of lichens. Each lichen species is a symbiotic association of a fungus and an organism that can produce food from sunlight, either one or more algae species or a cyanobacteria. We will be looking at them before they are hidden by the springtime leaves. Meet at 2018 New Cheverie Road (Karen's house) at 1:30 p.m. (Directions: Take Highway 215 from Brooklyn until you reach Cheverie. Turn right on Old Cheverie Road and look for No. 2018.)

**Tuesday, May 8, 2007 . . . and every Tuesday through the summer – Acadia University Woodland Trail biodiversity list.** For a second year we will take a walk every Tuesday evening throughout the spring and summer to look for flowering plants, nesting birds, fungi, butterflies, dragonflies, etc. This will be done in cooperation with the K.C. Irving Environmental Science Centre, and we plan to make it a long-term project with the collection of some interesting information. As the gardens become more established over the years, and more native species are introduced along the trails, it will be interesting to see if biodiversity of wildlife increases. Everyone is invited to participate. Come for one week or every week. You don't need to be an expert, but we need lots of people to show up to help spot and identify the different forms of natural history. Meet at 6:30 p.m. at the main entrance to the Harriet Irving Botanical Gardens on University Avenue.

**Saturday, May 12, 2007 – Nova Scotia Migration Count.** Everyone interested in counting birds is invited to participate in the 16th annual spring Nova Scotia Migration Count (formerly North American Migration Count). Come and participate in this worthwhile project. This is a wonderful way to get out for a day's enjoyment while discovering possible rarities visiting the Valley. (See the article elsewhere in this issue for more information.) Annapolis Valley coordinators:

- Hants East: Roslyn MacPhee (Shubenacadie) – Tel: 902 758-3265
- Hants West: Patrick Kelly (Falmouth) – Tel : 902 798-3329
- Kings County: Judy Tufts (Wolfville) – Tel : 902 542-7800
- Kings County (Kingston area): Sheila Hulford – Tel: 902 765-4023
- Annapolis County: Contact Hans Toom (<htoom@hfx.eastlink.ca>, 902-868-1862. Anyone interested in helping coordinate Annapolis County, or parts thereof, would be welcomed by Hans.

**Saturday, May 19, 2007 – Cape Split Hike 1**, with leaders Sherman Williams (542-5104) and Jim Wolford (542-9204). We will make interpretive stops along the way. Spring wildflowers and birds should be abundant. The tide will be low at the start of the hike, and likely near maximum when we reach the end of the cape. Meet at the Wolfville waterfront at 8:15 a.m. or at the start of the trail in Scots Bay at 9 a.m.

**Saturday, May 19, 2007 – Astronomy Observing Session.** Join Roy Bishop (902 542-3992) and members of the Minas Astronomy Group to observe the night sky. There will be telescopes on hand to show off the wonders of the night sky. Highlights will include Mercury, Saturn, spring constellations, and a crescent Moon beside Venus. For those who stay a bit later, Jupiter and the asteroid Vesta will rise in the southeast. Meet at 9:30 p.m. in the old parking lot at Grand Pre National Historic Site. There is no rain date.

**Saturday, May 26, 2007 – Blomidon Provincial Park.** In conjunction with Parks Are For People, Jim Wolford (902 542-9204, <jimwolford@eastlink.ca>) will lead a walk from the campground about two kilometres to the temporary pond that has the very rare and beautiful Fairy Shrimps, etc., and to the lookoff toward Five Islands Park. This is a beautiful time of year and location for spring flowers and birds. Meet at the Wolfville Waterfront at 9:15 a.m. or at the Blomidon Park registration building at 10 a.m.

**Sunday, May 27, 2007 – Cape Split Hike 2**, with leaders Sherman Williams (542-5104) and Jim Wolford (542-9204). We will make interpretive stops along the way. Spring wildflowers and birds should be abundant. The tide will be low at the start of the hike, and likely near maximum when we reach the end of the cape. Meet at the Wolfville waterfront at 8:15 a.m. or at the start of the trail in Scots Bay at 9 a.m.

**Sunday, June 3, 2007 – Neary Pines Bald Eagles**. George Forsyth (902 542-7116) will lead this walk to see a mature pine/hemlock forest, original Acadian cellar remains, active Bald Eagle nest, Poor Farm graveyard, beech hardwoods along the Cornwallis River, and the birds and flowers along the way. Meet at the Wolfville waterfront at 9 a.m. or at Noggins Corner Farm in Greenwich at 9:15 a.m. for this easy hike, done by noon.

**Sunday, June 3, 2007 – Nature Nova Scotia AGM & Field Trips**. Join fellow Nova Scotia naturalists for a day of schmoozing and exploring in the Truro area. See notice on page 43 for details (see also the website <<http://naturens.ca>>). Meet at 10 a.m. at the Community College in Truro.

**Saturday, June 16, 2007 – Palmetter's Woods**. Judy Tufts (542-7800) and Nancy Nickerson (542-9332) will lead a walk through the woods behind Evergreen Home for Special Care, located in the western end of Kentville. Come and explore this little green gem with us. We will have a good chance to see a variety of warblers and other migrants, and fascinating woodland plants. Meet at the Wolfville waterfront at 8 a.m. or at the parking lot behind Evergreen Home for Special Care (655 Park St) at 8.30 a.m. Juniors to seniors welcome. (The early meeting time will give more time to hear bird songs as the birds are most vocal then.)

**Sunday, June 24, 2007 – Cloud Lake Wilderness Area Canoe Trip**. Patrick Kelly (902 798-3329) and Larry Bogan (902 678-0446) will lead a canoe trip in the Cloud Lake Wilderness Area. The trip will be at about five hours long, so be sure to bring a hearty lunch, water, drinks, and, of course, life jackets, canoe, and paddles. If you have access to a life jacket but not a canoe, there will likely be extra room in one of the canoes. Check with one of the leaders to be sure. The trip will cover Frog Lake as well as Cloud Lake, and you will get a chance to stretch your legs on the portage. Meet at 9 a.m. at the parking lot of Avery's Market on Hwy 1 in South Berwick (a half-hour drive from Wolfville).

**Wednesday, August 1–Sunday, August 5, 2007 – Time & Tide.** This year, Nature Canada’s annual conference and AGM are being hosted by Nature Nova Scotia at Acadia University in Wolfville. The conference will feature presentations about the Bay of Fundy and watershed from leading experts in their fields. A program of field trips will cover the region and include such topics as geology, marine science, birds, astronomy, hiking, and canoeing. For details, see the website <<http://nature2007.ca>>.

**Friday August 17–Saturday August 19, 2007 – NOVA EAST 2007.** Atlantic Canada’s longest-running star party will be held at Smileys Provincial Park near Brooklyn in Hants County. Some of the presentations and workshops, as well as the Saturday evening observing session, are open to the public. NOVA EAST is hosted jointly by the Halifax Centre of the Royal Astronomical Society of Canada, the Minas Astronomy Group, and the Nova Central Astronomy Club. More information can be found at <<http://halifax.rasc.ca/ne>>.

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## **Good Things Keep on Happening – with Teamwork**

’Tis the season of the Luck of the Irish, so I should like to raise a glass of green what-ever-your-choice-is and toast all who have made not only this last quarter of BNS function smoothly, but the past 33 years! When a comet inspired some of us to propose starting up a natural history organization in this area, we had little to model ourselves on, as we were among the first in Nova Scotia to organize such a group. Never did we realize that 33 years later Nature Canada would be coming to our doorsteps to share our unique ecosystems. Good luck has certainly come our way, but tenacity, perseverance, time, organization, and willingness, just to name a very few real ingredients in our being at this moment, have certainly been the mainstay. The magic of teamwork has certainly worked wonders. Thanks be for all of it, to all of you. Please come out and welcome our guests as they arrive on or around August 1 for the Time & Tide conference. It will certainly be the best party yet!

—J Timpa, ed.

**Executive Notes**  
**A Good Year for Us**  
by **John Harwood, president BNS**

“Well, how about that!” says one of the well-known sports reporters when commenting on an excellent play shown on This Week in Baseball. Our BNS play wasn’t at all spectacular, but it was a first for the Society – two meetings in a row cancelled because of wintry weather. The way things are going as I write this in early March, there’s a chance we might be heading for three in a row. Let’s hope not.

We have missed out on a number of important things as a result of the cancellations. The first is the presentation of the promised New Year’s Honours List. The executive has selected three worthy members to receive Honorary Life Memberships this year. We will honour them properly in the summer issue. While we are at it, we will include a piece on Mary Pratt, who received her HLM last year. Ed Sulis, our worthy treasurer, has produced an attractive certificate for each recipient. We are very pleased with his work. Perhaps there are earlier honorees who might like to have their certificates replaced. If so, we would be pleased to do so.

Cancellation of the January meeting meant that we missed the much-anticipated talk by Twila Robar-DeCoste. Patrick Kelly always seems to have an ace up his sleeve when it comes to the program. The April meeting’s presentation had not been confirmed, Twila is available, so we have her lined up for it. Patrick is thinking that it might be a good idea to leave the April meeting blank until March every year just in case we have weather problems. His suggestion is a good one, I think.

We missed our annual Members Night show and tell in February. I am aware that several members, young and older, had gone to considerable effort to prepare presentations for the evening. Rather than letting all the work go to waste and our missing out on the content, we concluded that the best solution would be to schedule an extra meeting between the April and May meetings. See the program listings on pages 6-7. If you were considering a presentation but didn’t get it organized, now’s your chance complete it.

You will have noted that we have a great program for the summer and that Nature Canada will be holding its annual conference at Acadia in August. I expect we will have another elementary school Art and Nature competition before school ends, and work is ongoing for a super summer Young Naturalist Program. We hope you enjoy it all.

## **Wanted – Right Away Wolfville Shoppers**

Nature Canada is holding its annual conference in Wolfville August 1-5, 2007, with lots of great speakers and local field trips. And, as you can expect, many of us in BNS are already deeply involved in the planning.

About six weeks ago, Nature Canada sent letters notifying local businesses in Wolfville about the conference. We expect some 200 to 300 people from across the country, so this is an excellent opportunity for local vendors to reach out to conference participants, who will be here for the best part of a week. We are now looking for a few volunteers to follow up with specific information for these businesses and to ask for donations and sponsorships.

The Planning Committee has done the footwork. We have a brochure that describes what donors will receive for each of four levels of donation (from less than \$100 to more than \$1000). And we provide volunteers with an easy form for the donor to fill out.

I know that many of you are quite familiar with local businesses (we initially wrote to about 50 of them), and we really need your help at this point. To volunteer, please contact me directly at the e-mail or telephone number below. I have all the contact information and materials that you'll need to participate.

If you know someone who might help but does not have e-mail, please let me know, or pass on this message. Thank you for your help.

E. Jean Gibson Collins (treasurer, Nature Nova Scotia)  
Tel: 902 678-4725, e-mail: <nstn1738@ca.inter.net>

# BNS Field Trip Report

## Pond Life through a Microscope

by Todd Smith

April 9, 2006 – On this warm spring afternoon, about 15 members of BNS came to a teaching laboratory in Patterson Hall, home of Acadia University’s Biology Department, to examine the microscopic life found in typical ponds and other small bodies of fresh water in Kings County. Two members of the Biology Department, protozoologist Todd Smith and microbiologist H el ene D’Entremont, were on hand to help the participants identify the diversity of organisms found in these water samples.

Before the field trip, water samples were taken from each of four selected freshwater locations in the county: Wanda Langley’s artificial fish pond in Kentville, a river-fed pond on Middle Dyke Road south of Church Street, a rainfall-fed pond near the Cornwallis River off Middle Dyke Road north of Hwy 1, and the large pond just west of the Maple Leaf Fresh Foods plant in Canard. In addition, some participants brought water samples from their own local water bodies.

We attached a specialized microscope to a television, and participants were treated to video microscopy of many unusual microbes and animals. As well, each person was encouraged to obtain a drop of water from a sample, dispense it on a glass microscope slide, and examine it using one of several microscopes that were set up in the lab. Everyone enjoyed exploring the normally unseen life that makes up a pond, and for many participants this was the first time they had seen these types of organisms. Here are some of the highlights from our examination of these various water samples:

### **Plant-like Microbes (cyanobacteria and eukaryotic algae)**

We observed high numbers of many species of cyanobacteria (Kingdom Bacteria) and eukaryotic algae (Kingdom Protista), the two groups of plant-like microscopic organisms that use photosynthesis to make their own food.

Cyanobacteria grow in long, dark-green strands visible to the unaided

eye; although we used the microscope to observe their structure to a much more detailed degree, we were not able to key out any of our specimens down to the level of genus.

We did identify several species of microscopic green algae (phylum Chlorophyta), including the star of the show (literally), a colonial species called *Pediastrum*, which was characterized as 16 individual algal cells (zooids) arranged and connected in a star-like pattern and drifting in the water.

Members of another group of algae, the diatoms (phylum Bacillariophyta) were observed; these photosynthetic one-celled organisms are encased in two shells of silicon dioxide (essentially glass) and glide by an unknown mechanism so slowly through the water that at first they appear motionless.

A third group of algae we encountered were gold algae (phylum Chrysophyta) of the genus *Synura*; these appear golden-brown, are also colonial, and feature about 30 zooids, each with one flagellum at its base, to form a highly mobile ball with what appear to be many tails.

The final group of algae – although they are often considered protozoa (see below) – that we witnessed were members of the genus *Phacus* in the phylum Euglenozoa. These individuals are mobile by virtue of a very long flagellum, and can detect the light level in a pond (very important for a photosynthetic organism) by means of a tiny light-detection organelle that appeared as a red “eye” at the anterior end of the cell.



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## **Protozoa (animal-like, single-celled microbes of the Kingdom Protista)**

We found many species of three groups of one-celled, animal-like organisms called protozoa, which move around in search of the food they need for nutrition.

We observed many species of ciliates (phylum Ciliophora), which move (rather quickly) by means of hundreds or thousands of tiny hairs on their one cell. Noteworthy ciliates included several species of slipper-shaped *Paramecium*, which zipped and darted across the field of view as we watched them in the microscope, and the bizarre *Vorticella*, characterized by a tulip-shaped body atop a springy stalk attached to strands of algae.

There was no shortage of flagellates, which moved rapidly through the water using one or two long tails that project from their single cells, although none were identified to genus level.

For the first time in three years, we observed an amoeba. We identified it as a specimen of *Arcella* in the Canard pond and noted its protective dome-like shell and thin cytoplasmic projections, or pseudopods, that project out of the shell for feeding purposes.

## **Multicellular Animals (Kingdom Animalia)**

Many groups of tiny animals were abundant in our samples, including representatives from five phyla and seven major taxonomic groups. Highlights included several specimens of a tiny species of translucent roundworm, or nematode (phylum Nematoda), thrashing through mats of algae and feeding by means of their relatively large mouth.

New for this year was a flatworm of the phylum Platyhelminthes; the one specimen we observed was small (<1 mm), dark-coloured, and, as is typical of the group, flattened dorsoventrally.

We observed several distinct but unidentified species of rotifers (phylum Rotifera) in different water samples. Many participants were intrigued by the rapid, wheel-like action of rings of small hairs near the mouths of these invertebrates.

In several samples we observed a few small aquatic oligochaetes (phylum

Annelida), a type of segmented worm related to the earthworm. One species in particular appeared like a miniature aquatic earthworm, moving slowly through the water.

Crustaceans (phylum Arthropoda, subphylum Crustacea, which also includes shrimp, lobsters, and crabs) were abundant on this day, and we observed two main classes of microscopic species, ostracods and copepods. Ostracods, oddly-shaped crustaceans that each live within a tiny clam-like shell, fascinated participants with the jerky movements of their projecting legs.

Copepods are more typical of a crustacean body plan, and are shaped like teardrops with the head and antennae at the blunt end, the body tapering to a point. Nearly everyone had a chance to see the one red eye that these animals use for vision, and for the second year in a row several participants found specimens that were carrying eggs on each side of the body like two bunches of grapes.

We saw the immature aquatic stages of two groups of insects (phylum Arthropoda, class Insecta), including a beautiful mayfly nymph, which had six walking legs and was observed fluttering its external abdominal gills to bring oxygenated water toward its body, and a midge larva, which was legless but still able to wriggle its way across the slide.

### **Summary**

In summary, this field trip featured some microbes and animals that had not been observed in previous years, and keeps us guessing as to which organisms the following year will bring. Indeed, participants and demonstrators will definitely agree that a drop of pond water is not what it seems!

[See the program, p. 8, for this year's indoor pond life field trip.]

## **BNS Field Trip Report**

# **Winter on Snowshoes**

**By Soren Bondrup-Nielsen**

The week leading up to Saturday, January 20, had been cold with snow on the ground, and I was looking forward to the Winter on Snowshoes outing. This trip to investigate snow and tracks left by various denizens of the woods was to take place Saturday morning. On Friday it turned warm, above freezing, and it rained, it really rained. But during the night it got quite cold and started to snow – typical Nova Scotia winter weather.

When I awoke and found conditions okay for the outing, I decided to chance it. At eight I headed up to the woods south of Acadia and walked part of the trail. There was a nice layer of snow on the ground, but it was quite wet under the snow; rubber boots were the best footwear. I headed down to the Wolfville wharf and waited; I wondered how many people would show up.

Three hardy souls and I spent a wonderful morning slowly making our way along the winding trail south of the University. There were not a lot of tracks. Along the whole trail we followed the tracks of a person who had been out walking a dog; the dog was not on a leash, and we could examine how the dog had run through the woods sniffing here and there.

More interesting tracks included several tracks of Deer Mice as they ran from the base of one tree to the base of another. The Deer Mouse leaves a distinctive track with the tail dragging in the snow. We saw several tracks of Red Squirrels as they typically hopped also from the base of one spruce to the base of another. The Masked Shrew left tunnels or trough-like depressions in the snow as it ploughed along. We also saw the tracks of the Short-tailed Shrew, the largest of the shrews. This shrew also ploughs along and leaves a trail that looks more like the animal lumbered along.

The snow had stopped falling sometime in the early morning hours, and the various animals had not had much time to leave their trails, but we had a wonderful time ambling along the trail in the sunny but cold weather.

## BNS Field Trip Report

# Greenfield Cross Country Ski

by David Dermott, Wolfville Ridge

Jan 27 2007 – Three rugged people – Mary, Gisela, and David – braved the very cold (-15°C) temperatures and marginal ski conditions. We started at the Halfway River bridge near the Greenfield cemetery. Until last year, there was a beaver dam on the river here, but it has been washed out. We could see the abandoned beaver lodge below us.

The trail starts out in mixed forest where kinglets and Boreal Chickadees have been spotted, but today we didn't spot any. Because of the cold, we had several layers over our ears, so hearing bird sounds was difficult.

Soon we came to Little Lake, a small seasonal pond, but it was too cold and windy to explore the exposed shores where Canada Holly berries were still out.

The trail goes into open hardwoods where we caught a few glimpses of Black-capped Chickadees. There were many tracks of Snowshoe Hares in the snow.



The skiing was surprisingly good on the wide, level woods road, but narrower, rougher trails were not passable, so we returned early to the cars after about an hour and a half.

## **Nature Nova Scotia Notice**

# **Time & Tide: Nature Canada 2007**

During the first week of August this year, Wolfville will be seeing naturalists from across Canada at the annual Nature Canada conference and AGM. Nature Nova Scotia (Federation of Nova Scotia Naturalists) is hosting the conference on the Acadia University campus. The conference theme is Time & Tide. The dates, August 1–5, were chosen to coincide with the migration of shorebirds through the Minas Basin.

The conference will include presentations as well as a good variety of field trips and pre-and post-conference tours. I encourage Nova Scotia naturalists to attend the conference and make a good showing for our visitors. It is a good opportunity to meet people with similar interests from the rest of Canada.

See our website for complete information and registration material:  
<<http://nature2007.ca>>.

Nature Nova Scotia is a volunteer organization, consisting of representatives from the naturalist clubs across Nova Scotia. Organizers need help to run the conference, so if you can, please volunteer to help. We need people for the registration desk, transportation of visitors, hosting guests, and many other jobs.

Please contact me (<[larry@bogan.ca](mailto:larry@bogan.ca)> or 678-0446) if you would be willing to volunteer. And please note that Jean Gibson Collins is also looking for some Wolfville volunteers – see her plea on page 13.

Larry Bogan, president, NNS

**Seen in the Wild**  
**Southern Flying Squirrel**  
by Jean Timpa

On the evening on March 8, while I was talking on the phone to Marie Wamboldt in Clementsvale, between Annapolis Royal and Digby, she suddenly exclaimed, "Oh, there is a squirrel on my bird feeder." It is basically a tray feeder with a windowed see-through house on it for storing sunflower seed. It is often plagued with Red Squirrels and chipmunks, but this was about 9 p.m. on a dark night, so I quickly suggested that it might be a flying squirrel. She admitted that several years previous she had seen one fly in and land on the feeder, and my daughter saw one feeding from it several years ago, too, after dark. Marie's rocking chair is right beside the porch window, the feeder just on the other side, so she is just inches away from whatever happens to be feeding upon its contents.

I asked her if it looked like her usual Red Squirrels, and she replied that it did not have a red coat, but a brown/gray back, and a very well-defined black line between the back and the white belly. It dined at the feeder the whole time we were talking. The Southern Flying Squirrel has a white belly and has only been recorded in Nova Scotia for a few years now in Southwestern Nova Scotia, especially in Kejimkujik National Park, which is not very far from Clementsvale. Our more common Northern Flying Squirrel is a darker grayish brown, with the dividing black line and a gray tummy. I sent my Audubon Mammals guide down to her to look at this weekend, and she confirmed that her visitor was indeed the southern one. I hope sometime we can get some photos of it.



**BNS/AFNS Field Trip Report**  
**A Modern Herbarium**  
by **Jean Timpa**

March 3, 2007, 1 p.m. – Six members of the Annapolis Field Naturalists and five from BNS joined Melanie Priesnitz, Ruth Newell, and me in the front hall of the K.C. Irving Environmental Science Centre at Acadia University for a tour of the greenhouses, plant-processing workrooms, and herbarium. We were attempting to show our visitors how we would harvest a plant in the wild (the greenhouses did well as a substitute because of the time of year and a major snowstorm the night before) and the various steps the intended herbarium specimen would be put through before finally filling its correct place on the herbarium shelves.

Melanie first took us through the greenhouses, explaining not only the up-to-date technology for specialized research but also about some of the plants, including student experiments; Sam Vander Kloet's vaccinium plants from around the world, some even in bloom and berry; plants being grown for the Centre's spring tree and bush sale; and orange trees to keep the Garden Room supplied with greenery. At the end of the building Melanie showed us their potting room, which is often a very busy place. She also explained some of the gardens to the south of the building, which we could see from a glassed doorway.

Then I took them down one level to the preparation room, where we bring collections of plants from field, forest, and water habitats. We looked at and discussed collecting containers and methods, I demonstrated filling a plant press and explained the drying cabinet to the group. We had a lively discussion about collection of data and how much more accurately we can now pinpoint collection sites by using GPS. After the plants are dry, they are unpacked from the press, and formal labels are made on the computer from the data collected. I demonstrated the materials I use for gluing a plant sheet, and went through the steps with several fringed orchids. I also demonstrated piling the freshly glued plants with spacers and weights.

Then we walked down the hall to the outer rooms of the herbarium, where

Ruth first explained our library resources and then went on to explain about giving the plant sheets their own numbers via a stamp, accessing the collection in a ledger, and recording the information on a special Hyperion database. The plant sheets are then bundled and wrapped in plastic bags and frozen for two weeks at  $-20^{\circ}\text{C}$  to kill any insect life or moulds that might infect the plant material or paper or spread to the rest of our collections. Once the plants are out of the freezer, warmed to room temperature, and unwrapped, each is scanned so that its picture can be sent anywhere in the world for other scientists to study without having to send the actual plant material, which is often damaging to it. The final step occurs when the correct phylogenetic place is determined in the collection and its folder found. Placement is also determined by geographic origin.

Ruth explained the collections of mosses, lichens, liverworts, seaweeds, and fungi, and how they differ in preparation from the flowering plants. We encouraged our visitors to return any time for further instruction, as some expressed interest in collecting for themselves, or for us, too.



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**A Birding Life**  
**Wolfville Birder: Austin Loomer Rand**  
**by Merritt Gibson**

A Snowy Owl stands on the cabinet in my study, admiring my paper-strewn desk. It was prepared by Austin Rand, having collected it on Grand Manan Island, New Brunswick, November 20, 1924. Rand was born in Kentville in 1905, but his family moved to Wolfville and he grew up on west Main Street, present civic number 654, also known as Kent House.

Austin Rand became interested in the outdoors at an early age, especially birds and mammals. He joined the Wolfville Scouts, where he met Robie Tufts. Tufts had been invited to speak about birds, but that was difficult because Rand kept interrupting with his own observations and questions. As he did for so many young people, Tufts became Rand's mentor, encouraging his interest in birds. Fifty years later (1971), Rand wrote, "When as a youth in Nova Scotia I became aware of birds, the local 'bird man' (Tufts) impressed on me the importance of learning firsthand what each bird did, and how and where it lived, as well as what it looked like."

Rand was a huge man, six-foot-six and ruggedly built. Stories of his physical achievements are legend. One story (and there are several versions) tells of the time that, after work at Trout Lake in Annapolis County, Rand prepared to return to Wolfville. He placed his pack on his back, took out his compass, plotted a direct route to Wolfville, and started running. When he came to a lake, he held his clothes above water and swam across, staying precisely on his compass route. He reached Wolfville in late afternoon, having run the equivalent distance of almost two marathons.

Austin Rand enrolled in biology at Acadia in 1924 and, as a student, travelled widely throughout the Maritimes. Today, there are still 212 specimens of birds and mammals that he prepared in the Acadia Biology Museum. After Acadia, Rand entered the PhD program at Cornell University. However, his studies were delayed when he accepted a two-year position on an expedition to Madagascar, during which he was selected to write up the ornithology observations. This also became

the topic of his thesis, and he received his PhD in 1932. His thesis, *Distribution and Habits of Madagascar Birds*, was published in 1936 and is still recognized as a leading study of these birds. While in Madagascar, Rand described a new group of birds. Later, ornithologists placed these birds in the new genus, *Randia*, named in his honour.

After PhD studies, Rand joined the Museum of Natural History in New York City. Over the next six years he was co-leader and ornithologist on three expeditions to New Guinea. Later, in 1940, he co-authored the New Guinea Expedition and a *Handbook of New Guinea Birds*. The *Wolfville Acadian* reported on April 5, 1934, that this “well-known Wolfville scientist” would visit home after exploring “the Western Coast region of New Guinea that has not been entered for 50 years.” It also noted that his letter to his parents told only of his bird observations and “made no mention of trouble with head-hunting natives.” (Well, would you tell your parents?)

In 1941 Rand accepted a position with the National Museum of Canada and immediately organized studies in western Canada. This resulted in many research papers plus two books: *Mammals of the Eastern Rockies and Western Plains of Canada* and *Birds of Southern Alberta*. A colleague noted that Rand’s well-organized Field Notes were also worth reading, with “laconic comments on the weather, people (sometimes vividly characterized), campfire talk, and well-worded accounts of daily incidents.”

Rand left Ottawa in 1947 to become Curator of Birds at the Chicago Field Museum of Natural History. Under his leadership, the collections were expanded with the addition of specimens from several countries. One colleague wrote of his leadership: “His main inspiration to the staff came from his consuming interest in all aspects of birds.” At this time he led expeditions to the Philippines and Central America and wrote *Birds of El Salvador* in 1961. While at Chicago, Austin Rand served as president of the American Ornithologists’ Union from 1962 to 1964.

Rand’s wife, Rheua, was also a naturalist and director of a nature museum. The two spent much time, with their dogs, exploring the countryside about their homes. In 1961 they co-authored *A Midwestern Almanac: Pageant of the Seasons*, describing the natural history of the sand dunes

south of Lake Michigan. Rand retired from the Chicago Museum in 1970 and moved to the Archbold Biological Station near Lake Placid, Florida, where he continued his studies of birds.

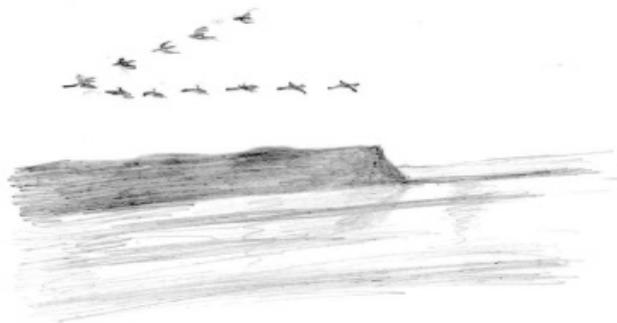
On one occasion, Austin Rand wrote, “In my youth I was fascinated by birds and geography and wilderness areas, and with writing about them.” Of his work in North America, he wrote, “I have observed birds from ocean to ocean and from Florida to Alaska.” And again, “The pleasure and stimulus of seeing them and writing about them has been a lodestar of my being.” (Quotes from Rand’s *Birds of North America*, 1971.)

Austin Rand authored or co-authored at least 21 books, both scientific treatises and popular accounts. I always enjoy reading *Stray Feathers from a Bird Man’s Desk*, which includes 60 stories about birds, such as: “Birds Using Tools,” “Crows are Smarter than Wise Owls,” and “Curiosity in Birds.” I do not know how many scientific papers he wrote, but one note states that he wrote 103 research papers while in Chicago. He wrote many others during his time at other museums. He also wrote popular articles in a several magazines and the *New York Times*, and a weekly nature column in the *Lake Placid Journal*.

In 1961, Acadia University awarded Rand the honorary Doctorate of Science degree. The citation concluded, “a distinguished ornithologist who has brought honor to himself and to his Alma Mater.” Austin Rand died on the 6th of November 1982, within a few hours, as noted by one colleague, of the death of his mentor, Robie Tufts.

## Reference

Traylor, M.A., D. Amadon, W.E. Godfrey. 1984. “In Memoriam: Austin L. Rand.” *The Auk* 101 (3): 600–602.



**Seen in the Wild**  
**Winter Birds 2006-7**  
by Mike McCall

The mild weather of early winter certainly resulted in many species staying on long after their normal departure date, although the more I learn about birds the more I realize there's almost nothing "normal" about their behaviour. A Great Blue Heron was at Cole Harbour on Dec 16, and a Sandhill Crane lingered on the south shore near Bridgewater; it was seen in mid-December and later, on Feb 15. Raptors, no doubt encouraged by easy hunting over bare fields, have been reported continuously – Red-tails, Rough-leggeds, Peregrines, and Bald Eagles being the most common. John Kearney reported an albino Red-tail near Hortonville on Mar 1. A Cooper's Hawk presented a gift sighting to Richard Stern right in his own driveway on Jan 5. This bird, apparently the same juvenile, came back for an encore on Feb 7. Richard went to some lengths to consult with birders who had experience with Cooper's and his sighting has been confirmed.



GREAT BLUE HERON

**Others**

On Dec 16, Jean Timpa and Judy Tufts shared sightings of an Eastern Phoebe and a Dickcissel, and Harold Forsyth saw a Dickcissel, possibly the same bird, on Jan 10 at his place near Wolfville. Other lingerers were a Common Yellowthroat, seen on the Christmas count, a Baltimore Oriole at Windsor on Dec 28, and a Pine Warbler was at Richard Stern's feeder for two days in early January. Glenys Gibson's Canning feeder runneth over: not only did she have cardinals all winter, but attracted a Carolina Wren on Jan 19. Jim Wolford's feeder has hosted a Northern Cardinal pair for most of the winter and a Yellow-breasted Chat on Jan 22. Jim

and Pat were happy to provide a free lunch for a Red-tailed Hawk, which pounced on a Norway Rat that was snacking beneath the niger feeder. Pat watched the hawk take the rat and proceed to devour it completely, except for a couple of tufts of fur.



I reported on large flocks of robins in the last issue and can do so again. A flock was seen at Port Williams on Feb 9, another group of 60+ visited Merritt Gibson's property the next day, and Richard Stern reported about 50 in Kentville on Feb 18. I see a lone robin flying past my office window at least three times a week. Grackles too, may be over-wintering; Ray Dempsey has been feeding six birds all winter, and five were reported on the south shore on Mar 4. Jim Wolford

opined that Marian Fulton's happy sighting on Mar 5, rather than being a sign of spring, was possibly another one of the stay-behinds.

Where are the Purple Finches? Several birders are asking the question. And so am I. I've always had Purple Finches at my feeder on the North Mountain, but they weren't around all summer and have stayed away all winter. The same is true of Boreal Chickadees. I've always been able to find a small flock as I walk around my property in winter, but not a dickie-bird, as an English friend would say, this year. Several people have chimed in to mention that their winter Boreals are also absent.

### **Miscellany**

Globe and Mail, March 5, 2007 – Researchers seem to have an answer to how cowbirds get away with leaving their eggs in the nests of other species. If the host birds reject the strange eggs, the cowbirds come back and trash the place.

“It's the female cowbirds who are running the mafia racket at our study site,” Jeffrey Hoover, of the Florida Museum of Natural History and the Illinois Natural History Survey, said in a statement. “Our study shows

many of them returned and ransacked the nest when we removed the parasitic egg,” he explained.

While cowbirds leave their eggs in the nests of other birds, the researchers focused on warblers in the study because warblers usually accept and raise cowbird eggs. To see what would happen, Dr. Hoover and Dr. Robinson watched where the cowbirds left eggs in warbler nests, and then removed some of them. They found that 56 percent of the nests where cowbird eggs were removed were later ransacked.

They also found evidence of what they called “farming” behaviour, in which cowbirds destroyed a nest to force the host bird to build another. The cowbird then synchronized its egg laying with the host’s re-nest attempt.

“Cowbirds parasitized 85 percent of the re-nests, which is strong supporting evidence for both farming and mafia behaviour,” Dr. Hoover said.

### **New Zealand Birds**

You may be aware that I abandoned you before the end of the fall 2006 reporting period and selfishly visited New Zealand from early November to mid-December. To compensate for my inability to report on local birds, I’ll mention some of the more interesting aspects New Zealand bird life.

My first New Zealand bird was hardly exotic: A very common House Sparrow cheeped its unmusical note above my head as I drank a morning coffee in the Auckland airport coffee shop. As in most warm climates where eatery doors remain open during the day, birds are free to come and go as they please and, in New Zealand, are bold as brass. Among the many other European species that settlers brought to New Zealand, we encountered European Goldfinch, Chaffinch, starling (wouldn’t you know it?) redpoll, Song Thrush, and Blackbird (European). Another introduction caught us by surprise when saw what looked like a couple of wild pigs following a sheep track up a hill. They turned out to be Wild Turkeys; a small population lives in rural areas of the North Island.

Of course, New Zealand almost lives for tourism, and the authorities won’t let you leave until you’ve seen a penguin, so a visit to a penguin colony is *de rigueur*. A slightly crazed-looking Yellow-eyed Penguin and I stared at each from about six feet at a beach near Oamaru on the South Island,

and a few hours later I sat in a bleacher at sunset with 200 other tourists to watch little Blue Penguins waddle timidly onto a beach after a day of fishing offshore and head for their nests in the brush. We were warned to be careful driving out of the parking lot, and sure enough, one little fellow was parked almost under the front bumper of our van. The only raptor we observed was the ubiquitous harrier, dull brown and similar in size and shape to our Northern Harrier, but with the white rump patch.

A challenge in the very modest birding I did in New Zealand (note that I have not mentioned shorebirds, waterfowl, or pelagic species, for instance) was simply remembering the rather exotic and unfamiliar names of such attractions as the Tui, Kokako, Kakapo, Pukekos Weka, and Takahe, a large, heavy, flightless, brightly coloured gallinule. One crept out of the woods and tried to undo the shoelaces of one of our party with its heavy bill.

Tititiri Watangi Island, an avian conservation project about 30 km northeast of Auckland on the Pacific side, has literally been brought back to life. After 120 years of agriculture had left it stripped of trees and brush, the Department of Conservation, with the help of volunteers, planted 300,000 trees and undertook stewardship of the island. It is now covered in lush vegetation, and the populations of many threatened bird species have recovered and are now spreading to parts of New Zealand from which many had all but disappeared. The success of the program was much assisted by eradication of predator mammals, among which is the possum, detested by the Kiwis for its predatory habits. When man's hunting of the Kiwi [the bird] had made it a rare species, the possum was brought to the country and nearly finished it off. But the automobile now seems to be doing a pretty good, if messy, job of reducing the possum population. The web site is <[www.tiritirimatangi.org.nz/](http://www.tiritirimatangi.org.nz/)>.

### **And Finally . . .**

I know it's cold (March 8), but I decided to give myself a lift. By going to the hummingbird migration website I saw that lots of Ruby-throats have left Guatemala and are now in the Florida Panhandle, southern Alabama, and northern Florida. If they keep to their flight plan, (mine really), they'll be here two months from today. Smile!

## Notice

### Caverhill Wins Environmental Leadership Award

(Wolfville, NS) – Acadia University’s Arthur Irving Academy for the Environment has awarded its first Environmental Leadership Award to 2006 MSc graduate Brennan Caverhill. The award is given to one graduating student, or to a group of students (at least one of whom is graduating), who has demonstrated exceptional environmental leadership during the previous year at Acadia University.

“Of the more than 90 honours and graduate students I have supervised over the past 28 years, Brennan is certainly one of the most outstanding,” said Acadia Biology professor Dr. Tom Herman, who nominated Brennan for the award. Over the past four years, Brennan, a Dean’s List and University Scholar from Woodstock, New Brunswick, has integrated himself into the small rural community of Pleasant River, Nova Scotia, in an effort to conserve and protect one of the three known Nova Scotia populations of the endangered Blanding’s Turtle. Brennan’s enthusiasm is infectious, and he has a remarkable record of achievements, including

- establishing a nest monitoring program for landowners in the Pleasant River area to monitor and protect nests of Blanding’s turtles on their properties, and an informal reporting network for species-at-risk sightings in the area.
- delivering dozens of public presentations on species at risk to schools, service groups, and naturalist clubs.
- organizing two environmental “paddle-bike-hike-a-thons” in southwest Nova Scotia to raise awareness about species at risk and funds for worthy causes.
- contributing to the design, and participating in, a Mermaid Theatre production on species at risk.

“The Blanding’s turtles at Pleasant River are now considerably more secure than they were five years ago,” said Dr. Herman. “Hundreds of southwest Nova Scotia residents, from pre-school to seniors, are better informed about species at risk, more aware of the unique organisms in their own back yard, and in a better position to serve as advocates themselves for conserving biodiversity.”

**Natural History**  
**Shipwrecked: The Life of a Parasite**  
by Dave Shutler

**Part 1 – Sympathy for the Parasite**

Because we see ourselves as their victims, we seldom stop to think how hard it is to be the parasite (although my parents claim I've got lots of experience). Before we go too far, I guess I'd better provide some definitions from an ecological/evolutionary perspective. First, a parasite is a replicating entity; in other words, it reproduces in some manner. This capacity means that under the banner of parasites, I include prions, viruses, and bacteria, as well as the familiar gross critters everyone usually thinks of. Second, a parasite depends on a host for some part of its life cycle. Third, it reduces its host's ability to produce surviving offspring (its Darwinian fitness). So, parasites are bad from our perspective. But, what if you were a parasite? I think you might want some sympathy. Let me explain.

On the surface, the parasitic lifestyle appears to be a very lazy; parasites just sit back and soak up food. But I doubt there are many parasites that can sit. And some don't even have mouths! Logically, parasitism must have evolved after hosts appeared; otherwise, what would parasites do? Clearly, they couldn't sit (and wait). This means that parasites evolved from free-living organisms. And by golly, the parasitic lifestyle has evolved many, many times, in many, many lineages! There must be a reason for this. I reckon it's the old adage that nature abhors a vacuum (as does my wife's dog). More to the point, all organisms are bags of hoarded nutrients. A parasite that figures out how to get some of the hoard saves the effort needed to collect its own. In economic terms, a parasite potentially reaps lots of income for minimum expense. So why don't all organisms become parasites? Because they'd all starve without the hoarders. And it's not like it's simple to become parasitic; they really deserve our sympathy.

Conceptually, it's probably easiest to see how skin parasites (ectoparasites) first carved out a niche of their own. Lots of insects make temporary

pilgrimages onto our skin, but critters like mosquitoes and black flies don't qualify as parasites by my definition because they don't depend on a host to complete their life cycles. They may make more babies with a blood meal, but they still retain a measure of independence from hosts. In contrast, lice and ticks familiar to vertebrates are often locked in; they need a host to complete their life cycles, and in the case of lice, die if they are off their hosts after several minutes. So why be sympathetic to them? Ever swatted a mosquito? Ever done cruel things to a deer fly? Or a tick? Imagine how frightened you would be if you had to approach one of us humans to get a tiny volume of blood. (From that perspective, you might ask why humans are so selfish.) The prospect of getting smashed by someone's grubby hand is enough to warrant considering other options.

Some parasites decided to escape the risks of being swatted by going right inside hosts (endoparasites). For example, malarial parasites are single-celled entities that get spit out by mosquitoes' salivary glands into the blood vessel of vertebrates. Once the malarial parasites are inside, these poor adorables are assailed by hostile amoeba-like guards coursing through the blood. The host's guards are different kinds of white blood cells that come along and frisk body surfaces to make sure that each cell belongs, in the same manner as customs officers. If a cell isn't carrying the same documents that all the other host cells carry on their surfaces, the guards turn hostile. They spew caustic enzymes, and alert other guards waiting in the wings (or other limbs) of the host. If successful, the guards kill the invaders and deport them from the body. Makes you feel sorry, doesn't it?

Other endoparasites are less Transylvanian, more content living in an organism's gut, bathed in predigested mush the consistency of hospital food that is laced with, among other unpleasantries, digestive enzymes. Although parasites in the gut mostly escape the customs officials and the grubby hands, it's still a lifestyle to pity.

So, the decision to be a parasite comes with a price. But, if you thought that the only hardships were grubby hands, unsympathetic guards, and squalid living conditions, stay tuned. There are lots more reasons to be sympathetic.

---

*ET on a bad day? No, it's a hookworm*



**Report**  
**2006 Wolfville Christmas Bird Count**  
**(from BNS website)**

**December 16, 2006**

Weather: Foggy in morning, then cloudy, temperature 6°C to 8°C, wind: 20 kph gusting to 35 kph in the afternoon.

**Species Counted**

Red-necked Grebe 4, Great Blue Heron 3, Canada Goose 828, Green-winged Teal 35, Black Duck 4,696, Mallard 552, Northern Pintail 4, Black Scoter 5, White-winged Scoter 16, Common Goldeneye 17, Common Merganser 42, Hooded Merganser 2, Bald Eagle (adult) 115, Bald Eagle (immature) 99, Bald Eagle (unknown) 6, Northern Harrier 2, Sharp-shinned Hawk 9, Northern Goshawk 1, Red-tailed Hawk 103, Merlin 2, Rough-legged Hawk 9, Ring-necked Pheasant 301, Ruffed Grouse 24, Peregrine Falcon 2, Ring-billed Gull 674, Herring Gull 5,217, Iceland Gull 16, Glaucous Gull 2, Great Black-backed Gull 767, Lesser Black-backed Gull 1, Gull sp. (immature) 406, Rock Pigeon 287, Mourning Dove 647, Great Horned Owl 1, Barred Owl 2, Belted Kingfisher 3, Downy Woodpecker 84, Hairy Woodpecker 37, Northern Flicker 36, Pileated Woodpecker 10, Eastern Phoebe 1, Horned Lark 54, Gray Jay 2, Blue Jay 993, American Crow 3,094, Common Raven 311, Black-Capped Chickadee 1,737, Boreal Chickadee 1, Red-breasted Nuthatch 15, White-breasted Nuthatch 43, Brown Creeper 8, Golden-Crested Kinglet 105, Ruby-Crested Kinglet 3, American Robin 12, Cedar Waxwing 16, Northern Shrike 1, European Starling 11,788, Pine Warbler 1, Common Yellowthroat 2, Yellow-breasted Chat 1, American Tree Sparrow 63, Chipping Sparrow 1, Savannah Sparrow 5, Song Sparrow 208, Swamp Sparrow 4, White-throated Sparrow 80, White-crowned Sparrow 1, Dark-eyed Junco 643, Snow Bunting 1, Northern Cardinal 5, Dickcissel 1, Red-winged Blackbird 5, Brown-headed Cowbird 17, Baltimore Oriole 2, Pine Grosbeak 2, Purple Finch 4, House Finch 1, Pine Siskin 9, American Goldfinch 1,548, Evening Grosbeak 12, House Sparrow 237

Total species count day 78, total individual birds ~36,100; count week 4 species (Carolina Wren, Northern Mockingbird, Ring-necked Duck,

Blue-winged Teal)

## Summary

Hours: on foot 97, by car 69, total 166

Kilometres: on foot 182, by car 790, total 972

Hours Feeder Watch 119

Count coordinator, Alison Bogan

The list of bush-beaters and feeder watch participants will be listed at a later date.

## Report

# 2006 West Hants Christmas Bird Count

by Patrick Kelly

Saturday, December 30 – The weather was excellent, clear, not too windy, and cold enough to enjoy being outside, but not so cold that you wanted to jump right back into the car. There was no snow on the ground either in most places, which also meant that travelling by foot was not inhibited.

Because of its location, the West Hants count attracts a nice mix of local birders and many from both the Wolfville and Halifax areas. This is the first time that I have compiled a Christmas count, and I want to thank all of those who participated. It was nice to have so many enthusiastic people willing to put in so much time to help out. I also want to thank the Woolavers for hosting the potluck, which always makes a great way to end the day.

## The Results

Total time for owling: 2h35, with 68 km covered by car. Regular birding: 78h55 party-hours by car and 33h40 party-hours on foot for a total of

112h35 party-hours. Distance covered: 937 party-km by car and 63 party-km by foot for a total of 1,000 party-km. A total of 32 field observers formed 14 parties. Nine feeder watchers also participated, including one in Windsor who read a notice about the count in the *Hants Journal* and who had been feeding a Baltimore Oriole, which was still there on the day of the count.

Fifty-four known species were seen, plus one unknown (*buteo* sp.), which would bring the total to 55 species. Two species not counted were a Great Horned Owl and a Long-eared Owl. I was owling with Fulton Lavender on the Walton Woods Road, but we found out afterwards that we had actually been about 2 km outside the circle at the time. So much for finding circle boundaries on a nondescript wooded road in the dark! The only additional species for the count week was a Yellow-bellied Sapsucker, which was seen in Hantsport before and after the count day, but not on the 30th, despite several efforts.

### **The Numbers**

Canada Goose 1,279, American Wigeon 3, American Black Duck 1,096, Mallard 64, Northern Shoveler 1, Green-winged Teal 1, Ring-necked Duck 7, Common Merganser 21, Ring-necked Pheasant 78, Ruffed Grouse 7, Bald Eagle 54, Northern Harrier 7, Sharp-shinned Hawk 4, Red-tailed Hawk 36, Rough-legged Hawk 2, Merlin 1, Wilson's Snipe 1, Ring-billed Gull 32, Herring Gull 934, Great Black-backed Gull 69, Rock Pigeon 421, Mourning Dove 362, Barred Owl 2, Short-eared Owl 1, Downy Woodpecker 37, Hairy Woodpecker 30, Black-backed Woodpecker 1, Northern Flicker 12, Pileated Woodpecker 5, Blue Jay 350, American Crow 1,677, Common Raven 143, Black-capped Chickadee 736, Boreal Chickadee 10, Red-breasted Nuthatch 11, White-breasted Nuthatch 17, Brown Creeper 6, Golden-crowned Kinglet 53, American Robin 43, European Starling 6,639, American Tree Sparrow 26, Savannah Sparrow 1, Song Sparrow 24, White-throated Sparrow 15, Dark-eyed Junco 227, Snow Bunting 20, Red-winged Blackbird 101, Baltimore Oriole 1, Pine Grosbeak 10, White-winged Crossbill 26, Pine Siskin 2, American Goldfinch 787, Evening Grosbeak 209, House Sparrow 201

Total Species 54, Total Individuals 15,903.

**Seen in the Wild**  
**Beaver and Otter**  
by **John Belbin, Kingston**

*(first posted to NatureNS e-mail forum, Dec 15, 2006)*

After a full week of being totally absorbed by my wife's school Christmas concerts, I went out this morning to check on the property. I noticed a tree lying on the lawn and found that it had been cut off by a beaver. I have a very low opinion of the intelligence of these animals and this one didn't disappoint me. After cutting off only two slim branches it had obviously found that it had no way to drag off its trophy into Walker Brook through the dense bushes, and simply left it there. In 30 years of cursing beavers I have found that often more trees are left where they fall or hang up than are actually used. It is especially aggravating when the only things they seem to leave untouched are thorn bushes and pin cherries.



Wondering if the beaver could actually use the cutline that we cleared this summer to subdivide the property, I wandered over. From the top of the bank I had a clear view of an old oxbow pond that sat on the new boundary. It was still mostly frozen over. A small opening in the ice looked like it was boiling for a few seconds, and then a brown back emerged. It was a River Otter, inelegantly emerging backwards and holding a good-sized fish in its jaws. I had no idea that such prey were possible in that pond. The otter ignored me completely, even though I was resplendent in a red coat and bright red toque. It turned the fish around daintily for a while and seemed to be nibbling the fins off. Then it tossed it up a couple of times and caught it until it was pointing the right way and ate it with no fuss or rush at all. Clearly finished, it looked up at me and dived under the ice. I will have to pay more attention to that pond in the future; clearly it has far more possibilities than I have believed up to now.

# Eastern Annapolis Valley Weather

## Winter 2006-7

by Larry Bogan, Cambridge Station, NS

	Mean daily max. temp (deg.C)	Mean daily min. temp. (deg.C)	Mean daily temp. (deg.C)	Snow (cm)	Total precip. (mm)	Bright sunshine (h)
<b>December</b> (45 yr. average)	4.0 (1.6)	-4.4 (-6.1)	-0.2 (-2.2)	2 (56)	84 (126)	56 (60)
<b>January</b> (45 yr. average)	0.8 (-1.3)	-10.6 (-9.7)	-4.9 (-5.5)	20 (69)	117 (116)	67 (76)
<b>February</b> (45 yr. average)	-2.7 (-0.9)	-11.9 (-9.8)	-7.3 (-5.3)	>6 (58)	16 (96)	88 (101)
<b>Season</b> (45 yr. average)	0.8 (-0.2)	-8.9 (-8.5)	-4.0 (-4.3)	>28 (183)	217 (338)	211 (237)

*Source: Food & Horticultural Research Centre, Kentville, NS.*

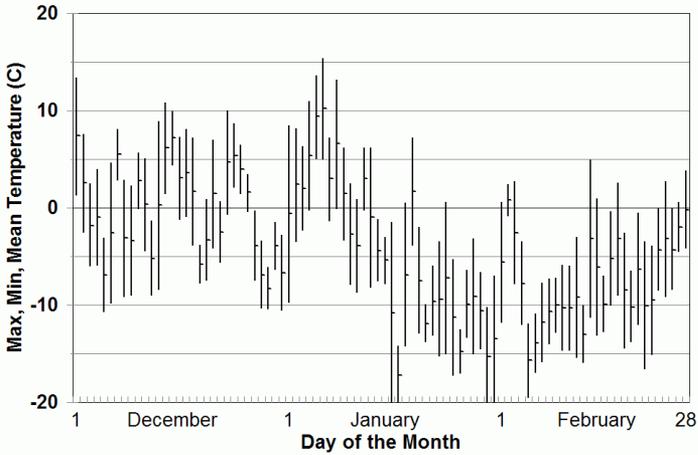
This winter was characterized by extreme contrast in temperatures, with an open, mild early winter and a cold late winter.

### Temperatures

The coldest part of winter usually comes at the end of January, and this year that was definitely true. The temperature graph for the three months clearly shows the dramatic changes in temperatures over the season. We had a wonderfully mild December and early January only to get hit with several weeks of extreme cold after that. In the first two weeks of January, we had the warmest day of the winter (10.2°C mean temperature on January 6) and the coldest day of the winter (-17.2°C mean temperature on January 17). Note the very brief thaw at the first of February right in the middle of in the cold weather we had from mid-January to the end of February.

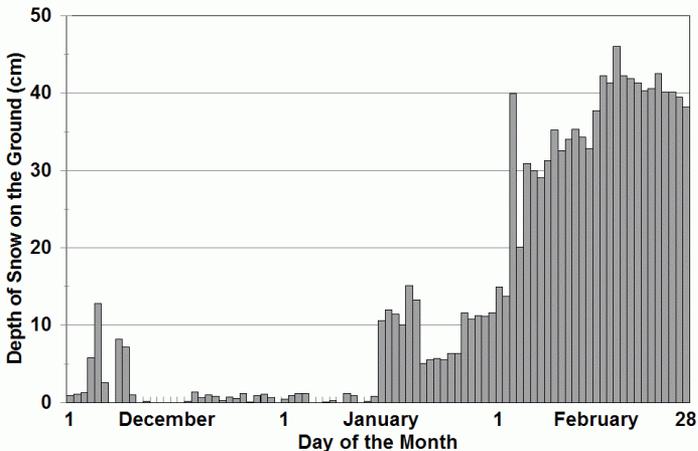
The monthly summary illustrates the same fact. December was 2°C above

**Daily Temperatures Mean, Max and Min**  
Dec 06, Jan-Feb 07 - Kentville, N.S.



average; January had low minimum and high maximum temperatures, with a mean temperature  $0.6^{\circ}\text{C}$  above average; and February was  $2^{\circ}\text{C}$  below average. The whole season ended up slightly above average mean temperature.

**Snow Cover Dec 06, Jan-Feb 07**  
Kentville, N.S.



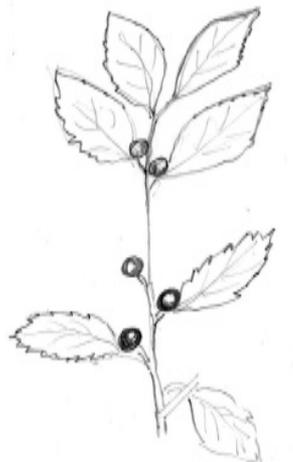
## Precipitation and Snow on the Ground

This winter was a dry one compared with the last 45 years, but only a little below average for the last five years (217 mm versus 253 mm). We received two-thirds of the average precipitation for the period. January was the only month with average precipitation, and most of that was rain rather than the usual snow. Only 20 cm of snow fell in January, when we can expect about 70 cm.

We had little snow fall in December, and only a little stayed on the ground. The graph of snow on the ground shows the buildup of snow cover after mid-January. Much of this was due to flurries blowing in off the Bay of Fundy. By the end of February there were 40 cm on the ground. There were a couple of moderate storms this winter, but no great snowfalls. The consistently cold temperatures during the later half of the winter did not allow the snow to melt. (Note: The total snowfall in the table is inaccurate because measurements were not available during February. This is the reason that it appears that only 28 cm fell, but there were 40 cm on the ground at the end.)

## Sunshine and Heating Degree Days

Solar heating seemed to be very low in December and January, but that is usually the case and we had nearly 90 percent of the expected bright sunshine hours. Fortunately, the early winter was warmer, and the demand on heat for the house was down. However, I think everyone noticed the increased use of fuel in the last half of the winter. The number of heating degree days for the winter was just about normal because the savings in early winter balanced the increased fuel use later.



CANADA HOLLY  
OR WINTERBERRY

# What's in the Sky?

by Roy Bishop

With a view to making this column more convenient for observers, I have changed the format from previous editions. Events are now in chronological order rather than by topic.

**March 18:** New Moon

**March 20, 9:07 p.m. ADT:** Spring begins, and the increase in the length of daylight from one day to the next begins to decrease, marking the approach of next winter!

**March 20 and 21:** Largest tides of 2007. Reasons: 1) The Moon was new on the 18th, so the lunar tide was in step with the solar tide, resulting in “spring” tides. 2) The Moon was very close to perigee on the 19th, producing a “perigean” tide. 3) Earth is at an equinox on the 20th, so the Sun and the new Moon are above the equator, which is favourable for a large tide, an “equinoctial” tide. The tide peaks a day or two after the astronomical influences are strongest; hence on March 20 and 21 a perigean-spring-equinoctial tide occurs.

**March 22:** Crescent Moon near the Pleiades star cluster in the western evening sky. Use binoculars.

**March 29, 2:45 a.m.:** The Moon passes very close to Saturn.

**April 2:** Full Moon.

**April 11:** For a few evenings around this date, in the western sky Venus will be near the Pleiades star cluster, making a nice sight in binoculars. Venus dominates the western evening sky this spring and is unmistakable. In its faster orbit, Venus is approaching Earth during the first half of 2007 and will pass between Earth and Sun to enter the morning sky on August 18.

**April 17:** New Moon.

**April 19:** This evening the waxing crescent Moon joins Venus near the Pleiades and Hyades star clusters. All four celestial objects lie within a 15-degree-diameter circle low in the west. The best time to look is between 9:30 and 10 p.m.

**May 2:** Full Moon.

**May 16:** New Moon.

**May 19:** On the evening of Saturday, May 19, Venus and the crescent Moon make a pretty pair in the evening sky. That same evening the Blomidon Naturalists Society has scheduled a night-sky field trip at the old parking lot of the Grand Pre Park, starting at 9:30 p.m.

**May 15 to 31:** Mercury is visible very low in the northwest evening twilight around 9:45 or 10 p.m. Find Venus (very bright!) in the western sky, then look down at 45 degrees to the lower right of Venus to see Mercury, near the horizon.

**May 31:** Full Moon.

**June 5:** Jupiter is at opposition. The giant planet rises in the southeast near sunset and is in the southern part of the sky all night long. However, Jupiter lies well south of the celestial equator this year, keeping it low in our sky and making good telescopic views of this large planet difficult.

**June 9:** Venus is growing larger as it approaches Earth this spring, and its phase changes from gibbous to quarter to crescent. Venus is at its quarter phase on June 9, although you will need a telescope to see its shape. In the following weeks, Venus continues to get brighter because its decreasing distance from Earth more than offsets its shrinking crescent phase (see July 12, below).

**June 15:** New Moon.

**June 17, 18, 19:** On these consecutive evenings Venus, Saturn, and the crescent Moon form interesting alignments in the western twilight sky. On June 17 the Moon lies to the right of the two planets. On the 18th the Moon lies between them, with Saturn on the left and Venus on the right.

On the 19th the Moon lies to the right of the two planets, and the bright star Regulus will be just above the Moon. The best view will be near 11 p.m., when the sky will be fairly dark and the Moon and planets will still be well clear of the horizon.

**June 21, 15:06 ADT:** Summer begins, and the amount of daylight in each day begins to get shorter as next winter approaches.

**June 29, 30, July 1:** Venus and Saturn are close together low in the western sky. On the 30th, Venus lies only 0.7 degrees below Saturn. This is a line of sight alignment; in late June, Saturn is 19 times farther from Earth than is Venus. The shift of Venus relative to Saturn is caused by the orbital motions of all three planets: Saturn, Venus, and Earth.

**June 30:** Full Moon.

**July 6:** Aphelion – Earth farthest from the Sun during 2007.

**July 12:** Venus reaches maximum brightness.

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## Nature Nova Scotia

### Nature Nova Scotia Annual General Meeting

10 a.m., June 3, 2007

Nova Scotia Community College, Truro

This year, because of our involvement in the 2007 Nature Canada conference, Nature Nova Scotia will hold a one-day event only, in Truro, which is a fairly central location. The AGM will be in the morning of Sunday, June 3, at 10 am, with field trips in the afternoon.

There is no registration fee. **All members of Nature Nova Scotia should plan to attend this meeting and get-together.**

Watch the NNS website for more details: <<http://naturens.ca>>.

**Society Business**  
**Blomidon Naturalists Society: Our Accounts**  
by Ed Sulis, BNS treasurer

Many changes have been made over the past year to provide accounts that are integrated, Web operable, cost effective (low fees), and at one financial institution. The bank of choice was the TD Group.

BNS now has a banking account at TD Canada Trust, a self-directed endowment account, and a self-directed general investment account, both at TD Waterhouse. The self-directed accounts are for your investment committee to invest funds as they become available through BNS financial endeavours.

*Banking:* A standard chequing account (called a community account) with minimum fees for all deposits, cheque writing, and free transfers between any of the three TD Group accounts.

*Endowment Fund:* A self-directed investment account to hold endowment principal invested in equity or fixed-income securities. Dividends and interest from this account automatically accumulate within as cash. The principal is to be maintained, and may be added to. From time to time the accumulated cash is to be used for special BNS projects as directed by the executive. The source of funds for this account is the BNS Nature Calendar and donations specifically directed to the Calendar. Each year, the amount by which sales and donations exceed the calendar cost is transferred from the bank account to the endowment fund. This fund has approximately \$32,000 in principal and annual income of \$1,200.

*General Investment:* A self-directed investment account to hold general funds generated from BNS activities and sales other than the Calendar. Principal and accumulated interest and dividends may be used at the discretion of the executive for ongoing BNS expenses such as the Robie Tufts Nature Centre, Art in Nature, and young naturalists. This new account provides a way to invest funds that were not part of the endowment fund and to provide a clear separation between the two. The account has approximately \$9,200 of principal and yearly income of \$325.

Your Investment Committee is Richard Stern, Roy Bishop, and Ed Sulis

# Blomidon Naturalists Society

Box 2350 Wolfville, Kings County, NS, B4P 2N5

## Net Worth worksheet for December 2006

	Description	Credits	Debits	Balance
1	<b>Bank Account as of 7 Dec. 2006</b>	44,969.91		
2	Less outstanding cheques		430.56	
3	Less WV of B final payment		1,286.00	
4	Less hats		1,231.54	
5	Less Calendars 2007		7,099.92	10,048.02
6	Transfer to Endowment BNS		10,396.84	
7	Transfer to Endowment EMA		9,528.96	
8	Transfer to Endowment Action Direct cash		269.04	
9	Transfer to Endowment from MM		9,800.00	
10	Transfer to Investment from MM		6,500.00	
11	Transfer calendar sales to date		2,402.50	
12	Transfer WV of Blomidon to date		1,220.00	
13	Less 2007 memberships & misc.		348.82	
14	Plus prepaid expenses	10,000.00		
15			40,117.34	14,852.57
16				
17	<b>Investing 54YL48A Endowment</b>			
18	Cash	1,000.00		
19	BNS proceeds	10,396.84		
20	EMA proceeds	9,528.96		
21	Action Direct cash	269.04		
22	Calendar sales to date (160)	2,402.50		
23	From MM	9,800.00		
24		32,397.34		33,397.34
25				
26				
27	<b>Investing 55MH41A</b>			
28	Cash	1,000.00		
29	Transfer to Investment from MM	6,500.00		
30	WV of Blomidon sales to date (61)	1,220.00		8,720.00
31		7,720.00		
32				
33				
34				
35	<b>Net worth</b>	<b>\$56,969.91</b>		<b>\$56,969.91</b>

(treasurer and writer of this note). Any one of us will be glad to expand on the account details and our investment decisions.

# Blomidon Naturalists Society

## 2007 Membership Fees and Order Form

Members of the Blomidon Naturalists Society receive four issues of the BNS newsletter annually. As a registered charity, BNS issues receipts for all donations. Members may also join Nature Nova Scotia through BNS and will receive *FNSN News*, the federation newsletter. (Neither BNS nor NNS membership is tax deductible.)

Please send cheques or money orders made out to **Blomidon Naturalists Society** in payment of membership fees and other purchases to  
 Ed Sulis  
 107 Canaan Avenue, Kentville, NS B4N 2A7

No.	Membership classification	Price	Total
_____	Individual adult	\$15.00	\$ _____
_____	Family (number of family members _____)	18.00	\$ _____
_____	Junior (under 16 years)	1.00	\$ _____
_____	Nature Nova Scotia membership	5.00	\$ _____
 <b>Items for Purchase</b>			
_____	2007 BNS calendar	15.00	\$ _____
_____	<i>Natural History of Kings County</i>	14.00	\$ _____
_____	<i>Nature Walks: Within the View of Blomidon</i>	20.00	\$ _____
_____	Annotated checklist of Kings County birds	5.00	\$ _____
_____	Blomidon Naturalist crest	5.00	\$ _____
_____	Blomidon Naturalist hat	15.00	\$ _____
_____	Screensaver: 10 years of BNS calendar photos	10.00	\$ _____
 <b>Postage and handling</b>			\$ _____
(orders \$15 or less = \$3, \$16 to \$50 = \$6, over \$50 free)			
<b>Tax-deductible donation</b>			\$ _____
<b>Total</b>			\$ _____

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Postal Code: \_\_\_\_\_

Telephone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Name of donor for gift subscription: \_\_\_\_\_

**Membership fees are due January 1 of the current year**

## **Sources of Local Natural History**

**(compiled by Blomidon Naturalists Society)**

<b>Information</b>	<b>Source</b>	<b>Office</b>	<b>Home</b>
Amphibians & Reptiles	Sherman Bleakney		542-3604
	Jim Wolford	585-1684	542-9204
Astronomy	Roy Bishop		542-3992
	Sherman Williams	542-3598	542-5104
	Larry Bogan		678-0446
Birds – General	Bernard Forsythe		542-2427
	Richard Stern	678-4742	678-1975
	Gordon & Judy Tufts		542-7800
	Jim Wolford	585-1684	542-9204
	Jean Timpa		542-5678
Butterflies & Moths	Jean Timpa		542-5678
Fish	NS Dept of Natural Resources	679-6091	
Flora – General Fungi	Ruth Newell	585-1355	542-2095
	Nancy Nickerson	679-5333	542-9332
Hawks & Owls	Bernard Forsythe		542-2427
Indian Prehistory & Archeology	James Legge		542-3530
Mosses & Ferns			
Mammals	Tom Herman	585-1469	678-0383
Rocks & Fossils	Geology Dept Acadia U.	542-2201	
Seashore & Marine Life	Sherman Bleakney		542-3604
	Jim Wolford	585-1684	542-9204
	Michael Brylinsky	585-1509	582-7954

