

Blomidon Naturalists Society



WINTER 2009 NEWSLETTER

Volume 36 · Number 4

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



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The Blomidon Naturalists Society

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THE BLOMIDON NATURALISTS SOCIETY

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BNS Newsletter

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BNS 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:

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Digital photographs should be submitted to
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**Submission deadline for Spring:
March 10, 2010**

Out and About

Jean Timpa, editor

At the end of September I was really out and about, flying from Halifax to Richmond, BC, and back again for a family wedding. This was my first time west of Ottawa, and I was really looking forward to it, even though I am not particular about flying. Both flights were excellent, and I enjoyed a window seat going out. I like to watch the geography at 35,000 feet in company with the electronic map on the back of the seat in front of me.

As we left Stanfield International Airport at 7 a.m., the sunlight was lovely for a minute or two on the fall leaves, many of which seemed to be the Red Maples in the swampy areas. Almost immediately we were in the clouds and, not long afterwards, above them, so I knew we wouldn't see Cape Split as I had hoped, and when we passed over Maine it was still cloudy, so I was not able to spot Mt. Kathadin, which I had climbed several times many, many moons ago. By the time we reached western Maine the skies were clear. Finally I was able to admire sparkling lakes, rivers, wooded hills, neat farmland, roads, cities, parts of the St. Lawrence River, and more populated areas.

The sun had been up long enough now that small puffy white clouds were forming, casting their shadows on the land below. After a short while I realized that the puffy clouds were now pale tan in colour, and thinking upon that I recoiled with disgust and horror at the amount of air pollution we were encountering. It went on for a long time before we landed in Toronto for a hour's stopover. And the tan clouds were still in the skies after we left, for a long time. However, there was also a bit of a heartening sight looking down on the beautifully laid-out Niagara farmland. Each field, it seemed, had in one corner a very tall windmill. The windmills show up easily, hect-

are upon hectare of them, of which I was unaware until flying over them. Could we be doing the same thing here in the Valley? It would be a lot greener than cutting down our forests for biomass burning, which is anything but green. It just leaves a sterile brown mess.

Onward the plane flew over some of the Great Lakes, and then across the northern parts of Michigan, Wisconsin, Minnesota, North Dakota, Montana, Idaho, and Washington, before we turned sharply north and soon landed in Richmond. Such a long journey, but so much of it had been clear skies. I felt rather blessed that I had been able to see so much of the physical geography from coast to coast.

About half way across Montana there was another interesting, but sad, blip. All of a sudden I could see up ahead that we were about to enter a gray cloud at 35,000 feet, and I had expected to lose sight of land. But the land and its waters were still visible through a gray haze. We had entered the smoke of the great western forest fires of 2009. It, too, lasted for many kilometres. Nearer the west coast it became clear again, and I was then intrigued by the high volcanic coastal mountains with their ponds and lakes, some green and others bright blue, sometimes side by side. From Montana onward to the coast there were also areas of bright pink soils or rock, sometimes where a pond had dried up, along a dirt road, or in the rocks of the high mountains, and I am still wondering what made all these interesting colours. I hope it is all natural.

It was hot and hazy in Richmond when we landed at 1:30 p.m., such a contrast to the cool, clear sky we had left in Halifax a few hours earlier. Off in the distance I finally found Vancouver in front of the tall mountains all covered in haze. So this was “beautiful British Columbia”! Saturday the air was cooler and somewhat clearer, but the weather changed again in the night, and on Sunday the air was heavy with smoke from the forest fires, causing my eyes to burn and water. An early morning flight on Monday over the Canadian Rockies to Calgary was quite lovely, except that I had an aisle seat, so I did not have as good a view as I had hoped. The sky in Calgary, where we had a two hour layover, was partially gray and drab, and I wondered if some or all of it might be from the burnoff in the oil fields. From

Calgary to about Berwick, NS, it was cloudy and boring. Suddenly there was a narrow hole in the clouds right up to about Hantsport, so I was able to pick out the Acadia campus, the Cornwallis and Avon Rivers, and Evangeline Beach, before we ran into cloud again. How wonderful it was to be home again to be able to appreciate even more what we have here in Nova Scotia.

It is quite something to view Canada from coast to coast at 35,000 feet for most of the journey. It looks so innocent and pristine, but we've all read about and seen television specials depicting the environmental abuses mankind has inflicted onto this beautiful Earth. Now you can even run into the problems of climatic change – the industrial smoke and massive forest-fire smoke – at surprisingly high altitudes. It was quite thought provoking to run into these situations so far away from their sources and to witness the magnitude of them as well.

Many thanks to all BNS members who dedicate themselves to the natural history and environmental problems of this small part of the planet. It is often discouraging to see the carnage and experience the frustration of dealing with political squabbling. However, we must never give up the good fight for better stewardship, as the most precious jewel of all is the one that sustains us. May your holidays be happy and safe ones and time for reflection upon the health of spaceship Earth.

NEW CONTRIBUTORS

We are very pleased to welcome a couple of new illustrators to the pages of the BNS Newsletter. Joining Mary Pratt and our variable crew of member photographers are Jack McMaster and Brian McKibbin. Jack is an accomplished Wolfville artist and calligrapher, with a history of contribution to various Gaspereau Press publications. Brian is a local architect who dabbles in wine making and drawing for the fun of it. Enjoy!

Board of Directors Report

by Rick Whitman, BNS president

Your board met on December 8 with all members present. Patrick Kelly has researched local town and county websites as to how non-profit groups are listed and has confirmed or taken steps to ensure our listing where feasible. Patrick has also been investigating audio equipment for us, and we have agreed to purchase a standalone system for BNS use. This means that the system will work anywhere, so when we have to move our meeting location, we'll still have audio.

Ed Sulis presented the annual financial report (see page 53), which shows a surplus for 2008/09. There was some catch up on the HST rebate, and grants for the Young Naturalists program were above budget.

When the Thextons and BNS turned our archival material over to the Acadia University archives, we eventually received back quite a collection of surplus Newsletter issues. In fact, from volume 3 (1976) to volume 33 (2006) we have at least one copy of all but 17 issues. For many issues we have numerous copies. The board has agreed that these issues should be used to allow as many BNS members as possible to replace missing issues in their own collections. It will only be feasible to replace a modest number within each existing collection. We certainly won't be able to provide complete sets prior to whenever you first joined or first started keeping your newsletters. The available copies will be allocated so as to allow the greatest number to complete their collections. Therefore, the fewer issues you need, the more likely you are to receive them. We would also respect collections going back the furthest with only a few missing issues.

So, if interested, please review your BNS Newsletter collection for

missing issues. Send an exact list of the issues you would need to me at 428 Schofield Rd, Wolfville, B4P 2R2, to be received no later than January 31, 2010. The board will review your requests and will divide the issues as fairly as possible under the above guidelines.

Regarding the current BNS Newsletter, the board agreed that advertising was not needed. We also agreed that more use could be made of Latin names for species mentioned in articles. We will continue to use common names also, but depending on the scientific level of each article, Latin names may be added. Please note, there is no intention to change the writing style or “accessibility” of the Newsletter. The Newsletter is intended for every member.

Under new business, we agreed to undertake a limited revision of the bylaws. We also chose a new honorary life membership to be awarded at a future meeting.

Have a great winter and be sure to get outdoors on pleasant days.

CLUB NOTES

Upcoming Events

MEETINGS

Unless otherwise noted, all meetings are held at 7:30 p.m., usually on the third Monday of each month, 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 Irving Centre, at the Acadia Arena, Festival Theatre, the Student Union Building, or on Westwood Avenue. Everyone is welcome.

Monday, January 18, 2010 – *Adventures in Bird Banding: from Manitoba to Central America.* Becky Stewart will give us a look into bird banding and what it is all about (believe it or not, there’s more to it than just giving birds silver bracelets). Becky is certified by the North

American Banding Council and has banded in Manitoba, Mexico, California, and Costa Rica. She'll share her adventures and show us why a bird in the hand is really worth two in the bush. Becky is currently the atlas coordinator for the Maritimes Breeding Bird Atlas.

Monday, February 15, 2010 – *Annual Show and Tell Night*. 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.

If you have a digital presentation, please arrange with Patrick Kelly (472-2322, patrick.kelly@dal.ca) to get the material preloaded on a computer in advance. If you have slides, please let him know, as we would have to request access to the projector area.

Monday, March 15, 2010 – *Replacing Most Fossil Fuel Use in North America with a Two-Terawatt Solar Electric Generating System, or a Practical Solution for the “Inconvenient Truth.”* – Fred Archibald is a research microbiologist and was a professor/researcher at McGill and the Pulp and Paper Research Institute of Canada for many years. He is associate editor of the *Water Quality Research Journal of Canada* and has much experience in wastewater biotreatment, pathogens, antioxidant enzymes, biological trace metals, and microbial ecology. He is also interested in electrics, electronics, and alternate energy sources.

Monday, April 19, 2010 – *It's the End of the World As We Know It*. Most aspects of natural history occur on the surface of the Earth. Earth's surface (and its biology, etc.) has changed drastically in the past. One only needs to look at a dinosaur skeleton to bring that fact home, yet we take the existence of life on the Earth's surface for granted. In astronomy, one is often faced with looking at not only the “big picture” but the “long clock” view of things. Modern astronomers and biologists now have tools that allow them to look far ahead and predict what may be in store for Earth's long-term future. Will things end with a whimper, or a bang? Come find out!

Patrick Kelly has had a life-long interest in astronomy and has taught first-year astronomy at Acadia, Dalhousie, Mount St. Vincent, and St. Mary's. He is a life member of the Royal Astronomical Society of Canada and is an active member of the Society's Halifax Centre. He currently edits the Society's annual *Observer's Handbook*.

FIELD TRIPS

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

Sunday, December 27, 2009 – *West Hants Christmas Bird Count*. Patrick Kelly (472-2322, patrick.kelly@dal.ca) will be compiling the count again this year. All are welcome to participate, but please contact the compiler as soon as possible so that you can be included in the planning. Following the count, around 5 p.m., all participants are invited to Frank and Beth Wollaver's house near Brooklyn for a tally count and potluck supper. There is a \$5 fee for all participants over 19 to help cover the cost of generating materials for compilers, producing the annual CBC summary issue, and maintaining the CBC website and database.

Monday, December 28, 2009 – *Kingston Christmas Bird Count*. Wayne Nealy (765-2455, neilyornis@hotmail.com) will be compiling the count again this year. All are welcome to participate, but please contact the compiler as soon as possible so that you can be included in the planning. There is a \$5 fee for all participants over 19 to help cover the cost of generating materials for compilers, producing the annual CBC summary issue, and maintaining the CBC website and database.

Saturday and Sunday, January 23 and 24, 2010 – *Eagle Watch Weekend 1*. The Sheffield Mills Community Hall will host its annual pancake and sausage breakfast with naturalist displays, films, crafts, and art show. A short drive around the area in the morning will usually



MARY PRATT

offer a sight of more than 100 Bald Eagles and many hawks. Maps and directions can be obtained at the hall or any time at the information post on Middle Dyke Road. For more information, check the website www.eagles.ca or contact Richard Hennigar (582-3044 or hennigar@xcountry.tv).

Saturday, January 30, and Sunday, January 31, 2010 – *Eagle Watch Weekend 2*. A repeat at the Sheffield Mills Community Hall.

Saturday, February 6, 2010 – *Winter on Snowshoes*. Snow transforms the landscape into stories that unfold as we follow tracks of foxes, mice, and other mammals. A Snowshoe Hare hops along and is pounced on by a Great Horned Owl. Without snow to show us the tracks, wing marks, and perhaps a drop of blood, we would not have known the drama took place. Soren Bondrup-Nielsen (582-3971) will lead this hike on snowshoes or skis, and we will explore the properties of snow (its insulative value, for example). By studying the char-

acteristic imprints made by different organisms we will interpret the various stories that have unfolded. Meet at the Wolfville waterfront at 10 a.m. for a two- or three-hour, non-strenuous hike at a nearby location to be determined by weather and snow conditions.

Saturday, February 27, 2010 – *Valley Birding*. Bernard Forsythe (542-2427) and Suzanne Borkowski (445-2922, suzanneborkowski@yahoo.ca) will lead this joint trip with the Nova Scotia Bird Society. Meet at 9 a.m. at the Wolfville waterfront. We will be looking for raptors, lingering winter visitors, and rarities in and around Canning and Grand Pre. Dress warmly and bring a lunch.

Saturday, March 6, 2010 – *Orchid Show*. The Valley Orchid Group will have its annual display of orchids in the conservatory of the K.C. Irving Environmental Science Centre at Acadia University from 10 a.m. to 3 p.m. There is usually a presentation in the downstairs auditorium about orchid growing and people in the lobby selling orchids, along with specialized materials and instructions on how to help them grow well. This is a sure cure for the winter blahs, with only the very best of the best orchids brought for this occasion. You will see plants that you will not believe are real – they are so beautiful, perfect, and complex in their structures. Photographers are welcome and encouraged.

Saturday, March 20, 2010 – *Along the Fundy Shore*. Leader: Wayne Neily (765-2455, neilyornis@hotmail.com). Focusing on the early spring birds of the Bay of Fundy and the ecozones from it to the Annapolis Valley, this will be a joint trip with the Nova Scotia Bird Society and the Annapolis Field Naturalists. Meet at 9 a.m. in Aylesford, just on the north side of Exit 16 on Highway 101. Those wishing to meet and carpool from the Wolfville waterfront should leave there at 8:30 a.m. We will visit the shore at Morden, Margaretsville, Port George, and perhaps Port Lorne and Hampton, before heading back into the Valley to check some sites on the way to Annapolis Royal. Dress warmly with layers; the Fundy shore can be cold and windy at

that time of year, and bring a lunch. Pre-registration is preferred in order to help with planning, but not required.

Sunday, April 25, 2010 – *Pond Hopping in the Wolfville Area*. Jim Wolford (542-9204, jimwolford@eastlink.ca) will lead this joint trip with the NS Bird Society to look for ducks and early migrants. Possibly there will be a visit first to Wolfville Ridge for Barred Owls. Meet at the town wharf off the east end of Front Street in Wolfville at 10 a.m. Dress warmly and bring a lunch. No rain date.

Saturday May 1, 2010 – *Herbert River Canoe Trip*. Patrick Kelly (472-2322, patrick.kelly@dal.ca) will be leading this trip. The Herbert River is fairly easy with lots of water at this time of the year, and it covers a great variety of terrain. There may be spots where it is running a bit faster, or where there are new obstructions from the trees, etc., that have come down over the winter, so we may have to wade in a few places, if necessary, or stop to scout out a bend. The trip will be two to three hours long, depending on our pace. Bring life jackets, canoe or kayak, 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 the leader to be sure. Meet at the Newport rink parking lot at 9:30 a.m. Take Exit 5 from Highway 101 and follow Highway 14 east for about 10 km to the village of Brooklyn. At the cenotaph, keep left and follow Highway 14 north for just under 1 km. At the intersection (Petro Canada station), Highway 14 turns right. Continue straight on Highway 215. (Note the YIELD sign. You do NOT have the right of way!) The rink is on the right as soon as you exit the intersection. We will be leaving some cars there as we will actually be putting into the river farther upstream.

The Autumn Night Sky

by Roy Bishop

OCTOBER 17, 2009 – Plans were in place to view the evening sky from the old parking lot at Grand Pre National Historic Site. It was to be a joint field trip with the Minas Astronomy Group. Also, a few Acadia students and a group of young people from the Gaspereau Church were planning to join us. However, Murphy was the first to show up; that is, Murphy of Murphy's Law: "If anything can go wrong, it will." Murphy had arranged for seven things to go wrong that evening:

1. The sky was mostly overcast.
2. It was not completely overcast. There were a few breaks in the cloud so the leaders of the session (Sherman Williams and yours truly) had to load up their telescopes and travel to Grand Pre in full awareness that the field trip very likely could not be held.
3. There was a cold northeast wind, promising uncomfortable conditions, unsteady telescopes, and blurry images because of atmospheric turbulence.
4. The patches of clear sky had poor transparency, which would limit views to only a few bright objects, such as Jupiter, which played hide-and-seek with the moving clouds.
5. The cloud deck in the west reflected the excessive lighting of the Wolfville/New Minas area, brightening the Grand Pre sky and detracting from what views might be possible.
6. Next to the observing site are dikelands, and that evening farm tractors with bright lights were on the fields after dark. The lights would have interfered with observing had the sky been clear.

7. The observing site was downwind of the area being worked by the tractors, and the tractors were spreading ... liquid pig manure! The air at the observing site was barely breathable.

The leaders waited until 20 minutes after the posted time for the session. The clear patches were larger, but the cold wind still blew, the air was ripe, and no one had showed up, so we left. One for Murphy!

FIELD TRIP REPORT

Cloud Lake

by Patrick Kelly

OCTOBER 3, 2009 – It was a beautiful fall day, which may partly explain why only Larry Bogan and I were there for this trip. One could have gone anywhere else and had a great day in the outdoors. Since I had a two-man canoe, we decided to leave his vehicle at the meeting point and take the canoe. We went in on a road I had not taken before, eastward from just north of Lake George, rather than Lake Paul. On the way in, Larry pointed out some other places where one could go into a lake with a canoe. We did the same coming back out, which inspired him to add a section to the BNS website that shows a map of the area with other places suitable for canoeing.

Our destination was Frog Lake, and as we started paddling south toward the large bay at fork in the lake, the colours in the trees were as impressive as the stillness of the water. We passed several areas with large boulders protruding from the lake. Depending on whether there were trees or sky reflected from the water that surrounded them, they looked like horizontally symmetrical rocks either frozen in glass or floating motionless in the air.

We could still hear loons calling. Reaching the end of the lake, we spotted a raptor, likely a Red-tailed Hawk, circling slowly over the



PATRICK KELLY

land beyond. At the entrance to the southern bay, I was startled by crashing in the bushes to our right and caught the while flash of the north ends of two southbound deer. We arrived shortly after that at the natural dam where a lake empties to the south. This is a great place to have lunch, with the water of the lake, the babble of the stream, and in the fall, lots of colour.

We wandered down the trail that follows the steam to a small pond, but that is as far as we ventured. There are some very rocky sections, but eventually, according to the maps, you reach a stillwater that leads to the next lake. On the way back out, we kept our eyes open in case the deer had returned, but they must have moved on. We heard several mystery birds calling on the way back, and then had the pleasure of watching an adult Bald Eagle fly fairly low in front of us.

About midway back we passed two fast-moving speedboats heading the other way. There is a camp at the northern tip of the other branch, and if it is a leased camp, that is one loophole that allows motorboats in a wilderness area. I'm still waiting to hear back from Natural Resources to see if that is the case here.

Still, it was a wonderful day, and I got to see a lot more places for possible future trips.

Restoring the Acadian Forest

Reviewed by David Coon

Jamie Simpson, *Restoring the Acadian Forest* (Wolfville, NS: Res Telluris, 2008), 158 pp, \$20 from the publisher's web site (www.restelluris.ca) or at bookstores.

R*estoring the Acadian Forest* is a comprehensive guide to forest stewardship for woodlot owners in the Maritimes. Jamie Simpson, a forester and woodlot owner and current forest program coordinator for the Ecology Action Centre, gives a detailed description of the Acadian forest region and composition, discusses the threats to its persistence, and makes descriptive recommendations for careful rehabilitation of this forest type across the Maritime Provinces.

Simpson describes patterns of forest disturbances and succession, the importance of old forest habitats, and the respective roles of the riparian ecosystem, soil nutrients, deadwood and cavities, and woodlot genetic diversity. A detailed chapter on practical management includes such topics as making a woodlot plan, harvesting and thinning trees, planting trees and shrubs, and providing habitat. The author also discusses silviculture funding, woodlot certification, and land trusts.

Case studies of woodlot owners in the three Maritime provinces provide the reader with a variety of perspectives and examples to follow. The book also contains a chapter on the native tress of the Acadian forest to help woodlot owners identify what they have and to determine what species will grow under different environmental conditions.

Simpson is clearly a conscientious and concerned woodlot owner and has provided a thorough resource for others that are like-mind-

ed. Woodlot owners interested in rehabilitating their woodlots to a more diverse and resistant Acadian forest will find this book indispensable.

[Adapted from a review by David Coon, Conservation Council of NB, in *EcoAlert* (Spring 2009).]

FIELD TRIP REPORT

Kingsport Mud Flat Critters

by Jim Wolford

OCTOBER 11, 2009 – We had a beautiful sunny and warm day, though the strong wind from the southwest made it difficult to converse among ourselves. Nevertheless, I think we all had a good time. There were 11 of us.

Our meeting time was 1.5 hours before the very mediocre low tide, which was chosen because the tide time was workable, unlike the two big tides of the month.

My walks at Kingsport always start by walking south from the wharf and through the small protected salt marsh to the edge of the mud. When the mud is still wet, there is a carpet of many thousands of mud snails, clearly showing at least part of the food web in the upper Bay of Fundy/Minas Basin (mud snails eat diatoms, which are the dominant algae of the mud, and they also scavenge on detritus; i.e., decaying remains of formerly living plants and animals). Interestingly, we see none or very few of these snails on the north side of the wharf.

In the salt marsh we saw the cord grass (*Spartina*), lots of periwinkle snails, and a few cast or molted “skins” of Green Crabs, which are invasive aliens (from Europe and New England) that have been

here for decades but are still spreading and causing problems in the Maritimes. I mentioned the importance of salt marshes as nurseries for young stages of shrimps, crabs, fishes like flounders, etc.

I also pointed out the dune grass that holds the small dune together via its roots.

On the north side of the wharf, we took a long time to walk east to the low-tide line, and I'll just list some of our encounters along the way:

- Shells in the high-tide strand lines were mostly slipper shells or slipper-limpets, which are weird flattish snails that in life are attached in sexy stacks to rocks near the low-tide line.
- Two dead animal skeletons found at high-tide line were *Flustra*, bryozoans that look like dead plants, and a single specimen of the Eyed Finger-Sponge (it used to be much more common).
- Other shells in the upper intertidal included Blue Mussels, soft-shelled clam, false angel-wings, Pandora clams, and small surf or bar clams.
- Also in the upper to middle intertidal zones, we found numerous serpentine trails in the sand, from what I call the sand sowbug, *Chiridotea*. We found several crawling on the surface, examined them, and then watched them burrow.
- Other clams encountered in the lower intertidal were razor clams and quahog (only 1) and several more false angel-wings.
- When we found large holes for razor clam burrows, we dug some up and watched a small razor clam actively shoot out its “foot” several times, get itself anchored in the stiff mud, then swing its shell into vertical position and burrow out of sight quite quickly.
- I was very happy that we found evidence of the very important mud shrimp *Corophium* in a few different places from upper to mid-lower intertidal zones. Recent explorations had found few to none of these, but apparently they are coming back.
- Shells or carapaces of rock crabs were fairly common, and we found legs with claws of Lady Crabs as well.
- Strangely, we found only one hermit crab, actually a cast “skin” in

a tide pool (maybe moved sub-tidally for winter) where I used a sieve to show the common sand shrimps.

- I used my shovel to show a few kinds of worms: long, skinny, reddish *Heteromastus*; bloodworms or baitworms, which are commercially dug on various mudflats during spring to autumn and shipped for sale as sport-fish bait in the US; bamboo worms in sandy tubes; coiled “ropes” of ejected indigestible matter from sub-surface unidentified and unseen worms; and a long, white, slimy nemertean worm (Milky Ribbon-worm).
- In the lower intertidal, we found lots of Dogwinkles, or Dog-whelk Snails, which were on rocks with lots of egg-cases, and foraging New England basket shells.
- We also found, under a rock with Dogwinkle egg-cases, two sea slugs called *Onchidoris*, which are predators on barnacles (as are the Dogwinkles, which also eat Blue Mussels).

See Merritt Gibson’s *Seashores of the Maritimes* (Nimbus, 2003) for more info on our common seashore critters and seaweeds and their natural histories, or, if you have it, the older and previous incarnation by Gibson called *Summer Nature Notes for Nova Scotians: Seashores* (Lancelot, 1987).



Getting Antsy

by John Belbin

“Getting antsy” has a much different meaning to crows than to you and me. They deliberately seek out ants and use them as a method of personal grooming and hygiene. If they suffer some temporary discomfort as a result, they feel much better and are far healthier in the long term as a result. They are probably a lot less squeamish about such a process than we are.

You may well be surprised to see American Crows spread their wings and lay down on a busy ant colony. It is a strange place to have a dust bath. The disturbed and angry ants crawl through the crow’s feathers, but while they are doing that they discover food sources that are of benefit to them. The ants turn from vengeance to food gathering and are soon greatly reducing the number of parasites hidden in the birds feathers. This is called passive anting. I have seen Northern Flickers revelling in this activity for long periods, but as they normally eat ants they probably have an ulterior motive.

In the related process of active anting, a bird picks up ants in its bill and then pokes them vigorously into its feathers. The bird will normally spend more time on the underside of its body, particularly beneath the wings and tail. Those must be problem areas. Starlings will usually seek out the Formicine ants to do this, so presumably the ants’ ability to spray their formic acid in defence is an important consideration. Whether this strong acid is used as a cleansing agent or as an insecticide is debatable; it is most probably a combination of both. Sometimes, a bird will eat the ants after the cleaning, a bonus that seems unfair, but could have been the intention all along. Few birds besides the woodpeckers will swallow ants that still have their full complement of formic acid.



JACK MCMMASTER

You might notice the birds become highly excited while doing this activity. They are clearly getting some stimulus from these actions, but what that might be is mostly guesswork. Other birds that practice active anting behaviour include the orioles and jays; see if you can find this activity when you are watching them.

Recent research has shown that starlings will also occasionally use “honeydew” ants for anting, a real puzzle as these species do not possess any formic acid. Instead they can exude citric acid, which doesn’t have the same effect at all. This clearly has a benefit, but again, we don’t know what it is.

Some songbirds don’t rely on ants at all. Cigarette butts, beetles and other bugs, onion, garlic, hornets and wasps, citrus fruit, apple and orange peels, and even mothballs can all be picked up for use in anting. When you see a bird collecting such items it is not just being cute or strange; it has a really serious purpose in mind. If you are one of those people who use mothballs to keep the bugs out of treasured parts of your garden, now you know why they disappear. If you were covered in feathers and had no hands you would have a hard time getting clean too!

NOTE: The idea and some of the material for this piece came from “Comfort Behaviour in Birds,” by Herb Wilson in his bi-weekly column *For the Birds* (published May 5, 2007, in the *Portland Sunday Telegraph*, *Waterville Morning Sentinel*, and *Augusta Kennebec Journal*). Wilson has researched the migration patterns of Semipalmated Sandpipers at Avonport.

Winter Nature

Reviewed by Doug Linzey

Merritt Gibson and Soren Bondrup-Nielsen, *Winter Nature: Common Mammals, Birds, Trees & Shrubs of the Maritimes*, illustrated by Twila Robar-DeCoste (Kentville, NS: Gaspereau Press, 2008), 224 pp., \$27.95.

It's always a pleasure to open a new book about local nature happenings by Merritt Gibson, especially one liberally illustrated by Twila Robar-DeCoste. This one adds Soren Bondrup-Nielsen to the mix. Soren brings the observations of a long-time outdoor enthusiast and explorer of Canadian winter natural history to what amounts to an expanded and updated edition of Merritt's 1980 *Winter Nature Notes for Nova Scotians*. *Winter Nature* is a year old now, and many BNS members will have had an opportunity to try it out.

The book gives a pretty good overview of three major divisions of living things likely to be spotted in winter – trees and shrubs, mammals, and birds – while walking through woods, fields, or towns. It does not cover aquatic animals, fungi, or the non-shrubby plants that persist through the winter as either dried plants or evergreens. Each category is in turn broken down into groups. The mammals for example are classified by insectivores, hare, rodents (small and large) carnivores (small and large), and deer and moose. Each species has a description, notes on habitat and distribution, a bit of relevant lore, and a pen-and-ink drawing.

Bonus features include three short “winter activities” – Measuring the snow profile, Feeding birds, and Enjoying nature in winter – and a brief section on basic mammal tracks.

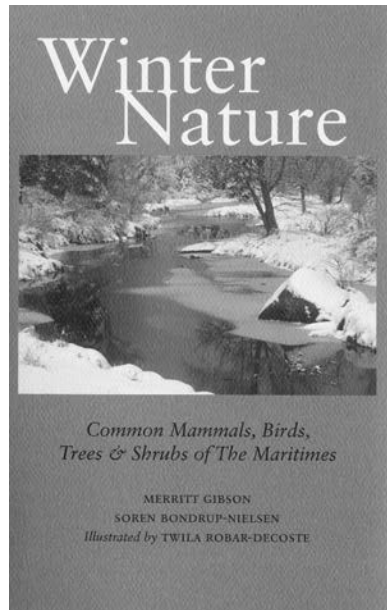
Twila's drawings are marvellous, as always, with attention given

to the habits and habitat of the mammals and birds. For the shrubs and trees, drawings concentrate on the identifying features of bark, twigs, buds, and remnant or overwintering leaves, catkins, cones, and the like.

This book is not by any means a comprehensive field guide. The birds listed in the table of contents, for example, comprise only about half the number of species counted during Christmas bird counts around the Maritimes. And the book, though nominally covering the Maritimes, still has a distinct Valley feel to it and possibly better reflects species to be found here than in the region generally.

The table of contents quite adequately does double duty as both a species list and a rough key for identification. The writing is competent and informative, and readers are more likely to look more closely at their natural surroundings after reading this book. The only quibbles with the text are some inconsistent editing (those pesky punctuation marks and bits of grammar) and the perpetuation of the wintering “Newfoundland” robin myth.

Whether you choose to treat this book as a field guide and use it outdoors probably depends on how you feel about exposing a fine Gaspereau Press book to the elements. *Winter Nature* is no exception to the thought and care that goes into all of this publisher’s products; the paper, layout, typography, binding, and covers together present a quite handsome package. There is a jacket, too, with those flaps that help keep your place in the book.



B's Bees

by Barry Yoell

Some time ago I had an idea that I felt to be unique. Not your usual concept – more of a Newtonian or eureka kind of earth-shattering idea. I was so impressed by my erudition that I hastened to share it with my wife, who agreed that it was at least interesting. Praise indeed!

I had been sitting beside our beehive. Musing. Watching the comings and goings of myriad bees and contemplating the inner working of the hive with its hierarchical society. Each bee has its own specific responsibility – feeding the larvae, grooming the queen, cleaning, guarding the hive, gathering nectar, making honey, etc. – each one an essential cog in the life of the hive. It occurred to me that this arrangement of tiny living creatures, each of which is totally incapable of living an independent life but, as an integral part of the hive, helps keep the colony alive and well, is much like life in our own bodies. We have myriad cells, blood cells, muscle cells, brain cells, etc., each with its own responsibilities and its own life, but unable to live and function independent from our bodies. Thus, I mused, the individual bees are analogous to our cells, and the hive is similar to our body. The hive colony is like a single organism, without a skin. What an idea! A new life form, a new way of looking at colonial animals such as ants and termites.

My biologist friend with whom I shared my lovely idea was interested, enthusiastic, but by no means bowled over. She brought me a book the next day, written in the 1860s, with a page marked for my guidance. There in old black and white was my idea, beautifully described by a monk/biologist, recognizing the insect colonies as single organisms, comparable to us, but skinless.



Rather than being heartbroken at having lost the race to this unique concept, I was pleased that the monk and I had come to similar conclusions, fascinated that his brain cells and mine, so many years apart, had shared our moment.

To make this little vignette even more precious to me, I recently saw a brilliant tv documentary on ants. The Brazilian entomologist referred to the colony as an organism. The concept is obviously now accepted. Eureka!

A Plea for Bees

by Laura Thompson & Derek Allerton

During the winter, the closest many of us are to bees is usually the honey we drop in our tea or spread on a slice of toast. However, while these magnificent insects lay dormant waiting for spring, we should start thinking about them now.

Of all the insect species, bees are the most beneficial to humans. Our current agricultural system could not exist without them, as one-third of all our food is pollinated primarily by bees. While we are most familiar with honeybees and bumblebees, there are more than 159 species of bees in Nova Scotia: 157 indigenous, 2 introduced (Sheffield, 2003). Of them all, honeybees are the one species people know because they produce honey; surprisingly, most bee species do not. Through beekeeping, we create the conditions for honeybees to thrive, although they can live in the wild without our help. Commercial beekeeping is an important industry, more so for the pollination services they provide to farmers than the honey they produce. To put this in perspective, one pound of honey represents the sweetness of about 10 million blossoms (Savage, 2008). Furthermore, farmers and home gardeners alike benefit from honeybees and wild bees.

But bees are in trouble. This first came to public attention in 2007 when beekeepers in Europe and North America began reporting the collapse of their bee colonies, upwards of 30 percent of their hives in a given year (Ellwod, 2009). This recent decline is also reflected in wild bee populations. Given how impactful the decline of bees would be on our food supply and wild flowering plants, scientists quickly started looking for the cause. The most critical causes identified are widespread use of biocides (insecticides, herbicides, fungicides), parasitic mites, viruses, and habitat loss.

What can we do? The good news is that wild bees don't require massive protected areas for nesting and foraging. The following actions, as suggested by the David Suzuki Foundation, can make a huge difference for wild bees and honeybees alike:

- Create your own pollinator-friendly garden using native plants.
- Eliminate pesticide use at home.
- Encourage your provincial government to eliminate cosmetic pesticide use (Ontario, Quebec, PEI, and New Brunswick have already passed such laws).
- Encourage your municipal council to implement pollinator-friendly policies, such as maintaining habitat along roadways and parks, eliminating pesticide use on municipal property, and planting vegetation that native bee populations support.
- Encourage the planting of native flowers in open spaces and outside public buildings.
- Encourage local clubs or school groups to build pollinator habitats such as butterfly gardens and bee boxes.
- Support agriculture enterprises with pollinator-friendly practices, such as farms that avoid or minimize pesticide use.
- Encourage government agencies to take into account the full economic benefits of wild pollinators and their habitats when formulating policies for agriculture and other land uses.

Another easy action we would recommend is to buy locally produced honey, which is widely available at farmers' markets, farm markets, and grocery stores. Local apiarists also benefit from people taking the above actions as it helps protect their livelihood. To learn more about our most important pollinators and how fascinating they are, we recommend reading *Bees: Nature's Little Wonders* by Candace Savage.

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NATURE COUNTS

2009 Nova Scotia

Migration Count – Kings & Annapolis

by Judy Tufts, Kings County coordinator

SATURDAY, MAY 9, 2009 – A warm thank you to one and all who took part in this spring's Migration Count a in Kings County. The results were wonderful, obviously showing not only a fine effort, but a great willingness to be involved in this project once again. In Kings County, 134 participants (70 field observers, 4 of whom also went out checking for owls, and 97 feeder watchers) counted 123 species, an increase of seven over last year. A big thank you is also extended to Sheila Hulford for her invaluable help coordinating participants in the Kingston area. Sheila is one of those exceptional participants who contributes valuable sightings in Annapolis County as well as Kings.

KINGS COUNTY HIGHLIGHTS

Possibly the best prize was the fact that not one, but two Brown Thrashers were discovered in Kings County – one on the North Mountain and one in Wolfville – and a third one for NSMC turning up in Shelburne County. One has to wonder if one of them was the same bird that hung around Richard and Liz Stern's property in Port Williams for some time prior to this count. This was a new species for our Kings list, though not a new one for the province. In the last few years one or more of this species has been tallied in time for the count (in 2004 there were four), possibly indicating that the species is pushing northeast, seeking to expand its continental range. Other new species for our county list were Greater Scaup and Nelson's Sharp-tailed Sparrow, which has now had its name officially shortened by the AOU to Nelson's Sparrow.

Kings County held the only NSMC sighting reports for nine species in this spring count: Turkey Vulture (1), Chimney Swift (12), E. Wood Pewee (1), E. Kingbird (3), lingering Horned Larks (9 – only the second Valley record), N. Mockingbird (1), Cedar Waxwing (36), Lincoln's Sparrow (2), and Bobolink (6).

Lucky were the participants who had the pleasure of finding other colourful birds to add to their list, and there were quite a few to go around. How about 31 N. Cardinals (20 in 2008), 19 Rose-breasted Grosbeaks, two Baltimore Orioles, a male Red-bellied Woodpecker, or the regal Great Egret in an Avonport farm pond (the only other one on our county record goes back to 2006)?

Not unexpectedly, we had several Peregrine reports in Kings – five out of seven for the whole province. This is the highest number we have ever recorded for Kings. These falcons are certainly here to stay. It is reassuring to know the pheasants remain well entrenched in the Annapolis Valley. A high of nine A. Woodcock found on the North Mountain by one participant was a record both for this year and for past NAMCS. Ruby-throated Hummingbird numbers (42) were a little higher than last year, but we have yet to beat that rec-

ord of 64 back in 2003. The woodpecker family was more than well represented, breaking previous county records handily, all except the Downy Woodpecker, which in 2008 was the most abundant. This year Yellow-bellied Sapsuckers almost doubled their numbers.

And we fared well with 16 warbler species, including a Wilson's (two others seen in the province, in Annapolis and Richmond counties). Flycatchers too, E. Phoebes taking honourable mention with 80 percent of the provincial tally, and the only E. Kingbirds counted were also in Kings. Eleven species of sparrows set another county record. An early Nelson's (Sharp-tailed) Sparrow was a happy discovery by one of the Kingston group.

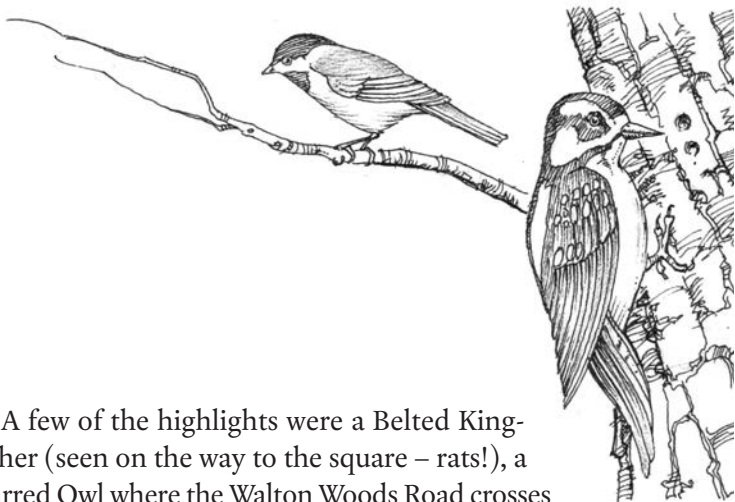
NATURE COUNTS

2009 Nova Scotia

Migration Count – West Hants

by Patrick Kelly

SATURDAY, MAY 9, 2009 – This year's count in West Hants was essentially a one-person event. There are not nearly as many avid bird counters in West Hants as there are in Kings County, and the few that usually participate (all feeder watchers) were involved with other events that day. I decided to combine the count with atlasing and chose the Centre Burlington square (20MQ19), which at the time had no data submitted. I thought it would be a great chance to explore some new terrain as well as providing data for two projects at once. This area has lots of side logging roads, which are kept in reasonable shape, given that logging in the area is infrequent. I thus ended up walking almost five kilometres over the course of the day. It was a pleasant change to be away from inhabited areas.



A few of the highlights were a Belted Kingfisher (seen on the way to the square – rats!), a Barred Owl where the Walton Woods Road crosses the Cogmagun River, and a really close view of an Eastern Phoebe where Highway 215 crosses the same river. A really nice treat was that in the few places where warblers were showing up there were lots of Palm Warblers (no palm trees, though), and not only was I able to get really good looks at most of them, I was surprised at the end of the day when they were actually the most numerous warbler I encountered. I should also thank the one Pine Grosbeak, which stayed perched on the top of the tall conifer tree long enough for me to walk far enough around the tree so that the sun was not directly behind it.

In terms of atlassing data, most species were only at the “possible” level, either on habitat or singing on habitat. Several species were exhibiting behaviour that put them in the “probable” category: Savannah Sparrows and Palm Warblers were both showing display activity, while the American Wigeon, Purple Finch, and American Goldfinch were in pairs. I even had one “confirmed” species when I spotted a Yellow-rumped Warbler collecting nesting material. She must have been making the nest nearby as she was back to get more within a minute each time she flew off.

In the end, I saw 48 species in total, and 478 individual birds.

2009 NSMC Valley Summary

Grand Total: 15297

Total Species: 137

Species	Hants West	Kings	Annapolis	Total	Species Tally
Red-throated Loon		4	1	5	1
Common Loon		23	9	32	1
Pied-billed Grebe		2		2	1
Northern Gannet		12	2	14	1
Double-crested Cormorant	8	70	1	79	1
Great Blue Heron		14	1	15	1
Great Egret		1		1	1
Canada Goose		56	1	57	1
Wood Duck		12	2	14	1
Green-winged Teal		46	1	47	1
American Black Duck	27	167	8	202	1
Mallard		182	4	186	1
Blue-Winged Teal		4		4	1
Gadwall		2		2	1
American Wigeon	6	7		13	1
Ring-necked Duck	2	6	6	14	1
Greater Scaup		1		1	1
Common Eider		74	18	92	1
Harlequin Duck			9	9	1
Long-tailed Duck			1	1	1
Black Scoter		272	47	319	1
Surf Scoter		9	47	56	1
White-winged Scoter		7	7	14	1
Scoter species		30		30	
Common Goldeneye		1		1	1
Hooded Merganser		4	5	9	1
Common Merganser		8		8	1
Red-breasted Merganser			2	2	1
Turkey Vulture		1		1	1
Osprey		2		2	1
Bald Eagle adult	1	31		32	1
Bald Eagle immature		5		5	1
Bald Eagle unknown age		3		3	1
Northern Harrier		3	2	5	1
Sharp-shinned Hawk		2	1	3	1
Red-Tailed Hawk		30	1	31	1
Buteo species		2		2	
American Kestrel		3		3	1
Merlin		6	3	9	1

Species	Hants West	Kings	Annapolis	Total	Species Tally
Peregrine Falcon		5		5	1
Ring-necked Pheasant	3	265	10	278	1
Ruffed Grouse		16	6	22	1
Killdeer		11	2	13	1
Greater Yellowlegs		1		1	1
Eastern Willet		12		12	1
Spotted Sandpiper		11		11	1
Peep species		2		2	
Common Snipe		5	1	6	1
American Woodcock		9		9	1
Ring-Billed Gull		8		8	1
Herring Gull	5	264	64	333	1
Iceland Gull		1		1	1
Greater Black-backed Gull	26	132	1	159	1
Gull species		439		439	
Black Guillemot		21	3	24	1
Rock Pigeon	7	113	18	138	1
Mourning Dove	9	380	66	455	1
Great Horned Owl		2		2	1
Barred Owl	1	27		28	1
Chimney Swift		12		12	1
Ruby-throated Hummingbird	1	42	9	52	1
Belted Kingfisher	1	10	1	12	1
Yellow-bellied Sapsucker		33	3	36	1
Downy Woodpecker	1	145	15	161	1
Hairy Woodpecker	3	85	16	104	1
Northern Flicker	4	170	20	194	1
Pileated Woodpecker		24	5	29	1
Eastern Wood Pewee		1		1	1
Alder Flycatcher		1		1	1
Least Flycatcher	2	17	6	25	1
Eastern Phoebe	1	23	8	32	1
Eastern Kingbird		3		3	1
Horned Lark		9		9	1
Tree Swallow	5	281	61	347	1
Bank Swallow		4		4	1
Cliff Swallow		14	14	1	
Barn Swallow	2	35	2	39	1
Blue Jay	8	473	65	546	1
American Crow	13	798	74	885	1
Common Raven	6	167	24	197	1
Black-capped Chickadee	6	778	96	880	1
Boreal Chickadee			1	1	1
Red-breasted Nuthatch		33	5	38	1
White-breasted Nuthatch	1	46	7	54	1
Brown Creeper		5		5	1

Species	Hants West	Kings	Annapolis	Total	Species Tally
Winter Wren		5	2	7	1
Golden-crowned Kinglet		6	3	9	1
Ruby-crowned Kinglet	2	21	1	24	1
Hermit Thrush	2	43	10	55	1
American Robin	18	781	136	935	1
Northern Mockingbird		1		1	1
Brown Thrasher		2		2	1
Cedar Waxwing		36		36	1
European Starling	158	1023	128	1309	1
Blue-headed Vireo	2	110	15	127	1
Red-eyed Vireo		7		7	1
Vireo species		3	3	6	
Nashville Warbler		19	1	20	1
Northern Parula	6	86	29	121	1
Yellow Warbler		45	9	54	1
Chestnut-sided Warbler		12	3	15	1
Magnolia Warbler		5		5	1
Black-throated Blue Warbler		4		4	1
Yellow-rumped Warbler	7	341	57	405	1
Black-throated Green Warbler		82	34	116	1
Blackburnian Warbler		1		1	1
Eastern Palm Warbler	9		2	11	1
Bay-breasted Warbler		1	1	2	1
Black-and-White Warbler	1	83	34	118	1
Ovenbird	1	63	10	74	1
Northern Waterthrush		17		17	1
Common Yellowthroat		4	1	5	1
Wilson's Warbler		1	1	2	1
Northern Cardinal		31	1	32	1
Rose-breasted Grosbeak		19	2	21	1
American Tree Sparrow		5	2	7	1
Chipping Sparrow	1	116	11	128	1
Savannah Sparrow	3	212	28	243	1
Nelson's Sharp-tailed Sparrow	1	1		2	1
Fox Sparrow		2	1	3	1
Song Sparrow	8	700	100	808	1
Lincoln's Sparrow		2		2	1
Swamp Sparrow	1	11		12	1
White-throated Sparrow	10	209	40	259	1
White-crowned Sparrow		1		1	1
Dark-eyed Junco	5	206	42	253	1
Bobolink		6		6	1
Red-winged Blackbird	13	493	51	557	1
Rusty Blackbird		1		1	1
Common Grackle	27	504	58	589	1

Species	Hants West	Kings	Annapolis	Total	Species Tally
Brown-headed Cowbird		11		11	1
Blackbird species		2		2	
Baltimore Oriole		2		2	1
Pine Grosbeak	1			1	1
Purple Finch	7	341	54	402	1
Red Crossbill		3	1	4	1
White-winged Crossbill		2		2	1
Common Redpoll		4		4	1
Pine Siskin		91	10	101	1
American Goldfinch	35	978	155	1168	1
Evening Grosbeak	11	87	40	138	1
House Sparrow		59	2	61	1
Red-bellied Woodpecker		1		1	1
Raptor species		1		1	
Shorebird species		8		8	
Loon species		15		15	
Warbler species		12		12	

	Hants West	Kings	Annapolis
Time Start		530	647
Time Stop		2300	2000
OWLING			
Hours		4.5	
Kilometres travelled		10	
Number of Observers		4	
REGULAR			
Time (hours)	Foot	116	14
	Car	66	12
	Bike	3	
Distance (km)	Foot	5	130
	Car		823
	Bike		18
Number of Observers	1	70	11
FEEDER WATCHING			
Time (hours)		322	41
Number of Feeder watchers		97	9
Number of Feeder stations		50	7
Number of Participants	1	134	19

Four Centuries Ago This Winter

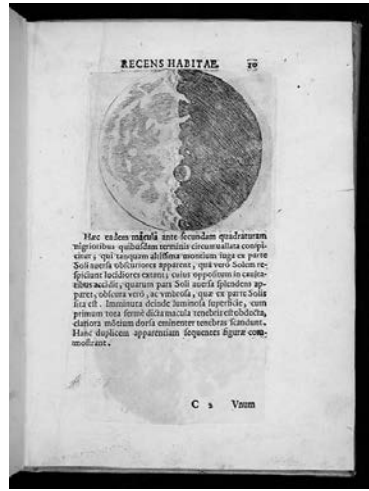
by Roy Bishop

It was exactly 400 years ago, in the first three months of 1610, that Galileo Galilei looked at the night sky with a telescope. In March of that year he published his observations of Jupiter, the Moon, and the stars in a book he named *Sidereus Nuncius*, the Starry Messenger. That small book was the product of a new scientific instrument, the telescope, and a brilliant mind that grasped the significance of what the telescope revealed.

The telescope revealed the planets to be not star-like points of light, but globes like the Moon and Sun. The possibility of other worlds, of life elsewhere, became plausible. In accord with philosophical ideas about the perfection of the heavens, the Moon had been assumed to be perfectly spherical, but the telescope revealed it to be Earth-like, with mountains, valleys, and plains.

Earth was widely believed to be stationary at the centre of creation, with the Moon, Sun, planets, and stars circling around it. Galileo's telescope revealed four moons circling Jupiter, the first new Solar System bodies to be discovered in recorded history. That raised troubling thoughts, such as, Why did God create those four moons if a gadget, a telescope, is required to see them? Also, those moons circled around Jupiter, not Earth, indicating that perhaps Earth is not at the centre of creation.

An argument for a stationary Earth had been that Earth has a moon circling around it. If Earth moved, the Moon would be left behind. That argument collapsed, for Jupiter has no trouble carrying four moons along with it. Could Earth be but one of the wandering planets? And if Earth is moving, the absence of any detectable parallax shift of the stars means that the stars must be at immense



Pages from Galileo's *Sidereus Nuncius*, the *Starry Messenger*.

distances from Earth. Why so much empty space? Infinity seemed to be devouring the space reserved for God and heaven.

The publication of *Sidereus Nuncius* marked a turning point in humanity's view of the universe. Its revelations were disturbing to the religious authorities of 1610.



MARY PRATT

Fall 2009 – Eastern Annapolis Valley

by Larry Bogan

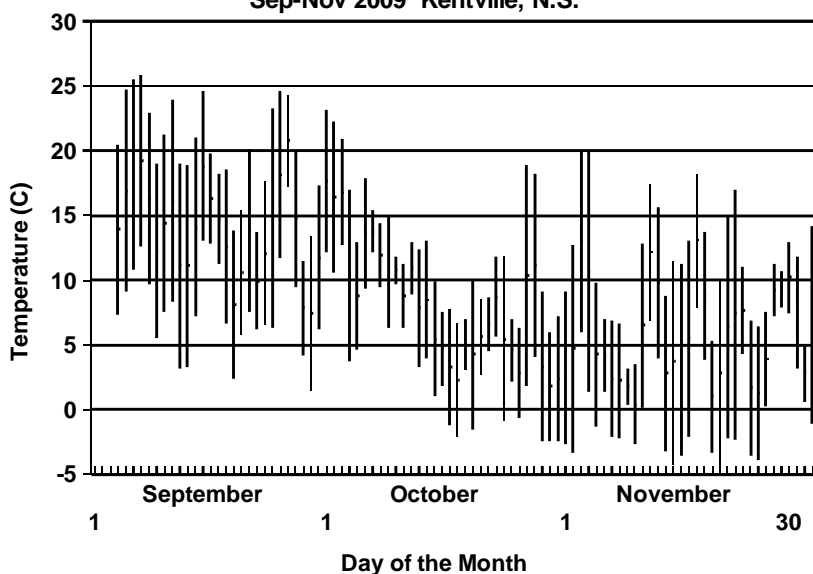
Usually, I compare the current monthly data with just that of the average for the months over the 1960–2008 period, but this time I’ve added a 5-year average for the period 2003–2008.

	Temperature			Precipitation		Bright Sunshine (h)
	Max (°C)	Min (°C)	Mean (°C)	Total (mm)	Snow only (cm)	
September	20.0	8.3	14.2	67		178
(48 yr. average)	(20.0)	(9.4)	(14.7)	(92)		(169)
(5 yr. average)	(20.8)	(9.7)	(15.2)	(66)		(191)
October	11.0	2.9	7.0	150		80
(48 yr. average)	(13.7)	(4.7)	(9.2)	(106)		(142)
(5 yr. average)	(14.3)	(5.2)	(9.7)	(108)		(150)
November	10.8	0.5	5.6	62		115
(48 yr. average)	(7.7)	(0.2)	(4.0)	(116)	(18)	(77)
(5 yr. average)	(8.4)	(0.4)	(4.4)	(106)	(62)	(76)
Season	14.0	3.9	8.9	279		373
(48 yr. average)	(13.8)	(4.7)	(9.3)	(314)		(388)
(5 yr. average)	(14.5)	(5.1)	(9.8)	(280)		(379)

Source: Food & Horticultural Research Centre, Kentville, NS

Daily Max, Min and Mean Temperature

Sep-Nov 2009 Kentville, N.S.

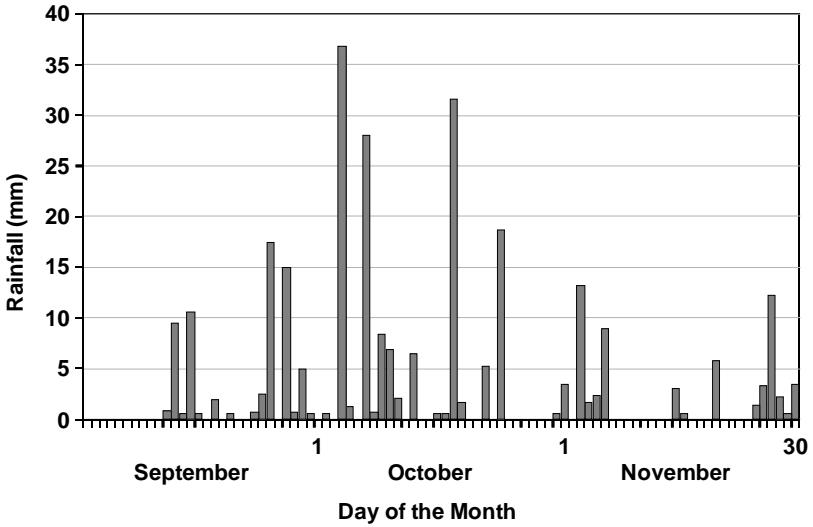


TEMPERATURE

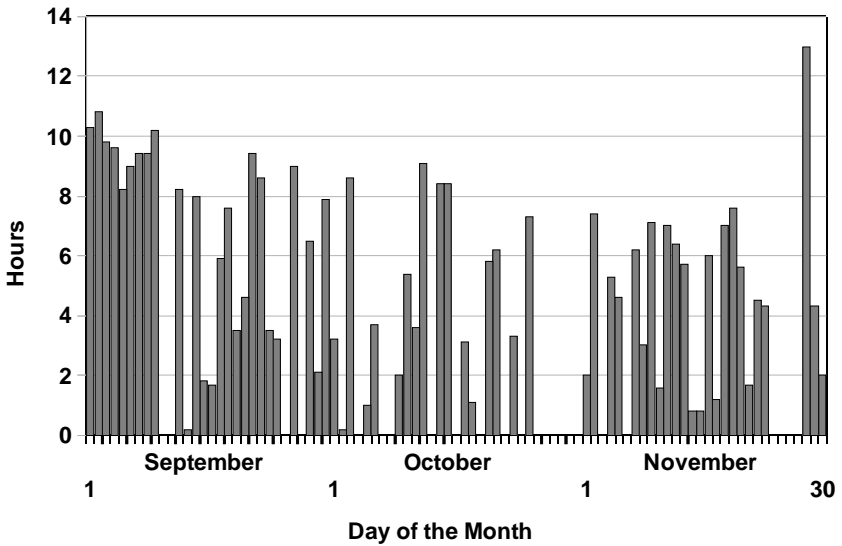
November was a wonderful month because it was relatively warm and sunny when usually it is darker and cooler as we head toward winter weather. October, in contrast, was a bit of a disappointment because it was cloudier and cooler than average. November averaged 1.6 °C above average while October was 2.2 °C below average. Even September was a bit below the average for the year by 0.5 °C. The autumn season this year was about 0.4 °C cooler than average. For the last five years the autumn months have all been above average in mean temperature by 0.5 °C. This autumn has changed that trend.

You will see on the graph of daily temperatures that September had fairly uniform temperatures, but then in October the temperatures steadily declined and levelled off late in the month. Interestingly, temperatures remained at that level throughout November and yielded the relatively warmer month.

Daily Rainfall
Sep-Nov 2009, Kentville, N.S.



Daily Bright Sunshine Hours
Kentville, NS Sep-Nov 2009

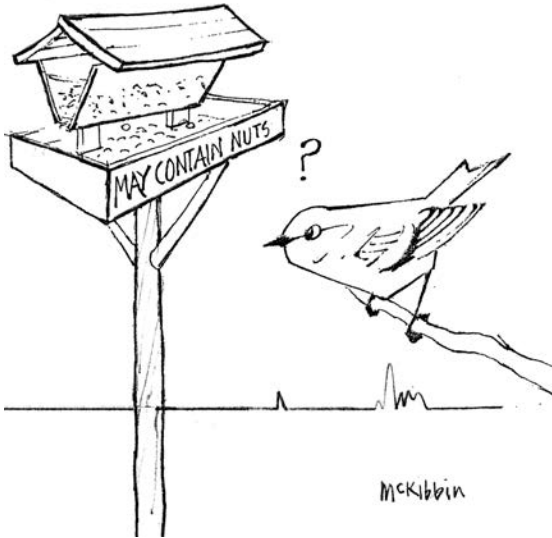


RAINFALL

Rainfall for the season was down 12 percent from the 48-year average but about the same as the last five years. Rainfall amounts were 72 percent, 140 percent, and 53 percent of average for September, October, and November, respectively. The chart shows that we had some heavy rainfalls in October. There was no significant snow in November, compared to the long-term average of 16 cm (62 cm for the last five years). Last year's November snowfall helped raise that short-term average.

SUNSHINE HOURS

November had 50 percent more sunshine than average, but October had only 56 percent of the expected amount. With September being about normal, the season was only down a little from the average. Note that the five-year average is also down the same amount.



What's in the Sky?

by Roy Bishop

SPECIAL EVENTS IN SEQUENCE

(see the main text for details)

January 29: Mars at opposition, beside the largest full Moon of 2010

February 14: Venus, Jupiter, and a Cheshire Cat Moon

February 16: Venus passes Jupiter

March 20: Spring equinox, Moon beside the Pleiades

March 22: Saturn at opposition

April 1 to 10: Mercury in the evening sky

April 15: Crescent Moon beside Mercury

THE RED PLANET IN MID-WINTER

Actually, Mars appears pale-orange in colour, but it will be bright and obvious, high in the midnight sky through late January and February. At intervals of just over two years, Earth overtakes and passes Mars as both planets orbit the Sun. That event occurs on January 29, and Mars is said to be at opposition because it is opposite to the Sun in the sky on that date, nearest to Earth, and at its maximum brightness. A special treat that night is the nearest, largest, and brightest full Moon of 2010, only 7 degrees from Mars.

Mars will be well placed in the night sky throughout February, although it will be only half as bright by month's end, as Earth in its faster orbit begins to leave Mars behind. Even when Mars is closest to Earth in late January, steady air and a good telescope will be needed to see any surface features. That is because at its 2010 opposition,

Mars is relatively far from Earth. Mars is then near aphelion (furthest point from the Sun in its elliptical orbit) and Earth is just past perihelion (nearest point to the Sun, on January 2). Thus the 2010 Martian opposition is unfavourable. Although oppositions of Mars recur at just over two-year intervals, favorable oppositions recur only every 16 years. Astronomers interested in a good view of Mars must be patient. The next favorable opposition of Mars visible from Nova Scotia is a decade away, in October 2020.

A CHESHIRE CAT CHALLENGE ON VALENTINE'S DAY

On February 14, just after sunset, very low in the west-southwestern sky the Moon and two bright planets, Venus and Jupiter, will lie within the same binocular field of view (less than 5 degrees from one another). What makes the sight especially unusual is that as viewed from Nova Scotia the Moon will be only 19 hours after its new phase – a sliver of a crescent and difficult to see. Sightings of the Moon less than 24 hours old are uncommon, less than 20 hours old relatively rare. The 19-hour Moon of February 14 will be particularly difficult to see because the Moon is at apogee two days earlier and thus moving slower than average away from the Sun.

The sky must be clear and transparent at sunset on February 14 for the Moon to be visible. Sunset is at 5:43 p.m., so locate a low western horizon and start looking about 5:50 p.m. Venus is bright and will be visible first, slightly left of where the Sun set. Jupiter is above and slightly left of Venus. The two planets serve as an essential guide for locating the Moon. The Moon will be to the right of both planets, higher than Venus, but lower than Jupiter, and twice the Jupiter-Venus separation from Venus. Use binoculars – the chance of seeing a 19-hour Moon without optical aid is remote. If visible, all that will be seen of the Moon will be a faint, wire-thin, partial crescent, like the smile of the vanishing Cheshire cat in *Alice in Wonderland*. The Moon sets about 6:30 p.m.

JUPITER, A VANISHING “EVENING STAR”

Jupiter was obvious in the southern evening sky during the autumn. In January Jupiter is in the southwestern early evening sky but vanishes into the twilight by mid-February. Jupiter passes behind the Sun on February 28, reappears low in the dawn twilight by late March, and remains in the morning (after-midnight) sky for the remainder of the spring.

On Tuesday, February 16, Jupiter passes barely half a degree from Venus, but both planets are then very low in the west-southwestern evening twilight. The best time to see the close pairing of the two bright planets is between 6:00 and 6:15 p.m. that evening. Use binoculars and pick a viewing site with a low western horizon. Look slightly left of where the Sun has set.

VENUS REPLACES JUPITER AS THE “EVENING STAR”

During much of 2009 Venus was the “morning star.” Venus passes behind the Sun on January 11 and reappears as the “evening star” in February. On February 16 Venus is very near Jupiter in the early evening twilight (see the previous paragraph). During February, March, and April Venus will dominate the western evening sky.

Note that both Venus and Jupiter pass behind the Sun early in 2010, Venus on January 11, Jupiter on February 28. However, Venus then enters the evening sky, but Jupiter enters the morning sky. That asymmetry is a consequence of the relative orbital speeds of the planets. Earth moves faster than Jupiter, leaving Jupiter behind. In turn Venus moves faster than Earth, and is catching up to Earth. Orbital speed is determined by a planet’s distance from the Sun. As Newton’s equations predict, a planet’s orbital speed varies inversely as the square root of the radius of its orbit. Hence a planet that is twice as far from the Sun as another planet moves only $1/\sqrt{2}$ (or 71 percent) as fast.

SPRING BEGINS WITH AN ETHEREAL SIGHT

Winter officially ends on Saturday, March 20. That evening, if the sky is clear, grab your binoculars and look at the pretty sight in the western sky as darkness falls. From about 8 p.m. until moonset at 1 a.m. the next morning, the waxing crescent Moon glides eastward past the Pleiades star cluster. While you are admiring the sight and noting the eastward orbital motion of the Moon during the evening, consider the contrast in distances. Light from the Moon takes 1.3 seconds to reach your eyes, whereas light from the stars in the Pleiades has been in transit ever since Galileo was observing the Pleiades in 1610! In other words, the Pleiades star cluster is $400 \text{ years}/1.3 \text{ seconds} = 10 \text{ billion}$ times further away than the Moon. To express it another way, if the Earth-Moon distance were represented by one human being, there are not enough people on Earth to represent the distance to the Pleiades.

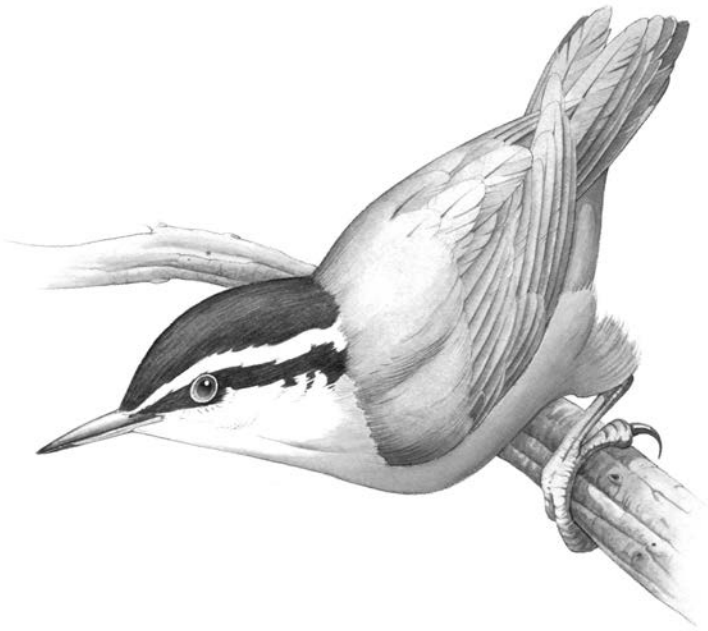
SATURN RETURNS

During the spring of 2010 the ringed planet Saturn is well placed in the nighttime sky. Opposition occurs early in the spring, on March 22, with Saturn 71 light-minutes from Earth. Seasons on Saturn last 30 times longer than on Earth. Last August 10, spring began in the northern hemisphere of Saturn. At that time Saturn's spectacular ring system was edge-on to the Sun. As spring slowly advances in Saturn's northern hemisphere, the Sun rises higher above the north side of the ring plane. As viewed from Earth, because of Earth's orbital motion the tilt of the rings is actually decreasing during our spring of 2010, reaching a minimum tilt of only 1.7 degrees in late May.

MERCURY AT ITS BEST

As mentioned on the April page of your BNS Natural History Calendar, Mercury is favorably placed in the west-northwestern evening twilight sky during the first ten days of April. Brilliant Venus serves

as a convenient locator beacon, with Mercury positioned about 3 degrees to the right of Venus. The best time to look is about 8:40 p.m. Mercury is considerably brighter at the beginning of the month than it is by April 10, so take advantage of the first clear evening. On April 15 the 35-hour crescent Moon is one degree to the upper right of Mercury. Have a look with binoculars about 9:00 p.m.



JACK MCMMASTER

Blomidon Naturalists Society

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

**Statement of Income, Expenditures and Net Worth for BNS year 2008 / 2009 at 30 September 2009
and Budget for 2009 / 2010**

Description	Budget for 2008 / 2009	Actual for 2008 / 2009	Budget for 2009 / 2010
INCOME			
Advertising	200.00	0.00	0.00
Blomidon Naturalists Fees	3,660.00	3,712.00	3,800.00
Nature Nova Scotia Fees	150.00	110.00	150.00
Miscellaneous Sales	200.00	181.00	250.00
Within the View of Blomidon Sales	500.00	456.00	1,500.00
Calendar Sales	8,550.00	7,825.00	9,000.00
Donations	3,500.00	3,090.00	3,000.00
Donations / Grants for Young Naturalists	12,000.00	14,822.00	12,000.00
Interest / Dividends; (see cash in investment accounts)			
HST Rebate	2,000.00	5,129.47	950.00
Other 1	150.00	0.00	0.00
Other 2	0.00	0.00	0.00
	30,910.00	35,325.47	30,650.00
EXPENDITURES			
Administration	450.00	665.76	500.00
Meetings	550.00	128.53	200.00
Donations to Other Groups	200.00	654.48	600.00
Nature Nova Scotia Distributions	250.00	205.00	250.00
Calendar Costs	5,500.00	5,282.75	5,200.00
Nature Displays	300.00	136.00	200.00
Newsletters	4,100.00	4,158.14	4,100.00
Transfers to Investment Account	4,000.00	0.00	6,000.00
Inventory Writedowns	1,026.00	1,026.00	0.00
Inventory Purchases	0.00	0.00	0.00
Young Naturalists (Green Dragon)	14,000.00	15,827.86	15,000.00
Bank Charges	150.00	84.40	100.00
Other: Portable Public Address System	0.00	0.00	1,500.00
	30,526.00	28,168.92	33,650.00
Excess; (or -) Income over Expenditures		\$7,156.55	-\$3,000.00
Net Worth as of 30 September 2009			
Bank Account (5207570)			\$11,494.54
Endowment Fund (54YL48A)	Cash: 14,172.63	Secur: 20,027.00	\$34,199.63
General Investment (55MH41A)	Cash: 1,053.62	Secur: 6,771.25	\$7,824.87
Within the View of Blomidon (374 + 38 = 412 sold)	Inventory 588 @ 11.30		\$6,644.00
Hats (see writedown)			\$60,163.04
Notes:			
1. Paid memberships for year is 181 : Honorary 16 .			
2. HST rebate for 2008 / 2009 includes recovered amounts for the past 3 years.			
3. HST rebate for future years should be \$900. to \$1000. each year.			
4. Newsletter mailing is approximately 240 copies per issue.			

SOURCES OF LOCAL NATURAL HISTORY

Compiled by the Blomidon Naturalists Society

TOPIC	SOURCE	OFFICE OR HOME TELEPHONE
Amphibians & Reptiles	Sherman Bleakney	H: 542-3604
	Jim Wolford	H: 542-9204
Astronomy	Roy Bishop	H: 542-3992
	Sherman Williams	H: 542-5104
	Larry Bogan	H: 678-0446
Birds – General	Bernard Forsythe	H: 542-2427
	Richard Stern	O: 678-4742 H: 678-1975
	Gordon & Judy Tufts	H: 542-7800
	Jim Wolford	H: 542-9204
	Jean Timpa	H: 542-5678
Butterflies & Moths	Jean Timpa	H: 542-5678
Fish & Wildlife	NS Department of Natural Resources	O: 679-6091
Flora:	Ruth Newell	O: 585-1355 H: 542-2095
Fungi:	Nancy Nickerson	H: 542-9332
Hawks & Owls	Bernard Forsythe	H: 542-2427
Indian Prehistory & Archeology	James Legge	H: 542-3530
Mosses & Ferns	Ruth Newell	O: 585-1355 H: 542-2095
Mammals	Tom Herman	O: 585-1358 H: 678-0383
Rocks & Fossils	Geology Dept., Acadia University	O: 585-2201
Seashore & Marine Life	Sherman Bleakney	H: 542-3604
	Jim Wolford	H: 542-9204
	Michael Brylinsky	O: 585-1509 H: 582-7954

BLOMIDON NATURALISTS SOCIETY

2010 Membership Fees & Order Form

Members 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.)

NAME

ADDRESS

POSTAL CODE

E-MAIL

TEL

In signing this membership application, I/we hereby waive and release the Blomidon Naturalists Society, its executive committee and members, from all claims for injury and/or damage suffered at any function or field trip organized by the Blomidon Naturalists Society.

SIGNATURE

DATE

No.	Description	Price	Total
_____	Individual/ Family Membership	\$20.00	\$ _____
_____	Junior (under 16 years) Membership	\$1.00	\$ _____
_____	Nature Nova Scotia Membership	\$5.00	\$ _____
_____	2010 BNS Calendar	\$15.00	\$ _____
_____	Natural History of Kings County	\$14.00	\$ _____
_____	Within the View of Blomidon	\$20.00	\$ _____
_____	Checklist of Kings County Birds	\$5.00	\$ _____
_____	Blomidon Naturalist crest	\$5.00	\$ _____
_____	Blomidon Naturalist hat	\$15.00	\$ _____
_____	BNS Calendar Photos (Screensaver)	\$10.00	\$ _____
	Postage: (calendar \$2) (parcel \$6)		\$ _____
	Tax-deductible Donation		\$ _____

TOTAL \$ _____

Address cheques or money orders to Blomidon Naturalists Society for membership and other purchases to: **Ed Sulis, 107 Canaan Avenue, Kentville, NS B4N 2A7.** Due date is January 1 of current year.



