Blomidon Naturalists Society

WINTER 2010 NEWSLETTER

Volume 37 · 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

MERRITT GIBSON

(1931–2010)

Blomidon Naturalist

The Blomidon Naturalists Society

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. (Registration number: 118811686RR0001)

THE BLOMIDON NATURALISTS SOCIETY
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BNS Newsletter

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Contributions to the BNS newsletter are always welcome. Articles may be reprinted with permission of the author or the editor. Credit the Blomidon Naturalists Society Newsletter. Unless otherwise stated, opinions are those of authors, not necessarily the Blomidon Naturalists Society. For subscription information, see the membership fees form at the back of this newsletter. If you change your address, please notify us at the address in the facing column.

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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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WOLFVILLE, NS B4P 2C5
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Digital photographs should be submitted to *doug@fundymud.com*

Submission deadline for Spring: March 11, 2011

Out and About

Jean Timpa, editor

Here it is the winter solstice, nearly the end of 2010, moments for reflection on the past 355 days, at least. Such a time frame will at least be bittersweet. It is the hottest year since temperature records have been kept. A quarter of a million people have died due to manmade or natural disasters, nearly an unprecedented number. Debaters about climate change are pretty much in agreement now that it is real, it is happening. The question remains as to what is causing it. Are human activities to be blamed, or is it the start of a natural geological event, or perhaps both? There seems to be little or no political will to try to tackle it head on with determination. The weather was so horrid on the evening of our December 13 meeting that for the first time in our BNS history the lights went out with a bang, and we all went home quickly into the teeth of a fierce gale and rain, which in the end caused many hours/days of power outage and untold damage here in the Valley. Our apologies to Dr. Broders, who was just about to speak to us about Maritime bats.

Most sad of all, however, was the sudden loss of Merritt Gibson on the evening of December 11. A charter member of BNS, his contributions to us are legendary, and the gap he leaves will never quite be filled. Our sincere condolences to Wilma and family.

To sweeter notes, for there were many during 2010. We have been blessed with fine programs, when weather has cooperated, and many field trips – some old favourites and some new. Exploring new areas is always an eye opener, but returning to old habitats allows us to see how such areas are adjusting to climate change. Best of all is the wonderful success we are having with the Green Dragon nature program for children at the various day camps in eastern Kings County dur-

ing July and August. The concept of hands-on natural history education has been met with wonderful enthusiasm. Many individuals, institutions and governmental agencies have been very generous in their monetary support of it. Thank you so much, and ever so grateful thanks to the BNS committee that overlooks all the planning and arrangements and makes it such a great success year after year.

Another highlight is the publication of our BNS Calendar, which in 2011 will be its fourteenth year. As usual I hear people saying not only "ooh" and "aah" as they browse through it, but "it is the best one ever!" And last but certainly not least, I can brag a bit about the ongoing appearance and content of the BNS Newsletter, just like a fond old mother! Its essence is created by many good minds and hands, and we thank Gaspereau Press staff for their generosity in publishing it for us, all professionally dressed up! We especially appreciate Gaspereau's having been able to get the fall issue out in the midst of an extremely busy time dealing with a Giller Prize winner. (Congratulations, Andrew and Gary!)

NOTICE

BNS E-mail List

The Society has a list server that is used to send notices of upcoming meetings, field trips, and last-minute changes to events. Subscribers can also post nature observations and questions to the list. If you are not already on the list, you can ask to be added by e-mailing a request to nature-request@blomidonnaturalists.ca stating why you want to participate OR by going to the sign-up page at http://blomidonnaturalists.ca/mailman/listinfo/nature_blomidonnaturalists.ca.

Board of Directors Report

by Rick Whitman, BNS president

Your board had a regular meeting on December 2. We first welcomed our newest board member, Rachel Cooper, who was elected at the annual meeting on November 15.

Because the notice regarding the vote on the bylaws revision in the BNS autumn Newsletter would not have been received by members prior to the November meeting, the board chose to delay this vote. With the coming vote having been announced at every monthly meeting between September and January, the board set the final date for the vote as the regular February 21 monthly meeting. As this is also the annual "show and tell night," there will be lots of time for discussion prior to the vote. The revised bylaws are posted on the BNS website www.blomidonnaturalists.ca

Murray Colbo informed us that his project to select and identify Internet sources for all types of natural history information (originally Latin names for species) is complete, for the first edition, and is on the BNS website. I reported that specific, agreed repairs to the Robie Tufts Nature Centre chimney are underway. As the exterior work is only re-pointing mortar joints and replacing damaged bricks and interior re-pointing is limited to the top two feet, we do not expect any negative reaction by the Chimney Swifts. We also reviewed the new 1-page, 2-sided BNS brochure that Larry Bogan has prepared at the board's request. The brochure has already been used at the Acadia Christmas Craft Fair and was well received. Thanks, Larry! And speaking of the Craft Fair, thanks also to Harold Forsyth, Ed Sulis, and all volunteers who, I understand, had $1,600 in sales, the most ever.

Another project underway is the renewal of BNS articles for the local paper, to be called "Blomidon Naturalists Notes."

Ed Sulis presented our financial report, as largely seen at the annual meeting. We do not have financial concerns, but we do have membership concerns. Projects such as the brochure and "Blomidon Naturalists Notes" are partial responses to that. We are also very fortunate to have two copies of a beautiful new bird book to be drawn as prizes at the December and January meetings for all members who had paid their 2011 membership fees. New and gift memberships were also eligible.

Have you ever considered giving an annual membership as a gift? The Newsletter alone is worth the price.

There seems to be some confusion as to when annual fees are due. Fees are due every year by January 1 for the coming year. If you find an envelope addressed to Ed Sulis in your copy of the Newsletter, this means your fees are due. If you receive more than one envelope per year, that means your fees are still due. Just call Ed at 678-4609 for clarification.

Pat Kelly reported that our winter and spring program is nearly complete, with meeting topics and field trips set through May. Pat also showed us the new BNS sound system that we have purchased for our own use so that we'll never be without a good system. You will have seen this in action as of the December meeting. In a related topic, we are asking why our meeting room location seems less certain than ever and what can be done about that. This needs to improve.

Enjoy the soon-to-arrive Nova Scotia spring and summer. It's an exciting time for birders and all natural history enthusiasts. Consider attending more BNS field trips than you have previously. I truly find the quality to be better than what some of the attendance numbers would indicate.

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.

Please note that the auditorium is not available to us this spring. January and February meetings will be in Room 241, Beveridge Arts Centre. The March meeting will be in BAC239. Unless otherwise posted, the April meeting will be in BAC241. Updates will be posted on the BNS website: www.blomidonnaturalists.ca

Monday, January 17, 2011 – *Bad Blows and Big Floods: Severe Weather and Community Response in the Annapolis Valley*, by Dr. David Duke. It's everyone's favourite topic, but how much do we really know about the history of weather in our lives? This presentation offers a weather history of the Annapolis Valley, focusing especially on bad weather such as storms. What was the impact of these storms, and how did communities respond to their impact? What was the effect of provincial and federal involvement in the aftermath of severe weather? In a world of changing climate, what can the Annapolis Valley expect in terms of severe weather and its impact in the future?

David Duke is an associate professor in the Acadia University Department of History and Classics, and he teaches in the Environmental and Sustainability Studies program. His subjects include environmental history, the history of science and technology, and Russian and Soviet history. His research focuses on the environmental history of Atlantic Canada. He is currently part of a team investi-

gating the environmental, social, and cultural history of the Tantramar, with particular reference to the Beaubassin area.

Monday, February 21, 2011 – *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 digital images to present, you should contract Patrick Kelly (472-2322, patrick.kelly@dal.ca), as it may be easier to transfer your images, etc., to the computer in advance of the meeting to ensure the files will work and to allow the meeting to start on time. BAC241.

Monday, March 21, 2011 – *Conservation in the Amazon and a Visit to Sable Island and the Gully Marine Reserve: Two Conservation Tours in 2011,* by Catalina Gomez and Jennifer Modigliani. We will present a short talk and slide show on the activities of a Colombian conservation organization in the upper reaches of the Amazon in the extreme south of Colombia We will also talk about our planned tour there in August of 2011. We will also discuss plans for taking people to Sable Island and the Gully Marine Reserve for one week by boat charter in the first week of July. Both tours will have professional researchers on board. BAC239.

Catalina Gomez is a PhD student in biology at Dalhousie University. She has focused on the potential of river dolphins as ecological indicators in freshwater ecosystems. She is an active staff member of a leading Colombian environmental organization dedicated to conservation and research of aquatic ecosystems. She is also a member of the South American River Dolphin Protected Area Network (SARDPAN), which attempts to bring together local researchers and indigenous communities to develop the first network of proposed and existing protected areas.

Jennifer Modigliani, who has been a commercial photographer for 20 years, has an MA in anthropology. She has traveled widely and has more than a decade of experience as a tour coordinator and guide.

Monday, April 18, 2011 – *The Nova Scotia Nature Trust: Protection is Our Game,* by Dennis Garratt. The presentation covers the different ways that we protect land, our three major project areas (endangered species, St. Marys River, coastal), and some of the many interesting characters that I have met in my day-to-day work. BAC 241.

Hailing from England, Dennis has been interested in wildlife from an early age. His passion for birdwatching has taken him the length and breadth of the British Isles, abroad, and recently to Nova Scotia. His first break into higher-level conservation work was with the Scottish Wildlife Trust, where he worked for 11 years, at one point jointly managing all the wildlife reserves across Scotland. Then Dennis moved due south to Hampshire, where he worked for the Hampshire & Isle of Wight Wildlife Trust for 10 years. Dennis has been working for the Nova Scotia Nature Trust for two and a half years.

Monday, May 16, 2011 – *Flying Squirrels,* by Rachel Thibodeau. Flying squirrels may be good indicators of landscape connectivity because they need mature trees to climb for gliding and to sleep in during the day. To understand their connectivity requirements in Nova Scotia, we need local life-history data to determine how long they live, how many young they have, and how they disperse. With this project, live-trapping, passive integrated transponder (PIT) tags, and nestboxes were used to collect life-history data for flying squirrels. A PIT tag – a small glass microchip inserted under an animal's skin – provides the time, date, and unique code for the animal when it passes through a circular antenna.

Rachel Thibodeau grew up in Montreal, and when she was young she liked to go outside the city and play in the forest. She studied for three years in a program called techniques in applied ecology at the Sherbrooke CÉGEP, where she graduated in 2009. In school, she had a chance to work with birds, fish, plants, reptiles, amphibians, and small mammals. For a required internship, she decided to come to Nova Scotia to work on the ribbon snakes and Blanding's turtles (it is here she really started to talk in English). She enjoyed it so much

that she decided to return and is living here now. She spent all last winter monitoring the flying squirrel.

FIELD TRIPS

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

Tuesday, December 28, 2010 – *Kingston Christmas Bird Count.* Wayne Neily (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.

Wednesday, December 29, 2010 – *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.

Saturday and Sunday, January 29 and 30, 2011 – *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 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.eaglens.ca or contact Richard Hennigar at 582-3044 or hennigar@xcountry.tv.

Saturday and Sunday, February 5 and 6, 2011 – *Eagle Watch Weekend 2.* A repeat at the Sheffield Mills Community Hall.

Saturday, February 5, 2011 – *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 characteristic 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.

Friday to Monday, February 18–21, 2011 – *Great Backyard Bird Count.* This count is done by the National Audubon Society and the Cornell Lab of Ornithology, with Canadian partner Bird Studies Canada. The 2010 count produced another record-breaking turnout, with participants turning in more than 97,300 checklists online and identifying more than 600 species. Instructions on how to participate can be found online at http://www.birdsource.org/gbbc.

Saturday, February 26, 2011 – *Valley Birding.* This joint trip with the Nova Scotia Bird Society will be led by Patrick Kelly (472-2322, patrick.kelly@dal.ca) and Suzanne Borkowski (445-2922, suzanneborkowski@yahoo.ca). 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 Pré. Dress warmly and bring a lunch.

Saturday, March 5, 2011 – *Earthquakes and Volcanoes.* Dr. David McMullin of the Department of Earth and Environmental Science at Acadia University will be giving a presentation on earthquakes and volcanoes. These have been in the news a lot lately, from the earthquake that devastated Haiti, to the tremors that trapped the miners in Chile, to the eruption of the Eyjafjallajökull volcano in Iceland, which brought air traffic in Europe to a halt. Come and learn about these phenomena. The time and location will be publicized when known.

Saturday, March 19, 2011 – *Orchid Show.* **Date and times are tentative at the point.** 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.

Sunday, March 20, 2011 – *Along the Fundy Shore.* This is a joint trip with the Nova Scotia Bird Society and the Annapolis Field Naturalists, led by Wayne Neily (765-2455, neilyornis@hotmail.com). It focuses on the early spring birds of the Bay of Fundy and the ecozones from the bay to the Annapolis Valley. 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. Bring a lunch and dress warmly with layers; the Fundy shore can be cold and windy at that time of year. *Pre-registration is preferred in order to help with planning, but not required.*

Sunday, April 10, 2011 – *Wolfville Area Pond Hop.* On this joint trip with the Nova Scotia Bird Society, Jim Wolford (542-9204, jimwolford@eastlink.ca) will take us pond hopping for ducks and early migrants. There will possibly be a visit to Wolfville Ridge first for Barred Owls. Meet at the Wolfville town wharf off the east end of Front Street at 10 a.m. Dress warmly and bring a lunch. No rain date.

Saturday, April 16, 2011 – *Pond Life Through a Microscope.* Todd Smith (todd.smith@acadiau.ca) and Hélène d'Entremont of the Department of Biology at Acadia University 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 digital projector will be set up in a lab in the New Biology Building from 1 to 3 p.m. You can expect to see representatives of many groups of organisms, including bacteria, algae, diatoms, ciliates, flagellates, hydras, flatworms, roundworms, rotifers, annelids, crustaceans, and insects. Meet at the east doors of the New Biology Building and follow the signs.

Saturday, May 7, 2011 – *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 or stop to scout out a bend. The trip will be four to five 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.

Saturday, June 4 – *Native Plant Sale.* The Friends of the Acadian Forest will be hosting a sale of native plants at the Harriet Irving Botanical Gardens at Acadia University from 9 a.m. to noon. Buy native plants grown by volunteers from seed collected in the gardens and from local nurseries. There will be a variety of trees, shrubs, and perennials available, as well as information tables and displays. Proceeds will be used by the Friends of the Acadian Forest Society to work toward forest conservation and education. Don't miss this great annual event in the Walled Garden and Conservatory at the Botanical Gardens.

Saturday and Sunday, June 4–5, 2011 – *Nature Nova Scotia Annual Meeting.* Nature Nova Scotia (Federation of Nova Scotia Naturalists) will be holding its annual meeting and conference at the Gaelic College in St. Anns, near Baddeck on Cape Breton. This is a great opportunity to meet old friends and make new ones while enjoying and learning about a piece of natural Nova Scotia. Watch the NatureNS website (naturens.ca) for details.

FIELD TRIP REPORT

Paddling Two Mile & Four Mile Lakes

by Larry Bogan

September 18, 2010 – I had never heard of these lakes a few years ago because I had considered them as part of Gaspereau Lake. They are the most westerly sections of that larger lake. Access to the

eastern section of Gaspereau Lake is easy along Rte. 12, but this western part requires driving woods roads if you don't want to paddle the distance across from the east. I have put a Google map with access locations on the BNS website as a guide to get to these lakes. (There are many more of my other favourite paddling spots on the map.) The direct link is http://www.blomidonnaturalists.ca/node/102.

We had a nearly perfect day for paddling on this sunny Saturday. Four canoes and a kayak put into Mosquito Hole at 9:30 a.m. carrying nine BNS members to explore the shores, islands, marshes, and inlet of Four and Two Mile Lakes. The winds were non-existent or very light all day and we able to paddle slowly and enjoy the quiet and gentleness of our surroundings.

We did not observe a lot of wildlife, since summer was nearly gone. While driving to the lakes we passed McGee Lake, where two loons were near the shore, but none were found on Four and Two Mile Lakes. We encountered cormorants, but the only ducks were two immature Mallards(?) casually munching on submerged grass as we paddled by; they seemed unconcerned by our presence. Chickadees, juncos, and Red-breasted Nuthatches were heard along the shore,

and at one spot there was a large mob of chickadees sounding off in the trees. We saw Blue Jays but no Gray Jays. The shores were decorated with the red berries of Canada Holly. There were sparrows flitting across the water when we paddled up the inlet from the West River.

Our first destination was the West River on the east side of Four Mile Lake. On the way we passed one of the many large marshes that border the lake. Bernard Forsythe explored the innards of a snag still standing in the water but found no nests. He then had a surprise when a 20-year-old hole in his canoe sprung a leak. Bernard found another correct-sized twig, stoppered the hole, and was able to finish the trip (and perhaps it will go on for another 20 years). The West River inlet is a delight, with lots of stillwater length, marshes, and narrow sections with overhanging trees. There were more stillwaters upstream of a short rocky section that we could not navigate but that will have to be explored at some future date.

Back on Four Mile Lake, we stopped for lunch under a stand of tall Red Pine on a small peninsula jutting into the lake. Here we enjoyed the view, our lunches, rest, and good conversation. From there we paddled north through a narrow channel into the western side of Two Mile Lake. On the way a Bald Eagle flew over. The topographic map of the northern end of this lake shows some interesting names attached to islands in the lake: The Calves, The Old Cow, The Bull, and The Carry. We had to take a look but only wondered how these landmarks got their names. The Carry was a shallow transition into the main part of Gaspereau Lake that had been dry before the flooding of this area when the lake was dammed.

The route back to our cars was on the west side of Two Mile Lake and through a scenic channel into Four Mile Lake. I took some photos, and you can see them on the BNS website in the new section for field trip reports. We were back on land by 3 p.m., having paddled about 12 km over smooth water under sunny skies. While we were on the water we passed only one cabin and encountered no other people, thus giving us a real sensation of a wilderness canoe trip.

Miner's Marsh Field Trip

by (leaders) Ruth and Reg Newell

September 25, 2010 – In spite of overcast and threatening weather, 13 people came out for a morning walk on the recently opened Miner's Marsh walking trail located in downtown Kentville behind the Municipal Building.

This was a joint project of the town of Kentville and Ducks Unlimited Canada. It features an easy trail through marshland along the Cornwallis River, a beautifully designed bridge over the river, a viewing platform, and interpretive signage. Except for some light drizzle, the weather held and we were able to enjoy a variety of native and non-native plants, mushrooms, and birds as we slowly made our way along the trail.

The plants observed during the walk include Common Milkweed (*Asclepias syriaca*), Jerusalem Artichoke (*Helianthus tuberosus*), Black Cherry (*Prunus serotina*), Common Beggar's-ticks (*Bidens frondosa*), Nodding Bur-marigold (*Bidens cernua*), Water Plantain (*Alisma triviale*), Freshwater Cord Grass (*Spartina pectinata*), Reed Manna-grass (*Glyeria grandis*), Reed Canary-grass (*Phalaris arundinacea*), Broad-leaved Cattail (*Typha latifolia*), Touch-me-not (*Impatiens capensis*), Tansy (*Tanacetum vulgare*), English Hawthorn (*Crataegus monogyna*), Wild Cucumber (*Echinocystis lobata*), Red Oak (*Quercus rubra*), English Oak (*Quercus robur*), American Elm (*Ulmus americana*), and several species of willows (*Salix* spp.).

Kingsport Mudflats Critters

by Jim Wolford

September 11, 2010 – Four participants joined me for this BNS trip: Pat Kelly, Martin Thomas (retired marine biologist), and Janet and Rick Whitman (BNS president). Despite a drizzly early morning, our walk was a dry one under an overcast sky with a strong and cool wind out of the north. The wind into the Minas Basin plus the low-pressure zone may have created a lower low tide than predicted by the 15.6 m amplitude (low to high) in the BNS Calendar.

I handed out a chart of September's tides from Sherman Williams plus two lists of Minas Basin biodiversity: a list of living groups plus common names and genus names, and a more formal list of group names with numbers of known species in each. The BNS Calendar shows that the new Moon coincided with a close perigee just three days before this trip, accounting for even bigger tides on September 9 and 10.

As usual for my Kingsport walks, we started an hour before low tide by walking south off the small dune of sand and dune grass through the wharf-protected salt marsh to the edge of the mud. In the salt marsh we saw oodles of periwinkle snails, many of them up high on the cord grasses, and numerous tiny to medium-sized Green Crabs. These crabs are aliens from the Old World; they have been here for decades but are still spreading in the Maritimes and causing problems, like uprooting eelgrass by digging when they forage and by getting into eel traps and eating the bait in PEI. I picked up a Green Crab to show, and it bit me very painfully, for an early trip highlight!

Out on the intertidal mud we could see thousands of closely spaced mud snails, which eat unseen microscopic plants called

diatoms and scavenge on any decaying dead animals and plants. I always use the spectacle of huge abundance of this one species to show just how productive our intertidal shores (salt marshes and mud flats) are in the upper Bay of Fundy.

Then back to the wharf, and we began our walk eastward toward the low-tide line, which was far away today, as the tide was still ebbing. At the high-water line we saw numerous white shells, mostly of slipper limpets. These actually live in the low intertidal zone, where we saw uncounted thousands of them covering just about any hard surface (shells, bottles, etc.).

Also at the high-tide line we looked at a recent accumulation of tide-deposited fragments of plants that looked like hay, and under that mass were numerous small "beach fleas" (amphipod crustaceans). Mostly at night this zone attracts land critters such as spiders, shrews, and mice. Storm-deposited seaweeds on other shores also attract migrant shorebirds for foraging.

NATURAL HISTORY

Once upon an October Morning

by Nancy Nickerson

Picture this. It's nine o'clock on a sunny Sunday morning in early October. You're wandering along a trail in Palmeters Woods (west Kentville), admiring all the mushrooms that have popped up lately. The woods are quiet this morning except for the occasional soft chatter of chickadees and the honking of Canada Geese on the Cornwallis River in the distance.

Suddenly … from directly behind you comes a loud, low-pitched howl that sounds like nothing you've ever heard before. Your blood turns to ice and every hair on your head stands to attention. Remem-

bering the recommendations for dealing with aggressive coyotes, you resist the overwhelming urge to run, grip the stout stick you're carrying for just such a situation (well okay, you picked up the stick five minutes ago because there's an interesting fungus growing on it), and slowly turn around . . .

. . . and discover that there's nothing there. On the trail in the distance stands a young woman hiker with a baby on board and two rather subdued-looking dogs at her feet. They all look harmless enough so you walk over to say hello and learn that the dogs have scared up a pair of "huge" (probably Barred) owls, one of which made that unearthly sound.

You resume your walk, wondering how many unexplained heart attacks are caused by owls.

NATURAL HISTORY

The Old Elm Tree at Horton Landing Is No More

By Laura Thompson and Derek Allerton

During the violent rainstorm that swept through the province from the 5th to the 7th of November 2010, the old elm tree that accompanied the Acadian Deportation Cross and the Planters' Monument at Horton Landing was blown over into the Gaspereau River.

This great elm has been a part of our collective landscape for many years. In fact, tradition maintains that this elm was standing when the Acadians were forced to leave Grand Pré in 1755. More recently, this particular tree has been portrayed numerous times by artists (including Alex Colville's 1956 painting *Study for Elm Tree* at Horton Landing) and photographed by countless tourists and local citizens.

Many visitors to Horton Landing have been struck by this magnificent tree on the water, regardless of the season. We bring along friends or relatives and invite them to take notice of this historical landscape, enjoying our pensive walks in these beautiful natural surroundings. During a sunny yet sombre July 28 wreath-laying ceremony at the Deportation Cross, we vividly remember witnessing Bald Eagles perched in the old elm while they scanned the river for prey and basked in the summer sun. Moreover, while the memories of the generous and dedicated Métis-Acadian leader Roland Surette (1951–2009) were recalled, one eagle left its perch on the stark elm tree and flew into the vivid blue sky. Members of the culturally mixed audience gasped!

This old elm tree – an arboreal symbol of endurance, strength, and hope – will be sadly missed. Many locals and visitors will mourn the loss of this deep-rooted connection to the past, and our landscape will not be the same without it.

DEREK ALLERTON

The old elm tree that accompanied the Acadian Deportation Cross and the Planters' Monument at Horton Landing

The Atlantic Coastal Plain Flora

by Martin Thomas

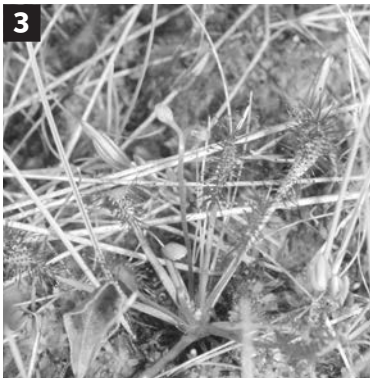
The Atlantic Coastal Plain Flora (ACPF) is a quite small group of plants that are much more common further south along the eastern coastal plain of the USA. Nova Scotia is the northern limit for most of these species. Many of these plants are very rare, and some have already been extirpated from the province. There are about 90 species of the ACPF, almost all living in southwest Nova Scotia, although a few extend as far north as southwest Cape Breton. The majority of these fascinating plants live along lakeshores and in bogs, swamps, and marshes. Many of them flower quite late in the summer.

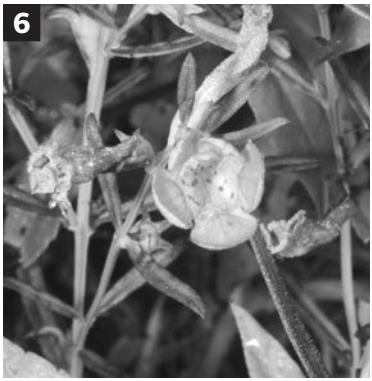
This group of plants probably moved north well in the past when sea levels were much lower than at present and a land bridge connected Nova Scotia to New England. However, some may well have arrived as seeds clinging to the feet of migrating birds.

The best known of these plants are those with very showy flowers. Good examples are Plymouth Gentian (*Sabatia kennedyana*), Rose Pogonia (*Pogonia ophioglossoides,* an orchid), and Pink Coreopsis (*Coreopsis rosea*). The first and last are uncommon lakeshore dwellers, and the Rose Pogonia is found in a few bogs.

Those examples that are found on lakeshores have adapted over time to the natural rise and fall of lake levels with the seasons. In rainy spells, such as that in November this year, their habitat is totally submerged. Without this natural variation in water level, these plants die out, and this has happened where lake levels are controlled by dams associated with the production of hydroelectric power.

Southwest Nova Scotia has an abundance of bogs and marshes that support a variety of ACPF plants. Two of the most fascinating





1 Pink Coreopsis (*Coreopsis rosea*) **2** Rose Pogonia (*Pogonia ophioglossoides*) **3** Narrow-leaved Sundew (*Drosera intermedia*) **4** Northeastern Bladderwort (*Utricularia resupinata*) **5.** Salt-marsh False Foxglove (*Agalinis maritima*); **6.** False Foxglove Agalinis (*purpurea neoscotica*).

Plymouth Gentian (*Sabatia kennedyana*)

groups of wetland plants are the sundews and bladderworts, both of which are, in part, carnivorous. The most interesting of the sundews is the Thread-leaved Sundew (*Drosera filiformis*), a very rare plant confined to just a few bogs and marshes and usually found with the Spoon-leaved Sundew (*Drosera intermedia*). There are several different species of bladderwort, which are found both on lake shores and in bogs. Some of these have obvious leaves with bladders that catch small water creatures, but others have inconspicuous leaves at, or just below, the sediment. A particularly wonderful member of this group is the very rare Northeastern Bladderwort (*Utricularia resupinata*), found on muddy patches of a few lakeshores. The whole plant may be only 1 or 2 cm high, without visible leaves, and carrying a single, pretty purple flower with a yellow highlight on the upper lip.

While many of the ACPF plants are quite easily recognized, a lot of them present a great identification challenge. Many of these tricky examples are grasses, sedges, or rushes. Poison Sumac (*Toxicodendron vernix*) is one example that should be avoided, as it can give a nasty reaction, although it is very rare and its habitat quite inaccessible, so contact with it is unlikely.

The ACPF flora are not confined to land and freshwater habitats; some very interesting ones are found in salt marshes. A good example is the exceedingly rare Saltmarsh False Foxglove (*Agalinis mariti-*

ma), which is closely related to the Nova Scotia False Foxglove (*Agalinis purpurea*), which is endemic to Nova Scotia and is found in damp freshwater locations such as ditches.

The ACPF is a very important group of plants, many of which are in peril. They deserve every effort to preserve them.

BIOGRAPHY

Donald Gilbert Dodds

1925–2010

By Peter Austin-Smith, Sr.

As a young boy living on a farm in upstate New York, Don was captivated by the sights and sounds of the wildlife surrounding him as he went about his daily chores. Between chores he learned very early how to hunt and fish with his father, a hardworking farmer. His grandfather also imbued in him the love of the land and, being a man of the cloth, also instilled in Don a belief in a higher power.

Don graduated from North Rose high school, but just previous to that event he spotted a young lady, Pearl, whom he said he would marry, and so he did later in 1945. After graduation Don went on to various jobs as a trucker, salesman, and nursery and farm labourer. His "yearning for learning" led him to enroll in the College of Forestry at Syracuse University in 1949. Two years later he transferred to Cornell University to begin studies in science, education, and wildlife. After earning his BSc in 1953, he and Pearl went to Newfoundland, where Don studied moose for his MSc. Following this research, he became Newfoundland's first district biologist. He then focused his research on the Snowshoe Hare, which earned him a PhD from

Cornell University. Along the way, Pearl and Don adopted two children, Tracy and Kathy.

After receiving his doctorate, Don was interested in taking up a university position in the western USA but in 1960 was contacted and soon persuaded by Clarence Mason, the politically appointed director of wildlife in Nova Scotia, to become Nova Scotia's big-game biologist. Denis Benson, who had been provincial wildlife biologist, left in 1958 to join the Canadian Wildlife Service. In the first few years, Don, together with Neil van Nostrand and Clarence, established the wildlife division within the then Nova Scotia Department of Lands and Forests. Not long after, Clarence Mason became ill, so Don stepped into his shoes as assistant director and then as acting director of wildlife. Don's attempts to manage big game on a sound biological basis, rather than through public opinion and guesswork, occasionally resulted in acts of vandalism against him. In one incident, his car was damaged when someone poured sugar in the gas tank.

In 1961 Don established the wildlife and animal ecology program at Acadia University as visiting professor, and in 1964 he was appointed a full professor. He also worked to obtain research properties for Acadia, including those on Long Island, Hemeon Head, and Bon Portage Island.

Don supervised 30 MSc students and several honours students in wildlife management while continuing to write numerous articles on wildlife and natural resources. The book, *Deer of Nova Scotia,* coauthored with Denis Benson, was published in 1977. He also was a member of, or chaired, many wildlife and resources organizations. And he served on the boards of several resource councils through these years. He was also active in a number of local service clubs. Don's expertise was sought by regional, national, and international organizations both as a wildlife professional and as an administrator. Through the United Nations he was engaged to assist in organizing and implementing modern wildlife management administrative methods in Trinidad and in several African countries.

Don later became Dean of Science but continued to work diligently in the interests of wildlife – not just "game," but all wildlife – and natural resources in general.

Don multitasked before that term was invented. He would sit in his easy chair, write, watch television, and often talk on the phone at the same time. Any budding author would envy his ability to write so clearly and without much wasted time. Words seemed to pour effortlessly from his pen. He authored more than 40 professional papers and numerous government and company reports. Anyone who has read his early books *Wild Captives* and *A Long Night in Codroy* will also be struck by his obvious love of Newfoundland, its wildlife, and its peoples.

In 1987 Don retired from Acadia University to establish a private consulting company and, of course, to write. Together with a former student, Fred Gilbert, they published a wildlife management text, *The Philosophy and Practice of Wildlife Management,* which has gone through three printings. His book *Challenge and Response: A History of Wildlife and Wildlife Management in Nova Scotia,* published in 1993, is a lively discourse on the vagaries of early wildlife management efforts in the province together with comments about some of the people who promoted them. A few years earlier Don was instrumental in organizing and undertaking a wildlife strategy process that incorporated the views of special interests, professionals, and the general public. This process culminated in the publication of *Living with Wildlife: A Strategy for Nova Scotia,* largely written up by Don, which set the stage for future action to conserve and protect wildlife resources in the province. He also wrote many short stories, newspaper columns, and popular articles both before and after retirement.

In recognition of his work, many honours came his way, including the Wildlife Society's John Pearce Award (1990), Canada's 125th Commemorative Medal (1992), the Nova Scotia Professional Environmental Award (1994), and the Atlantic Society of Fish and Wildlife Biologists Wall of Fame Award (2004). He had been a member of Kappa Phi Kappa, National Education Fraternity in the US, chapter

president at Cornell, a member of the Phi Kappa Phi Honor Society and Sigma XI Scientific Honor Society. Most recently, Don was honoured by his former colleagues, students, and friends when the Dr. Donald G. Dodds Wildlife Scholarship Fund was established at Acadia University.

Less well known perhaps is the fact that Don had a remarkable singing voice, one that could possibly have enabled him to have had a singing career. He had studied at the Eastman School of Music in Rochester, and during his years in Nova Scotia he sang in many choral groups and church choirs, often as soloist. Also, few besides local United Church members in Cape Breton and the Valley knew that Don acted as lay pastor, conducting church services when the regular pastor could not be present.

Don was a gregarious fellow who liked nothing better than getting together with old comrades at least once a month, if not more often, to tell outdoor tales and, yes, gossip a bit in a harmless but most entertaining way. His last writing efforts focused on obtaining information on the careers of his former students, information he wished to collect for inclusion in a publication for the Acadia Alumni office as well as for distribution to all who participated. Sadly, he died before this work could be completed. His death occurred on May 5, 2010, at home in his easy chair while on the phone with one of his many friends.

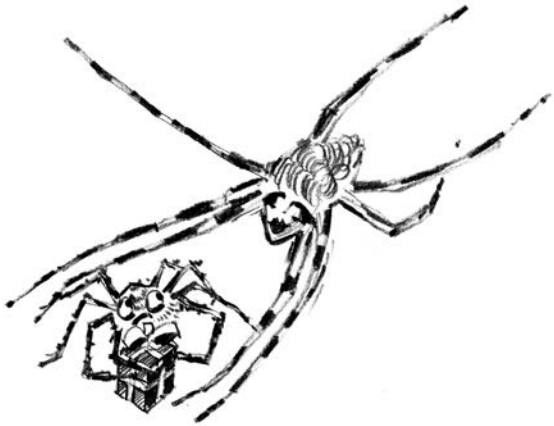
Donald Gilbert Dodds, wildlife biologist, naturalist, teacher, administrator, writer, loyal friend, and outdoor companion, worked diligently to encourage the conservation of all natural resources. Don loved being outdoors, whether fishing, hunting, or just enjoying the wild world around him, but his concern for the welfare of wildlife was with him constantly. Now it is left to his legion of friends and his former colleagues and students to carry on his deep and abiding wildlife interests, about which he so persuasively wrote in his many books and other published writings. A concerned conservationist and outdoorsman who advocated a philosophy of sound resource management, Don deeply cared for and respected the intricate organization of all living things.

Monster Mixup

by Barry Yoell

Perceptive readers of this newsletter will have noted that in one of the recent garden monster sagas scribed by your humble servant, a major error occurred. Oh Horrors! I had described my encounters with the fearsome looking Horsehair Nematode. Wrong! As pointed out by several experts (thus emphasizing the degree of brilliance and expertise that exists in our BNS). 'Twas not a nematode, 'twas a Nematomorph, or Gordian worm. My sincere apologies to all who were misled or offended. I'll try not to let it happen again.

In this, the latest in the garden monster series, I have come close to committing the same class of error – misnaming the subject of the essay. However, forewarned and forearmed (eight-legged, actually), I can confidently say that we will be discussing *Dolomedes*, a member of the Pisauridae, specifically the water spider, raft or fishing spider, nursery web spider – also known as the Jesus Christ spider. There! Identification should be clear now. Mind you, there are probably six



MCKIBBIN

or seven species of *Dolomedes* here in Nova Scotia, and although I'm certainly not completely sure which one of these lives at the bottom of our garden, I am confident that it is *D. tenebrosis.* She certainly is huge by Canadian spider standards, almost as big as my fist: a 2–3 cm body and 6–8 cm legs. A monster, but seemingly a benign and very interesting monster.

She (I'm assuming that it is a she, as the female of the species is not only more deadly than the male, she is twice his size.) She lives on and under our little dock that floats just off the shore at the bottom of our garden – on Lumsden Pond. Favouring the southwest corner, just above the wave line, she surveys the surrounding water, a dark brown furry mini-monster, ready to pounce on any water insect, tadpole, or small fish nearby. She is mostly a nocturnal hunter, sensing the vibrations of a potential prey by testing the water surface with her front legs. Although she has eight eyes, they are evidently of little value at night. When she registers the vibrations made by a struggling insect or small fish she can run extremely quickly on top of the water to grasp her prey. She can also submerge and do battle. When underwater, her hydrophobic covering of hair traps air, and she appears silver. She can use this air covering to breathe from, thus prolonging her underwater antics for up to 30 minutes. She emerges from the water completely dry and, if successful in her hunt, will have killed the prey with her venomous bite. The venom and enzymes will liquefy the insides of the prey, and she will literally suck it dry, leaving only the skin.

An interesting quirk in her lifestyle relates to courtship. Evidently the male that is hoping to mate with her faces the possibility of being consumed by his potential lover and attempts to avoid this fate by bringing a gift to her, wrapped in silk. She, being female, is excited to be treated so generously by her mate and busies herself with unwrapping the gift. He, meanwhile, scurries round and impregnates her while she is concentrating on other things and, if he's lucky, leaves before she realizes what is happening and eats him. If eaten, he has the benefit of knowing that the mother of his offspring not only car-

ries his genes but has had a nourishing meal before producing eggs, thus improving the chance of their survival!

These spiders live for several years, so if not eaten by a bird, frog or large fish, my mini-monster will probably be back on our dock next spring, perhaps with some of the family. I look forward to seeing her there.

NATURAL HISTORY

A Winter Walk through Conifers of the Acadian Forest

by Melanie Priesnitz

My favourite time to take a walk in the woods is just after a fresh snowfall. The calm serenity of the woods in winter is awe inspiring. Winter is a great time to learn how to identify evergreen trees as their beauty so clearly stands out.

When walking in the woods I am always surprised by how many people young and old can't tell a spruce from a pine. I've made it a mission of mine to teach all of my hiking companions, and occasionally random strangers met on a trail, how to identify our native trees.

One of the easiest trees to identify in winter is the Eastern Larch or Tamarack (*Larix laricinia*). This tree is one of only three deciduous conifers found in the world. Like the Swamp Cypress and Dawn Redwood, our native larch loses its needles in the winter, making it easy to identify. The bark is grey and the cones are small and delicate. When the needles are out during the summer they are soft and green. Larch is found throughout Nova Scotia, commonly growing in bogs and wet areas.

The defining tree of the Acadian Forest region is the Red Spruce (*Picea rubens*). Red Spruce is the provincial tree of Nova Scotia and has been an important part of the history of the province. The three native spruces, Red, White, and Black, can be tricky to tell apart. Taking a small magnifying hand lens into the woods is a great help. The twigs of Red Spruce are red in colour and have small fine hairs. (I remember this by looking at my red hair and then I remember that the tree with hair is Red Spruce!) The needles are shiny and yellowish-green in colour.

The best way to identify a White Spruce (*Picea glauca*) is by smelling it. If you crush the needles you will be rewarded with the lovely aroma of cat pee. The needles are sharp and bluish green. White spruce grows commonly in open and exposed coastal areas. If you've forgotten your trail mix and are feeling hungry on your walk you can eat the tips of the White Spruce. While a good survival food in winter, they are much tastier when fresh in spring.

The easiest way to tell if you're looking at a Black Spruce (*Picea mariana*) is to look down at your feet. If you're standing in a bog, it's likely a Black Spruce. They like to grow in swamps and bogs and poorly drained soils. Black Spruce has blunt needles that are greyish-green. The bark and overall appearance of the tree is dark. Traditionally the small cones of Black Spruce were eaten as a sore-throat remedy.

Our common native pines, Red and White, are easy to distinguish as they have long, soft needles. You need your fingers to tell the two apart. If there are as many needles in the bundle as you have fingers on one hand, you're looking at a White Pine (*Pinus strobus*). An easy way to remember is that there are five letters in white and five needles. Red Pine (*Pinus resinosa*) has just two needles per bundle. Our third native pine, Jack Pine (*Pinus banksiana*), is less common across the province and can be found growing in acid soils, rocky outcrops, and sandy or gravelly locations. Jack Pine has short, stiff needles ranging from just 1cm to 4cm long. The cones of Jack Pine are serotinous, meaning that they need the heat of a fire to open.

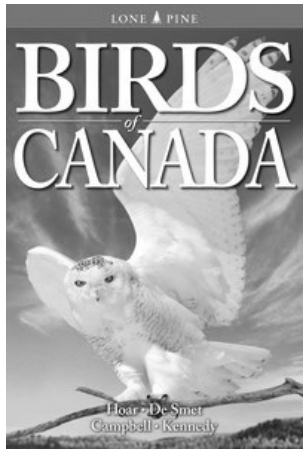
Take advantage of the sunny days this winter and get outside to

explore nature with all of your senses. I find that there are few things better in this world than the feeling you get after returning from a cold hike in the woods to a warm cup of cocoa beside the fire.

BOOKS

Birds of Canada

reviewed by Richard Stern



Birds of Canada Tyler Hoar, Ken De Smet, Wayne Campbell, and Gregory Kennedy (Edmonton: Lone Pine Publishing, 2010)

This is a 526 page, hard-backed, and well-produced book, which, as the authors state in their introduction, celebrates the rich assortment of birds that live and breed in, or migrate through, Canada. A 43-page introduction discusses the eco-regions of Canada; conservation and protected spaces; where to go birding; bird classification; equipment such as binoculars and cameras; range maps; and ID tips. There is a reference guide at the front with a drawing-based index to the more detailed accounts that form the main part of the book. At the back are an appendix listing rare and accidental species, a glossary, selected references, and a checklist.

The meat of the book is in the one-page species accounts of all the birds regularly seen in Canada. I believe the majority of people who pick up this book will first look at the pictures. I found the quality of

art variable. It looks as though more than one artist did the drawings. Some of the drawings are crisp, sharp, and similar to those in the standard field guides, whereas others are more of an artistic impression. An example of this is on pages 450 and451, where the drawing of a Song Sparrow is more of an artistic impression and the drawing on the facing page of a Lincoln's Sparrow is more diagrammatic. I personally find the more diagrammatic type more useful and more lifelike, but I suppose that is a matter of taste. I could not find any reference in the book as to which of the authors did the drawings, which did the text, and which took the photographs.

I found the quality of the photographs to be variable. Many of them are excellent and demonstrate at least one attitude or plumage of the relevant species, but I found some dark, out of focus, or poorly composed. Some of that may just be the printing process. I don't know if it would raise the cost substantially in future editions to include higher-quality photographs.

The more I read the text, however, the more useful information I found. Indeed, to me the true value of this book lies in the text rather than the illustrations. For each species the text summarizes nicely the biology and relevant information concerning the bird. Some of the writing, too, is rather attractive. For example, the text for Veery starts, "Like a musical waterfall the male Veery's voice descends under the thick undergrowth in liquid ripples."

I could not find any glaring inaccuracies in the text, and the range maps are generally accurate as well, although looking specifically at some of the birds that visit Nova Scotia, I found some errors. Brant, for example, which is common in various regions in southwest Nova Scotia on migration, is not shown in the migration range map for the species, and the Red-tailed Hawk is only shown as summering in Nova Scotia, whereas we all know locally that it is actually more common in winter.

The authors admit the book is not meant to be a comprehensive field guide, and therefore many plumages (females, immature, etc.) of some species are not illustrated, and that left me wondering at $39.95 who would buy this book, particularly if they already had

one of the standard field guides. Furthermore, it is obvious from the hard cover and the fact that the book is too big to fit in most pockets that it is not intended as a field guide. However, the more I thumbed through this book, the more I enjoyed it, and I think it would be a good buy particularly as a present for anybody who has a casual or passing interest in birds in Canada and, for that matter, some people who have considerably more expertise. Indeed, it's a book that might well spark a deeper interest in the casual naturalist.

I would certainly hope to see future editions published, with the minor inaccuracies that I have mentioned corrected, and perhaps more uniformity in the drawings and the photographs.

NATURAL HISTORY

American Goldfinch Study 2007–2010

by Bernard Forsythe

As we watch goldfinches at our feeders, a sure sign of spring is when they start to change plumage. Patches of colour begin to show through their rather brownish winter plumage, until the males become canary yellow with black wings, tail, and cap. This friendly finch will not begin nesting until late summer, after seeds required to feed their young have ripened.

To determine success of recruitment into the population, it is necessary to monitor the outcome of many nests. Many breeding goldfinches are attracted to the old fields on Wolfville Ridge and the wide ditches along Highway 101 that are overgrown with knapweed and other wildflowers, which provide food, and young trees, which provide nest sites.

Following are the results of a four-year study I conducted in this area. Nests found and recorded include 25 in 2007, 29 in 2008, 42 in 2009, and 65 in 2010, for a total of 161 nests.

NEST SITES

The pale bluish-white eggs are laid in a compact cup of fine grasses, plant fibres, plant down, sometimes inner bark shreds, lined with a mat of down, often cattail down. One nest in a bright green Bayberry bush was located because it contained lots of contrasting white Sow Thistle fluff. Nests are usually in an upright crotch next to the trunk, but occasionally they are saddled on a branch from 0.7 m to 2.7 m above the ground. Many nests were within sight of other occupied nests, and several were no more than 12 m apart. All nests were in young trees or low bushes: 74 in willow; 23 in Wire Birch, 19 in poplar; 14 in buckthorn; 11 in hawthorn; 7 in Chokecherry; 5 in alder; 2 in Multiflora Rose; 2 in Bayberry; and one each in Canada Holly, White Birch, Wild Apple, and Meadowsweet.

EGGS AND YOUNG

Earliest date for eggs in a nest was June 27, 2008. Latest date for young in a nest was September 18 in both 2008 and 2009. Over the four-year study period, there were 118 nests with observable clutch sizes:

1 nest with 7 eggs	=	7
36 nests with 6 eggs	=	216
53 nests with 5 eggs	=	265
18 nests with 4 eggs	=	72
8 nests with 3 eggs	=	24
1 nest with 2 eggs	=	2
1 nest with 1 egg	=	1
Total eggs:	=	**587**

In the other 43 nests the clutch size is unknown either because of

predation during the egg-laying stage or because the nest was found after the eggs had hatched. Number of young fledged from 96 nests:

12 nests fledged 6 young	=	72
27 nests fledged 5 young	=	135
36 nests fledged 4 young	=	144
16 nests fledged 3 young	=	48
4 nests fledged 2 young	=	8
1 nest fledged 1 young	=	1
Total young:	=	**408**

In two nests the number of young fledged is unknown, and one nest outcome was not conclusive. The remaining 62 nests had no young fledged. Causes of 62 nest failures:

- 42 nests failed during the egg stage: 34 were subject to predation; in 8 nests the eggs failed to hatch
- 20 nests with young failed: 15 were subject to predation; in 5 nests the young were dead in the nest

Average number of young produced per nest, based on 408 young having fledged:

- Young fledged from 96 successful nests: 4.25 per nest.
- Young fledged from 161 attempted nestings: 2.53 young per nest.

Many studies have shown that a large percentage of birds' eggs never produce flying young. A general statement can be made that only about half the eggs of songbirds are successful (from *Ornithology: An Introduction*, by Austin L. Rand, 1967).

Success of 161 American Goldfinch nests in this study:

- 118 nests known to have produced 587 eggs = average 4.97 eggs per nest.

- 43 nests with unknown number of eggs, using the calculated average 4.97 = 213 eggs.
- Therefore, the total of 161 nests had a possible production of 800 eggs.

The 408 young fledged goldfinches found in this study is slightly above the 50 percent average expected from the number of eggs produced.

NATURE COUNTS

Nova Scotia Migration Count Spring 2010

Judy Tufts, Kings Co. coordinator for NSMC

This will be my last Nova Scotia Migration Count report for the Newsletter. I feel more than a little humble knowing how much so many of you have contributed to this project over the years. My deepest thanks go out to the 151 participants in Kings County this year (up from 137 in 2009), who gave generously of their time and effort. Once again, you came through with wonderful results for this count, whether as feeder watchers or out in the field. Remarkably, many of you have been involved from the outset of the NAMC in the early 1990s. I am most appreciative of your continued support through those years.

I am most grateful and wish to sincerely thank Sheila Hulford for the outstanding job she has done since she came on board in 2000, gradually building up to a large list of participants (50 this year) around the Kingston/Greenwood area for a very generous "western" contribution to the Kings County results. She then orchestrated

another large contingent (50) to check out migrant birds across the county border into eastern Annapolis County (five participants did double duty for both counties) for a second Valley county tally. Her group's Annapolis County list has been added to the Valley counties list in the table following this report. Sheila has contributed a great deal to the NAMC/NSMC project, participating actively in both counties over the years.

SOME OBSERVATIONS

MAY 8, 2010, KINGS COUNTY – No rarities this time, but a new species was added to the county list: Razorbills were spotted along the Fundy shoreline. Fifty Northern Gannets (the highest number recorded for Kings) and a flock of late Purple Sandpipers were fine additions. Other good finds include Broad-winged Hawk, Turkey Vulture (almost an annual regular now), a Goshawk with a nest, a Black-backed Woodpecker, and for the second year in a row a few Horned Larks. New records were set for numbers of species of waterfowl (19) and warblers (17).

Some species numbers were down, but whether the weather had any bearing is questionable. The day brought rain showers in some areas, but temperatures were warm and winds were light – a pretty good day for observing birds. Red-tailed Hawks were down by 50 percent, hummingbirds by 60 percent (Did they delay their migration?), pheasants by 30 percent. Also down in numbers were Northern Flickers, Eastern Phoebes, some of the sparrow species; Downy Woodpeckers, Blue Jays, and Black-capped Chickadees. Common Grackle numbers were the lowest since 1996, and House Sparrows (down by 25 percent, possibly because participants do not figure this species is worthy of inclusion?) are steadily in decline.

On the other hand there were some encouraging increases in other species. Northern Cardinals appear to have settled well into the Annapolis Valley, obviously spreading far and wide as 42 were registered this year (31 in 2009). Sightings of Yellow-bellied Sapsuckers have doubled in the past two years, the majority being found in the

Gaspereau Lake area. Records were broken by Hermit Thrush (up 90 percent), White-breasted Nuthatch (a steady increase), Ovenbird (almost double), American Redstart (28 this year, but normally only 1 or 2, and none in 2009). Blue-headed Vireos, American Robins, and Least Flycatchers almost matched the best record, with encouraging numbers. Sora was a welcome addition, too, being last recorded in 2002.

Birds observed by Pat Kelly and his team in West Hants are also included in the following table. Pat reports that the only species seen this year that was not recorded in 2009 is Pileated Woodpecker.

I do hope there is someone who will consider taking over as coordinator for Kings County for the 2011 NSMC . There has been such wonderful, enthusiastic support here for this project over the years, and it would be a great pity should it not continue to benefit our annual provincial migration bird count.

2010 NSMC VALLEY SUMMARY

Grand Total: 14887 Total Species 128

	Species	Kings	Anna East	West Hants	Total	Species Tally
1	Red-throated Loon	1	7		8	1
2	Common Loon	25	2		27	1
3	Northern Gannet	50			50	1
4	Double-crested Cormorant	68			68	1
5	Great Blue Heron	9			9	1
6	Canada Goose	95	19	6	120	1
7	Wood Duck	9			9	1
8	Green-winged Teal	2		2	4	1
9	American Black Duck	115	5	7	127	1
10	Mallard	176	13		189	1
11	Northern Pintail	1			1	1
12	Blue-Winged Teal	4			4	1
13	Northern Shoveler	3			3	1

	Species	Kings	Anna East	West Hants	Total	Species Tally
14	American Wigeon	2			2	1
15	Ring-necked Duck	5			5	1
16	Common Eider	151	7		158	1
17	Long-tailed Duck	2			2	1
18	Black Scoter	22	30		52	1
19	Surf Scoter	2			2	1
20	White-winged Scoter	6	1		7	1
21	Scoter species*	8			8	
22	Hooded Merganser	6			6	1
23	Common Merganser	6			6	1
24	Red-breasted Merganser	3	2		5	1
25	Turkey Vulture	1			1	1
26	Osprey	1			1	1
27	Bald Eagle adult	25	2	2	29	1
28	Bald Eagle immature	7		3	10	
29	Northern Harrier	4			4	1
30	Sharp-shinned Hawk	4			4	1
31	Northern Goshawk	1			1	1
32	Broad-winged Hawk	1		1	2	1
33	Red-Tailed Hawk	24		2	26	1
34	Buteo species*	1	1		2	
35	American Kestrel	4	1		5	1
36	Merlin	5	1		6	1
37	Peregrine Falcon	2			2	1
38	Ring-necked Pheasant	194	6	7	207	1
39	Ruffed Grouse	17			17	1
40	Sora	1			1	1
41	Killdeer	9			9	1
42	Eastern Willet	7			7	1
43	Spotted Sandpiper	2			2	1
44	Purple Sandpiper	12			12	1
45	Wilson's (Common) Snipe	5			5	1
46	American Woodcock	2			2	1

	Species	Kings	Anna East	West Hants	Total	Species Tally
47	Ring-Billed Gull	26			26	1
48	Herring Gull	1346	7	36	1389	1
49	Greater Black-backed Gull	157	3	12	172	1
50	Gull species*	19	7		26	
51	Black Guillemot	3	7		10	1
52	Rock Pigeon	152	27	26	205	1
53	Mourning Dove	361	130	11	502	1
54	Barred Owl	31			31	1
55	Chimney Swift	5			5	1
56	Ruby-throated Hummingbird	17	5		22	1
57	Belted Kingfisher	8	2	3	13	1
58	Yellow-bellied Sapsucker	32	2	2	36	1
59	Downy Woodpecker	132	36		168	1
60	Hairy Woodpecker	82	15	1	98	1
61	Black-backed Woodpecker	1			1	1
62	Northern Flicker	115	11	10	136	1
63	Pileated Woodpecker	13		3	16	1
64	Yellow-bellied Flycatcher	1			1	1
65	Alder Flycatcher	1			1	1
66	Least Flycatcher	22	2		24	1
67	Eastern Phoebe	7	6		13	1
68	Eastern Kingbird	2			2	1
69	Horned Lark	9			9	1
70	Tree Swallow	444	95	38	577	1
71	Bank Swallow	2		3	5	1
72	Barn Swallow	68	26	6	100	1
73	Gray Jay	6			6	1
74	Blue Jay	368	76	34	478	1
75	American Crow	686	101	37	824	1
76	Common Raven	242	6	9	257	1
77	Black-capped Chickadee	665	119	46	830	1
78	Boreal Chicakee	3			3	1
79	Red-breasted Nuthatch	40	3	2	45	1

	Species	Kings	Anna East	West Hants	Total	Species Tally
80	White-breasted Nuthatch	53	7	3	63	1
81	Brown Creeper	3			3	1
82	Winter Wren	6			6	1
83	Wren species*	2			2	
84	Golden-crowned Kinglet	19			19	1
85	Ruby-crowned Kinglet	22			22	1
86	Swainson's Thrush	1			1	1
87	Hermit Thrush	70		1	71	1
88	American Robin	781	145	77	1003	1
89	Gray Catbird	4	1		5	1
90	Northern Mockingbird	3			3	1
91	Cedar Waxwing	68			68	1
92	European Starling	1031	174	73	1278	1
93	Blue-headed Vireo	85		1	86	1
94	Red-eyed Vireo	3		3	6	1
95	Vireo species*	4			4	
96	Tennessee Warbler	1			1	1
97	Nashville Warbler	4		1	5	1
98	Northern Parula	116	11	5	132	1
99	Yellow Warbler	52	3	4	59	1
100	Chestnut-sided Warbler	2			2	1
101	Magnolia Warbler	10			10	1
102	Black-throated Blue Warbler	5			5	1
103	Yellow-rumped Warbler	236	19	6	261	1
104	Black-throated Green Warbler	92	7	3	102	1
105	Blackburnian Warbler	3			3	1
106	Palm Warbler	40			40	1
107	Blackpoll Warbler	1			1	1
108	Black-and-White Warbler	72	2	6	80	1
109	American Redstart	28			28	1
110	Ovenbird	148	22	12	182	1
111	Northern Waterthrush	9			9	1
112	Common Yellowthroat	18			18	1

	Species	Kings	Anna East	West Hants	Total	Species Tally
113	Northern Cardinal	42	3		45	1
114	Rose-breasted Grosbeak	14	4		18	1
115	Chipping Sparrow	93	18	4	115	1
116	Savannah Sparrow	66	23	27	116	1
117	Song Sparrow	497	79	34	610	1
118	Lincoln's Sparrow	2			2	1
119	Swamp Sparrow	13	1		14	1
120	White-throated Sparrow	129	9	1	139	1
121	White-crowned Sparrow	4	1		5	1
122	Dark-eyed Junco	166	22	4	192	1
123	Bobolink	6	1	5	12	1
124	Red-winged Blackbird	427	22	78	527	1
125	Rusty Blackbird		1		1	1
126	Common Grackle	353	103	29	485	1
127	Brown-headed Cowbird	14	9		23	1
128	Blackbird species*	16	6		22	
129	Pine Grosbeak	1			1	1
130	Purple Finch	254	57	15	326	1
131	White-winged Crossbill	19			19	1
132	Pine Siskin	11			11	1
133	American Goldfinch	919	250	26	1195	1
134	Evening Grosbeak	53	31	10	94	1
135	House Sparrow	42	4	5	51	1
136	Raptor species*	1			1	
137	Shorebird species*	2			2	
138	Sparrow species*	15	3		18	
139	Duck species*	6			6	
140	Warbler species*		1		1	
	Time Start	6:00	6:00	7:00		
	Time Stop	20:30	18:00	14:00		

		Kings	Anna East	West Hants		
OWLING	Hours	0.5				
	Kilometres	7				
	No. Parties	1				
	No. Observers	1				
REGULAR	Hours Foot	95.5	3	2		
	Hours Car	59.6	12.5	8.7		
	Hours Bike	4				
	Kilometres Foot	148	3	2		
	Kilometres Car	706	144	187		
	Kilometres Bike	19				
	No. Parties	46	3	2		
	No. Observers	96	5	2		
	Feeder Watcher Hours	311	192	0.8		
	No. Feeder Watchers	88	45	1		
	No. Feeder Stations	67	25	1		
	No. Participants	151	50	3		
	No. Species	128	61	49		

JACK MCMASTER

The Immensity of Space

by Roy Bishop

Anyone who has driven across Canada has a feeling for large distances. The same journey can be accomplished in about seven hours via Air Canada or Westjet. What if it were possible to fly from Earth to the Sun on a commercial jet, spending seven hours per day, every day, in the cramped airplane seat, with convenient airports, restaurants, and hotels strategically located along the route toward the Sun. On day 1, as you take off from the Halifax airport, instead of heading west toward Vancouver, head straight for the Sun. How long would it take to traverse the Earth-Sun distance? Answer: about 90 years. Even if you began the journey as a knowledgeable 12-year-old, your chance of living long enough to complete it would be remote.

At that rate, how long would it take to travel one light-year? The Earth-Sun distance is to one light-year as one inch is to one mile, a factor of about 63,000. Thus to traverse one light-year by commercial jet (spending a tiring seven hours of every 24 in the cramped seat) would take 63,000 × 90 = about 6 million years, far longer than our species has existed. The distance is inconceivable. And one light-year is only one-quarter of the way to the next star beyond the Sun. In terms of the starless void surrounding our Solar System, we would barely have gone anywhere.

Even the flickering light from the fires of our earliest, cave-dwelling ancestors has not yet traversed the 100,000-light-year width of our own galaxy, the Milky Way. The next similar galaxy (M31, the Andromeda Galaxy) lies 24 times again further away. The most distant galaxies detectable by the Hubble space telescope are more than a thousand times more distant than Andromeda.

Lest you find the immensity disturbing or even scary, remember that it is the litre of neurons within the human skull that has grasped this picture. Also, after 50,000+ years on this planet, only within the last 1 percent of that time has our species had any idea whatsoever of distances beyond planet Earth. We are riding the cusp of an unprecedented explosion of knowledge of the natural world, an explosion that has accelerated beyond all expectation even during the lives of the people I have known. What a time to be living!

ASTRONOMY

Celestial Arithmetic and the Last Transit of Venus in Our Lifetime

by Roy Bishop

Four centuries ago and after years of patient work, Johannes Kepler discovered something profoundly beautiful: the orbital period of a planet is proportional to the 3/2 power of its distance from the Sun. Kepler had no idea why planets should obey such simple mathematics, but he was ecstatic that he had once again managed to read the mind of God. Earlier he had discovered that planetary orbits are elegantly simple mathematical curves (ellipses with the Sun at one focus), and how a planet moves in its orbit (the planet-Sun line sweeps out equal areas in equal times).

Venus is 0.72333 of Earth's distance from the Sun, so its period is $(0.72333)^{3/2} = 0.61518$ year. Thus, like a faster horse on a circular racetrack, Venus repeatedly laps Earth, passing between Earth and the Sun. How often that happens is given by dividing the product of the orbital periods by their difference. $(1 \times 0.61518) \div (1 - 0.61518) = 1.59862$ years. That result is itself an interesting number because

five such laps will span $5 \times 1.59862 = 7.9931$ years or almost exactly 8 years, which means that Earth and Venus are at almost the same points in their respective orbits as they were five laps previously, and the intermediate four laps occur at equally-spaced intervals around Earth's orbit. At the fifth lap, Earth will have completed almost 8 orbits, and Venus almost $8 + 5 = 13$ orbits.

What happens when Venus laps Earth? Not much usually, other than that Venus moves from the evening sky into the morning sky. Venus's orbit is tilted 3.4 degrees relative to Earth's orbit, so when Venus passes between Earth and the Sun, as seen from Earth it nearly always passes either north or south of the solar disk. However, if Venus happens to be near Earth's orbital plane when it laps Earth, it will be seen for a few hours silhouetted against the Sun – a transit of Venus – and Earth will be immersed in Venus's penumbral shadow. The fact that the five-lap interval is not exactly 8 years is significant, for if it were exactly 8 years, transits of Venus would likely be so rare as to be of little interest.

The difference between 8 years and the 7.9931-year interval causes successive 5th-lap locations of Earth in its orbit to shift slowly around the orbit. It takes $[1/(8 - 7.9931)] \times 7.9931$ years = 1200 years (to two-figure precision) for a 5th-lap location to make one circuit around Earth's orbit, because "$1/(8 - 7.9931)$" is the number of "5-lap intervals" that will fit around one Earth orbit, and 7.9931 years is the 5-lap interval. However, there are a total of five lap locations nearly equally spaced around the orbit and there are two "nodes" on either side of the Sun where the orbital planes of Earth and Venus intersect. Hence one or another lap location will encounter a node $5 \times 2 = 10$ times more frequently, every 1200/10 = 120 years (again to two figure precision). That is, transits of Venus occur at intervals of about 120 years.

The tilt of Venus's orbit is small enough and the Sun's angular diameter large enough that transits can occur in pairs, 8 years apart, which is the situation during recent centuries. Beginning with the transit 8 years prior to the first recorded observation of a transit of Venus in 1639, here are the dates of transits during the following 500 years:

1631	December 7	1882	December 6
1639	December 4	2004	June 8
1761	June 6	2012	June 6
1769	June 3	2117	December 11
1874	December 9	2125	December 8

The successive intervals between these transits are: 8, 121.5, 8, 105.5, 8, 121.5, 8, 105.5, 8 years. Thus the pattern repeats every 243 years, or pairs of transits recur, on average, every 121.5 years, in agreement with the approximate 120-year value calculated above. The intervals between pairs alternate from 105.5 to 121.5 mainly because Earth's orbit is appreciably elliptical, so its orbital speed varies. The June-December alternation is because the drifting lap positions encounter first one node and then the other, on opposite sides of Earth's orbit. The 2- or 3-day earlier date for the second member of a pair is the interval by which 7.9931 years falls short of 8 years.

Your great-great-grandchildren might see the transits of 2117 and 2125, but 2012 will be your last chance to see a transit of Venus. Venus last lapped Earth on October 29, 2010. That was 1.6 years (1/5th of 8 years) prior to June 6, 2012. Thus, when Venus next laps Earth, there will be a transit. Currently Venus is in the morning sky. It will pass behind the Sun on August 16 and move into the evening sky, where it will draw ever closer to Earth prior to passing across the face of the Sun on June 6, 2012 (from 7:11 p.m. until sunset on June 5 from Nova Scotia).

Because of clouds, no one in Nova Scotia saw the 2004 transit … except Sherman Williams! Sherman was at his home on Horton Bluff that day, well aware of the transit, conscious that no one living had ever seen such an event, all prepared to view the transit, and the heavens smiled upon him! A clearing in the cloud deck opened between Sherman and the Sun for barely half a minute, and he saw Venus silhouetted against the Sun. Yours truly was 8 km away, at Evangeline Beach that morning. All I saw was a brief moment of sunlight east of me, shining on Horton Bluff.

Fall 2010 – Eastern Annapolis Valley

by Larry Bogan

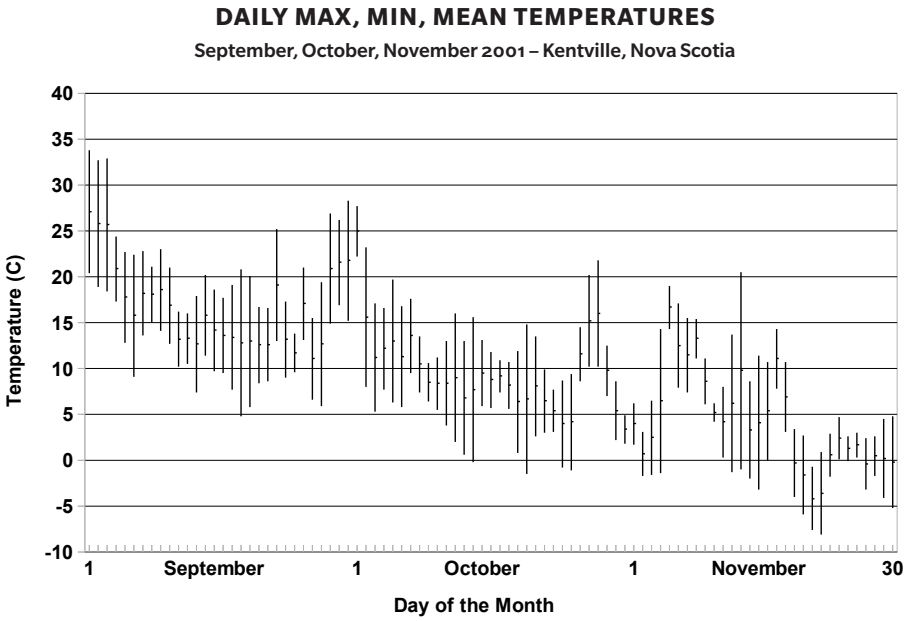
This was another warmer-than-average season, which seems to be a common theme in so many of the weather reports that I have written in the last few years. The unusual fact this autumn was an abundant rainfall that was half again the expected amount.

	Temperature			Total	Snowfall
	Max (°C)	Min (°C)	Mean (°C)	Percipitation (mm)	(h)
September	21.7	11.7	16.7	93	0
(49 yr. average)	(19.4)	(9.2)	(14.3)	(87)	(0)
October	14.1	5.2	9.7	134	0
(49 yr. average)	(13.4)	(4.5)	(9.0)	(95)	(2)
November	8.2	0.4	4.3	235	0
(49 yr. average)	(7.5)	(0.1)	(3.8)	(117)	(12)
Season	14.7	5.7	10.2	462	0
(49 yr. average)	(13.4)	(4.6)	(9.0)	(299)	(14)

Source: Environment Canada for Kentville, NS

TEMPERATURE

All three months of the season were above average in temperature, but September was by far the extreme with a mean temperature 2.4 °C above average. October and November were 0.7 and 0.5 °C above average, respectively. Even at the end of September we were getting highs in the upper 20s. There were 19 days in September with the



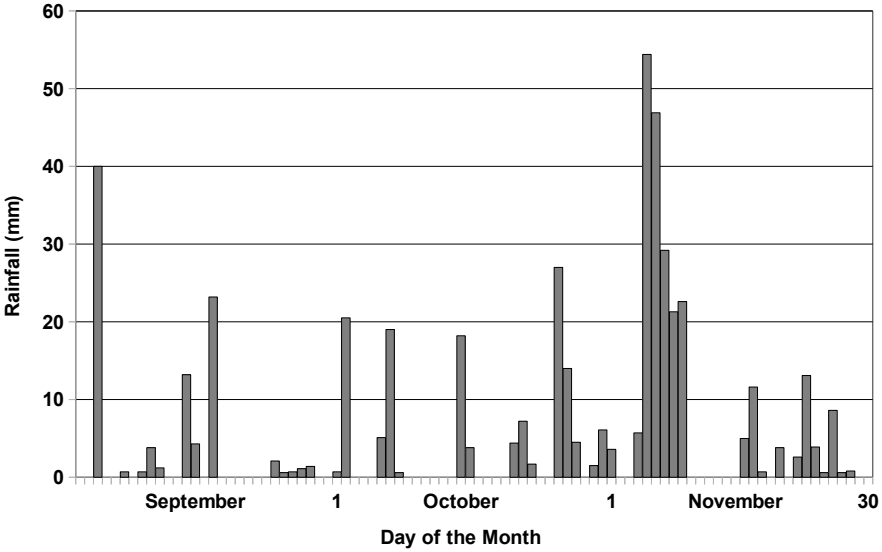
maximum above 20 °C, while the long-term average is only 12 such days. If you look at the graph of the season's temperatures, you will see that we did not have any cold days until the end of November. October and early November stayed in the 0 to +20 °C range.

RAINFALL

While September had about average rainfall, October's was 40 percent above average, and November received twice its average amount. The distribution of this precipitation through the season is shown in the accompanying graph. There were no dry spells this autumn, and we had one long, cloudy, and rainy period from October 21 to November 10. In that 20-day period we received 250 mm of rain and had only five days without precipitation. What a relief to have five days of bright sunshine following that drenching. As a consequence of the high rainfall, the soils of the Valley are well saturated going into winter.

DAILY PRECIPITATION

September, October, November 2001 – Kentville, Nova Scotia



No significant snow fell during the autumn; we expect, on average, about 14 cm, mostly in November. I do not have any sunshine information for autumn to comment on.

JACK MCMASTER

What's in the Sky?

by Roy Bishop

SPECIAL EVENTS IN SEQUENCE

January 3: Quadrantid meteor shower (*see your 2011 BNS Calendar*)
January 19: Full Moon
February 17: Full Moon
February 22 to March 6: Zodiacal light in west c. 7:40–8:00 p.m.
March 13: Clocks spring ahead by 1 hour (AST to ADT)
March 19: Full Moon (largest in 2011, see note below)
March 20: Equinox, Sun on the equator, 20:21 ADT
March 22 to April 4: Zodiacal light in west c. 9:25–9:45 p.m.
April 3: Saturn at opposition
April 17: Full Moon

WHY IS MARCH'S FULL MOON THE LARGEST OF 2011?

Moonrise in the evening twilight of Saturday, March 19, will be special, for not only will the Moon be full, but it will be at its closest point to Earth during the year, making it the biggest, brightest Moon of 2011. Why so?

The Moon's orbit is not circular. It is an ellipse, and the Moon's distance varies as it moves around its orbit from its close point to Earth (perigee) to its far point (apogee) half an orbit later. The average interval from one perigee to the next is 27.554 550 days. The interval from one full Moon to the next is a bit longer, 29.530 589 days. Hence, the perigee point drifts relative to the lunar phase, and perigee coincides with full Moon only every (29.530 589 × 27.554

550)/(29.530 589 – 27.554 550) = 411.8 days. March 19, 2011, is one of those infrequent moments. The Sun's tidal influence on the Moon's orbit makes the Moon's perigee distance particularly small when it coincides with new Moon or full Moon. Perigee distance varies from about 356 500 km to 370 200 km (apogee distance is near 405 000 km), and on March 19 the Moon will be 356 600 km from Earth.

If the sky is clear on March 19, check your BNS Calendar for the time of moonrise, go to a site with a low eastern horizon (for example, the Grand Pré dikelands), and enjoy the spectacle as the eastern horizon drops to reveal the largest Moon of the year.

THE ZODIACAL LIGHT, A VICTIM OF LIGHTING TECHNOLOGY

Two lines in the list at the beginning of this article refer to the zodiacal light, giving the dates and times favourable for seeing this ghostly apparition in the west after twilight ends.

The zodiacal light is comet dust in the plane of the inner Solar System, illuminated by sunlight. It is brightest nearest the Sun, and thus is best seen within half an hour following the end of evening twilight, or in the half hour prior to the beginning of morning twilight. At mid-northern latitudes, such as in Nova Scotia, the zodiacal light is favorably positioned (at a steep angle to the horizon) in the evening western sky in February and March and in the morning eastern sky in September and October. It appears as a huge, softly radiant pyramid of white light with its base near the horizon and extending halfway or more toward the zenith. At our latitude, in the western evening sky it slopes up to the left; in the eastern morning sky, up to the right.

Most people have not experienced the mystical zodiacal light pillar. Moonlight, twilight, haze, or light pollution rule out any chance of seeing it. A dark, clear, transparent sky and proper timing are essential. Most people are unaware of the phenomenon, so even if they happen to see the zodiacal light they likely pass it off as twilight and thus ignore it. Unfortunately the spread of artificial lighting,

exacerbated by the low cost of electrical energy, has obliterated the zodiacal light from many parts of Nova Scotia. Last spring, on the road between the Lookoff and Scots Bay I had a view of the zodiacal light pillar extending high above the Bay of Fundy and photographed it. But even along that rather remote road I had to search to find a viewing site that did not have a glaring yard light obscuring the zodiacal light.

My most memorable view of the zodiacal light was several years ago while on a replica of an 18th-century bark, sailing from Halifax to Bermuda. With no lights anywhere, other than the dim, shielded navigation lights of the ship, it was wonderfully dark on those October nights. Phosphorescent zooplankton sparkled like stars in the wake of the ship, and in the early morning hours the winter Milky Way arched high overhead from horizon to horizon, casting paths of reflected light across the sea on either side of the ship. One night around 2:30 a.m., I noticed a faint glow near the eastern horizon. For a brief moment I thought, What city is that? But there were more than 4000 kilometres of dark ocean in that direction. I was seeing the top of the zodiacal light pillar. Two hours later that glow of interplanetary comet dust dominated the eastern sky and, like the Milky Way, cast a path of reflected light across the sea, from the horizon to the ship.

I find it sad that within the past century such sights have become impossible near populated areas because of humanity's desire to eradicate the blessed dark of night with dusk-to-dawn artificial lighting. Most people today have never seen a truly dark sky, so they do not realize what they have lost.

Kejimkujik National Park A Dark-Sky Preserve

by Roy Bishop

At its annual meeting last July at the University of New Brunswick, the Royal Astronomical Society of Canada (RASC) approved an application from Kejimkujik National Park to be designated a Dark-Sky Preserve (DSP). On August 14 at Keji, Mary Lou Whitehorne, national president of RASC, presented a certificate formally announcing Keji's designation to the Hon. Gregg Kerr, representing the minister of environment.

Among the conditions required for a DSP, a park must have dark skies, year-round access to the public, a public astronomy outreach program, and proper, full-cutoff lighting (that shines light only where and when it is needed, not horizontally and not up into the sky). DSP status acknowledges that the night sky is an important part of the natural environment, deserving of protection so that children, adults, and future generations will be able to see the splendour of the night sky unspoiled by light pollution.

Several people deserve credit for Keji's new status, including Jonathan Sheppard, interpretation coordinator at Kejimkujik National Park, and Dave Chapman and Quinn Smith, both of the Halifax Centre of RASC.

Keji is Canada's 12th Dark-Sky Preserve, and the first in Nova Scotia.

	BLOMIDON NATURALISTS SOCIETY			
	Box 2350 Wolfville, Kings County, NS, B4P 2N5			
	Statement of Income, Expenditures and Net Worth for BNS year 2009 / 2010			
	at 30 September 2010 : And Budget for 2010 / 2011			
	Description	**Budget for**	**Actual for**	**Budget for**
		2009 / 2010	**2009 / 2010**	**2010 / 2011**
	INCOME			
1	Advertising	0.00	0.00	0.00
2	Blomidon Naturalists Fees	3,800.00	3,154.00	3,500.00
3	Nature Nova Scotia Fees	150.00	105.00	100.00
4	Miscellaneous Sales	250.00	113.00	250.00
5	Within the View of Blomidon Sales	1,500.00	1,039.00	1,000.00
6	Calendar Sales	9,000.00	9,280.25	9,500.00
7	Donations	3,000.00	2,400.00	3,000.00
8	Donations / Grants for Young Naturalists	12,000.00	12,117.00	12,000.00
9	HST Rebate	950.00	987.50	1,100.00
10	Other 1	0.00	20.00	0.00
11				
12		30,650.00	29,215.75	30,450.00
13				
14	**EXPENDITURES**			
15				
16	Administration	500.00	172.53	350.00
17	Meetings	200.00	536.10	600.00
18	Donations to Other Groups	600.00	450.00	400.00
19	Nature Nova Scotia Distributions	250.00	205.00	200.00
20	Calendar Costs	5,200.00	4,930.19	5,000.00
21	Nature Displays	200.00	0.00	0.00
22	Newsletters	4,100.00	4,211.31	4,400.00
23	INTERNAL Transfer to Endownment Fund	6,000.00	0.00	10,000.00
24	Inventory Writedowns	0.00	0.00	0.00
25	Inventory Purchases	0.00	0.00	0.00
26	Young Naturalists (Green Dragon)	15,000.00	20,559.65	20,000.00
27	Bank Charges	100.00	88.00	100.00
28	Other: Portable Public Address System	1,500.00	0.00	1,400.00
29		33,650.00	31,152.78	32,450.00
30				
31	Excess; (or -) Income over Expenditures	-$3,000.00	-$1,937.03	-$2,000.00
32				
33	Net Worth as of 30 September 2010			
34				
35	Bank Account (5207570)			$12,385.44
36	Endownment Fund (54YL48A)			$44,837.71
37	Within the View of Blomidon (525 @ 11.30)			$5,932.50
38				$63,155.65
39	Notes:			
40	1. Paid memberships for year is 156 : Honorary 14 .			
41	3. 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

2011 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 & 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	$_____
_____	2011 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 (Registration number: 118811686RR0001)		$_____
		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.

ANDREW STEEVES

Black River above Davison's Mill Pond, January 2010