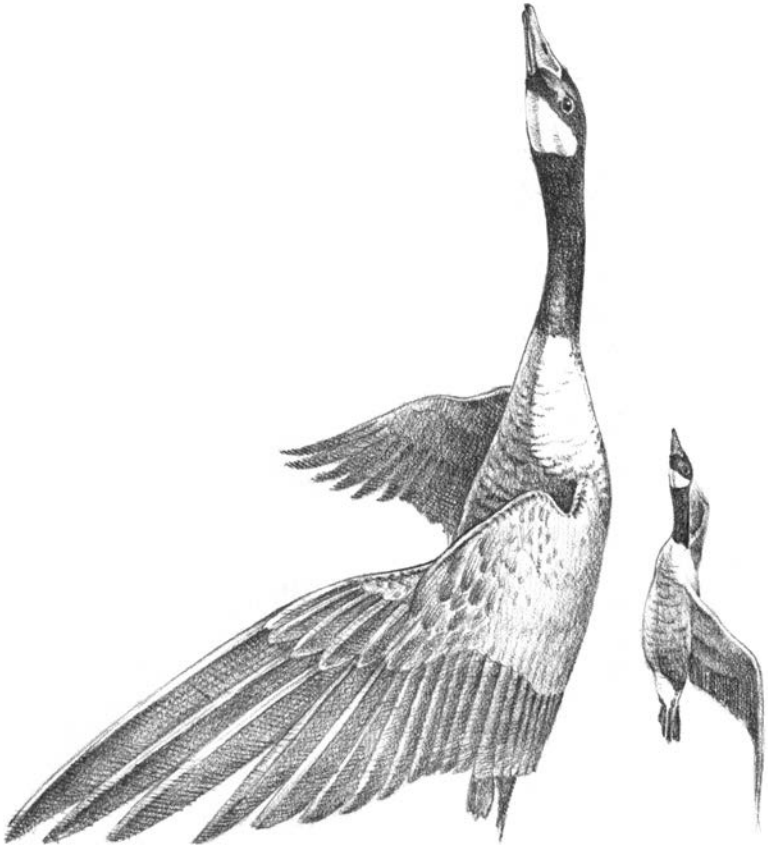
Blomidon Naturalists Society

SPRING 2010 NEWSLETTER

Volume 37 · Number 1

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



JACK MCMASTER

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.

THE BLOMIDON NATURALISTS SOCIETY
P.O. BOX 2350
WOLFVILLE, NS B4P 2N5

www.blomidonnaturalists.ca

BNS Newsletter

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Contents

VOLUME 37 NUMBER 1

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:

1 – 25 GASPEREAU AVENUE
WOLFVILLE, NS B4P 2C5
jtimpa@ns.sympatico.ca

Digital photographs should be submitted to *doug@fundymud.com*

Submission deadline for Summer: June 11, 2010

Out and About

Jean Timpa, editor

Now that winter 2009-10 is over, it has been declared the warmest and driest one since 1946. Forest and agricultural officials are understandably worrying about fires and crop failures in the coming warmer seasons, so we can hope this pattern will change for cooler and wetter soon. Hotter and drier may be more comfortable for us, but such weather does not provide optimum growing conditions for our plants.

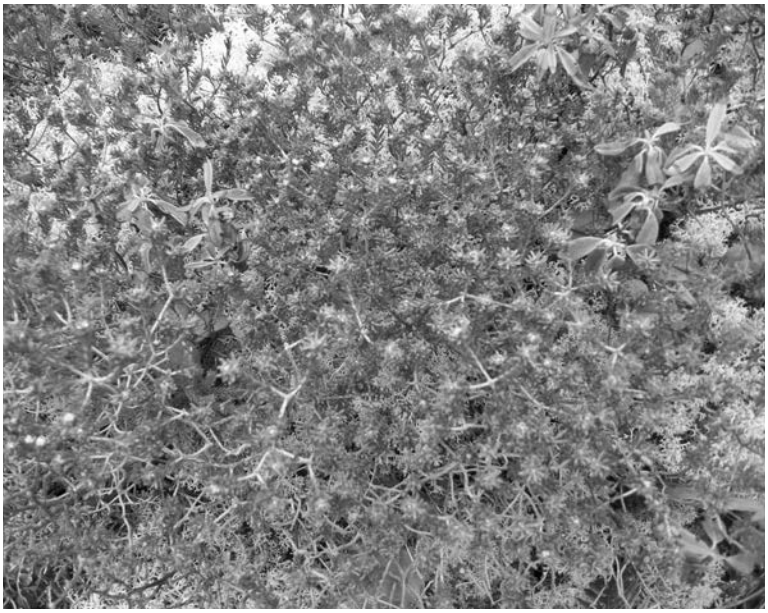
"Hopelesshagen" is now behind us, but Canada's moral lapse and ensuing embarrassment will long remain a dark cloud in our history. We need to provide a much better example, demonstrating that we are not only a thinking, caring nation but also one of systematic action, keeping our promises.

Biomass is the other very controversial topic currently making the rounds. Burning wood and other dried plant materials to generate some of our electricity was suggested by a previous government as a "green" source to offset the need to burn dirty coal, oil, and gas, which are becoming more scarce. Darrell Slauenwhite has written in this issue on the subject, but it is such an important one that I cannot emphasize enough how much we need to discourage our provincial government from falling into this trap.

Thanks to all people who have supported BNS in various ways these past few months. Without your time and effort we could not be the well-known group that we are. We always like to see more people out to our programs and field trips, so be sure to bring along guests.

A Call for Photos of Nova Scotia Plants

The Nova Scotia Museum and the E.C. Smith Herbarium of Acadia University are collaborating on an e-flora of Nova Scotia plants. We hope to complete this project in late 2010 in time for the 100th anniversary of the E.C. Smith Herbarium. Distribution maps for this e-flora are being provided by the Nova Scotia Department of Natural Resources. Images will be colour photos, and we are hoping Nova Scotia naturalists are willing to contribute digital images of plants for inclusion in this book. If you would be willing to share your colour photos, please contact Marian Munro (zinckmc@gov.ns.ca) or Ruth Newell (ruth.newell@acadiau.ca) for details on specific species requiring images.



TROY DENNIS

Board of Directors Report

by Rick Whitman, BNS president

Your board met on March 4. The board approved the donation of one complete set of the BNS Newsletters to the Nova Scotia Museum of Natural History in Halifax. The museum librarian had indicated a serious interest in receiving the set. Extra copies of many issues of the Newsletter are still available to members who wish to complete their own collection. Please review the directions in my last report, while ignoring the deadlines.

Ed Sulis gave a financial and membership report, and we discussed the expectations that the Canada Revenue Agency has for a non-profit organization. It was agreed that our finances allow us to assist the Green Dragon Young Naturalists program and ensure that it will continue. We have a formal five-person committee this year, chaired by Harold Forsyth, to keep the program dynamic and to share the load with Harold. The board agrees that the Green Dragon program is one of the most important BNS activities, and it certainly seems to be well received by everyone involved with it.

We also support the Annapolis Valley Regional Science Fair with two prizes for relevant projects and John Belbin as our judge.

Patrick Kelly reviewed the evening programs through June and field trips through August, as reported elsewhere in this Newsletter.

Murray Colbo has been researching websites providing Latin (scientific) names and ID assistance for various groups of organisms. Eventually we plan to make this information available on the BNS website, with direct links.

Lastly, we are working on a revision to the BNS bylaws, the first since 1981. The revisions are modest, as we primarily want to bring

the bylaws into conformity with the current operation of the society. The proposed revisions will be presented for the members' vote as a special resolution when the board feels they are complete.

Have a great spring and enjoy our Nova Scotia summer.

CLUB NOTES

Upcoming Events

MEETINGS

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

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

Patrick Kelly has had a lifelong interest in astronomy and has taught first-year astronomy at Acadia, Dalhousie, Mount St. Vincent, and St. Mary's. He is a life member of the Royal Astronomical

Society of Canada and is an active member of the society's Halifax Centre. He currently edits the society's annual *Observer's Handbook.*

Monday, May 17, 2010 – *The Butterflies of Nova Scotia and the New Maritimes Butterfly Atlas,* presented by John Klymko. The talk will consist of a brief introduction to butterflies and a discussion of the species occurring in Nova Scotia, including "Maritime Specialties" and Nova Scotia's species of conservation concern. The Maritimes Butterfly Atlas, a citizen-science project, is the first comprehensive butterfly survey for the Maritime provinces and will rely on records submitted by volunteer naturalists. It aims to greatly improve the baseline knowledge of butterfly occurrence in the Maritimes, allowing for the identification of species of conservation concern and for more-informed conservation decisions.

John grew up in southern Ontario, did his BSc and MSc at the University of Guelph, and has done insect, bird, and plant work in Ontario and the Maritimes. He is now the zoologist at the Atlantic Canada Conservation Data Centre, where he focuses on butterflies, dragonflies, damselflies, and other insect groups.

Monday, June 21, 2010 – *Sea Turtles in Nova Scotia.* Laura Bennett will be describing sea turtles in Nova Scotia and the efforts of the Canadian Sea Turtle Network to conserve these animals. She will also share some of the outcomes from the network's research and volunteer programs.

Laura is coordinator of conservation and community outreach with the Canadian Sea Turtle Network. This is a non-profit organization involving scientists, commercial fishermen, and coastal community members that works to conserve endangered sea turtles in Canadian waters and worldwide.

July and August, 2010 – As usual, no meetings are scheduled for these two summer months.

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

Friday, April 16, 2010 – *Astronomy Observing Session.* Join members of the Minas Astronomy Group to observe the night sky. Constellations will be identified by the use of a laser pointer. There will be a not-too-bright crescent Moon in the vicinity of the Pleiades. Venus and Mercury are in the western twilight, Mars is high in the south near the Beehive, and Saturn will be well up in the southeast. Meet at 8:30 p.m. at the old parking lot at Grand Pre National Historic Site. Bring binoculars and be sure to dress warmly. Rain/cloud date is Saturday, April 17.

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

Saturday, May 1, 2010 – *Herbert River Canoe Trip.* Patrick Kelly (472-2322, patrick.kelly@dal.ca) will be leading this trip. The Herbert River is fairly easy with lots of water at this time of the year, and it covers a great variety of terrain. There may be spots where it is running a bit faster, or where there are new obstructions from the trees, etc., that have come down over the winter, so we may have to wade in a few places, if necessary, or stop to scout out a bend. The trip will be two to three hours long, depending on our pace. Bring life jackets, canoe or kayak, and paddles. If you have access to a life jacket but not a canoe, there will likely be extra room in one of the canoes. Check with the leader to be sure. Meet at the Newport rink parking lot at 9:30 a.m. Take Exit 5 from Highway 101 and follow Highway 14 east for about 10 km to the village of Brooklyn. At the cenotaph, keep left

and follow Highway 14 north for just under 1 km. At the intersection (Petro Canada station), Highway 14 turns right. Continue straight on Highway 215 (Note the YIELD sign. You do NOT have the right of way!) The rink is on the right as soon as you exit the intersection. We will be leaving some cars there as we will actually be putting into the river farther upstream.

Tuesday, May 4, 2010, and every Tuesday for the summer – *Acadia University Woodland Trail Biodiversity List.* For a fourth year, we will take a walk every Tuesday evening throughout the spring and summer to look for flowering plants, nesting birds, fungi, butterflies, dragonflies, etc. This will be done in cooperation with the K.C. Irving Environmental Science Centre, and we plan to continue it as a long-term project to observe the changes in biodiversity over the seasons and over the years. Everyone is invited to participate. Come for one week or every week. You don't need to be an expert, but we need lots of people to show up to help spot and identify the different forms of natural history. Some weeks we will have a special leader with an emphasis on a specific area of natural history. If you would like to lead a walk or be on one with a particular emphasis, call Melanie

at 585-1916. Meet at 6:30 p.m. at the main entrance to the Harriet Irving Botanical Gardens on University Avenue.

Saturday, May 8, 2010 – *Nova Scotia Spring Migration Count.* Come and participate in this worthwhile project. It's a wonderful way to get out for a day's enjoyment while discovering possible rarities visiting the Valley. Annapolis Valley coordinators are

Hants West: Patrick Kelly (Falmouth) – 472-2322 (patrick.kelly@dal.ca)
Kings County: Judy Tufts (Wolfville) – 542-7800
Kings County (Kingston area): Sheila Hulford – 765-4023
Annapolis County: Contact Chris Pepper – 829-3478 (cpepper@ymail.com). Anyone interested in helping coordinate Annapolis County, or parts thereof, as a regional representative, would be most welcomed by Chris.

Saturday, May 15, 2010 – *Cape Split Hike.* Make a trip to Cape Split with leaders Jim Wolford (542-9204) and Patrick Kelly (472-2322). This will be joint trip with the Halifax Field Naturalists. There will be interpretive stops along the way. Spring wildflowers and birds should be abundant. This walk requires good footwear. You should bring water with you and a lunch, as we usually don't get to the end of the trail until lunch time. Meet at the Wolfville waterfront at 8:15 a.m. or at the start of the trail in Scots Bay at 9 a.m.

Sunday, May 23, 2010 – *Blomidon Provincial Park.* Jim Wolford (542-9204, jimwolford@eastlink.ca) will lead a walk from the campground about 2 km to a seasonal pond that has the very rare and beautiful fairy shrimp. We will also see other pond life, spring plants and flowers, and birds. We will visit a lookoff toward Five Islands Park, across the Minas Basin. BNS members can meet and carpool from the Wolfville waterfront at 9:15 a.m. or meet Jim at the Blomidon Park registration building at 10 a.m.

Monday, May 24, 2010 – *Historic Hants County.* This is a field trip from the Nova Scotia Bird Society, led by Suzanne Borkowski (445-2922, suzanneborkowski@yahoo.ca). The trip will start by exploring some of the grounds at Mount Uniacke Estate Park, then continue along back-country roads through Hants County. Bring a lunch to be enjoyed at Smileys Park. The trip will start at 8 a.m. in the parking lot of Mount Uniacke Estate Park. (Those wishing to carpool should meet at the Wolfville Waterfront and leave by 7 a.m. to ensure they arrive on time.) The main gate will be locked, but the second gate (coming from Halifax) will be open. No rain date.

Friday, May 28, to Sunday, May 30, 2010 – *Nature Nova Scotia Conference and AGM.* This year, Nature Nova Scotia will hold its annual meeting in Sherbrooke, Guysborough County. We will be sharing the weekend with the St. Mary's River Association and the Nova Scotia Nature Trust. All naturalists and their families are welcome. For details, see the Nature Nova Scotia website: www.naturens.ca.

Saturday, June 5, 2010 – *Native Plant Sale at the Botanical Gardens.* Learn more about gardening native, purchase native plants for your home garden, and take an early spring tour of the Gardens. Plant material grown by our volunteers from seed collected in the Gardens will be available for sale, as well as material from several local nurseries. One of the best ways to attract local wildlife is to plant native vegetation. A variety of information booths from local groups will be in the main lobby. All welcome. The plant sale goes from 9 a.m.to 12 noon.

Saturday, June 5, 2010 – *Palmeters Woods.* Judy Tufts (542-7800) and Nancy Nickerson (542-9332) will lead a walk through the woods behind Evergreen Home for Special Care (655 Park St.), located in the western end of Kentville. Come and explore this little green gem with us. Look and listen for local birds and search the woodland floor for flora and fauna. There will be a good chance to see a variety of

warblers and other migrants and fascinating woodland plants. Meet at the Wolfville waterfront at 7:30 a.m. or at the parking lot behind Evergreen Home for Special Care in Coldbrook at 8 a.m. Juniors to seniors welcome. (The early meeting time will give more time to hear bird songs, as the birds are most active in the early morning. This year, the June date also means there will be more flora to see.) Rain date: Sunday, June 6.

Saturday, July 10, 2010 – *Herbert River Trail.* Patrick Kelly (472-2322 patrick.kelly@dal.ca) will be leading this walk for the Nova Scotia Bird Society. This easy walk follows the rail bed of the former train line that ran from Windsor to Truro via Kennetcook. It runs along the Herbert River for a good part of its length. This is a great walk for spotting floodplain vegetation in addition to birds. Meet at the Newport rink parking lot at 9 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. Bring insect repellent. We should be done by lunch. Rain date: Sunday, July 11.

Sunday, July 25, 2010 – *Moon Over the Water.* The view from The Lookoff on the North Mountain is something that many society members are likely familiar with. But how many have watched the Sun set and the Full Moon rise from that vantage point? Tonight, the Moon will rise around 8:30 p.m., about half an hour before the Sun sets and about two hours from being full. The tide will be coming in, although you will have to stay until after 1:30 a.m. if you want to see the moonlight with the tide in all the way! Arrive for around 8 p.m. and enjoy the evening. We will likely hear lots of nature sounds as it darkens, and the brighter constellations will come into view. Weather permitting, of course.

Saturday, August 7, 2010 – *Beginning Birders Trip, Windsor, Hants County.* Leader: Patrick Kelly (494-3294 (w), 472-2322 (h), patrick.kelly@dal.ca). Limited registration – pre-registration is required. These trips are geared for those who have always had an interest in birdwatching but are not sure how it is actually done. Bring binoculars and field guides, if you have them. Meet at 9 a.m. at the parking lot for the Windsor Tourist Bureau, which is just north of Exit 6 (Water Street) on Highway 101. We should be 1–2 hours and will visit a few different types of habitat in the town of Windsor. No storm date for this trip.

Saturday, August 21, 2010 – *Cornwallis River Greenway.* Murray Colbo and Bernard Forsythe will lead this walk, which will start behind the Foodland in Coldbrook, located along Highway 1 at South Bishop Road, about 3 km west of Exit 14 on Highway 101. The trail is on the old rail bed, which is now resurfaced with gates and is restricted to walking and bicycles. The trail is flat with two rest sites with benches and tables and is designed to be wheelchair accessible, so all are welcome. This section runs through mixed forest with two stream crossings and parallels the Cornwallis River with its broad flood plain. An interesting fen is also present. For those in the Wolfville area who wish to carpool, meet at the Wolfville waterfront at 9:15 a.m., or meet Murray and Bernard behind the Foodland in Coldbrook at 10 a.m.

Friday, September 3 – Sunday, September 6, 2010 – *NOVA EAST 2010.* Atlantic Canada's longest-running star party will be held at Smileys Provincial Park near Brooklyn in Hants County. Some of the presentations and workshops as well as the Saturday evening observing session are open to the public. NOVA EAST is hosted jointly by the Halifax Centre of the Royal Astronomical Society of Canada and the Minas Astronomy Group. More information can be found at http://halifax.rasc.ca/ne.

Lack of Action in Copenhagen a Disgrace

by Thea Whitman

"HOPENHAGEN" was the first thing I saw upon arriving in Denmark, emblazoned across a colourful mural, and hope was the theme of the day as the world converged on Copenhagen. The reason: to negotiate how to proceed, united in the fight against climate change. Perhaps something should have clicked, however, when I realized that the mural was not a UN campaign but, in fact, an ad for Coca-Cola. I was honoured to attend the negotiations as a member of the Canadian Youth Delegation to Copenhagen.

As was made clear by the media, the December negotiations can be called a "greenwash" at best and a failure at worst, falling far short of even the lowered expectations that were set in the preceding months. After 15 years of negotiations and a clear work plan from the 2007 conference in Bali, the Copenhagen Accord cobbled together over the last days of the conference is an insult to those who believe in an open and transparent process that includes the voices of those who will suffer the most from climate change as well as those who are causing it. While the accord cites a goal of limiting warming to 2 degrees, the actions pledged by all countries virtually guarantee that we will fail to meet this goal. Rather than legally binding targets, countries were allowed to append aspirational targets to the accord. By the January 31 deadline, 107 countries, representing 81.5 percent of global emissions, had added targets.

Canada has reduced our level of ambition even further than what we were saying we would do during Copenhagen. We are now aim-

ing to reduce our emissions to levels that are 2.5 percent higher than they were in 1990 (for reference, under the Kyoto Protocol, we had previously pledged to reduce our emissions to 5 percent below 1990 levels by 2012, but our government has chosen to ignore those legal commitments).

The Copenhagen Accord was crafted by a small group of countries, including the United States, China, India, Brazil, and South Africa, but it was not accepted by all countries that are part of the UN process. It was rejected by some because its low level of ambition was seen as condemning the most vulnerable countries to unacceptable fates. Thus, in the end, it was simply "taken note of" within the official UN process, not adopted. This raises interesting questions about what the future forum of climate negotiations will be. Should we expect that a small handful of countries will be making the decisions that will affect the whole world? We might get a close-up look as the G8 and G20 summits take place in Ontario this June.

A few other important developments took place during the negotiations. One is that the Copenhagen Accord specifies that significant funds will be mobilized to finance the efforts of developing countries to adapt to climate change and develop on a pathway that is less greenhouse gas intensive. It is not yet clear where all the funds will come from, though, and it is crucial that these funds are truly new – they should not be taken out of existing aid budgets. Replacing schools with flood levees is not an acceptable solution.

A second interesting point was the further development of a mechanism to reduce emissions from deforestation and forest degradation (REDD). Deforestation currently contributes about 25 percent of annual human greenhouse gas emissions, so it is essential that we address it as part of our solution to climate change. However, the Copenhagen Accord is still woefully far from being enough.

Already, this failure is a costly delay, measured in human lives and in dollars, as we lock in more dangerous climate change and delay the investments in clean energy that can bring jobs and prosperity. Our negotiators' job is not finished; we must finalize a strong agree-

ment over the next six months. As a young person seeing how these negotiations will affect my future, I am outraged, frightened, and ashamed by what my country is doing.

However, I still have hope. People around the world are taking action, some for the first time in their lives. On December 12, I marched alongside mothers, grandfathers, professionals, indigenous people, and tradespeople as part of the tens-of-thousands-strong Copenhagen march, accompanied by thousands of demonstrations in countries all over the world, including hundreds in Canada, one of them in Wolfville. This fight for climate justice was the most inspiring thing I saw in Copenhagen.

Many countries are taking significant steps, both on domestic mitigation of emissions and on finance to help developing countries. Although Canada is lagging behind on both counts, provinces, cities and towns, and individual Canadians are taking big steps on their own. The majority of Canadians want to do their fair share in preventing dangerous climate change. We want our country to return to its role as a world leader on the environment, and while these calls to action seem to have fallen on deaf ears, I believe that Canadians will not stand for this for long.

If those inside the conference will not take leadership, we will. If those negotiating our future will not use principles of climate justice and human rights to guide their decisions, we will not stand for it. And when our political leaders are ready to take the necessary action to prevent dangerous climate change, we will welcome them to join us.

Thea Whitman, B.Sc. ArtSci '08, was honoured to work with the talented, passionate, and brilliant young people on the Canadian Youth Delegation to Copenhagen. She is from Wolfville, NS, and is currently finishing an M.S. at Cornell University in Ithaca, NY.

Green Dragon 2010

by Harold Forsyth

As naturalists, we have found that knowledge of and engagement with the natural world sustains our personal growth through imagination and creativity and supports a passion for the outdoors and the environment. To share this passion with young people, the Blomidon Naturalists Society is entering the sixth year of our very-well-received Green Dragon Young Naturalist Program. We plan to provide some 400 kid days in nature at locations including Blomidon Provincial Park, Smileys Provincial Park, Blue Beach Fossil Area, and the Harriet Irving Botanical Gardens. Plans are well underway, with an enthusiastic committee to engage partners, to develop the program, hire and train student assistants, and of course find funding for the $17,000 budget. Any contributions toward that end are gratefully accepted and tax deductible. Anyone who would like to participate with the children in the program with an hour or a day at any of the locations would be most welcome.

Nova Scotia Migration Count (NSMC) 2010

Hello birders, feeder-watchers, and anyone interesting in counting birds. This is a reminder that the annual Spring Nova Scotia Migration Count will take place on Saturday, May 8, 2010 (always

held on the second Saturday in May). Please keep this day open on your calendar! You may be looking at snow flurries as you read this issue of the BNS Newsletter. If you are lucky, you might be looking at some crocuses, or even daffodils, in bloom. But keep in mind this count is only a few weeks away, and it is time to give some thought to the NSMC 2010. Enjoy a fun day, indoors or out in the field, watching and counting birds for this worthwhile project. Maybe you will get the thrill of finding an unexpected rarity – these spring counts often turn up a few. In 2009 it was a Great Egret. Let's see what this year brings!

All are welcome to participate – no fee involved.

Our former provincial coordinator, Hans Toom, after a number of years of invaluable dedication to this project has retired, and we are indebted to the enthusiasm and graciousness of Chris Pepper, who has volunteered to take it over.

I am the county coordinator for Kings County. If you have not participated before and wish to do so, you can reach me by telephone (542-7800) or by e-mail (tandove@ns.sympatico.ca).

Finally, I will add that 2010 will be my last year as the Kings County coordinator. After enjoying many years of involvement in this count, I have decided to make this year's effort my swan song. I do hope there is someone who will consider taking over Kings for the NSMC 2011. I have had such wonderful, enthusiastic support over the years that it would be a great pity should it not continue to benefit this Nova Scotia migration bird count.

Judy Tufts,
Kings County coordinator for NSMC
918 Ridge Rd, P.O. Box 2263
Wolfville, NS B4P 2N5

MARY PRATT

Biodiversity is Life

by Derek Allerton & Laura Thompson

Biodiversity is life. Biodiversity is our life. This is the slogan for the 2010 International Year of Biodiversity as proclaimed by the United Nations General Assembly. With an increasing disconnect between people and nature, the International Year of Biodiversity is an urgent call for nations and individuals around the world to become aware of how humans are a part of nature, the incredible interconnectedness of nature, and the imminent threat being posed to thousand of species on our planet every day.

Being aware of biodiversity is not just an appreciation of the tremendous impact it has on our daily lives. It is true that we count on the world's biodiversity to help feed us with a wide variety of food, clothe us with natural fibres and animal skins, shelter us with timber and other natural products, provide us a wide variety of renewable fuels, and heal us with medicines derived from or inspired by nature. However, preserving biodiversity is also critical to finding the tools we need to help us in the future. For example, we know the world will be warmer, but if we do not take steps to preserve a wide variety of plants, we might not be able to develop grains that are more resistant to heat and drought. The more biodiversity that is lost, the less well off we will be.

An easy way to think about the threats to biodiversity is to remember the HIPPO in the room, as described by biologist E.O. Wilson (*The Future of Life*, 2002):

H is for habitat destruction, disturbance, and fragmentation. This is possibly the greatest cause of species decline.

I is for introduced and invasive species. Introduced species often become invasive when they breed and out-compete or eat the native species.

P is for pollution, which can range from greenhouse gases causing climate change to toxic emissions poisoning specific ecosystems.

P is for population – human population. There are 6.7 billion people now, with projections of an increase and peaking at 9.2 billion by 2050.

O is for over-exploitation. We are living beyond our means – consuming the equivalent of what three planets would produce per year.

What can concerned ecological citizens do about protecting biodiversity? If you are a member of the Blomidon Naturalists Society, you are already a step ahead. Being a member of one or more organizations dedicated to appreciating, understanding, and preserving the environment opens doors to learning about the environment where you live and around the world.

Another action is being a mindful consumer. We are dependent on biodiversity to survive. By taking steps to reduce our consumption, reduce our carbon footprint, and purchase more sustainably produced products, we reduce our impact on biodiversity.

Lastly, do not keep your concerns about protecting biodiversity to yourself. Talk about it with friends and neighbours. Contact your municipal, provincial, and federal representatives to share your concerns, especially when it comes to preserving habitat. Be part of an environmental activity or event. Whatever you choose to do, make sure people know that protecting biodiversity is an important issue. For when a species is lost, its extinction is forever.

SOURCES

UN Convention on Biodiversity, 2010 International Year of Biodiversity website. http://www.cbd.int/2010/biodiversity

Wilson, E.O. 2002. *The Future of Life.* Toronto: Random House

Green Winter Bird List No. 2

by Bernard Forsythe

Winter 2009-10 – Birds counted were found during walks (two to North Grand Pre) from our home on Wolfville Ridge between December 1, 2009, and February 28, 2010. Many of our usual winter birds were not present this winter, especially the finches, and the few that stayed were in very low numbers. A real bonus during walks from Wolfville Ridge is the scenery during the changing seasons. I made many stops looking south across the Gaspereau Valley to the South Mountain. From the north side of the Ridge the view of the Cornwallis River through Port Williams out into the Minas Basin and beyond to Blomidon is inspiring.

The total for this winter was 64 species, considerably lower than the 71 species recorded last winter. I find it interesting that of this winter's 64 species, 10 of them were not recorded last winter. This leaves 17 species on the 2008-09 list that were not found during my 2009-10 walks. Both years, I saw other species near Wolfville but did not count them because I was in a car.

Species recorded in 2008-09 but *not* during 2009-10: Green-winged Teal (1), Ring-necked Duck (2), Ruffed Grouse (3), Rough-legged Hawk (4), Dunlin (5), Great Horned Owl (6), Red-bellied Woodpecker (7), Ruby-crowned Kinglet (8), American Pipit (9), Yellow-breasted Chat (10), Eastern Towhee (11), Lapland Longspur (12), Baltimore Oriole (13), Pine Grosbeak (14), House Finch (15), White-winged Crossbill (16), and Hoary Redpoll (17).

Species recorded in 2009-10 but *not* during 2008-09: Common Eider (1), White-winged Scoter (2), Great Blue Heron (3), Northern Harrier (4), Merlin (5), Sandhill Crane (6), Lesser Black-backed

Gull (7), Short-eared Owl (8), Belted Kingfisher (9), and Chipping Sparrow (10).

Most of the above species were only seen once. The total number of species recorded during my Green Winter Bird List for the past two winters now stands at 81. What surprises will next winter bring?

JACK MCMASTER

Valley Birding

by Bernard Forsythe

February 27, 2010 – The nine participants on this outing, including a couple from Ontario, were blessed with an April-feeling day. We began with great views of the Northern Mockingbird that has now spent two winters living on Canada Holly berries beside the Wolfville Wharf. Next, our five-vehicle caravan stopped in Lower Wolfville to watch a pair of Bald Eagles repairing their large nest in an oak tree. At the far eastern end of the Ridge Road everyone enjoyed the striking pure-white Red-tailed Hawk that has overwintered there for several years. Across the Grand Pre dikes we added two Rough-legged Hawks and Horned Larks. One car sank into the mud at East Point; however, Suzanne Borkowski, our co-leader, had it pulled out in no time with her Jeep. At Evangeline Beach we added White-winged Scoter and Red-throated Loon.

At our stop for lunch in Greenwich, one member spotted a Lesser Black-backed Gull that was a lifer for him. The afternoon was spent driving the Canning area dikes, where Red-breasted and Common Mergansers were added to our list. The numbers of Red-tailed Hawks, Bald Eagles, and Canada Geese were impressive. The spring-feeling day, a pair of ravens building a nest, and a couple of Song Sparrows in full song led us to believe that winter must be almost over.

Some Thoughts on the Value of Dead Trees

by Darrell Slauenwhite

Nothing in the forest is more majestic or enchanting than a huge, ancient Red Oak, such as the ones along the path to Blue Beach. These great trees create an atmosphere of awe and wonder, but when they die and fall to the ground little thought is given to them.

What happens to the dead wood that falls to the forest floor? It was once thought of as forest waste worth nothing, of no use but to be piled up and burned. We now realize that that fallen tree is far from being dead. It is teeming with life! The death of one of these forest giants marks the beginning of life for a whole host of other organisms and the start of a recycling process that is important for the health of the forest and vitality of forest ecosystems. The role of provider that the tree had while standing now continues, even more so, on the forest floor.

Ecologists call newly fallen and decaying logs and branches "coarse woody debris," and it is an important component of forest ecosystems. It provides habitat on the forest floor, a source for nutrient and carbon cycling, fuel for forest fires, and a home for many organisms that depend on dead wood for their survival. The process of decay adds nutrients to the soil, and the lives of many organisms are involved in the decay process. I have been told that if it took a hundred years for the tree to grow it will take a hundred years for it to decay – a long, slow nutrient flow.

Once on the ground, a fallen tree begins to dry. Leaves dry and fall to the ground where they become the first flush of nutrient from the

tree. Bark is shed, and the wood cracks, allowing rain to enter deeper into the tree. Bacteria, invertebrates, and wood-decaying fungi begin to colonize the fallen tree. A moist environment is created, encouraging complex interactions between the decay process and the succession of organisms. In this way the dead tree becomes habitat for a wide range of living forms, including bacteria, fungi, protozoa, nematodes, lichens, invertebrates, and other plants and animals that use or remove the remaining tissue.

Logs and branches of various sizes scattered over the forest floor break up the terrain and moderate the extremes of weather and provide valuable protection from radiant heat during forests fires. Large logs provide homes for many animals of many species. Some live in holes in the logs while others dig homes under the logs. These can be short-term homes or long-term.

Invertebrates are vital in breaking down dead wood and returning carbon and other nutrients to the soil, and they in turn are food for other members of the forest.

Like invertebrates, fungi are extremely diverse and numerous and important forest organisms. Wood- and litter-inhabiting fungi are the forest recyclers , decomposing logs and other dead wood that accumulates during the life of the forest. This decomposition releases large amounts of nutrients back into the soil, which is important for maintaining soil fertility and forest health. Some fungi attack the bark, while others rot the sapwood, and still others rot the heartwood. On a large log one could expect to find a large number of different fungi each doing its own thing on the various parts of the log and at different states of the log's decomposition.

Lichens and mosses are also associated with dead wood, adding to the colour and texture of the fallen tree.

Disturbances such as fire and timber harvesting can greatly change the volume of coarse woody debris, its pattern of distribution, and its decay state, all of which can have significant impact on the communities of organisms that use dead wood as habitat.

The coarse woody debris within the forest is a significant source of

carbon that can remain in the ecosystem for many years before being released into the atmosphere, either slowly through decay or rapidly through a forest fire. This is an important part of a continuous cycle wherein carbon moves between living biomass, dead organic matter, and the soil. It is important that this system not be broken by human activities such as biomass harvesting.

This article is based on an article in *LANDSCOPE*, vol. 24, no. 2. (*LANDSCOPE* is "a magazine devoted to conservation, parks and wildlife in Western Australia")

NATURAL HISTORY

An Argument in Favour of "Messy" Wood Lots

by Darrell Slauenwhite

I am not a trained person in any of the natural history areas, but I have spent many years walking through the woods of Canada and the bush lands of Western Australia. Along with my personal experiences, I have read widely and have been blessed with the friendship of some very passionate outdoor people. That is the background for this short paper.

In this day and age of looking for alternative energy sources it is natural for some to turn to the forests as a source of energy. I have great fears of the idea of biomass harvest, as it would take so much out of the forests that they could not regenerate themselves to anything like they were. The dead mass is part of the fertilizer for the next generation of forest. It appears that with all we have learned about how the various natural systems interconnect we still have a

very shallow understanding of the process if we allow the harvesting of the whole tree while lumbering.

I was watching a TV show on the west coast salmon and how they and the bears and the forest are interconnected. I was amazed to learn that a good deal of salmon is carried some distance from the riverbanks into the forests, where any of it that isn't eaten becomes part of the forest's energy bank. Should the bears be removed or the salmon lost, the forest would lose a source of energy it has relied on for thousands of years, and the resulting forest would be less because it has less energy to work with.

Closer to home, when a tree dies it is already a home for countless insects, bacteria, and some birds and animals. When it falls to the ground the release of minerals, carbon, etc. as it decays really speeds up, and over the next period of time this old tree may in fact become the nursery for a member of its own kind. As the tree breaks down, minerals and carbon are released back into the soil to be used once more.

Trees, with their deep roots, bring minerals up to the surface, where they are deposited at soil level through the decay of fallen leaves. Walk into a hardwood bush, drop to your knees, and dig. With any luck you will find several centimetres of dark leaf mould. For any gardener, this is "black gold," and for the forest and all the animals and plants that live there it is their lifeblood. Remove the limbs, twigs, and all the other plant materials in biomass harvesting and you remove this leaf mould; this powerful layer of natural material and the health of the forest is reduced.

If we allow the harvesting of the limbs, small trees, etc. – the byproduct of the logging industry – and leave the forest floor looking like a farmer's field after the fall harvest and ploughing, we will be killing the forest. It will starve to death without the energy that is provided by the work of all the decomposers as they break down the slash left by the loggers.

Without old dead trees the woodpeckers would have no homes; nor would all those other birds and animals that rely on them to dig holes that they can then use. We need dead and decaying wood in

our wood lots to keep a healthy forest system. We must not remove all the plant life from the forest, for if we do we will be removing the forest.

NATURAL HISTORY

Thoughts on Introduced Species

by Martin Thomas

Introduced species are living organisms that have travelled to a new home because of the activities of humans. Many introductions are intentional: a wide variety of agricultural crops, farm animals, flowers and ornamental trees, for example. Other introductions are accidental, such as weeds or weed seeds arriving with intentional introductions and pest animals such as rats, mice, and cockroaches. Moving animals over long distances can bring many parasites and diseases, and the same applies to human travel. However careful we are, and despite stringent shipping regulations, new animals, plants, bacteria, and viruses are arriving all the time.

Organisms new to an area can have a variety of effects. Those that appear to have little effect on the natural history of their new homes are considered benign. Many others have harmful effects. When they spread widely in the new location, they are considered invasive. They can out-compete native fauna and flora. Many plants in this group are called weeds. At their worst, invasive introductions can change the whole character of the countryside.

One might think that intentional introductions would be easy to control and not cause great damage. Unfortunately, this is often not the case. Although intentional introductions are often thoroughly researched prior to being made, they can act very differently in their new home. Rabbits were introduced into Australia in 1788, and more were brought in later. It was assumed that they would act simi-

Dandelion Taraxacum officinale *Flower Head*

larly to the way they did in Europe. However, in their new home the population exploded such that they were a menace and reached plague numbers by 1890. They ate much of the ground vegetation and riddled the ground with hazardous holes that could trip horses. An incredibly long fence was built in a control attempt, but the rabbits had spread around it before it was finished. The viral rabbit disease myxomatosis was introduced in the 1950s to control the pest; it killed over 99 percent of the population, but the remaining rabbits multiplied again. A second virus, the calici virus, was introduced in 1995 and has brought populations to a low level.

Some examples of intentional introductions are almost ludicrous. In Bermuda, an introduced and very attractive lizard, the Jamaican Anole, became a mild nuisance. In an attempt to control the lizards, a big, yellow tropical flycatcher, the kiskadee, was introduced. In its native home, the kiskadee did eat mostly lizards, but in Bermuda it broadened its diet, eating bird eggs and fledglings, including those of the endemic race of the White-eyed Vireo. It also ate rare endemic insects and other invertebrates. It did eat a few lizards but did not control them.

A recent example of huge damage done by an introduced plant is the spread of the Kudzu vine in the USA. Native to southeast Asia, it was introduced in 1876 at the Philadelphia Centennial Exposition as a forage plant with ornamental properties. It spread very rapidly, choking out the natural vegetation and enveloping buildings and other structures. Kudzu is a problem in 20–30,000 square kilometres of land in the United States and costs around $500 million annually in lost agricultural land and control costs. It consumes about 60,000 additional hectares each year. Kudzu turned up in Canada in southern Ontario in 2009. It is very difficult to eradicate.

Some accidental introductions have now become worldwide pests. Examples are the Black and Brown Rat and the House Mouse. Since they live in close association with people, they can occupy climates outside their normal range and now occur everywhere except polar regions. A good example of a weed that has spread all over the temperate world is the dandelion. It is said to have been introduced to North America as a source of nectar for bees, but it is also quite edible, and young leaves can be used in salads. Once in a new area it spreads widely by means of its wind-borne seeds.

TECHNOLOGY

Look Straight Up!

by John Belbin

On clear nights in late November, I began to notice a shimmering green beam shooting up from the KC Irving building on the Acadia campus. It looked to be going high enough to contact the aircraft flying in and out of Halifax Stanfield International Airport. Mildly concerned with this apparition, I was pleased to get an invitation through BNS to attend a special meeting on the subject.

Dr. Kevin Strawbridge of Environment Canada gave a number of us a detailed talk in the auditorium and then a tour of the high-tech equipment that was shooting beams of green light into the sky. This proved to be a modified travel trailer packed with electronics and weather sensors, located in a secure area at the back of the Irving building. It is one of only four identical units doing research across Canada, which together make up CORALnet (Canadian Operational Research Aerosol Lidar Network). The others are located at UBC; Egbert, Ontario; and the University of Sherbrooke, Quebec. A fifth is planned for Saskatchewan.

Lidar is yet another of those acronyms that people in remote sensing seem to love for some reason. It stands for "light detection and ranging" and is obviously very similar to the more familiar radar (radio detection and ranging) that we have all become familiar with. A radar system sends out powerful radio waves on selected wavelengths, a few of which are reflected back to the source, sometimes with a slight change in their characteristics. This extremely weak signal is electronically amplified and provides information on the target that caused the reflection. Lidar likewise uses light waves to achieve the same effect. Light has smaller and more energetic wavelengths than those of the radio part of the spectrum and requires more energy to produce. The part of the electromagnetic spectrum we call light runs from the infrared zone through the familiar red, yellow, green, and blue parts of the visible zone, culminating in the high energy ultraviolet area. The lidar system used by CORALnet uses a bright green laser, which obviously has far greater power than the low-level red scans we see at the supermarket or on survey equipment. Those shorter wavelengths also mean that a lidar can sense far smaller objects than any radar system ever could.

That really is the point of the whole exercise. The lidar is designed to detect small particles in the air called aerosols that play an important role in the climate system of our entire planet. Aerosols have a major role in atmospheric chemistry and mixing. They contribute heavily to harmful atmospheric problems such as ozone and smog, and are believed to modify clouds and the earth's radiation char-

acteristics. They thus have a direct effect on both our climate and human health. Despite this importance, we really have had little information about aerosols until now; virtually all our climate stations sample only the nearby surface air, and this may not be representative of the larger reality at all. No wonder some of our forecasts are still so bad despite the huge computers that are used.

With the introduction of atmospheric lidars we can now see the huge variation in the composition of the air for several kilometres above the station. We are finally moving from a 2-dimensional to a 3-dimensional understanding of the atmosphere. Atmospheric lidars have already shown that dust from the Sahara region travels right across Asia and the entire Pacific Ocean to have a significant effect on Western Canada. Large forest fires have similarly dropped materials right round the world. What other effects are far-distant locations having on us here in the Valley?

The lidar beam projected from the Irving Centre reaches an altitude of some 15 km, reflecting from very small particles all the way up. These may have had their origin in natural events such as volcanic eruptions, dust storms, natural forest or grassland fires, or sea spray. Increasingly, the aerosols come from human activities, mostly from the burning of fossil fuels, manufacturing processes, and the deliberate changing of the earth's surface. The receiving equipment, based on a large telescope, is sensitive enough to be able to detect small changes in the polarization of the reflected light and thus identify the shape of the particles that are being recorded. Accuracy is ensured by the trailer's being essentially a complete weather lab facility with its own climate-controlled system to remove variations in the data. It works 24 hours a day, seven days a week, and can be controlled remotely by an Internet link.

I was worried that such a powerful light beam could be a hazard to aircraft and anything living that flies over it. In fact, we were told that at low height levels it is powerful enough to act as a "bug zapper" and you can see this effect at night in the nearby parking lot. There are sparkles and flashes in the beam as small items are incinerated. This is obviously one reason for the security zone in which the trailer

operates. The design incorporates a radar system that scans the sky around the lidar and will shut it down automatically if aircraft or anything else of a radar-detectable size flies into the danger zone close to the beam. We were assured that small birds that flew through the beam would not be affected by it. It must still be a sight when you are flying over Wolfville at night, but at least you won't be subjected to a dazzling green beam with the potential to damage eyes.

If you happen to look for the beam in a rain shower you will not see it. Rain drops are much larger than aerosols and render the system blind. It continuously scans for approaching precipitation and shuts down the lidar automatically. There are also three webcams that photograph the sky while the system is operating and record the atmospheric conditions under which it is working. There is thus a continual record of the Wolfville sky.

There is roughly $500,000 worth of equipment packed into this small trailer. It is producing data that we could not obtain by any other means, and it is giving us the first real understanding of how the atmosphere above us works. Our climate and weather studies and our understanding of the real effect of pollutants and human activities should all greatly improve as a result.

The basic data are available on line for anyone who is interested, on the CORALnet website (http://www.coralnet.ca). From there you can obtain basic information or up-to-date records from Acadia or any of the other sites in Canada.

Similar equipment is now being used in the Canadian Arctic to monitor global climatic changes. NASA's Phoenix Lander was designed to use an almost identical system on the surface of Mars to determine the nature of atmospheric particles on that distant planet. It operated for months longer than its design called for and returned a huge amount of data to Earth. It does not appear to have survived the Martian winter.

[Lidar is now also used in traffic control. Police use handheld units that are much more selective than traditional radar to pick off speeders from a crowded field – ED.]

Dr. Raymond C. Parker, Valley Scientist, Polio Researcher

by Merritt Gibson

Dr. Raymond C. Parker (1903–1974) was born and grew up in Newport, Hants County, across the Avon River from Windsor.

He attended school in Newport and enrolled at Acadia University in 1920. The story is that after enrolling he asked to see the then-head of the department of biology, Prof. H.G. Perry. He was able to convince Perry that he wanted to grow tissues outside of the body. Methods of tissue culture were essentially unknown at that time. His arguments were successful, and Dr. Perry provided him with space, chemicals, and glassware. Growing tissues in culture was an interest Parker wished to pursue; it was not part of his course work. Four years later, when Parker graduated from Acadia, he was able to grow cells and tissues in culture. However, they lived for only a short time.

After Acadia, Parker attended Yale University, where he continued to work on cell nutrition, hoping to find a means of keeping tissues alive in culture for longer times. He received his Ph.D. in 1927. After working at Berlin and Pennsylvania, he became head of the Virus Research Section of the Rockefeller Institute in New York. At Rockefeller, he became associated with two other scientists who were also attempting to develop tissue culture methods, and the three worked together.

In 1938, Parker published *Methods of Tissue Culture*, the first book on this subject and the standard reference for many years (it went through three editions). In 1941, Dr. Parker joined the Faculty of Medicine at the University of Toronto and became research associ-

ate with the Connaught Medical Research Laboratories in Toronto. While at Toronto, Parker and associates developed a vaccine against typhoid fever. This was during the Second World War, and battlefields and bombed communities without clean water were rampant with typhoid fever.

After developing the typhoid vaccine, Parker concentrated on growing both cancerous tissues and those infected with poliomyelitis in culture. Parker developed the cultures needed to grow polio-infected tissues, and these cultures were used by other scientists to prepare the polio vaccine. At the time of Parker's death in 1974, Fisher and Wilson wrote that "it was in the field of poliomyelitis that his studies again had world-wide impact. Indeed the successful production of the poliomyelitis vaccine depended directly upon (the) cell nutrition studies conducted by Dr. Parker and his associates."

In 1955, Acadia University presented Dr. Parker with the Doctorate of Science degree. The citation on that occasion read "in recognition of his outstanding contributions to teaching and research in fields which are so important to the future welfare of mankind."Other honours included the Order of Canada (1970).

SOURCES

Biology Faculty, 1961. Department of Biology, Acadia University

Fisher, A.M., and J.R. Wilson. 1974. Raymond Crandall Parker, 1903–1974. *In Vitro,* 9(5)

NATURE COUNTS

2009 Wolfville Christmas Bird Count

SATURDAY, DECEMBER 19, 2009 (7:45 a.m. to 4:45 p.m.) – It was not a great year for either number of species or individuals. We had a windy, cold, sunny day, which may have had a bearing on

results. Merritt Gibson told us that this was his 55th CBC, which I [Alison] thought was remarkable!

Conditions: Temperature –10 to –6, wind WNW 10 to 50 km/h; light snow in partly morning clear in afternoon; 5 to 15 cm snow on the ground; still water partly open; moving water open

Observers: 57 in 31 field-parties (86.5 hours and 173.5 km on foot; 73 hours and 781.5 km by car) and 92 feeder watchers at 72 feeders/yards (126 hours)

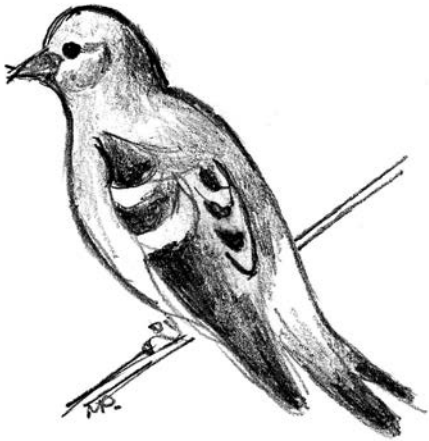
Overall compiler: Alison Bogan

Feeder-watchers compiler: Jim Wolford

Species List for the 2009 Wolfville Christmas Count: Canada Goose 915, American Black Duck 1255, Mallard 574, Northern Pintail 4, White-winged Scoter 3, Common Goldeneye 7, Common Merganser 69, Red-breasted Merganser 2, Ring-necked Pheasant 244, Ruffed Grouse 4, Common Loon 2, Horned Grebe 2, Great Blue Heron 1, Bald Eagle 254 (124 adult, 129 immature, 1 unknown), Northern Harrier 1, Sharp-shinned Hawk 11, Red-tailed Hawk 122, Rough-legged Hawk 2, Merlin 2, Peregrine Falcon 3, Ring-billed Gull 27, Herring Gull 2086, Iceland Gull 4, Lesser Black-backed Gull 1, Great Black-backed Gull 624, Gull sp. 59, Rock Pigeon 502, Mourning dove 1119, Barred Owl 4, Downy Woodpecker 88, Hairy Woodpecker 70, Northern Flicker 50, Pileated Woodpecker 7, Blue Jay 1470, American Crow 4072, Common Raven 304, Horned Lark 43, Black-capped Chickadee 1136, Boreal Chickadee 2, Red-breasted Nuthatch 27, White-breasted Nuthatch 60, Brown Creeper 3, Golden-crowned Kinglet 21, Ruby-crowned Kinglet 1, American Robin 94, European Starling 7163, Cedar Waxwing 25, American Tree Sparrow 55, Chipping Sparrow 2, Savannah Sparrow 3, Song Sparrow 229, Swamp Sparrow 1, White-throated Sparrow 122, Dark-eyed Junco 267, Snow Bunting 217 (but no longspurs seen), Northern Cardinal 26, Red-winged Blackbird 4, Common Grackle 3, Purple Finch 9, White-winged Crossbill 11, Common Redpoll 6, Pine Siskin 8, American Goldfinch 1343, Evening Grosbeak 30, House Sparrow 123

Total species: 64

Total individuals: 25,194



MARY PRATT

Count Week species: Northern Mockingbird

Observers for the 2009 Wolfville Christmas Count: Derek Allerton, George Alliston, Margaret Alliston, Jim Amos, Fred Archibald, Helen Archibald, Peter Austin-Smith Jr., Peter Austin-Smith Sr., Joanne Bezanson, Charlane Bishop, Diana Bishop, Sue Bissix, Sherman Boates, Fen Boates-Bishop, Alison Bogan, Larry Bogan, Soren Bondrup-Nielsen, Sharon Borden, Mike Boudreau, Heather Brown, Mike Brylinsky, Carol Buckley, Nancy Burbidge, Scott Burbidge, Andrew Cameron, Diane Cameron, Andy Cann, Ken Cheslock, Lana Churchill, Karen Cloghesy, Neil Cloghesy, Murray Colbo, Chris Cox, Peggy Crawford, Pat Davis, Andy Dean, Lelia Dean, Claire Diggins, Pat Dix, Huu Duy, Joan Eaton, Mark Elderkin, Paul Elderkin, Wendy Elliott, George Forsyth, George F. Forsyth, Harold Forsyth, Bernard Forsythe, Sandra Forsythe, Hilma Frank, Hedley Fulton, Glenys Gibson, Jamie Gibson, Merritt Gibson, Jean Gibson Collins, Mary Sue Goulding, Art Hamilton, Charlotte Harper, Eileen Harris, Lorna Hart, Avril Harwood, Heather Hennigar, Maxine Hill, Dennis Hippern, Bob Horne, Marg Horne, John Horton, Winnie Horton, Jeff Isenor, Lana Isenor, Ryosuki Ishigami, Ari Kalkman, Patrick Kelly, Sharon Kinsman, Jean Leung, Doug Linzey, Phil Long, Jake

MacDonald, Angus MacLean, Stella MacLean, Janet MacWha, Ron Margeson, Don Marston, Shirley Marston, Eleanor Mason, Janet McClain, Sheila McCurdy, Rosaleen McDonald, Pat McLeod, Randy Milton, Terri Milton, Adele Mullie, Pat Murphy, Terry Murphy, Gary Ness, Alisa Nguyen (and children Eliina and Leo), Nancy Nickerson, Mike O'Brien, Carole Paterson, George Paterson, Ian Paterson, Dorothy Perkin, Mary Pratt, Cecil Pulsifer, Stan Riggs, Gordon Robart, Jacquie Roche, Barry Sabean, Linda Sacouman, Kathie Schaffner, David Shutler, Darrell Slauenwhite, Steven Slipp, Andrew Steeves, Richard Stern, Elizabeth Stern, Ed Sulis, Mary Anne Sulis, Bill Thexton, Brenda Thexton, Martin Thomas, Dianne Thorpe, Jean Timpa, Christina Toplack, Dave Tracy, Kurtis Trzeinski, Judy Tufts, Alison Webster, Dave Webster, Rick Whitman, Sherman Williams, Jim Wolford, Don Wright, Irene Wright, Shirley Wright, Earl Young, Sheila Young

NATURE COUNTS

29th Annual Cyril K. Coldwell Eagles & Raptors Count of Eastern Kings County

by Jim Wolford

January 31, 2010 – Providence delivered a beautiful and perfect wintry day for this one-hour count. It was sunny and very cold, with temperatures from –14 to –9°C, and a moderate wind from the west .We had 28 observers in 17 field parties from 10 to 11 a.m. Participants were in designated areas in order to minimize double counting of individual eagles.

CYRIL K. COLDWELL EAGLES AND RAPTORS COUNT OF EASTERN KINGS COUNTY

Summary of Results by Year

Year	Date	Time (morning)	Bald Eagles Total	Adults/Immature Ratio (%/%)	Eagles of Unknown Age	Observers
1979	Mar 4		22 (18?)	36/64–44/56 (?)		10
1980	Feb 24		31 (to 34?)	35/65–32/68 (?)		10
1981	no count					
1982	Feb 28		36	36/64		?
1983	Feb 27	10–11	56 (to 58?)	48/52		11+
1984	Feb 26		27 (but prob. 40 to 65)	44/56		?
1985	Feb 24	10–11	36	44/56		15
1986	Feb 23		42	48/52(?)		
1987	no count					
1988	Feb 28		56	59/41		10
1989	Mar 11		69	36/64		7 or 8
1990	Feb 3	10–11	123	49/51		16 in 10 parties
1991	Feb 3	11–noon	148	51/49		12 in 8 parties
1992	no count					
1993	Jan 31	11–noon	442	43/57	26	15 in 11 parties
1994	Jan 30		408*	46/54	9	30 in 12 parties
1995	Jan 22	10–11	405*	45/55	19	33 in 14 parties
1996	Jan 21	10–11	300**	43/57	8	34 in 12–15 parties
1997	Jan 26	10–11	525	52/48	9	34 in 16 parties
1998	Feb 1	10–11	395	65/35	28	32 in 17 parties
1999	Feb 7	10–11	483	54/46	8	37 in 16 parties
2000	Feb 13	10–11	580	57/43	9	29 in 15 parties
2001	Feb 10	10–11	387	59/41	6	35 in 16 parties
2002	Feb 9	10–11	333	67/33	3	31 in 16 parties
2002	Feb 16	10–11	312	61/39	4	29 in 15 parties
2003	Feb 9	10–11	425	52/48	10	36(+1) in 16 parties
2004	no count					
2005	Feb 12	10–11	217	55/45	7	35 in 17 parties
2006	Feb 11	10–11	287+***	63/37	3	23 in 15–16 parties
2007	Feb 4	10–11	427	52/48	2	32 in 16–18 parties
2008	Feb 3	10–11	291	58/42	8	30–31 in 16–17 parties
2009	Feb 1	10–11	294	63/37	4	37 in 16 parties
2010	Jan 31	10–11	427	58/42	6	28 in 17 parties

*inflated? **deflated? ***one area done the next day – add 10 eagles?

COMPILED BY JIM WOLFORD 2010

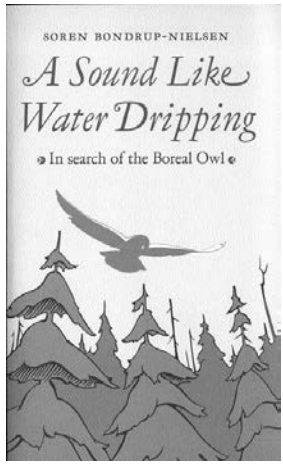
Totals Observed: 427 Bald Eagles, consisting of 245 adults (58%), 176 immatures (42%), and 6 of unknown age; 54 Red-tailed Hawks, including the white one at Hortonville, which has been a winter visitor since February 2001; 4 Rough-legged Hawks (at least one in dark phase); 1 Merlin; and 1 Sharp-shinned Hawk. George Forsyth reported one Peregrine Falcon in Port Williams on the afternoon of the count day.

READING

A Sound Like Water Dripping

Soren Bondrup-Nielsen, *A Sound like Water Dripping: In Search of the Boreal Owl* (Kentville, NS: Gaspereau Press, 2009), 240 pages, $26.95, ISBN 9781554470747, paperback.

In the spring of 1974, Soren Bondrup-Nielsen, a graduate student in biology, travelled to the boreal forest of northern Ontario in search of the tiny, elusive Boreal Owl. His supervisor had made a well-intended attempt to persuade him that there were easier ways to earn a degree than by searching for the proverbial needle in a haystack, but Bondrup-Nielsen's youthful enthusiasm would not be dampened. In subsequent field seasons in Ontario and Alberta, he recorded and photographed Boreal Owls, studying their diet, habitat, and courtship. His efforts resulted in the first nesting record for the species in Ontario.



This book recounts the author's youthful adventures living in tents, cabins, and

bunkhouses and travelling by snowshoe, ski, and bicycle, following his quest into the boreal heartland.

While his research and methodology provide the framework, the story's true focus lies in the author's sylvan encounters – with birds, trees, voles, coyotes, bears, moose, birders, loggers, tree planters – and the jubilation of first love and self-discovery. Bondrup-Nielsen reminds us of the importance of curiosity, passion, and persistence to the study of ornithology and ecology.

Soren Bondrup-Nielsen was born in Denmark and at thirteen immigrated to Canada with his family. He is currently a professor in the biology department at Acadia University, where he teaches ecology and conservation biology. He is the co-author of *Winter Nature: Common Mammals, Birds, Trees & Shrubs of the Maritimes* (with Merritt Gibson & illustrated by Twila Robar-Decoste, 2008).

WEATHER

Winter 2009-10
Eastern Annapolis Valley

by Larry Bogan

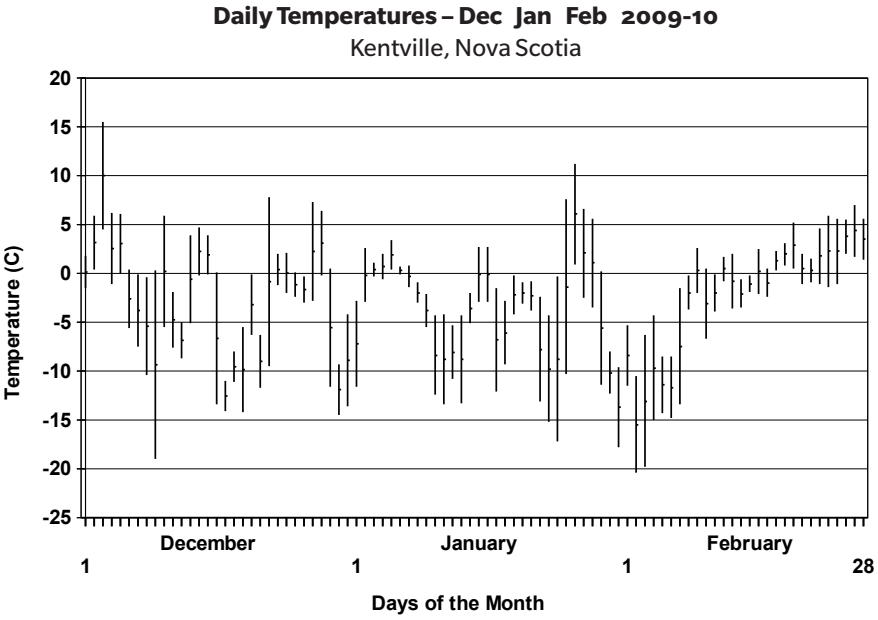
TEMPERATURE

The Annapolis Valley had a relatively mild winter this year, although December, the season starter, was colder than average. What a pleasure it was to have both following months warmer than usual. January averaged 1.8 °C above the 30-year average while February was all of 2.9 °C warmer. That resulted in an average seasonal temperature 1.5 °C warmer than average.

	Temperature			Precipitation	
	Max (°C)	Min (°C)	Mean (°C)	Total* (mm)	Snow on ground (cm)
December	0.9	–6.4	–2.8	35	4
(30 yr. average)	(1.6)	(–6.5)	(–2.5)	(130)	(8)
January	–0.3	–7.1	–3.7	79	20
(30 yr. average)	(–1.2)	(–9.8)	(–5.5)	(127)	(21)
February	0.4	-5.0	–2.3	89	29
(30 yr. average)	(–0.9)	(–9.5)	(-4.4)	(102)	(25)
Season	0.4	–6.2	–2.9	203	17
(30 yr. average)	(–0.1)	(–8.6)	(–4.4)	(359)	(18)

**Precipitation includes melted snow (1 cm snow equals approximately 1 mm water)*

SOURCE: *Environment Canada (30-year averages are for 1970–2000)* NOTE: *This report does not comprise the direct weather data from the Kentville agricultural research station that I usually have. It uses the data available on the Internet from Environment Canada. The disadvantage is that it does not include the daily bright sunshine hours or the daily snowfall amounts. LDB*



The daily temperatures graph shows how December and January fluctuated between -10 and 0 °C at irregular intervals. After a cold and clear period in early February, the temperatures rose above –5 °C and continued to climb. That is the reason February was so unusual.

SUNSHINE

The warmer air this winter carried more moisture, and the season was generally cloudy. In January, the first full sunny day of the month was not until the 17th. We had a lot of cloudy weather that month and only a few sunny days. I wish I had the bright sunshine hour data quantify this.

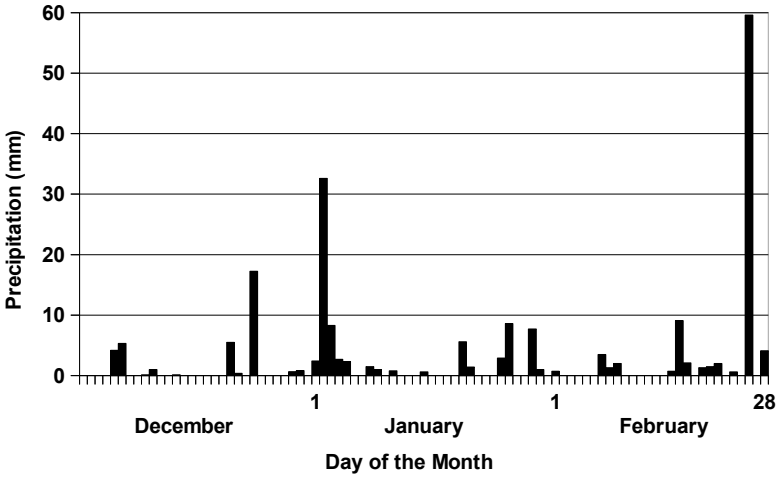
PRECIPITATION

Rain and snow accumulations over the season were well below average (only 56 percent of the normal). All three months were below average, but December was the lowest at only 35 mm of an average 130 mm. Despite this record, the snow pack was nearly average. The graph of snow depth on the ground for the season shows how snow built up in December and stayed into March. We had snow on the ground all winter except for four very brief periods of almost clear ground near the end of each month. February had above-average snow depth, but December had less; the average for the season was normal.

This winter most of the storms went out to sea south of the Maritimes, and we missed much of the snow and rain that fell in the mid-Atlantic States. Those areas had record-breaking snowfalls throughout February.

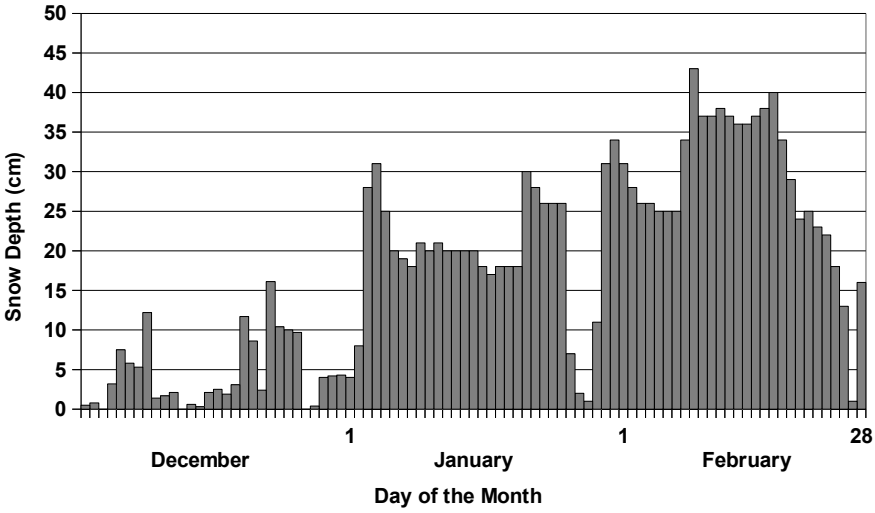
Total Daily Precipitation – Dec Jan Feb 2009-10

Kentville, Nova Scotia



Snow Depth on the Ground – Dec Jan Feb 2009-10

Kentville, Nova Scotia



What's in the Sky?

by Roy Bishop

SPECIAL EVENTS IN SEQUENCE

March 14: Clocks spring ahead by one hour (Daylight Saving Time)
March 16: Young Moon in the evening twilight
March 20: Spring equinox, Moon beside the Pleiades
March 21: Saturn at opposition
March 29: Full Moon
April 1 to 10: Mercury in the evening sky
April 15: Crescent Moon beside Mercury, Mars near the Beehive
April 16: Crescent Moon between Venus and the Pleiades
April 28: Full Moon
May 27: Full Moon
June 21: Noon Sun highest in the sky. Summer begins
June 26: Full Moon

ANOTHER CHESHIRE CAT CHALLENGE

If you missed the young Moon on Valentine's Day (see the previous Newsletter), there will be another opportunity, weather-permitting, on Tuesday, March 16. Start looking about 7:45 p.m. low in the western twilight for a 26-hour crescent Moon. Positioned directly above the Sun, the thin lunar crescent will be perfectly oriented toward the horizon, resembling the smile of the otherwise invisible Cheshire Cat in *Alice in Wonderland.* Being seven hours older than February's young Moon, March's young Moon will be easier to see; even so, binoculars will be a great help in spotting it. Bright, star-like Venus

will be a perfect guide for locating the Moon, which will be about one binocular field of view to the right of Venus, and slightly lower. Moonset is at 8:30 p.m., so the window of opportunity to see the celestial Cheshire Cat's grin is barely half an hour.

SPRING BEGINS WITH AN ETHEREAL SIGHT

Winter officially ends on Saturday, March 20. That evening, if the sky is clear, take your binoculars and look at the pretty sight in the western sky as darkness falls. From about 8 p.m. until moonset at 1 a.m. the next morning, the waxing crescent Moon glides eastward past the Pleiades star cluster.

While you are admiring the sight and noting the eastward orbital motion of the Moon during the evening, consider the contrast in distances. Light from the Moon takes 1.3 seconds to reach your eyes, whereas light from the stars in the Pleiades has been in transit ever since Galileo was observing the Pleiades in 1610! In other words, the Pleiades star cluster is (400 years/1.3 seconds) = 10 billion times further away than the Moon. To express it another way, if the Earth-Moon distance were represented by one human being, there are not enough people on Earth to represent the distance to the Pleiades.

SATURN IN SPRING

This spring the ringed planet is well placed in the nighttime sky, in western Virgo, under the tail of Leo the lion. Opposition occurs on March 21, with Saturn 71 light-minutes from Earth. As a guide for spotting Saturn, the Moon will be approximately below Saturn on the evenings of March 1 and 28, April 25, and May 22.

As viewed from Earth this year, Saturn's ring system is almost edge-on, its tilt changing slowly from about 3 degrees in March to a minimum tilt of only 1.7 degrees in late May. By year-end the rings will have opened to 10 degrees. It is unfortunate that Saturn is so far away, nearly 10 times further from the Sun than is Earth. As a

consequence, its spectacular rings cannot be distinguished with the unaided eye, or even with binoculars. Only by means of a telescope is Saturn's ethereal symmetry revealed. Saturn sits there glowing in the blackness of space, an unbelievable sight, like a discarded toy of some celestial god. One of the things to do before you die (as the titles of some recent books put it) is to view Saturn with a telescope.

MARS IS RECEDING

Earth in its smaller, faster orbit lapped Mars on January 29. Since that date Earth has been leaving Mars farther and farther behind, with Mars shrinking in size and fading. By early May, Mars will be half the angular diameter (one-quarter the surface area) and only one-seventh as bright as on January 29. By then, even telescopic views of Mars will show little detail. However, from week to week it is still fun to follow Mars with the unaided eye as the orange planet moves against the stellar background. Its backward, westward, "retrograde" motion (a consequence of Earth's faster orbital speed) ends on March 11, after which Mars resumes its eastward track against the background stars. As a guide for spotting Mars, the Moon will be approximately below Mars on the evenings of February 25, March 24 and 25, April 21, and May 19. The view in binoculars will be especially interesting on the evenings of April 12 through the 20th as Mars moves eastward past the Beehive open star cluster in Cancer.

THE EVENING STAR

Venus decorates the sky as "the evening star" this spring as it draws nearer to Earth in its faster orbit. Venus is the brightest object in the sky after the Sun and Moon because it is relatively close to the Sun and is covered in highly reflective white clouds. During the summer of 2010, Venus remains in the evening sky but drops ever lower toward the southwestern horizon. Venus passes between Earth and the Sun in late October to reappear in the dawn sky in November.

MERCURY CAN BE SEEN

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

JUPITER IN THE DAWN

Jupiter passed behind the Sun on February 28, reappears low in the dawn twilight in April, and remains in the morning (after-midnight) sky for the remainder of the spring of 2010. The king of the planets will not be well placed for viewing in the evening sky until autumn.

ON VIEWING THE WORLD

The anthropologist and naturalist Loren Eiseley wrote in his book *The Immense Journey:*

> *The world, I have come to believe, is a very queer place, but we have been part of this queerness for so long that we tend to take it for granted. We rush to and fro like Mad Hatters upon our peculiar errands, all the time imagining our surroundings to be dull and ourselves quite ordinary creatures. Actually, there is nothing in the world to encourage this idea, but such is the mind of man.*

I recalled Eiseley's words as I was composing the last two sentences of the Saturn section above. If Saturn were close enough to reveal its ringed symmetry to the unaided eye, probably most people would ignore it as merely another part of their "dull surroundings," just

as they ignore the spectacular reappearance of the nearest star at every sunrise, or the haunting symmetry of the crescent Moon every month. I believe that naturalists and many scientists are the exception, retaining some of the wonder of their childhood, making them less apt to see the world through glazed eyes.

MARY PRATT

SOURCES OF LOCAL NATURAL HISTORY

Compiled by the Blomidon Naturalists Society

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

BLOMIDON NATURALISTS SOCIETY

2010 Membership Fees & Order Form

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

NAME

ADDRESS

POSTAL CODE

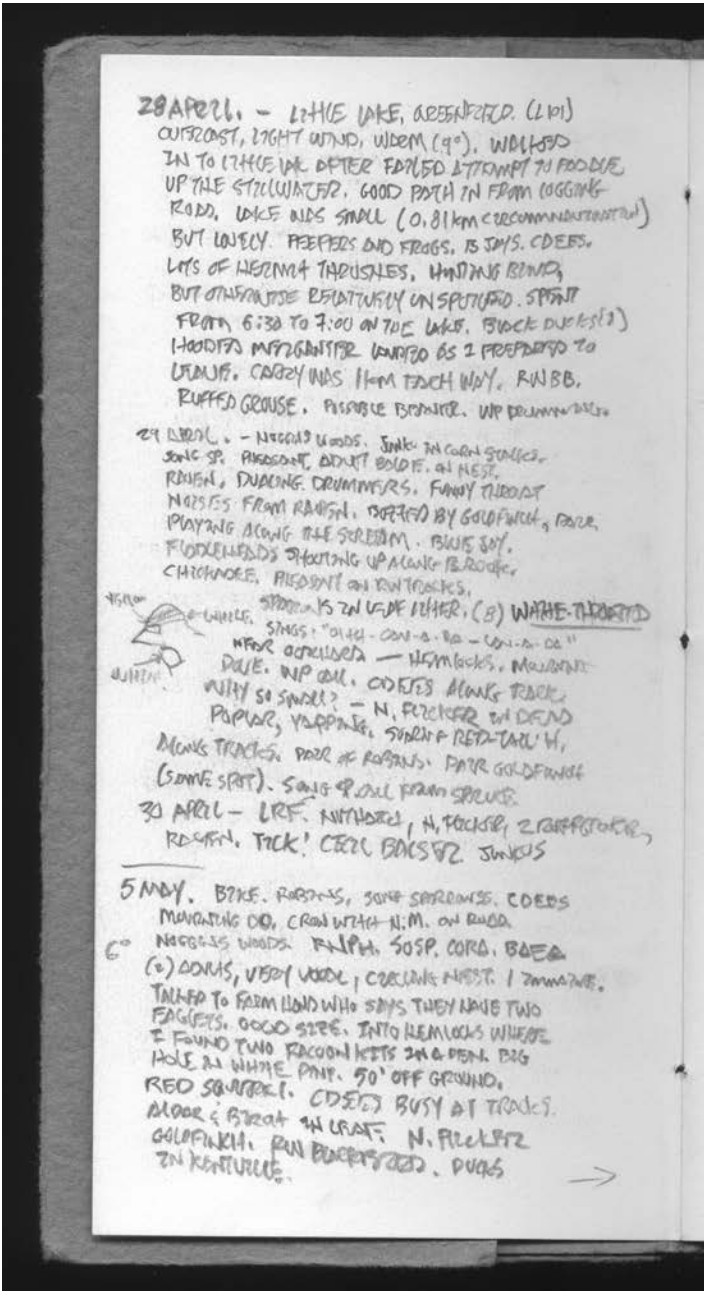
E-MAIL TEL

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

SIGNATURE DATE

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

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



28 APRIL. – [illegible] LAKE, GREENFIELD. (LRF)
OVERCAST, LIGHT WIND, WARM (9°). WALKED
IN TO [illegible] LAKE AFTER FAILED ATTEMPT TO PADDLE
UP THE STILLWATER. GOOD PATH IN FROM LOGGING
ROAD. LAKE WAS SMALL (0.81 km CIRCUMNAVIGATION)
BUT LOVELY. PEEPERS AND FROGS. B JAYS. CDEES.
LOTS OF HERMIT THRUSHES. HUNTING [illegible],
BUT OTHERWISE RELATIVELY UNSPOTTED. SPENT
FROM 6:30 TO 7:00 ON THE LAKE. BLACK DUCKS (2)
HOODED MERGANSER [illegible] AS 2 PREPARED TO
LEAVE. CAREY WAS [illegible] EACH WAY. RNBB.
RUFFED GROUSE. POSSIBLE BEAVER. WP DRUMMING.

29 APRIL. – NICOLS WOODS. JUNC. IN CORN STALKS.
SONG SP. PHEASANT, ADULT BALD E. ON NEST.
RAVEN, DUELING DRUMMERS. FUNNY THROAT
NOISES FROM RAVEN. BOTHERED BY GOLDFINCH, PAIR,
PLAYING ALONG THE STREAM. BLUE JAY.
FIDDLEHEADS SHOOTING UP ALONG BROOK.
CHICKADEE. PHEASANT ON RR TRACKS.
[illegible] WHILE SPARROWS IN LEAF LITTER. (8) WHITE-THROATED
SINGS: "OH-CAN-A-DA – CAN-A-DA"
[illegible] — HEMLOCKS. MOURNING
DOVE. WP CALL. CDEES ALONG TRACK.
WHY SO SMALL? – N. FLICKER IN DEAD
POPLAR, YAPPING. SOARING RED-TAIL'D H,
ALONG TRACKS. PAIR OF ROBINS. PAIR GOLDFINCH
(SAME SPOT). SONG SP. CALL FROM SPRUCE.

30 APRIL – LRF. NUTHATCH, N. FLICKER, 2 [illegible],
RAVEN. TICK! [illegible]. JUNCOS

5 MAY. BIKE. ROBINS, SONG SPARROWS. CDEES
MOURNING DO. CROW WITH N.M. ON ROAD.
6° NICOLS WOODS. RNPH. SOSP. CORA. BAEA
(2) ADULTS, VERY VOCAL, CIRCLING NEST. I IMAGINE.
TALKED TO FARM HAND WHO SAYS THEY HAVE TWO
EAGLETS. GOOD SIZE. INTO HEMLOCKS WHERE
I FOUND TWO RACOON KITS IN A DEN. BIG
HOLE IN WHITE PINE. 50' OFF GROUND.
RED SQUIRREL. CDEES BUSY AT TRACKS.
ALDER & BIRCH IN LEAF. N. FLICKER
GOLDFINCH. RW BLACKBIRD. DUCKS
IN KENTVILLE. →

This is a page from Andrew Steeves's fieldbook from spring 2009. Perhaps we'll reproduce pages from other member's notebook in upcoming newsletters.