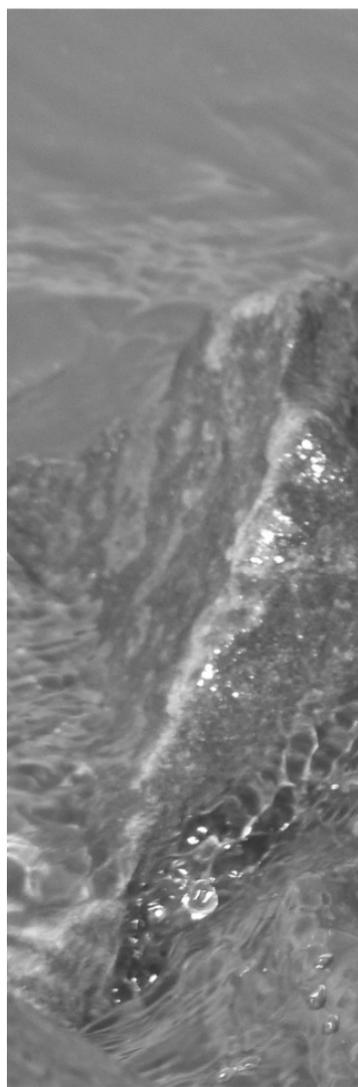


Blomidon Naturalists Society



FALL 2012 NEWSLETTER

Volume 39 · Number 3





Least Sandpiper, East Point, NS

RICK WHITMAN

❖ THE BLOMIDON NATURALISTS SOCIETY ❖

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

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THE BLOMIDON NATURALISTS SOCIETY

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BNS Newsletter

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BLOMIDON NATURALISTS SOCIETY
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 Fall:
November 30, 2012**

Out & About

by Jean Timpa, editor

Now that summer vacation is just about over, I reminisce about the dread of school beginning again. My ultimate favourite teacher was the great outdoors (aka Mother Nature), where I could run unfettered until sleep, which often enough gave me plenty of wonderful dark-time experiences, too. I was able to “run” all day – looking, listening, smelling, touching, and tasting – and then asking all-important questions of older children in whose company I may be, parents, or expert colleagues of my dad’s at the University of Maine in Orono (UMO) – entomologists, ornithologists, botanists, zoologists, geologists ... and the list went on and on. They quite seemed to enjoy my endless questions of what, how, where, and, the most important of all, why! With any amount of luck in my younger grades, we would be in Bear River in late summer. In the fifties, classes at UMO did not start until mid-September, so I was thankful beyond measure to be allowed to play hooky for a few more days of exploring the wilds of southwestern Nova Scotia. Pleasant as it is, I never wanted to go back to Maine.

Sometimes, though, we would not come here, and I actually started my first day of school on time. It inevitably began with a request from the teacher to write a story about what we had done during our summer vacation. I wish I had copies of those stories. There are special moments over a span of eight to ten weeks or so, and it is valuable to teach and encourage documentation of such moments in one’s personal history at an early age.

So, here are my special moments during some of the summer of 2012, not necessarily in chronological order:

- All of a sudden there was constant heat and humidity – too much of it, and the woods were even closed. So far we have escaped major forest fires when other provinces have not been so lucky.
- As the days and weeks have gone by this season has been equated to the great drought of 1936, and other parts of mid-western North America are in much worse shape.
- The fireflies in July were more spectacular than I have seen in years. I hope they have been pointed out to many children in Nova Scotia; they can carefully catch a few of these remarkable bugs in a jar – and later let them go – so that they can experience bio-luminescence first-hand.
- The numbers of butterflies were huge this year; their presence on the dykes and roads was a real showcase, and people who had flower gardens noticed a great increase of these colourful visitors.
- A great colour photo of a “Monarch” butterfly on a bright pink Echinacea flower in the *Chronicle Herald* (August 21) was really a much smaller Painted lady. Not all butterflies are Monarchs; we have a lot of educating to do.
- There were too many signs of rapid climate change taking place, including heavy downpours, more and higher winds, Hurricane Isaac in Louisiana, exactly seven years after Katrina destroyed New Orleans. When will we learn not to build on flood plains?
- The melting of the Arctic ice is much more rapid than predicted.
- On August 5 at the Mersey River, just as I was being helped into a canoe for the first time in 40 years, with my first life jacket on, I spy a small frog on a large lily pad. My son Sean takes photos of it as Ellie and Luke-George paddle me off to look at some other aquatic vegetation and a subsequent Snapping Turtle. I pull up from the Mersey River four pieces of long, dark green sphagnum moss, now dried and waiting to be named at the E.C. Smith Herbarium at Acadia University. I learn that not all sphagnum moss is brownish-yellow and grows in bogs.
- On August 22, I find a dead bug on the sidewalk not far from my house. I bring it home, and with the help of *Peterson’s Field Guide to Insects* I am able to identify it as a horntail hymenopteran (*Tre-*

mex columba Linn.), whose larvae are wood-boring, attacking both deciduous and coniferous trees. Several old, ailing sugar maples were nearby and probably its target or former home as a grub.

- The long Canada Day weekend spent in Bear River. Sean has been able to take a number of very fine photos of butterflies near the house and in the edges of the lush hay field. We also drive out to Lake Joli, a little over eight kilometres away along the last part of the road, which has been recently clear cut – very disheartening. At the end of the rain-rivulet road, Sean sees a tiny new toad, and I find another one. I could have fit four or five on my little fingernail. He takes a good series of photos of a lovely new Red Admiral butterfly. Ah, the wonder of digital photography.

Now that I have recorded some of my highlights so far for summer 2012, would you be willing to write down some of yours? We always volunteer many of our sightings verbally at the beginnings of meetings, but what with the rapid effects of climate change occurring, we really need to record them in a public venue. Don't be shy, please. No one will bite, and your observations may be very interesting or valuable to generations to come. Photos and drawings are always welcome.

THANKS

Praise to all of you as you help in so many ways as to be unlistable without the danger of missing some good deed or person having helped us. You assist greatly by just being a member of BNS, and showing up for field trips and program meetings from September to June. Since January, we have renewed 159 members and added a few new people to our roster. Ed would be pleased to add more, I am sure, so please bring guests along to try us out for a while.

2013 BNS Natural History Calendar

THE always-popular Blomidon Naturalists Society natural history calendar will be available again this fall. This is the 16th year of publication, and as always it will contain exceptional pictures by local photographers, daily tide times for the entire year, relevant events, and lots of fascinating natural history information.

Calendars will be available at the following retail locations for \$15:

IN WOLFVILLE: Herbin Jewellers, EOS Fine Foods, Blomidon Inn,
KC Irving Environmental Science Centre

IN GREENWICH: Elderkin's Farm Market, Hennigar's Farm Market,
Noggin's Corner Farm

IN PORT WILLIAMS: Shur Gain Feeds & Needs

IN HANTS BORDER: R&G Family Restaurant

These outlets sell the calendar for our benefit at no profit for themselves, and we thank them for that and encourage you to patronize these fine establishments.

Calendars will also be available at BNS monthly meetings, our booth at the Acadia Christmas Craft Fair, and from Ed Sulis at edmasulis@ns.sympatico.ca.

The annual calendar is our biggest fund raiser of the year; profits go to support our Green Dragon Young Naturalist Program. And don't forget, calendars make an *excellent* Christmas gift.

Board of Directors Report

By John Owen, BNS president

YOUR board had a regular meeting on August 23, 2012. The following is a summary of the meeting and discussions.

Invasive Species – A report will be forth coming in the fall issue of the Newsletter regarding activities and recommendations.

The committee would like to do an additional field trip on invasive species to show participants what can happen over a period of 50–60 years when an invasion is not managed after recognition. It would also like to engage participants in actively doing something (e.g., removing berries before they are eaten by birds). One of the two Nature Trust properties has been “protected” by destroying the seed bank of glossy buckthorn over a period of approximately seven years since the invasion was recognized.

Stewardship of Grand Pre Beach – The committee has taken the name Minas Basin IBA Stewardship Committee (IBA = Important Bird Area). (See the committee report in this issue.)

Wind farm regulation review, Kings County – The Issues Committee is preparing a position paper outlining the information concerning wildlife we consider essential prior to the approval of a site and the monitoring that would be required if such a site were established. (see a summary of the committee findings to date in this issue).

Green Dragon / Young Naturalists Committee – This summer’s 10-week summer program was very successful. For camp counselors, one student returned from last year, and the new student worked out very well. The program focused on local trips, using Kings Transit, and this significantly reduced the transportation costs. (See the report in this issue.)

Camp counselor Sara Boyd will make a presentation at the BNS meeting on September 17, 2012.

There was discussion on a program about 25 years ago, a weekend event that involved the local school, parents, school teachers, and students from Acadia (Physical Education, Education, etc.). There will be a special information-gathering meeting of the board just to deal with the issue of possibly expanding the Green Dragon program to include this weekend event.

The next BNS board meeting is scheduled for November 22, 2012.

CLUB NOTES

Minas Basin IBA Stewardship Committee

by Rick Whitman

As president John Owen reported in the last Newsletter, the board decided that BNS could be more active in stewardship activities. As a board member, I was asked to form a stewardship committee with the first focus on stewardship of the shorebirds in the Minas Basin. We have taken the name Minas Basin IBA Stewardship Committee (IBA stands for Important Bird Area). This designation – a term that is used around the world – is already in place for the southern portion of the Basin. It provides recognition to a defined area but it does not imply that protection is in place.

I recruited Richard Stern, Jim Wolford, and Roy Bishop to the committee, and Sue Abbott, with Bird Studies Canada, is our advisor and keeps our minutes. As of this report we've held two very enthusiastic committee meetings and established our objectives for 2012.

We have reviewed the signage regarding the shorebirds at Evan-



RICK WHITMAN

Dunlin at East Point, NS

geline Beach and East Point and have recommended changes at East Point. We have discussed dogs on the beaches and whether stronger regulation may be needed. Several of us are regularly monitoring shorebird species and numbers at several locations and are reporting this to eBird or NatureNS. We also do some photography of the flocks, and we monitor Peregrine Falcon activity. The latter has far more impact on shorebird roosting behaviour than does any current human activity, including fishing. Jim Wolford will continue to do “lawn-chair outreach” at Evangeline Beach, and Roy Bishop, as president of the North Grand Pre Community Association (NGPCA), will provide direct communication with that group. On July 17 the NGPCA held its annual meeting, at which Richard Stern gave a well-received presentation on the shorebirds. There was a good community turnout, and it certainly seemed that shorebird protection or stewardship was supported. We keep in touch with Sherman Boates at NSDNR and Charlane Bishop of the Young Naturalists Club.

One totally unplanned activity was my discovery that I could spot and photograph coloured leg flags on Semipalmated Sandpipers.

The codes on the flags can be fully read in most cases. The seven flags photographed to date were all applied by the New Jersey Audubon Society in Brazil, French Guinea, or Delaware Bay between 2009 and 2012. As of the first week of August, researchers from Mt. Allison University were applying white flags in both New Brunswick and Nova Scotia, so perhaps we will spot some of those too.

It is expected that the Minas Basin IBA Stewardship Committee will continue for a number of years. We may look at other stewardship issues if and when we feel both the need and the ability.

CLUB NOTES

Wind Farms: Issues Committee Report

by George Alliston

AT its March 2012 meeting, the BNS board decided to revive the issues committee and subsequently assigned it the task of reviewing potential impacts on wildlife by wind farms. At the time, three wind farms had been proposed in our area of interest. The purpose of the review is to prepare a position paper outlining the wildlife-related information we consider essential before the approval of a site and the monitoring that would be required if such a site were established.

Members of the committee are George Alliston (542-3651), John Belbin (684-0862), and Jean Gibson Collins (678-4725). As president, John Owen (678-0004) is also a member.

Since March, much of our effort has been focused on what has been happening at the provincial and municipal (Kings County) levels of government concerning wind farms (and much has hap-

pened!). Committee members have attended all meetings of Kings County Council and the Planning Advisory Committee (PAC) that addressed the issue of wind farms.

On October 15, 2010, the Province of Nova Scotia enacted renewable energy regulations with the objective of increasing renewable energy to 25 percent of the provincial supply by 2015 and to 40 percent by 2020 (currently about 15 percent). The objective of this ambitious undertaking was to “move away from predominantly (imported) coal-fired electricity to sources that are local, clean, secure, and sustainable.”

Energy sources considered by the province to be renewable include solar, wind, run-of-river hydroelectric, tidal, wave, ocean power, and biomass.

To achieve the 2015 goal the Renewable Energy Plan provides three avenues for participation by committed citizens and businesses, community organizations, and large independent power producers (IPPs):

1. An “enhanced” metering program – to pay individuals, businesses, and community/not-for-profit customers of NS Power for net surplus renewable energy produced and delivered to the grid. This will apply to installations with electrical generation capacity up to one megawatt (1 MW). Payments will be made annually and will be based on the customer’s retail class rate (for you and me, that would be about \$0.133 per kilowatt-hour).
2. A community-based feed-in tariff (COMFIT) – to provide an established price per kilowatt-hour (kWh) over a defined period of time (generally 20 years) for projects producing electricity from “qualifying” renewable resources. The intent is to encourage the development of projects by community-based groups such as municipalities, First Nations, co-operatives, not-for-profit groups, and universities. Small wind turbines (up to 50 kW capacity) are included and are the most “popular” of the approximately 100 projects or applications listed by government. The feed-in tariff

for wind generation is \$0.499/kWh (compare with in-stream tidal generation at \$0.652/ kWh and run-of river hydroelectric generation at \$0.14/ kWh). The government anticipates that about 100 MW of electricity will be delivered under this program by 2015.

3. Competitive bids from IPPs – to obtain the greatest amount of electricity at the lowest costs (economies of scale) from medium- and large-scale projects. Wind farms consisting of several large wind turbines (1–3 MW range) constitute most of the IPP bids. In June 2012 the province accepted 19 bids, and on August 2 announced three successful bidders. Two of them (Oxford Frozen Foods and Minas Basin Pulp and Power) will be building the largest wind farm operation in Nova Scotia, near South Canoe Lake in northeastern Lunenburg County. It will be able to deliver 102 MW of electricity. The third successful bidder was Sable Wind, with a 13.8 MW project near Canso. With the awarding of these contracts the province has set in place the means of achieving its 2015 renewable energy goals.

With the stage set for meeting those goals, we might expect a quiet period for the next couple of years with regard to new wind farms. At the moment the provincial government appears to be betting on the Lower Churchill (Muskrat Falls) hydroelectric development in Labrador (due on line in 2017) to supply most of the renewable electricity to meet the 2020 objectives. This project has its detractors, and should it encounter difficulties, plans could change. It seems somewhat ironic that, as these new facilities are being built, two of NS Power's largest customers (NewPage and Bowater-Mersey) are closing all or part of their operations, thereby reducing demand on the grid by about 450 MW.

Much has been happening in recent months in Kings County concerning the possible establishment of wind farms.

After three years of study and public input, Kings County enacted bylaws on June 2, 2011, regarding large-scale wind turbine instal-

lations. The bylaws were quite lenient, requiring the proponent to locate turbines at least twice the height of the turbine from the property boundary and 700 m from the nearest dwellings. Property owners that leased their land for wind turbines were granted “as of right” privileges; that is, as long as they followed the basic bylaws they were not compelled to consult with neighbours or the general public. Environmental impact assessments are required by the province only for installations generating 2 MW or more.

It was not until late 2011, when wind gauge towers began to appear, that the public became truly involved with issues related to wind farms. Since that time there have been open meetings, questionnaires, PAC meetings, and County Council meetings devoted entirely or partially to the examination of issues associated with establishing wind farms. This process has been an exemplary case of democracy in action; in addition to “expert” presentations by people from outside our area, presentations by many local people demonstrated the depth of knowledge and thought within our community. Although very different opinions were expressed, differences were in general treated respectfully. And PAC and Council listened. On July 3, 2012, Council voted 10 to 1 to repeal the existing bylaws and place a moratorium on large-scale wind turbine installations pending a review by Council of issues associated with such installations. The repeal of the existing bylaws has been approved by the province and came into effect on August 30, 2012. Smaller projects, as defined under the COMFIT and the enhanced metering programs will not be affected by the repeal of the bylaws.

So it appears that large-scale wind turbine installations in Kings County will be on hold for a while and, if the Muskrat Falls project proceeds, there will be little pressure from the province for additional renewable energy in the immediate future. However, things are not always as they appear; Muskrat Falls could falter, private companies (including NS Power) might wish to generate and export renewable energy, etc.

As stated above, our concern is to ensure that proper consideration to wildlife (using its broadest definition) issues are considered

for any major wind farm development proposed within our area of interest. It was reassuring to observe how many of those giving presentations at the PAC and Council meetings and who filled in the questionnaire (477 respondents) cited potential impacts on wildlife as one of their major concerns.

In an attempt to identify gaps in our knowledge, the issues committee is currently reviewing existing information about wildlife in our area, particularly concerning species at risk or concentrations of wildlife. Bats, migratory birds (particularly raptors and local movements of shorebirds), and whales are top of our list. We are also reviewing environmental impact assessments and monitoring programs at established wind farms in Canada and beyond. If you have any questions or suggestions, please contact any of the committee members listed above.

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 (note exception for December), in Room BAC241 of the Beveridge Arts Centre of Acadia University on the corner of Main Street and Highland Avenue, Wolfville. Parking is available off Highland Avenue, on Acadia Street, and at the parking area around the Robie Tufts Nature Centre. Everyone is welcome.

Monday, September 17, 2012 – *Set Course for Ceti Alpha V*. Most science fiction relies on planets: Totoonie and Alderaan in *Star Wars*; Vulcan, Bajor, and Cardassia in *Star Trek*; Caprica (and the mythical planet “Earth”) in *Battlestar Galactica*. For most of human history,

the existence of other planets was either a speculation or a hypothetical reality but with no way to prove they existed. The last 15 years have seen incredible advances that now allow several methods for the detection of planets around other stars. This talk will explain some of these methods, the results, and how you can keep track of the 700+ planets discovered so far. And yes, there's an app for that!

Patrick Kelly has a background in astronomy and computer science. He is the Director of Faculty Computing at the Faculty of Architecture and Planning at Dalhousie University, where he teaches a graduate course in archaeoastronomy and architecture. He teaches first-year astronomy at Dalhousie and is a past editor of the *Observer's Handbook of the Royal Astronomical Society of Canada*.

Monday, October 15, 2012 – *A Vicarious Trip to Bon Portage Island*. Claire Diggins will share her experiences from over 40 visits to the island with the Nova Scotia Bird Society, including hours of rich birding, community living, and risky adventures in the ambience of this special place on the map of Nova Scotia.

Monday, November 19, 2012 – *Looking for a White Needle in a Snow-covered Haystack: Searching for Canada's Ivory Gulls*, by Dr. Mark Mallory. The talk summarizes a decade's work conducting surveys and research on the Ivory Gull (*Pagophila eburnea*), an iconic seabird that has recently joined the ranks of Canada's endangered species. Mark will go over the local ecological knowledge that prompted the early surveys, the survey results, research into contaminants in gull eggs, smoking guns that may be responsible for some of the population changes, and up-to-date results of satellite tracking work being undertaken by Acadia University MSc candidate Nora Spencer.

Dr. Mark Mallory is the newest Canada Research Chair at Acadia University, focusing on coastal wetland ecosystems. He spent 20 years as a federal government biologist with the Canadian Wildlife Service, working first on acid rain and boreal ecosystems in Ontario before heading North with his family to Iqaluit in 1999 to work on

Arctic seabirds and landscapes. Although his overall research program is broad and examines many aspects of the ecology of coastal areas, much of his most notable work has examined year-round movements of Arctic marine birds, and the consequences of their biotransport of nutrients and contaminants from marine feeding areas to terrestrial breeding colonies. At Acadia, his research locations are split between the Arctic and coastal Nova Scotia. Mark's wife Carolyn is a noted expert on Canadian Arctic plants, but regularly trundles off with Mark to study wild things.

Monday, December 10, 2012 – *Tracking Nova Scotia's Most Elusive Shrews* by Dr. Donald Stewart, Acadia University.

Monday, January 21, 2013 – TBA.

Monday, February 18, 2013 – *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 and would like to submit them in advance, contact Patrick Kelly (472-2322, patrick.kelly@dal.ca).

FIELD TRIPS AND OTHER NATURE EVENTS

Saturday October 13, 2012 – *Invasive Tree and Shrub Species*. During this field trip we will learn to identify some of the most invasive tree and shrub species in our area, visit an area where some of these species are becoming well established and another area where attempts have been made over the past decade to control them. In the latter area participants will take part in a survey to evaluate the success of the control program. Meet at the Wolfville wharf at 9:30 a.m. Bring a lunch and wear appropriate clothing for doing some bushwhacking (no rough terrain involved). Rain date October 14. Contact: George Alliston (542-3651, alliston@xcountry.tv).

Sunday, October 21, 2012 – *Learning to Identify Common Tree and Shrub Species without Some of the Obvious Clues of Leaves and Blossoms.* George Forsyth will be leading this trip. Meet at Hennigar's Farm Market in Greenwich at 1 p.m. or at the Robie Tufts Nature Centre in Wolfville at 12:45 p.m. for those who want to carpool. We should be finished by 4:30 p.m. We will leisurely walk the trails of Hennigar's Farm Park; the view from the top of the field is well worth the hike. This is a great place, as it is close to many members, yet one can easily escape the hustle and bustle of our modern community.

Saturday, December 15, 2012 – *Wolfville Christmas Bird Count.* The CBC has been an annual tradition since 1900, now with over 50,000 participants from across North America. A vast pool of bird data has been created on the status and distribution of early winter bird populations. The count area is a circle 15 miles (24 km) in diameter, in which volunteers count all the birds they see on the count day. All levels of birders are invited to participate in the Wolfville count. You may be assigned your own area within the circle or join with others who may be more experienced. To participate, contact Alison Bogan, the compiler, at 678-0446 or alison@bogan.ca or at a BNS meeting before the count. As always, 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.

For those with bird feeders in the count area – within 12 km (7.5 mi.) of Hennigar's Farm Market – who prefer to count from home, you are invited to keep track of the birds at your feeders for all or any part of the count day and get that information to Jim Wolford at 542-9204 or jimwolford@eastlink.ca.

Following the count, around 5 p.m., all participants are invited to Richard and Liz Stern's for a tally count and chowder/chili supper. The address is 317 Middle Dyke Road, north from the lights at the intersection of Belcher Street and the dyke road from New Minas, just before Chipmans Corner. Richard and Liz can be reached

at rbstern@ns.sympatico.ca or 678-1975. There is lots of room for parking, and everyone is welcome.

Friday, December 21, 2012 – *Winter Solstice Family Frolic*. We invite everyone to welcome the winter season and continue the 5000-year tradition of celebrating the return of the Sun after the longest night of the year. We will meet around a roaring bonfire at Noggin's Corner Farm and set off for a hike through the centuries-old pine and hemlock forest. We will pass an 18th century Acadian cellar, Poor House graveyard, and a huge bald eagle nest. We will look for tracks and signs of wildlife, call for owls in the deep woods, and view the stars from the dykes (weather permitting). We will make our way back to the bonfire for hot apple cider and share a toast to a winter season full of light and good cheer to all. Charlane Bishop (542-2217) and Harold Forsyth (542-5983) will be the leaders. Meet at Noggin's Corner Farm in Greenwich at 6:30 p.m.

Sunday, December 30, 2012 – *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 Woolavers' 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.

Green Dragons – Summer Nature Camp 2012

by Harold Forsyth

THE summer of 2012 has been our eighth year of the Green Dragon Nature Camp for youth. Our two student leaders this summer were Naomi Crisp and Sara Boyd, who did a wonderful job providing a fun filled and educational program for 141 children from six different local community groups. This year we added visits to the Kentville Research Station Ravine and Noggins Corner Farm, with the travel assistance of Kings Transit, along with trips to Blomidon Provincial Park, Smiley's Provincial Park, and the KC Irving Environmental Science Centre and Harriet Irving Botanical Gardens. As well, the kids were fascinated by visits to the Acadia Biology and Geology museums. This provided a wealth of diversity in habitats for the children to explore and to gain an appreciation of the nature and environment that surrounds them away from the technology that can sometimes consume too many hours.

Funding for the program this year was generously provided by Kings County Council (\$4750), Canada Summer Jobs (\$3962), TD Friends of the Environment Foundation (\$3500), Michelin (\$500) and of course members and the Blomidon Naturalists Society itself.

REPORT (BY NAOMI CRISP & SARA BOYD)

This summer, we had the privilege of working for the Green Dragon Nature Camp, hosted by Blomidon Naturalists Society. It was an experience like no other – working outdoors in the unique landscape of the Annapolis Valley with a different group of interested,

eager children every week. Each week we went to four different locations – Smileys Provincial Park, Kentville Ravine or Noggins Corner Farm, the KC Irving Environmental Science Centre (KCIC) and Harriet Irving Botanical Gardens, and Blomidon Provincial Park. We began each day with an introduction of the site and said our pledge, to “protect and respect nature and be a good explorer.”

For six weeks in July and August, we took six different summer camps from around the Valley on these adventures: New Minas Children’s Centre, New Minas Recreation, Wolfville Recreation, Kentville Recreation, Aldershot Recreation, and Apple Tree Landing Daycare.

Just past Windsor is Smileys Provincial Park, where we would start the day making our way down the river, appreciating the life the river contains. Using nets and buckets, the kids were able to catch minnows, water skippers, frogs, beetles, water snakes, and other aquatic creatures, and marvel at their discoveries. After lunch we would explore a hollow pine tree in search of porcupine quills. We then made our way down to the Beaver Dam, sharing cool facts about the beaver and its home, which got the kids excited and eager to explore.

Noggin’s Corner Farm provided us with a scenic walk through the woodland trails. We explored the woods and its history with the children as well as learning more about the wildlife that lives there. The kids were thrilled to listen to the noises that one can only hear inside of our Nova Scotian woodlands. We would spend our afternoon enjoying the play structures provided and sometimes a local treat of apples. Using Kings Transit the camps were able to easily get back and forth from the site.

Kentville Ravine was another beautiful site we were able to add in this year with the help of Kings Transit. Our morning consisted of plummeting down into the wonders of the ravine hidden so closely to town. The kids enjoyed spotting different wild creatures and listening to the cries of the newly born eagles. We would sit and marvel at the waterfall and its beauty. On the way back the kids loved splashing in the brook that went along side the trail. After lunch we spent the afternoon catching and learning about different insects in the field by the picnic area.

We visited KCIC, where we split into three groups and rotated stations throughout the day. One was a tour with the KCIC gardeners to learn about the native plants of the Acadian Forest Region and the different habitats within it. Another rotation was spent at the Geology floor in Huggins Science Hall where the kids could see firsthand some of the oldest rocks in the world, a meteorite, and many stunning rocks from our very own Nova Scotia. At the third station, the kids explored the Biology museum with Fred Scott here at Acadia University. This provided a hands-on experience with animals the children may not normally encounter.

Blomidon Provincial Park was another site we explored during the week, starting at the picnic grounds at the top of the park, where we played a few games before making our way down the mountain. Along the way we enjoyed looking at different tree formations and the difference between deciduous and coniferous trees. At the end of the trail we would enjoy eating lunch on the grass with a view of the ocean. The rest of the afternoon was spent on the beach, where the kids waded in the ocean searching for shells and crabs or enjoyed the waterfall's chilly stream. Here, they loved building dams and investigating the brook's course.

Overall, it has been an amazing summer and we are grateful for the experience. We feel it was a great opportunity for the kids to take a step back and see the world they live in through new eyes. This whole experience wouldn't be possible without the support and commitment from the Blomidon Naturalists Society as well as the bus companies, staff of Acadia University, and Noggins' Corner Farm. We hope the children have gained a higher appreciation for their surroundings and will continue to explore, protect, and respect nature.



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Human Resources and
Skills Development Canada

Herbert River Trail

by Patrick Kelly

SATURDAY, JUNE 16, 2012 – A pleasant day greeted the dozen people who came on the walk. While birds are to focus of this trip, as it is a joint trip with the Nova Scotia Bird Society, we also tend to see a lot of neat things besides the birds. We had the same number of bird species as last year, 38 in total, although they were not the same 38. The birds that tend to put on the best viewing, or that have the most interesting activities, change from year to year.

At the entrance to the trail, a Downy Woodpecker was being followed by a newly-fledged young. That was a bit of a theme, as there were several places where we met a Common Merganser with her brood, and the unusual noises being made by some chickadees were identified by Bernard Forsythe as the begging call of the fledglings. We watched an interesting encounter between a Common Raven, a Red-tailed Hawk, and a Broad-winged Hawk, which were all interacting, apparently not sure about sharing the same thermal. Bernard also spotted a robin's nest, having noticed a robin flush from up ahead of us. It was in the fork of a tree, and using the telescoping mechanic's mirror that he keeps for looking into nests, we all got a great view of the two eggs that were in it.

One of the four-legged animals we came across was not one, but two separate Snapping Turtles that were on the trail. We went a bit past the usual turning point to see the first one. It had a thick layer of mud on its back, and it returned to the river with at least one name scratched in it. At the turning point, Bernard pointed out a lovely specimen of Feverwort growing right at the side of the trail. This is a rare plant, so it was a nice find. At the riverside we filled out the geo-cache and explored some of the plants and shrubby trees growing

along the side of the water. A Chestnut-sided Warbler also put on a nice show, giving everyone a chance to see it up close.

The second, smaller turtle was encountered on the way back out. We also stopped at one of the ponds between the path and river to check out the frogs. Joan Waldron spotted a large beaver, curled up in a den under a tree, having a nap. It was only last year that I first noticed beavers in this area. It looks like they may well become a staple of this walk.

FIELD TRIP REPORT

Showy Lady's-Slippers: Smileys Park

by Bernard Forsythe

SATURDAY, JUNE 30, 2012 – Our party of eight, including one from England and two from Halifax County, was blessed with sunshine for a pleasant evening stroll around Smileys Park. Entering the Tamarack alkaline bog, we found the Showy Lady's-slipper orchids in full flower. Up to 80 cm tall with large leaves and flowers, it is obvious why it is known as Queen's Lady's-slipper. We continued deeper into the bog, noting that the colony has expanded since my first visits about 30 years ago. Its companion, the tall, leafy Northern Green Bog-orchid was found looking grass-like compared to its exotic looking neighbour. Other bog plants included Purple Avens, Labrador Tea, Dewberry, Blue Flag, and Buckbean just past flower.

Leaving the bog, we examined many of the other plants around the park, although most were past flower stage. Beds of Nodding Trillium, Yellow Violet, and Bloodroot were present, along with a few rare Blue Cohosh plants. We also spotted White Avens, False Solomon's Seal, and young Jack-in-the-pulpits. A few Ironwood trees with fruiting hop-like catkins demonstrated their other com-

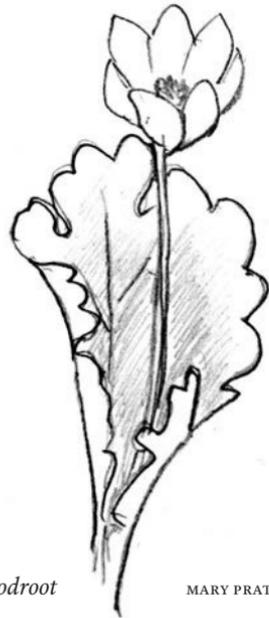
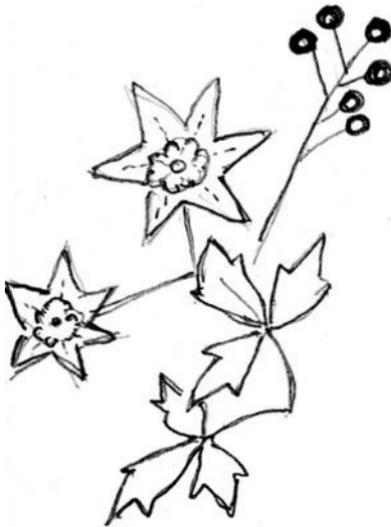


mon name, Hop-hornbeam. These trees are larger than most Ironwood trees I find in Kings County.

Another highlight was a thick bed of the variety of Woodland Strawberry with white fruit when ripe.* The plants were covered with ripe white berries, so we did lots of sampling. Very tasty indeed.

Thus ended a successful field trip. Even the lady from England had no complaints about getting wet feet in the bog. Her comment was, "Oh, it rains over there all the time anyway."

* This strawberry has a long handle: *Fragaria vesca* L. var. *americana* Porter forma *landonii* Boivin. It was first identified on the White Rock River trail, Kings County. Since then it has been found in Grand Pré and Wolfville. Gini Proulx also knows where there are some plants in Clementsport, and John Erskine wrote in one of his many papers that he found it in Bear River, but he did not leave detailed directions, so I am still looking for it. We feel fairly sure that the Acadians brought it along with many other medicinal plants.



Top, Showy Lady's-slipper; left, Blue Cokosh; right, Bloodroot

MARY PRATT

Astronomy at Blomidon Provincial Park

by Patrick Kelly

FOR the last number of years, Larry Bogan and I have done two nights of astronomy presentations at Blomidon. This year the dates were August 24 and 25, right in the middle of several days of clear skies – *not* the case most years! Each of the nights began with a presentation that started around 7:30 when the Sun was still up. Larry’s talk on Friday focused on how astronomers look at the night sky, while my Saturday talk covered how astronomers over history have worked out the distances to objects in the sky. There were lots of questions, and then we had a short break while we set up the telescopes in the nearby field.

While the Moon is a spectacular sight in even a small telescope, it was at First Quarter on Friday night, so on both nights the “light pollution” from the Moon kept the sky from getting really dark. This also meant that some fainter objects, such as the Andromeda Galaxy and M13, the globular cluster in Hercules, were not at their best. As compensation, Saturn was visible, although it was low in the southwest as it got dark. Still, I don’t think I will ever tire of the noises people make when they see Saturn or the Moon for the first time in a telescope. We had about two dozen people for each evening (including the dean of my faculty the first night).

Larry spent some time pointing out constellations with a laser pointer (keeping it well away from airplanes). We were also lucky, as at about the same time both nights we saw a passage of the International Space Station, and on Saturday we had a bright meteor mov-

ing slowly enough that even those not facing the right direction got a chance to turn and see it. That rarely happens!

FIELD TRIP REPORT

New Birder's Trip, Windsor

by Patrick Kelly

SATURDAY, JUNE 23, 2012 – This was a trip put on as part of the Nova Scotia Bird Society's program to introduce new people to birding. There were about a half dozen participants including John Owen, president of the Blomidon Naturalists Society, and a mother-daughter team where the daughter was also interested in getting started in nature photography. This trip starts at the Windsor Tourist office with a look at binoculars, field guides, and how sound can be used to identify many species. This area has lots of common birds, and we got some really good looks at both male and female Yellow Warblers, as well as hearing many of them.

The next stop was the Windsor sewage lagoons, where we were able to see some newly fledged American Black Ducks following an adult. There were also more Yellow Warblers in the thickets on the non-lagoon side of Lagoon Drive. Again we were lucky, as a gap in one small tree allowed us to watch a newly fledged Yellow Warbler, which was quite content to stay in one place as its parents came back every minute or so with food. This was also where we saw the one mystery bird of the day, perched on the wires near the lagoon driveway. Between the way it was perched on a sloped wire and being able to see it only in silhouette, it posed a challenge. We eventually got close enough to see that it was, in fact, a Mourning Dove.

The final destination was the Shell Environmental Park. We stopped at the entrance to the road for a pit stop, and I noticed that

a male House Sparrow carrying nesting material was sitting nearby on power equipment at the top of a nearby pole. He was being very cagey, but eventually we found the opening in the equipment into which he was disappearing. At the park itself were more Yellow Warblers, and some other birds mixed in for good measure.

Vultures in Nova Scotia

by Derek Allerton and Laura A. Thompson

THIS past December, after updating the preliminary species totals from the Wolfville and area Christmas Bird Count on Twitter, we received a response asking if we had seen any Turkey Vultures. At the time, neither of us had ever seen a Turkey Vulture, let alone in Nova Scotia. It did pique our curiosity, so we did some online digging.

Indeed, there are Turkey Vultures in Nova Scotia. This species has been slowly expanding its range into our region, most likely in response to the increased availability of carrion along our shores and highways and warming of the northeastern North America climate. While Turkey Vultures can now be regularly spotted over Brier Island and up the Digby Neck, there have also been reported sightings for every month of the year across Nova Scotia. The Maritimes Breeding Bird Atlas indicates only a scattering of possible or probable Turkey Vulture breeding sites in Nova Scotia, but with the increase in sightings since the 1990s, a confirmed nest may be found in the near future. Rather than construct a traditional nest, Turkey Vultures nest either on the ground or in caves and scratch out an indentation, making their nests more challenging to find.

Although Turkey Vultures may seem relatively new to Nova Scotia, they have an extremely wide range, extending from the northern

United States and southern Ontario all the way down to Tierra del Fuego. They search for carrion using their incredible senses of sight and smell while soaring high above the ground for much of the day. Genetic testing of North and South American vultures has demonstrated that these birds are actually descended from storks and thus are not related to Old World vultures.

There have also been sightings of Black Vultures in Nova Scotia, where they are considered rare. Black Vultures are similar in appearance to Turkey Vultures, although slightly shorter in wingspan and without the distinctive red head. Immature Turkey Vultures look very similar to mature Black Vultures, making positive identification more difficult. In a flock, Black Vultures are more aggressive than Turkey Vultures and are usually more dominant over a carcass.

We did not spot a Turkey Vulture on the day of the 2011 Wolfville Christmas Bird Count; however, we did spot one on the last day of count week. It was flying relatively low over the east end of Wolfville while we were out walking our Basset Hounds. Our non-birder friends and family did not appreciate our excitement regarding this sighting. We did realize that, considering the size and colouring of these birds, we should definitely use binoculars to identify immature Bald Eagles in flight in case they may really be Turkey Vultures. Once again, we learned the importance of carrying a camera when birding and missed our chance to take a photo.

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Trained by Owls

by Bernard Forsythe

ALTHOUGH Barred Owls will still be found in what's left of their preferred old-growth woods, many are quickly adapting to smaller second-growth woodlots around farms and even towns, provided that nestboxes are erected for them. The Wolfville Ridge Barred Owl family has been alternating between our backyard and the Dug Woods about one kilometre west of us for more than 20 years. They show up at my owl feeder 6 m up in a maple tree behind our house each winter and use the nearby nestbox, except in 2011, when nesting took place in the Dug Woods. Their free food supply was cut off in early May 2011, and the owls were no longer seen or heard in our yard during the nesting period. Over the years it appeared that these owls were occasionally checking the feeder for an easy meal. In recent years they spend time watching me. Could they be training me to provide a free dinner?

With no evidence of owls in our yard by November 19, 2011, I took a Short-tailed Shrew to the feeder. Climbing the ladder, I imitated a Barred Owl hoot. As the shrew was placed on the tray, an owl swooped down with talons extended, grabbed its meal without stopping, and silently flew to a nearby branch. It had been waiting near its winter food source. Food is not provided every evening, so the owls must continue hunting for themselves. By February 15, 2012, both adult owls were visiting the feeder. On February 23 the female first entered the nearby nestbox, and by March 19 an egg was laid. Now only the male watched the food tray. As I climbed the ladder he would lower his head in an intense stare across the feeder. By the time I dropped the offering he would be in full flight, snatching up the carrion, while I felt wind and sometimes wing tips across

my face as he passed by to another tree. Next, the male would hoot, followed by an answer from the female in the nestbox. Shortly after, the female would fly to him, where the food item was transferred and taken back to the nest by the female. Once, two smelts were placed about three inches apart on the food tray. The male glided in with talons extended. Without pausing, contact was made, and each talon held a dangling smelt as he flew to a perch. Sometimes the owls landed on the tray to look down at the offering before accepting the food. When the food was taken during a flyover, the owl's head was held in a straight forward position. Only rarely did the talons miss their target. If contact was not made, the owl circled for a second successful pass. Up on a ladder, it was like being in the middle of an airplane battle from a war movie.

By late April one or both adult owls would often be in a tree watching our cellar door at dusk for me to come out with food. As I headed toward the feeder the owls flew to a perch overlooking the food tray. One evening in early June we left the house for a walk. One adult owl was watching the cellar door. It glared at us walking by, giving a single hoot as if to say, "Where is my meal?" We returned after dark along the Ridge Road and were greeted with another hoot from the top of a power pole. It was probably saying, "I am still waiting." By the time I got a flashlight and a Deer Mouse, the owl was at its usual perch at the feeder. Who is training whom?

We have many people visit us to enjoy viewing our owls. A group of several dozen joined me on May 8 to band the young owl. The owlet was taken down from the nest for everyone to get a close look. Many of the young people as well as some of the parents got their first look at owls. A total of thirty-two young Barred Owls were banded in 2012 from eight of my nestboxes and six boxes erected by others interested in helping these fascinating nocturnal hunters. This was double the success of 2011. Having a box occupied by a family of owls is very rewarding for the bit of effort required.

Sand Barrens in Nova Scotia

by Martin L.H. Thomas

SAND barrens in Nova Scotia are a much maligned habitat. In general conception, they are areas of little or no value and have consequently been destroyed for housing development, road building, graveyard sites, sand mining and, locally, airport building. CFB Greenwood is largely built on former sand barrens. Elsewhere, these habitats have been widely used for golf courses. It has been estimated that 97 percent of the original sand barren area in the Annapolis Valley has been lost. Currently, the remaining ones are very heavily used by recreational vehicles, including ATVs and motorcycles. This use destroys the plant cover, reduces biodiversity, and leaves the remaining area prone to wind erosion.

Sand barrens, sometimes called heathland, are generally quite flat but often have low areas that may even be distinctly damp. They should not be confused with coastal dunes, which have high mounds of sand and very different fauna and flora. Sand barrens are old features and often occur where glacial retreat left large areas of sand. The Annapolis Valley examples have arisen in this way. Elsewhere, they are common where old lake beaches have been left high and dry by post-glacial changes in land elevation and drainage patterns. Examples can be seen around Lake Erie.

Unless they are disturbed, sand barrens are virtually fully vegetated with a low growth of tough plants and are far from barren. They support a varied group of plants that are beautifully adapted to open, dry conditions with very low plant nutrient supplies. Many of these plants are rare elsewhere, and some of them have very attractive flowers. Shade is virtually absent except in micro-habitats beneath the low plant cover. Drainage is so good that the surface



TOP: *General Habitat, Kingston sand barrens*

LEFT: *Wild Lettuce (Lactuca hirsuta), Middle Clyde sand barrens*

RIGHT: *False Heather (Hudsonia tomentosa), Kingston sand barrens*

of the ground is virtually dry except during rain. Trees were originally absent, but with time, as the soil slowly improved a little, hardy trees, typically pines and a few birches, have gradually encroached. Natural succession has resulted in many sand barrens becoming pine barrens, which are forested but retain the very sandy soil. Typical sand barren plants are absent in pine barrens except in openings among the trees. Some sand barrens in Nova Scotia have pine barrens around the edges.

The closest sand barrens to the Wolfville/Kentville area are in the Kingston/Greenwood/Green Acres areas, with one of the largest expanses on the north side of Hwy 101 just beyond exit 17W. It is eas-



ALL PHOTOS BY MARTIN THOMAS



TOP: Broom-crowberry (*Corema conradi*), Kingston sand barrens
 LEFT: Northern Slender Ladies'-tresses (*Spiranthes lacera*), Kingston sand barrens;
 RIGHT: Rock-rose (*Helianthemum canadense*), Hwy 101 near junction 17E

ily recognized by the open expanse with only scattered, small trees and criss-crossed with bare ATV trails exposing the sandy soil. Walking through this area is both easy and very rewarding.

This location and most of the others in the Valley are dominated by a low, woody shrub called Broom-crowberry (*Corema conradii*); it is in the Heath family (Ericaceae) and a member of the Atlantic Coastal Plain Flora (ACPF). It is found on sandy or rocky locations in mainland Nova Scotia and continues south to New Jersey. It has small somewhat inconspicuous, reddish flowers at the branch tips, which appear in early spring. Broom-crowberry is spread by ants, which detach seeds on which are eliosomes – protein and fat-rich

structures. Ants consume the eliosomes, leaving the seeds intact, a behavior known as myrmecochory. Commonly interspersed with the crowberry is another shrub of similar stature, Golden-heather (*Hudsonia ericoides*), which has showy, bright-yellow flowers in late spring. Another member of the ACPF, it is ranked as sensitive in Nova Scotia. A member of the Rock-rose family (Cistaceae), it has a much rarer relative, the Rock-rose, or Frostweed (*Helianthemum canadense*), in Nova Scotia found only in the Annapolis Valley sand barrens and two other small locations in openings in pine barrens. This very rare species is a small herb that bears large, showy, yellow flowers at the tips of the shoots in late May or June. It is a real Nova Scotia treasure that you will long remember if you are lucky enough to find it.

Common plants in these sand barrens include the strangely named Sweetfern (*Comptonia peregrina*), which is not a fern at all but a member of the Bayberry family (Myricaceae). Lowbush Blueberry (*Vaccinium angustifolium*) is also common and bears abundant, sweet berries. Another berry scattered over the barrens is Bearberry (*Arctostaphylos uva-ursi*), which is another heath. Some sand barrens further south in Nova Scotia are dominated by dense growths of Bracken (*Pteridium aquilinum*) with large patches of Mountain Cranberry (*Vaccinium vitis-idaea*) bearing large, tart berries. In all sand barrens the Rough Goldenrod (*Solidago puberula*) and its relative Silver-rod (*S. bicolor*) are frequent. Careful searching may reward the naturalist with other uncommon plants such as the orchid Northern Slender Ladies'-tresses (*Spiranthes lacera*), notable for its lack of leaves at flowering time, and the Hairy Wild Lettuce (*Lactuca hirsuta*), which has purple-tinged leaves and stems. The Three-toothed Cinquefoil (*Potentilla tridentata*), usually found close to the coast, is quite common in some sand barrens.

In Annapolis Valley sand barrens White Pine (*Pinus strobus*) rings the barrens, and a few smaller individuals occur throughout; Jack Pine (*P. banksiana*) is also present in small numbers. In other locations Red Pine (*P. resinosa*) is also present, and Scotch Pine

(*Pinus sylvestris*) may be invasive. Small Wire Birch trees (*Betula populifolia*) are found in most barrens.

Although sand barrens offer plenty of low cover, amphibians, reptiles, birds, and mammals are not commonly seen. Careful searching may reveal American Toads (*Bufo americanus*), Common Garter Snakes (*Thamnophis sirtalis*), or occasionally a Red-bellied Snake (*Storeria occipitomaculata*). Mammals such as Raccoons (*Procyon lotor*) and even Black Bears (*Ursus americanus*) may visit during the berry season, and shrews (*Sorex* spp.) and mice (*Peromyscus* spp.) are occasionally seen. A variety of birds are seen passing through or feeding in the barrens: Nashville Warblers (*Oreothlypis ruficapilla*) and Common Yellowthroats (*Geothlypis trichas*) may be resident and nest there.

SEEN IN THE WILD

Nature Counts at the Harriet Irving Botanical Gardens

by Melanie Priesnitz, conservation horticulturist

WE continued our annual Nature Counts walks this summer, recording flora and fauna seen in the Gardens and Woodland Trails. Due to relatively low turnout last year we decided to change the time and day to see if we could attract more participants. We moved the walks to midday Thursdays, which apparently was not the right choice, as we had even lower participation this year. We'll put our thinking caps on this winter and see if there's a way we can revitalize Nature Counts or incorporate it into one of the Gardens' existing volunteer or children's programs.

Though our numbers were low we still had some interesting sightings and learned a lot about the amazing flora and fauna of the Acadian Forest. One week we spent a good deal of time watching a pair of Pileated Woodpeckers work away at our large elm stump. We had the bark stripped off this dead tree and left it standing several years back with the hopes that it would attract woodpeckers, and it seems to be working.

We had cardinal sightings and many butterflies early in the season. We noticed the native Turtlehead (*Chelone glabra*) growing along the stream in the Woodland Trails, where I don't remember seeing it in the past. Hopefully, this is a sign that the native species planted in the Gardens are starting to spread to the nearby woods as hoped.

Numerous sightings of Indian Pipe (*Monotropa uniflora*) were reported throughout the woods. These "ghost plants" are striking to find, as they contain no chlorophyll and are therefore pure white. Indian Pipe plants get their nutrients from nearby fungi rather than through photosynthesis. Seeing this plant on walks allows for a good educational story about plants and their uniquely adapted systems.

A great number of bees were spotted this summer in the Gardens; the numbers of native bees appeared to be higher than remembered in years past. As always, a myriad of birds, dragonflies, moths, and butterflies were reported. The children's camps that visited the Gardens this summer decided that chipmunks should be our official mascot because of the constant sightings. It's very rewarding to see so many creatures calling the Harriet Irving Botanical Gardens home after 10 years.

Not Just a Tree

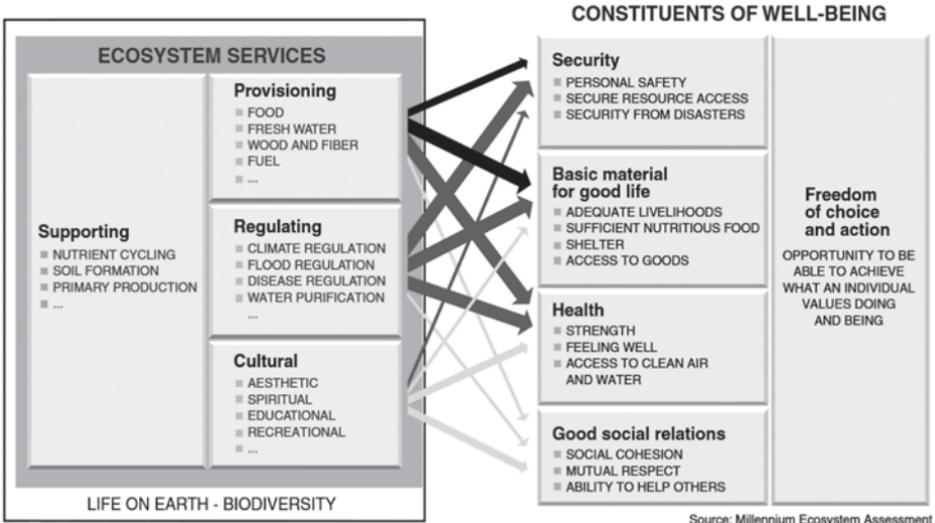
by Linda A. Lusby, Professor Emeritus,
Environmental Science, Acadia University

SEVERAL years ago on a flight back from Toronto, I was looking out the window, transfixed by the natural beauty of the province below me. The flight plan crossed over the Bay of Fundy near Digby and continued on to Halifax over much of the Annapolis Valley. The gentleman beside me eventually followed my gaze and after a few minutes commented: “What a waste – so much land but worthless. Just trees and rocks.”

Much as I was horrified and quite frankly wanted to toss him from the plane then and there, his comment led me to explore an emerging area of research: that of ecosystem services and how we value the tangible and intangible services provided to humankind by our natural ecosystems. In our industrialized modern society, many decision makers (at all levels from consumer through policy makers and government) have come to recognize components of our natural surroundings only by their use value as defined by current practice. Thus a tree is lumber, fuel, or pulp. Open land is for development or agriculture. Bogs and natural grasslands are areas to be filled in, paved over, or utilized in some way – otherwise worthless. While most natural scientists and naturalists, many aboriginal peoples, and others (including any kid who ever just sat in a tree) have long known that ecosystems support a wide variety of human activities, our system of valuation has continued to rest on products of commercial value.

The concept of ecosystem services began to appear in scientific literature with the completion of the Millennium Ecosystem Assessment (MEA). Between 2001 and 2005 a team of more than 1360 sci-

entists and experts worldwide completed a major assessment of the world's ecosystems. The United Nations initiated the MEA as a response to requests for information made by governments involved in negotiating and then ratifying the Convention on Biodiversity, the Convention to Combat Desertification, the Ramsar Convention on Wetlands, and the Convention on Migratory Species. The assessment was carried out to “assess the consequences of ecosys-



ARROW'S COLOR
Potential for mediation by socioeconomic factors

ARROW'S WIDTH
Intensity of linkages between ecosystem services and human well-being

Low
Medium
High

Weak
Medium
Strong

Such a broad range of services thus presented demonstrates the vital importance of ecosystems to human life. Of course one can quickly criticize the concept in that it appears to be completely anthropocentric with all values and services assigned to support human life. However, the MEA and ecosystem services have been used successfully in the ecosystem approach to decision making: a strategy for the integrated management of land, water, and living resources that promotes conservation and sustainable use in an equitable way, and that recognizes that people, with their cultural and varied social needs, are an integral part of ecosystems (Maltby 1997).

tem change for human well-being and to establish the scientific basis for actions needed to enhance the conservation and sustainable use of ecosystems and their contributions to human well-being” (MEA 2005). Essentially, the MEA was designed to provide scientific information regarding the links between human well-being and ecosystems, and as a baseline assessment of the world’s ecosystem resources.

Ecosystem services are those services from which humans derive benefits. They are essential to human survival and well-being. The Millennium Ecosystem Assessment developed four categories to better characterize ecosystem services: provisioning, supporting, regulating, and cultural services. *Provisioning* services are the products obtained from ecosystems, including food, fibre, fuel, genetic resources, biochemicals, natural medicines, pharmaceuticals, ornamental resources, and fresh water. *Supporting* services are those that are necessary for the production of all other ecosystem services, including soil formation, photosynthesis, primary production, nutrient cycling, and water cycling. *Regulating* services include any benefits obtained from the regulation of ecosystem processes, including air quality regulation, climate regulation, water regulation, erosion regulation, water purification, disease regulation, pest regulation, pollination regulation, and natural hazard regulation. *Cultural* services are the non-material or intangible benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences – thereby taking account of landscape values. The links between human well-being and ecosystem services are demonstrated in Figure 1.

Using this example, the man on the plane was looking at an area encompassing many components of almost immeasurable value. The tragedy in this is that he is far from alone. How many of our public figures and decision makers actually know what they are dealing with?

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BRIAN MCKIBBIN

Nova Scotia Migration Count

2012 – Kings County

by Larry Bogan

SATURDAY, MAY 12, 2012 – The day started out sunny and cool (3°C) but soon become mostly cloudy but warmer (10°C). The winds were light all day. The warblers were back by this time, in good numbers. I was also able to see my first Bobolinks of the season. The field surveys and feeder watchers tallied numbers for 115 species in Kings County this year.

There was good participation in Kings County, with 29 field observers and 64 feeder watchers. The field observers spent 127 party-hours on foot and driving, while the feeder watchers spent 368 party-hours watching feeders. The field parties walked 110 km and drove 636 km. The county was divided into east and west: Shiela Hulford coordinated the area from Aylesford west, and I did the eastern part.

See the following table for species totals (combined field and feeders). More details have been reported on the BNS website. (<http://blomidonnaturalists.ca/node/327>). The web report also lists the names of participants. For details of the areas covered and reports from previous years, go to <http://blomidonnaturalists.ca/node/194>.

The Kings County NSMC is only one of 18 such counts across Nova Scotia. The provincial coordinator this year was Chris Pepper. Province-wide, there were 162 observers and 230 feeder watchers, who recorded a total of 179 species. They spent 888 hours in front of feeders and 329 hours on foot (covering 449 km) and 273 hours in cars (4046 km).

2012 Results of NSMC – Kings County, Nova Scotia

Species	Field	Feeder	Total
Common Loon	3	1	4
Pied-billed Grebe	1	0	1
Sooty Shearwater	1	0	1
Double-crested Cormorant	28	0	28
Great Blue Heron	7	0	7
Canada Goose	61	6	67
Wood Duck	9	0	9
Green-winged Teal	8	0	8
American Black Duck	117	0	117
Mallard	288	4	292
Blue-Winged Teal	1	0	1
American Wigeon	1	0	1
Ring-necked Duck	5	0	5
Common Eider	2	0	2
Black Scoter	37	0	37
Surf Scoter	3	0	3
Hooded Merganser	1	0	1
Osprey	1	0	1
Bald Eagle (3 immatures)	24	0	24
Northern Harrier	3	0	3
Sharp-shinned Hawk	1	0	1
Red-Tailed Hawk	12	1	13
Merlin	0	1	1
Peregrine Falcon	2	0	2
Ring-necked Pheasant	96	9	105
Ruffed Grouse	10	3	13
Killdeer	4	0	4
Greater Yellowlegs	3	0	3
Eastern Willet	7	0	7
Spotted Sandpiper	10	0	10
Common Snipe	4	2	6
Herring Gull	443	0	443
Iceland Gull	1	0	1
Greater Black-backed Gull	98	0	98

Black Guillemot	3	0	3
Rock Pigeon	18	44	62
Mourning Dove	177	147	324
Barred Owl	25	10	35
Chimney Swift	105	1	106
Ruby-throated Hummingbird	8	46	54
Belted Kingfisher	13	1	14
Yellow-bellied Sapsucker	19	1	20
Downy Woodpecker	50	49	99
Hairy Woodpecker	13	38	51
Northern Flicker	76	8	84
Pileated Woodpecker	6	6	12
Yellow-bellied Flycatcher	1	0	1
Least Flycatcher	25	0	25
Eastern Phoebe	10	4	14
Tree Swallow	142	13	155
Bank Swallow	19	7	26
Barn Swallow	115	0	115
Gray Jay	1	0	1
Blue Jay	189	145	334
American Crow	326	152	478
Common Raven	102	24	126
Black-capped Chickadee	306	162	468
Red-breasted Nuthatch	12	7	19
White-breasted Nuthatch	4	29	33
Brown Creeper	7	0	7
Winter Wren	7	0	7
Golden-crowned Kinglet	7	0	7
Ruby-crowned Kinglet	7	1	8
Veery	3	1	4
Swainson's Thrush	3	0	3
Hermit Thrush	50	1	51
American Robin	516	129	645
Gray Catbird	5	0	5
Cedar Waxwing	87	16	103
European Starling	631	174	805

Blue-headed Vireo	62	0	62
Red-eyed Vireo	4	0	4
Nashville Warbler	1	0	1
Northern Parula	86	0	86
Yellow Warbler	67	5	72
Chestnut-sided Warbler	48	0	48
Magnolia Warbler	29	0	29
Black-throated Blue Warbler	5	0	5
Yellow-rumped Warbler	169	5	174
Black-throated Green Warbler	107	0	107
Blackburnian Warbler	2	0	2
Palm Warbler	20	0	20
Black-and-White Warbler	66	1	67
American Redstart	17	4	21
Ovenbird	197	1	198
Northern Waterthrush	7	0	7
Common Yellowthroat	15	0	15
Wilson's Warbler	1	0	1
Northern Cardinal	22	9	31
Rose-breasted Grosbeak	13	22	35
American Tree Sparrow	0	3	3
Chipping Sparrow	56	19	75
Vesper Sparrow	1	0	1
Savannah Sparrow	30	2	32
Song Sparrow	359	60	419
Swamp Sparrow	11	3	14
White-throated Sparrow	97	22	119
White-crowned Sparrow	0	1	1
Dark-eyed Junco	58	67	125
Bobolink	6	0	6
Red-winged Blackbird	268	39	307
Eastern Meadowlark	0	1	1
Rusty Blackbird	2	0	2
Common Grackle	228	78	306
Brown-headed Cowbird	2	24	26
Baltimore Oriole	2	0	2

Purple Finch	71	82	153
Pine Siskin	8	30	38
American Goldfinch	359	383	742
Evening Grosbeak	26	6	32
House Sparrow	11	10	21
Long-tailed Duck	1	0	1
American Woodcock	0	1	1
Indigo Bunting	1	1	2
Red-bellied Woodpecker	0	1	1
Total Birds	6915	2123	9038
(unidentified species)	48	15	63
Grand Total	6963	2138	9101
Total species (115)			

NATURAL HISTORY

Monarch Butterfly Report – 2012

by Larry and Alison Bogan

THIS year the Annapolis Valley's Monarch butterfly generation started early. The first Monarchs arrived the usual time in early June, but normally we do not observe egg laying until mid-July. This year, the breeding started in late June, and the first eggs were observed and collected on July 6. At that time the northern migration was in full swing, and we had seven Monarchs in our milkweed field.

In mid-July we were delighted with a show of 15 to 20 Monarchs flying over our butterfly garden. They would flit and swirl about each other in groups of twos and threes. This happened on several days, usually near sunset. It was a marvelous and entertaining show! Soon,

however, most of them went on to other locations.

June had adequate rainfall, and the grass and Common Milkweed in our field grew normally. July was much drier, and that slowed milkweed growth, but there were more than enough plants for the butterflies.

We again collected eggs and tiny larvae to raise the butterflies under protection indoors. By early August we had over 40 larvae and chrysalids inside. We could have collected many more but were limited in space. We were hoping for more breeding success in the wild but did not see it. We monitored the milkweed and surrounding bushes for larvae and pupae but found few.

We released our first adult Monarch on August 7 and, as we did last year, tagged 25 with light paper tags from Monarch Watch (<http://www.monarchwatch.org>). We checked the database on returns, but no one found any of our Monarchs released in 2011. In mid-August we had releases every day. In previous years the Monarchs emerged later in September and early October.

As of September, we have released 42 raised and one wild Monarch, with five chrysalids to emerge. One Monarch died when caught by a spider, and two chrysalids were lost to predation when left outside while we were away.

The following are dates of release and number of each sex: August 7 (3M 2F), 8 (1M 1F), 9 (1M 3F), 10 (2M 2F), 11 (1M 3F), 12 (2M 1F), 13 (3M 1F), 14 (3M 5F), 15 (1M), 16 (1M), 17 (1M), 18 (1M), 19 (1F), 22 (1M), 24 (1F – caught by a spider and died), 26 (1F), 30 (1M – raised wild); September 7 (1M).



Summer Weather 2012, Eastern Annapolis Valley

by Larry Bogan, Cambridge Station

THIS summer was dry, as I had imagined, but not as severely as the previous spring and winter seasons were. We received nearly three-quarters of the 30-year average rainfall, while the spring and winter were closer to one-half the norms. It was a hot summer.

	Temperature			Total Precipitation	
	Max (°C)	Min (°C)	Mean (°C)	Kentville (mm)	Halifax Airport (mm)
June 2012	20.6	10.2	15.55	91.5	75.1
(30 yr. average)	(21.6)	(10.5)	(16.1)	(81.4)	(93.3)
July 2012	26.2	14.4	20.3	22.6	58.5
(30 yr. average)	(24.8)	(14.0)	(19.4)	(87.6)	(102.2)
August 2012	27.0	15.1	21.1	72.7	54.1
(30 yr. average)	(24.2)	(13.5)	(18.9)	(85.5)	(9.0)
Season	24.6	13.3	19.0	186.8	187.7
(30 yr. average)	(23.6)	(12.7)	(18.2)	(254.5)	(293.2)

Source: Environment Canada data for Kentville, NS (<http://weatheroffice.gc.ca>) and Canadian Climate Normals and Averages (Kentville).

TEMPERATURE

June was actually a bit cooler than average by 0.5°C, but July was hot, at 1°C above the 30-year average, and August was hotter, by 2°C.

Overall, that made the summer a little less than 1°C warmer than a normal summer over the period 1970 to 2000. Another indicator of the hot summer was that we had six days above 30°C, double the normal.

PRECIPITATION

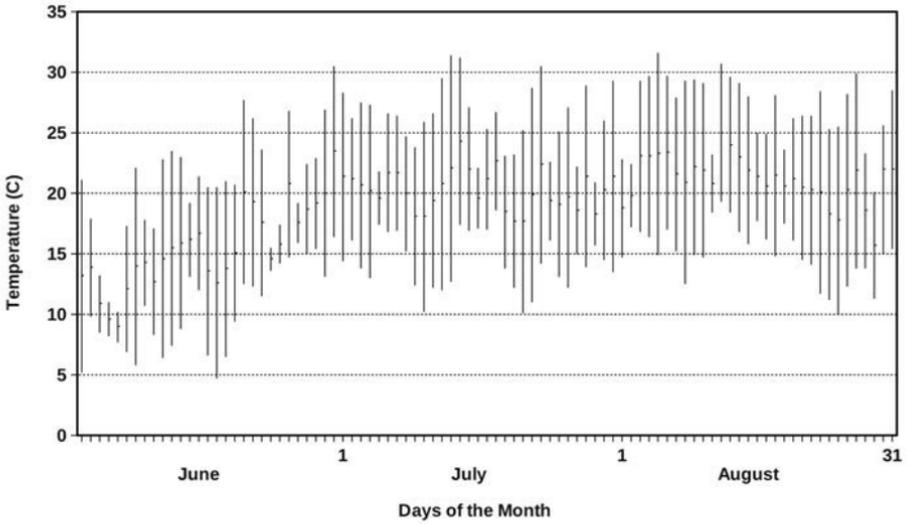
It was the absence of precipitation that concerned gardeners and farmers this summer. Although June in the Valley had more than the average amount, the middle of the summer was exceptionally dry. In July we had no days with more than 10 mm of rain, when usually we can expect about 3 days with more. July ended with less than 23 mm of rain, about one-quarter of the normal rainfall. August was also shy of rain, but not nearly as badly. Overall, the Valley received 187 mm of rain for the summer, about three-quarters of its normal precipitation.

A good share of the rainfall this summer occurred as thunder-showers, which produce uneven distributions. I have added a column in the table for rainfall at the Halifax International Airport. Although both locations got nearly the same amount of rainfall this summer, Kentville had less in July and more in June and August. The different temporal distributions can be seen in the chart of precipitation, which includes both locations. Normally, Halifax International gets more rain than Kentville, so the airport area was lower in relative rainfall than Kentville this summer.

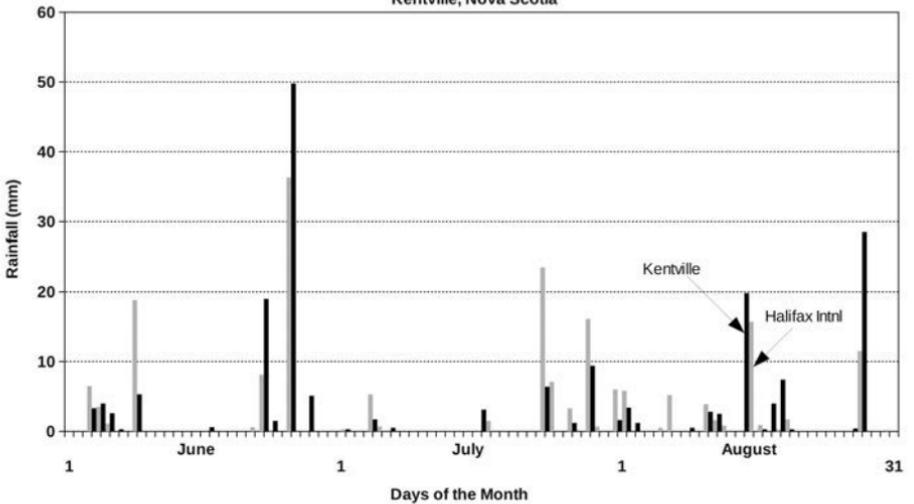
SUNSHINE AND CLEAR SKIES

Environment Canada does not provide bright sunshine hours records, so we cannot determine how relatively clear our skies were this summer. However, we had a lot of “nice” days this summer, with good skies for celestial observing and many great days for being out in the sunshine. I would expect from the dryness and heat that there were indeed more than the average sunshine hours this summer.

Daily Temperatures - Jun, Jul, Aug 2012
 Kentville, Nova Scotia



Daily Rainfall - Jun, Jul, Aug 2012
 Kentville, Nova Scotia



Wild Language (excerpt)

by Robert Bringhurst – poet, linguist, typographer

THE wild isn't something to conquer or subdue; it's something to try to live up to: a standard better than gold. Humans are part of it, and in the long run have no choice but to be so. In the short run, of course, we can try to opt out. We can pretend to be children of god or creatures from outer space, free to leave when our term is up – but what we really are is earthlings. We can also pretend to be so intelligent that we know how to manage the planet more effectively than the planet can manage itself. Those who grow up, as most of us have, in industrialized economies and colonial regimes, are encouraged to think there is no other choice than to take control and manage the planet. But there is another choice. That choice is to *participate* in the biosphere, learning enough about it to recognize and accept that we can never be anything more than junior partners: a few million or billion human cells in a brain the size of the planet. Right now those human cells are acting like a cancer, a tumor in the wise, old brain of planet earth.

As soon as you think your way out of the wild – as soon as depression or arrogance or some other form of exaggerated self-concern leads you to see yourself as distinct from it – the wild looks like a *thing*. You might imagine you can carve it up and sell it. You might even think you can redesign it or manage it and do a better job than the wild itself. But of course you can't. Your only hope, when you are really cut off from the wild, is to rejoin it. The wild is the biosphere: this tiny hollow ball which is the only place in the universe where you or I are free to be what we are.

FROM: *The Tree of Meaning: Thirteen Talks* (Gaspereau Press 2006)

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

2012 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.)

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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	\$_____
_____	2012 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	\$_____
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_____	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.

