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# Blomidon Naturalists Society

Summer 2005 – Volume 32 Number 2

## **Blomidon Naturalists Society**

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

(from the BNS constitution)

### **BNS Executive**

Past president	George Forsyth	542-7116
President	Liz Vermeulen	681-0061
Vice-president	Mike McCall	678-6273
Treasurer	Harold Forsyth	542-5983
Secretary	Helen Archibald	

### **Directors**

John Belbin	
Glenys Gibson	582-1273
Jean Gibson	678-4725
John Harwood	582-3320
Ed Sulis	

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.

Visit us on the web

[<www.go.ednet.ns.ca/~bns/home.htm>](http://www.go.ednet.ns.ca/~bns/home.htm)

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

## **Upcoming newsletter deadline**

Fall, September 15, 2005

## **Editorial Board**

Chair: Jean Timpa (902 542-5678)

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Production: Doug Linzey

Distribution: Bill and Brenda Thexton, Judy Tufts, Lorna Hart

Advertising: Liz Vermeulen

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**EDITORIAL**  
**This and That, Out and About**

First of all let me congratulate those who took the time to write to the Department of Natural Resources about the 26 parcels of land they wanted to de-list because their original use was no longer valid. That may well have been the case, but in the meantime you, the public, had made them valid in that you used those areas on a regular basis and had become fond enough of them to stand and fight. Even before the May 31 deadline came up, DNR officials announced that they would not be removed from their list of natural areas and have in fact added some more. It is always wonderful to have good news on the environmental front.

As for Bilcon of New Jersey, which wants to mine every scrap of basalt rock out of the North Mountain that it can in the next 50 years or so, we have heard nothing since the last newsletter. This does not mean that they are still not very interested, but the holdup is rather in the government panel, which was so swamped by reports and materials that it still has not been able to consolidate or digest it all and turn out its own report. Once the report is out the going may get tough and rough again. Unfortunately, Nova Scotia has next to no protection for its coastal resources, in or out of the water nearby.

Roy Bishop is making a second call for photos for the up coming Calendar. So please take an hour or two to look through your photos of this area; make it a real choice for the committee and let's see some new names on the photo credits.

Remember to take your summer visitors to see the Chimney Swifts and enjoy an ice cream while you are downtown.

And this business about our lost spring – I sit here on the evening of June 14 with all my windows closed with a cold wind blowing outside which is tempting me to put the furnace on! Did winter really leave? Not for long, I'm afraid.

—Jean Timpa, editor

### **Many Thanks . . .**

. . . for all of the fine spirits who find the time to add a bit of this and a dash of that, so that Doug, our production editor, and I can put together another newsletter for all the readership. Be it writing, artwork, leading field trips, or the mailing process, it all is so necessary – just like all of the ingredients of a good cake. Leave out a part, and it just wouldn't turn out at all. But all together, you really put on a great frosting!

And if you haven't thought about writing or drawing or leading a field trip, giving a program, or stuffing envelopes, there is always a first time. Please apply soon to Harold Forsyth, program chair and treasurer, or me, Jean Timpa, editor. (Contact information is on pages 2 and 3.)

### **That Time of Year . . .**

. . . is here at hand or coming close when BNS, if it is going to continue to be a thriving organization – and we have been told we are about the best of our kind in the province – must fill some vacancies. We need

- a new representative to Nature Nova Scotia (the Federation of Nova Scotia Naturalists). It means travelling about four times a year to meetings and reporting to the BNS executive afterwards. The executive is a lovely group to work with (and so is the NNS board).
- a chairperson for our environmental issues committee. Gary Ness held this position but went on sabbatical, so it too has been vacant.

At our October Annual General Meeting, there is usually some changeover in BNS executive positions and board members. As of writing this I do not know of any specific resignations, but the following are the possibilities and can always be challenged: president, vice-president, secretary, treasurer, members-at-large, newsletter editor, program chair, committee members, and advisors and helpers in various capacities. A nominations committee will be struck in August, calls will be made, and we would love to find some new blood with new ideas. We had a bit of luck at attracting people to Brenda Thexton's lovely refreshments after meetings, so here's your chance to sample the best goodies in town in exchange for four executive meetings a year.

Please volunteer before we call. Please say YES if we do call!

# Blomidon Naturalists Society

## Spring 2005

### Meetings

Unless otherwise noted, meetings are held at 7:30 p.m. on the third Monday of each month (except July and August) in the auditorium of the K.C. Irving Environmental Centre, Acadia University. The Centre is on University Avenue, up the hill from the Acadia arena. Parking is available at Wheelock dining hall, along Crowell Drive immediately east of the Centre, at the Acadia arena, the student union building, or on Westwood Avenue. Everyone is welcome.

**Monday, September 19, 2005 – Ocean Migration of Atlantic Salmon: Knowns, Unknowns, and their Role in the Decline of North American Populations.** Since Mike Dadswell spoke to us six years ago, two studies have been completed on ocean migration of Atlantic salmon, and what was then speculation is now hard fact. New information shows that they migrate as far east in the Atlantic as Norway and north on both sides of Greenland. Since salmon from both sides of the Atlantic seem to use the same migration path, it's not surprising that high-seas fishers have figured out how to exploit them. Mike will bring us up to date on the migration patterns and the illegal exploitation and politics – to explain where all the salmon have gone.

**Monday, October 17, 2005 – Whither Human Society?** Marjorie and Martin Willison will host a talk full of information with directives for near-future implications for human society globally.

**Monday, November 21, 2005 – Hiking the Dream: A Family's Four-month Pioneer Trek across Canada along the Trans Canada Trail.** Along with extreme temperatures, impassable trails, and assorted wildlife, the Didkowskys found something more enduring – the heart of a nation in its people, who shared their friendship, songs, and stories.

## Field Trips

Unless otherwise indicated, all field trips will begin at the Wolfville Waterfront Park. Please note we have changed to this location because of congestion at the Robie Tufts Nature Centre during Farm Market days. Everyone is welcome.

**Saturday, July 9, 2005 – Black Rock Hiking Trails.** There is an extensive hiking trail system in the community of Black Rock on the Fundy shore. Reg and Ruth Newell (902 542-2095) will lead us over some of these trails to see the local flora and fauna. Meet at the Wolfville waterfront at 9:15 a.m. or the Black Rock Community Centre at 10 a.m. See <[www.go.ednet.ns.ca/~bns/trails/blckrock.htm](http://www.go.ednet.ns.ca/~bns/trails/blckrock.htm)> for more information about the location and trails. Bring a lunch to enjoy on the beach.

**Wednesday, July 13, 2005 – Kentville Ravine.** Reg and Ruth Newell (902 542-2095) will lead an evening walk to see flowers and ferns among the majestic old-growth forest of pines and hemlocks at the Kentville Ravine. Meet at the Wolfville waterfront at 6 p.m. or the Research Station parking lot in Kentville beside Highway 1 at 6:30 p.m.

An interesting feature of islands is that large land mammals tend to become smaller and small land mammals tend to get bigger. It's called the "island effect."

On Grand Manan, the native Meadow Vole and Deer Mouse are much larger than on the mainland, and they have been given subspecific status, while the White-tailed Deer that were introduced have become fairly small.

Laurie Murison, Grand Manan, NB

## BNS Executive Notes

The executive meets every three months. Since our last report we have presented the Young Naturalist Award to Jack Forsyth at our February regular meeting. This was the first presentation in several years. We would like to have a recipient each year, so please be on the lookout for suitable candidates and let me know.

We have finalized the details for the Young Naturalists Program in cooperation with the Town of Wolfville Summer Recreation Program. We are providing the major share of the funding to initiate this project, which we hope will become an annual project.

Larry Bogan has updated our BNS website. A reminder that October will be our AGM and we are looking for candidates/nominations for the 2005/06 executive.

On behalf of the executive,  
Liz Vermeulen, president



BRISTLY SARSAPARILLA.



FLY-HONEYSUCKLE

**BNS FIELD TRIP REPORT**  
**Spring Birds and Plants on the**  
**Gaspereau River Trail**  
by **Bernard Forsythe**

May 25, 2005 – About 15 participants gathered at the White Rock bridge for this evening outing. After discussing the phoebes nesting under the new bridge and admiring Rattlesnake Weed, a hawkweed conspicuous along the riverbank because of its leaves veined with purple, we started up the trail. Mother Nature had other ideas. Due to recent heavy rain, the rising river covered the trail to a depth too deep for rubber boots. While listening to the song of a Rose-breasted Grosbeak, close enough even Jim could hear it, we decided to head for Bentley Meadow off Miner Meadow Road.

We looked at and enjoyed many plants along the wood road to the meadow. Fly-honeysuckle, Purple (Red) Trillium, Goldthread, and Trout Lily with its showy mottled leaves were in flower, while Clintonia, or Bluebead Lily, was just starting to open. We looked at other plants such as Indian Cucumber Root, Partridgeberry, Starflower, and Pink Lady's-slipper in bud. Many club-mosses and ferns, Wood-horsetails, several mushrooms, etc., presented a nice variety.

A tributary of Schofield Brook flows through Bentley Meadow. The brook has been dammed for many years by both man and beaver, creating a large woodland pond. The beaver house and dam were admired. Tree, Barn, and Bank Swallows were skimming over the pond, no doubt the only place to find insects during this cold, wet May. A pair of Pied-billed Grebes were swimming and calling along the far shore. I have no previous record for Pied-billed Grebes at this site.

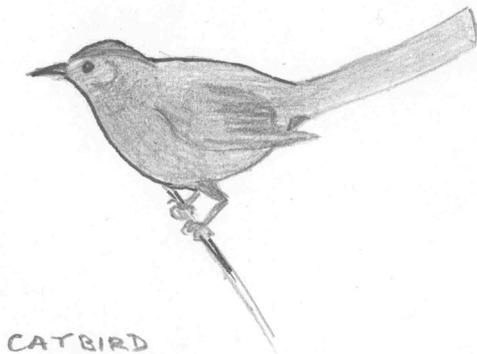
As we started back on the woods road a Yellow-bellied Sapsucker appeared, while a pair of Barred Owls entertained us with a variety of calls. The owls have a brood of three healthy chicks in my nestbox beside the pond. Although rain was threatening, several songbirds were singing, including robins, Ovenbirds, and Yellow-rumped Warblers. Harold Forsyth found a Black-throated Green Warbler, followed by George

Forsyth's spotting a Wilson's Warbler. Listening to the flutelike songs of several Hermit Thrushes ended a successful outing. Perhaps Mother Nature did us a favour.

**BNS FIELD TRIP REPORT**  
**Birding for Seniors**  
**by Bernard Forsythe**

June 4, 2005 – A dozen participants joined Judy Tufts and me for a leisurely stroll in the Kentville Migratory Bird Sanctuary. Along the path taken we passed by shrubs, alder swamps along a brook, mature mixed woods and pine stands, and the wide swamplands along the Cornwallis River. The great variety of habitats enables many species of birds to live in a small area. A few such as Gray Catbird, Common Yellowthroat, Chestnut-sided Warbler, Veery, Rose-breasted Grosbeak, Ruby-throated Hummingbird, and a Wilson's Snipe flying overhead were seen, while many others were identified by their songs. Several species of ducks, flycatchers, vireos, and sparrows were present; however, the ten or more species of warblers were most impressive.

We also admired woodland plants, including Starflower, Wild Lily-of-the-valley, *Clintonia*, Solomon's Seal, and *Aralia*, or sarsaparilla. Some of us old-timers recall sarsaparilla as the drink preferred by the cowboys with white hats. Last year I had found Bellwort; however, our search of the area for it was unsuccessful. We stopped beside a giant oak, wondering about its age. Standing all those years watching the world go by, the oak easily took the prize for the oldest member of this pleasant outing.



**PARKS ARE FOR PEOPLE FIELD TRIP REPORT**  
**Blomidon Provincial Park**  
**by Jim Wolford**

March 28, 2005 – This annual walk, which I lead, is an easy stroll along the cliff trail segment of the Jodrey trail in Blomidon Provincial Park. Everyone should consult the PAFP booklet available from tourist bureaus around the province. The province offers a wide variety of excursions from May through the autumn in provincial parks, new wilderness areas, nature reserves, and other forms of protected natural landscapes.

We got a bit of a break in the weather: The day was fairly warm (8°C), calm, and slightly drizzly with frequent rainless periods. About ten people participated, including a couple of enthusiastic young lads.

On our drive up through the park, some of us saw a flicker foraging on the roadside ground. Near the park registration building, a short walk to limber up showed Baneberry and Purple (Red) Trilliums in bloom, and I was a bit surprised to find a small colony of Spring Beauty also in flower (this species is much more abundant at Cape Split). Also strawberry and Blue Violet flowers were everywhere in open areas.

We started the real walk in the northeastern corner of the campground. I quickly pointed out two non-flowering plants. First were tall fiddleheads of the Ostrich Fern, growing in a relatively unusual upland site. Second were the very obvious extensive colonies of leaves of Wild Leeks; after describing how these were protected and had a history elsewhere of being gathered and then disappearing, I dug one up so that everyone could see the oniony bulb and have a small taste.

As usual, along this part of the Jodrey trail, the forest floor's greening up was in its early stages, and the leafing out of the deciduous trees was in a similar state. We found two Hobblebush plants with their infertile outer flowers open, but not the inner fertile flowers. Two large Balsam Firs had fallen down in the past few months.

The only bird we saw on our walk was a dead male Myrtle (Yellow-rumped) Warbler.

The water level in the woodland pond was higher than I have ever seen it. As usual, I set up a pan of pond water on top of a bucket and then swished my dip net randomly through the water a few times. The lovely Fairy Shrimps were very abundant, full-grown at approximately 2 cm long, the females bearing eggs in sacs at the base of their tails. This pond and another near Berwick are the only known Nova Scotia sites for these critters, whose life cycle for this year will soon be over (until next year's melt-water hatches the eggs in early spring).

Other animals seen in the dipped samples were “water fleas” (Daphnia), two kinds of water mites, caddisfly larvae in their cases built of pieces of plants (two kinds), a few predaceous diving beetles, a few phantom midge larvae, and a few mosquito larvae.

Also found at the pond were a living Seven-spotted Lady Beetle, and a dead June bug, or June beetle.

The pond had flooded the trail, and the fog also told us that the lookoff ahead would not have any kind of view, so we just turned around and walked back to our cars.

**BNS FIELD TRIP**  
**Walk To Cape Split**  
**by Jim Wolford**

May 7, 2005 – Six people showed up: co-leaders Sherman Williams and Jim Wolford, Harold Forsyth, Patrick Kelly, and Wendy and Bob McDonald. The morning was overcast/hazy, 7–8°C, with very light winds, but with rain predicted for later in the day.

On this perennial trip, Sherman Williams always cuts some new twigs of Yellow Birch, hands them out, and asks participants to break the bark

with their teeth and then try to smell the oil-of-wintergreen scent; well, finally this year, even I was successful at this. The chemical is methyl salicylate, I believe, and I worked with it for years in the parasitology lab when I was a grad student in Alberta – I love that smell!

We always hope to find a Winter Wren on this hike, and this year we were not disappointed. In fact, we heard two different ones singing. Early in the walk, we encountered a fairly large, recent clearcut with a lot of slash laying about. Out in the middle, and associated with several fallen but unharvested trees, we heard the lovely song. And, wonder of wonders, even I heard it quite well (after several years of hearing them only on recordings). It was just that kind of day, with no wind at the time, and not much talking from our small group.

Finally, this date was picked because 29 years ago on almost the same day I did my first Cape Split hike, and that year the Spring Beauties were very early and in very impressive carpets. Well, today there were oodles of the flowers, which would all have been open if the sun had been out. But the overcast and morning haze combined to result in most of them being visible but closed up, with many nice exceptions when observed closely.

Also there were many Red Trilliums, some almost blooming, but only one with an open flower. And wild strawberry and Blue Violets were in flower at the Cape tip.

After the field trip had disbanded, Sherman Williams and Patrick Kelly drove home via Starrs Point and checked out the Great Horned Owls at the Muttarts' house; they couldn't find the fledgling owlet nor any parent. Presumably the chick had successfully fledged; i.e., gotten itself from tree to tree via the ground at night and into some proper tree cover, where the parents will continue to feed it for several more weeks at least.

[Note: A return trip was planned to Cape Split, but the weather was awful, and because of that, as Jim was hoping, no one showed up. –ed.]

## JOINT BNS AND NSBS FIELD TRIP REPORT

### Annapolis County

by Richard Stern

May 15, 2005 – A dozen people, from Cape Sable Island to Kentville, and from absolute beginners to experienced birders, assembled at 8:30 a.m. and set off to the French Basin Trail at Annapolis Royal. The birding there was excellent, and it took us two and a half hours to do it instead of the anticipated one hour that I usually take when I'm on my own. Highlights included three male cardinals singing – two seen in the scope – and a stunning White-crowned Sparrow that unfortunately appeared very briefly and was only seen by a lucky few. Yellow Warblers, evidently newly arrived, were everywhere. Chimney Swifts were overhead as we arrived. All three common swallows were seen. There were many ducks of several species, but alas, no sign of the Glossy Ibises that had been seen there earlier in the week.

Then we had a brief walk in some mature woods on the North Mountain and found Blue-headed Vireos and the first Black-throated Green, American Redstart, Northern Parula, etc. for the year for most of the group. Sharon Hawboldt, the traditional leader of this trip, turned up and kindly invited us back to her delightful home at Belleisle, where we had our lunch, and after that we did a two and a half hour stroll around Belleisle Marsh. Highlights there were one or two American Bitterns and many ducks, including Wood Ducks, Common and Hooded Mergansers, Northern Shovellers, Gadwall, and Blue-winged Teal. Some of us got a great view of a Sora taking off from one hidden reed bed and disappearing into another. Several were calling, as were Pied-billed Grebes. The last bird of the day was a rather distant but prolonged look at a male Northern Harrier coasting over the fields

We ended up with 70 species, and the weather was just about perfect.



**NOVA SCOTIA BIRD SOCIETY/BNS FIELD TRIP REPORT**  
**Spring Birds In The Wolfville Area**  
**by Jim Wolford**

April 24, 2005 – The weather gods smiled on us today, with starting conditions of warmth and sun and light wind. One result was a large turnout of 17 cars and perhaps 35 people. We had a bit of drizzle and wind in late morning, then continued warmth, overcast, and little wind.

At the Wolfville wharf, someone thought she heard swallows, but we saw very few for the whole day; I saw only two Tree Swallows.

Three of our first four stops were owl-related. First was the crow/barred owl nest in Andy Nette's yard along Wolfville's Main Street. Everyone saw the female Barred Owl incubating (probably two or more owl eggs plus four crow eggs), while two concerned crows were calling excitedly and landing very near the nest. Andy told us the crows are already building a new nest somewhere nearby and stealing twigs from their old nest.

Next, as has become traditional, Bernard Forsythe showed us his nesting Barred Owls on his property on the Wolfville Ridge. This year Bernard is monitoring ten pairs of Barred Owls in his nestboxes locally. This pair of owls usually nests unusually early, because Bernard gives them food during most of the year.

Once again this year, Bernard in his crash-helmet was not attacked by the owls at all. We all saw the female leave the box as he climbed to it. He reached in and showed us a very tiny whitish owlet, newly hatched, and said there were two other eggs, one of which was pipped; their first egg had been laid March 20.

Then he checked the prey items in the box: a Meadow Vole, an adult Star-nosed Mole, a starling, a Song Sparrow, a Savannah Sparrow, and a Wood Frog! (Barred Owls are very opportunistic and will eat any kind of available animals from earthworms and beetles to fish to herptiles to birds to small mammals.)

Next we caravanned to Starrs Point, where we all viewed a new Bald Eagle nest that is very close to a road. Then we visited the Great Horned Owl nest, where unfortunately the female owl, seen well by all, was covering her quite large chick in the old crow nest. Bernard told us that two days ago there was a freshly killed cock pheasant in the nest, and we saw a few of its wing feathers on the ground.

The very next house was that of Debbie and Jim Daigle, and we spent about half an hour there, pursuing an uncooperative adult Red-headed Woodpecker that had spent the entire winter there. Eventually everyone saw it, at least in flight. We also saw flickers at a nest-hole, a Chipping Sparrow, White-breasted Nuthatches using crevices as holders for pecking sunflower seeds, chickadees, Mourning Doves, Blue Jays, and a single Tree Swallow.

Then, still at Starrs Point, we all did an interesting walk at Van Nostrand's ponds. The newest pond held two Canada Geese, two Mallards, and four Ring-necked Ducks (3m/1f), and a Belted Kingfisher flew over. Also we heard a calling Leopard Frog and were very surprised to find an adult female Painted Turtle out of the water and up on the dike around the pond.

The older pond has been recently drained, apparently because of a collapsed bank. Thus it had just a few very shallow puddles and was mostly dark mud. We saw a pair each of Blue-winged and Green-winged Teal plus a Greater Yellowlegs that was very well camouflaged against the mud and, surprisingly, a Pectoral Sandpiper.

Along Saxon Street southeast of Canning, I stopped to scope what I thought was a Red-tailed Hawk nest, only to see a raven on the nest.

In Canning, along the Habitant River, we saw another Greater Yellowlegs, three Blue-winged Teal, a Double-crested Cormorant, and 15+ Canada Geese. Later, one of the group saw a few hundred Canada Geese in a field of corn stubble south of Canning.

In Canning, we saw the raven nest above Main Street and went to Harris Pond, where we saw three male American Wigeons, four Black Ducks, two Mallards, and several Red-winged Blackbirds, including a darkly coloured female that was very uncooperative.

The Red-tailed Hawk nest at Hillaton, southwest of Canning, had no adult on it.

Our last formal stop for the remaining gawkers in late afternoon was Canard Pond, which had only four Great Black-backed Gulls.

I was disappointed that we saw no warblers and very few swallows, but otherwise we all had a great day and lots of fun, especially with those owl stops and the long walk at the Daigles' lovely property.

Many thanks to Andy Nette, Bernard Forsythe, the Muttarts, and the Daigles for helping to make this trip memorable for a long time.

## **LAST CALL FOR PHOTOS 2006 BNS Natural History Calendar**

Photo submissions are still invited for possible use in the 9th edition of our society's Natural History Calendar. Submissions should be in one of three forms: colour negative, colour slide, or electronic (JPEG format, file size between 300 KB and 2 MB).

If only a print is available, it should be 5 x 7 (inches) or larger. However, if you submit a colour negative, it would be helpful to include a small print for an initial evaluation of the photo. We will return negatives, slides, and prints, so include your telephone number and postal address.

Photos of natural history interest taken in Nova Scotia are preferred. Please do not submit more than a dozen of what you consider to be your most suitable photos. Suitability involves technical quality, composition, and content.

Send submissions to Roy Bishop by mail (RR 1, Avonport, NS B0P 1B0) or e-mail <rg@ns.sympatico.ca>. Questions? Call Roy at 542-3992. Deadline: Labour Day, September 5.

## SEEN IN THE WILD

### Manners! for the Birds!!

In which BNS newsletter illustrator Mary Pratt and her son Nick observe an avian culinary oddity.

Last Sunday (June 12, 2005) Nick had put some cracked corn on a plate for the visiting pheasant, and while the pheasant was busy pecking away at it, a crow came along but didn't have the courage to share, so very carefully he crept close to the pheasant and took hold of the plate and pulled it toward himself. The pheasant then followed the plate, and the crow took hold of the plate again and dragged it farther away, where he was able to eat his fill. The pheasant gave up.



## BNS FIELD TRIP REPORT

### Harriet Irving Botanical Gardens

by Melanie Priesnitz

June 8, 2005 – A handful of BNS members met at the gates to the Harriet Irving Botanical Gardens for an evening tour. Head gardener Melanie Priesnitz led the group through a tour of the nine native habitats of the Acadian forest region. Some of the plants found in bloom were *Cornus canadensis*, *Tiarella cordifolia*, *Nuphar microphylla*, *Potentilla tridentata*,

*Sarracenia purpurea*, *Trientalis borealis*, *Myrica pensylvanica*, and, most exciting of all, the Yellow Lady's-slipper, *Cypripedium calceolus*. Melanie also pointed out four of the endangered plants held in the collection at the gardens for the purpose of research and education: *Geum peckii*, *Drosera filiformis*, *Hydrocotyle umbellata*, and *Coreopsis rosea*.

Members also had a behind-the-scenes tour of the greenhouses, Phytotrons, and experimental gardens, where they learned about what plant research is taking place at the K.C. Irving Centre. One of the projects is a phyto-remediation project, in which members of the biology department are looking at how plants can be used to remediate gas- and oil-contaminated sites.

SCIENCE OF NATURE  
**Whence Lightning?**  
by Roy Bishop

In 1749 Benjamin Franklin demonstrated that lightning is an electrical phenomenon, a gigantic, high-voltage spark occurring between thunderclouds, or between a thundercloud and the ground. The energy released in a lightning bolt is built up by the heat-generated winds and associated separation of electrical charges carried by the ice and rain in a thundercloud. One of the mysteries concerning lightning has been that the electric fields measured within thunderstorms are too small to cause an electrical breakdown in the air. Typically, a voltage difference of about 20,000 volts per centimetre is required. The 2-mm-long spark that you receive from a doorknob after walking across a carpet on a dry winter day involves a finger-tingling snap of about 4,000 volts, but, fortunately, with a very small, non-lethal current.

So, if the electric field in a thunderstorm is too small to initiate the massive runaway electrical breakdown of air that is a lightning bolt, how then do lightning bolts get started? An article in the May 2005 issue of *Physics Today* by two physicists, Alexander Gurevich and Kirill Zybin at the

Russian Academy of Sciences in Moscow, indicates that cosmic rays apparently trigger lightning bolts.

The Austrian physicist Victor Hess discovered cosmic rays in 1911 when, using a balloon, he took a radiation meter high into the atmosphere. Hess found that the higher he went, the stronger was the dose of ionizing radiation he encountered. Few passengers on commercial jets are aware of this hazard of modern air travel. The radiation is caused by high-energy, subatomic particles that bombard Earth from interstellar space, the so-called cosmic rays.

Cosmic rays consist of protons (hydrogen nuclei), photons (gamma rays), electrons, positrons (antimatter electrons), and smaller numbers of heavier atomic nuclei. The greater the energy of the particles, the less numerous they are. The highest energy cosmic rays far exceed the energies attained by the largest particle accelerators in laboratories on Earth. Their source appears to be the most violent events in the universe, such as supernova explosions and stellar debris falling into large black holes at the centres of galaxies.

When a high-energy cosmic ray (for example, a proton with an energy of about ten to the sixteenth electron-volts) hits a nitrogen or oxygen nucleus high in the atmosphere, it generates a cascade of secondary particles that rip downward at essentially the speed of light, producing an extensive atmospheric shower of ionizing particles. When this occurs within the region of a strong electric field in a thundercloud, a runaway electrical breakdown takes place and a lightning bolt is triggered. The cascade of secondary particles generated by the cosmic ray occupies a straight, narrow, cylindrical volume about 100 metres in diameter and tens of kilometres long, whereas the lightning bolt, once triggered, follows a crooked path dictated by the electric field pattern of the thundercloud and the rain, ice, and humidity conditions within the storm.

Thus it appears that the unpredictable staccato dance of lightning bolts marks the random arrival of subatomic debris from the most violent events in the universe, events that occurred thousands of years ago, thousands of light-years from Earth. This is a revelation that will imbue me with a new sense of spine-tingling awe when next I experience a lightning storm on a summer's night.

SEEN IN THE WILD  
**Spring Birds 2005**  
by Mike McCall

It will come as no news that weather of the kind we expect in spring took so long to get here that many birders fretted that early avian arrivals might be felled by cold or starvation. However, unlike the rotten summer of 1816, when winter never left North America, crops failed, and the United States as it then existed fell into a depression that quickly took many, including John James Audubon, from prosperity to poverty, our world soon recovered and the parade of spring migrants and residents carried on.

With some exceptions, the same birds return at about the same time each year, yet our pleasure in, and our wonder at, the reenactment of the annual miracle never diminishes. Whether it's the first robin, the reappearance of newly gilded goldfinches, the first sweet White-throat song, or the first hummer, it is all *stop-the-press* news, a confirmation that in spite of the nuttiness and tragedy daily thrown at us by the media the truly important and timeless cycles of nature take scant notice of man's presence. This year, too, unusual visitors and behaviours were excitedly reported, and those of us within sight of Blomidon had our share.

Starrs Point was frequently a featured destination for both Valley people and those from away, thanks to the continued presence of the Red-bellied Woodpecker at the Daigles' and a nesting Great-horned Owl. The latter was sighted in late March, and by Apr 11 the Thextons were able to spot an owlet; Judy Tufts reported all well with mother and child on the 23rd, as did Jim Wolford on May 2, and in the following weeks photos of the family of two were coursing up and down the Internet.

Indigo Buntings were seen (and enjoyed) at many locations; one stayed around John and Avril Harwood's Woodside feeder for ten days, and Marlene Snyder saw and photographed one on her Gaspereau deck on May 24. John Belbin braved a cold, windy day to do his rounds on the Fundy shore but considered the experience well worth it when he counted about 100 Northern Gannets near Margaretsville – the largest number he's ever seen in the area.

Other non-routine sightings were White-crowned Sparrows at Grand Pre and Wolfville on May 25, a Pectoral Sandpiper at Van Nostrand's Pond on Apr 24, and two nighthawk sightings in or near Wolfville by Jim Wolford on May 16 and another by Jean Timpa on June 7. I lament the reduction in their numbers; one of my strongest memories of the small southern Ontario town where I grew up was the sight and sound of dozens of nighthawks climbing, diving, and zooming above the town's main street on summer evenings.

Andy Moir at Freeport reported a rare (for NS) Cattle Egret in late April.

On May 25 Angus MacLean had a quick look at a Three-toed Woodpecker before a Hairy Woodpecker landed nearby to scare it away. On the same outing, Angus heard a Tennessee Warbler, "difficult to find most years in Kings County."

"Where are the hummers?" was frequently heard in May. A website allowed us to follow the daily drift of Ruby-throated Hummingbirds north and east through the US in March and April. Their progress seemed normal – perhaps a day or two later than usual – but an untimely stretch of cold, wet weather intervened, with the result that "my" hummers, who usually arrive May 8, didn't show up until the 18th, and Judy Tufts' pair didn't arrive until May 30.



CATTLE EGRET

Can we have a spring bird report without mentioning Chimney Swifts? No. Loyal counters have been out nightly at RTNS, Middleton, and Bible Hill, and they assure us of good numbers entering the chimney at the usual times. On Jun 7, 175 swifts entered the RTNS chimney and 263 did their trick in Bible Hill. In both Wolfville and Middleton, however, they are the bedtime snack of choice for the local Merlins.

Andy Nette of Wolfville had a crow nest in a tall spruce in his yard. On Apr 16 he looked out to see crows harassing an

owl that had occupied the nest – and soon fled. Later that day, Andy found four crow eggs and one owl egg in the nest. The next day, Andy heard another crow/owl disturbance caused by a Barred Owl sitting on the nest. Investigation turned up two owl eggs and four crow eggs. No happy ending, I'm afraid. The owl sat the eggs for two and a half to three weeks, severely pestered by crows. Eventually, both species lost out; the crow eggs disappeared, and all that remained was the cracked shell of a single owl egg.

The weekend of June 12/13 had the troops hopping. A small task force turned out to provide succour to two Bald Eagle nestlings that fell from their nest on Oak Island Rd, Avonport. They were found by Jamie Simpson, who put out an eagle SOS and received a prompt response from Sherman Boates, Jim Wolford, and Clarence Stevens. Because the birds were nowhere near fledging, they were collected and will be taken to Raptor Rehab on June 13. [Both chicks later died. –ed.] Our collective thanks goes out to all concerned. If that wasn't enough excitement, just before the eaglets were found, a crow that had become entangled in fishing line, which in turn had become snagged on a stump, was disentangled and released just before it was caught by the incoming Minas Basin tide.

Corvids again figured in Eric Mills' Sunday. I'll let him tell the story:

“About 9:45 I stopped along Saxon Street, just east of the north end of Fred Thomas Road, more or less in front of house 1224 (the location is a bit south of Sheffield Mills and close to Canning) to look through a gathering of ravens and crows. The first bird in my binocular field was an adult Black Vulture. I watched it for quite some time as it stood quietly, slept, snuggled into a depression in the ground, and sunned itself with wings spread. After a while, about 11, the vulture quite spontaneously took off, flew off to the west, gained altitude, and eventually circled over the Valley floor, probably over Centreville. I lost it at that point, but had the impression that it wasn't leaving, but getting up to do what vultures do best – soar – as the day heated up.

“The reaction to the vulture of the many corvids on the ground was fascinating. Some ravens feeding nearby were supremely indifferent. Others, dropping in, walked up to the vulture, circled around it, and peered curiously. One actually cosied up to it, side by side. If (pardon my

anthropomorphizing) there had been a conversation balloon over them, it would have read something like, ‘What the heck is this? It looks like one of us, but it isn’t.’ A small group of crows was far more aggressive, dive-bombing the vulture for a few minutes. It maintained a truly regal indifference.

“This bird may be hard to find again among the fields full of ravens (commented on by Richard Stern) and the constant movement of corvids overhead. Likely it will end up in some nearby field again, so checking the ravens may help. The very distinctive choppy flight and unique shape in flight (especially the short tail and square silhouette) may help too if it’s in the air. A nice bird for the birding doldrums.

A woman brought a duck to her vet. As she lay her duck on the table, the vet pulled out his stethoscope. After a moment, the vet shook his head and said, “I’m so sorry; Cuddles has passed away.”

The distressed owner wailed, “Are you sure?” “Yes. The duck is dead,” he replied. “How can you be sure?” she protested. “I mean, you haven’t done any testing on him or anything. He might just be in a coma or something.” The vet rolled his eyes, turned around and left the room, and returned a few moments later with a black Labrador retriever.

As the duck’s owner looked on in amazement, the dog stood on his hind legs, put his front paws on the exam table, and sniffed the duck from top to bottom. He then looked at the vet with sad eyes and shook his head. The vet patted the dog and took it out, returning a few moments later with a beautiful cat. The cat jumped up on the table and also sniffed the bird. The cat sat back on its haunches, shook its head, meowed softly, and strolled out of the room.

The vet looked at the woman and said, “I’m sorry, this is most definitely, 100% certifiably a dead duck.” Then the vet turned and produced a bill, which he handed to the woman. The duck’s owner, still in shock, took the bill. “\$150!” she cried. “\$150 just to tell me my duck is dead?!”

The vet shrugged. “I’m sorry. If you’d taken my word for it, the bill would have been \$20. But, with the lab report and the cat scan . . .”

— from Donna Jack, via James R. Hirtle, on NatureNS

## West Hants Christmas Bird Count reported by Gail Davis

Due to the winter storm on December 27, the Christmas Bird Count was rescheduled for January 2 which turned out to be a beautiful, if cool, sunny day. Twenty-six participants scoured the woods, shoreline, fields, and streets of Hants County from Martock to Cogmagun looking for birds. At the end of the day, they came up with 9,255 birds of 57 different species, ranging from the Common Crow to the more exotic Red-bellied Woodpecker and the beautiful Northern Cardinal.

The highlight of this year's count was the Red-bellied Woodpecker, of which five were seen. This bird has never before been recorded in a Hants County Christmas count. This year it has also shown up in bird counts throughout the province. It will be interesting to see if its numbers increase over the next few years and it becomes a permanent resident.

The Christmas count total is really only a fraction of the birds that live in our area, but the continuous monitoring afforded by the count may show some changes taking place. One notable change is the lower count of the owls and Pileated Woodpecker populations, both being residents of old-growth forest. There have been vast increases in the populations of starlings, gulls, and crows, all birds that adapt quite readily to changes in their environment.

The day ended with the usual potluck get-together and count tally. As long time participants have said, the hot cider and warm atmosphere at the Woolaver's farmhouse is the highlight of the Christmas count.



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# Eastern Annapolis Valley Weather

## Winter 2004/05

by Larry Bogan, Cambridge Station, NS

The recent wind and cold makes most of us feel as if it is too early to summarize what the winter has been like; however, let's be optimistic and hope the worst is over. Actually, it has not been a very unusual winter except for our snowfall pattern.

	Mean temperature (deg.C)	Snowfall (cm)	Total precipitation (mm)	Bright sunshine (h)
December (44 yr average)	-25 (-13.0)	785 (30.9)	100 (4.0)	201 (8.4)
January (44 yr average)	-36 (-32.8)	1052 (41.8)	86 (3.4)	164 (6.7)
February (44 yr average)	-46 (-5.3)	96 (3.8)	40 (1.6)	108.7 (42.3)
Season (44 yr average)	-53 (-4.3)	1963 (77.4)	227 (9.0)	361.3 (137.2)

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

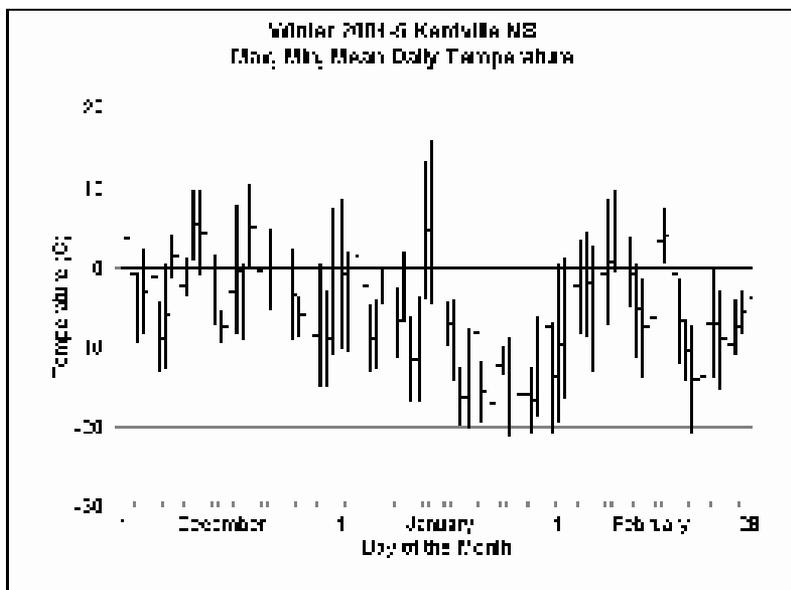
### Temperatures

The winter season was colder than average by 1.0°C, mostly due to the very cold weather in January, which was a full 3.1°C below average. December was about normal, and February was a bit warmer than normal. The graph of daily temperatures shows the ups and downs of the temperatures during the season. A normal progression would be a

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*Ed note: We were unable to place this article in the Spring 2005 issue of the newsletter, so for continuity and archival purposes, we've included it here.*

slow decrease in the temperature to the end of January, then a slight rise toward the end of February. As you can see, December temperatures did not drop much, and early February had some unusually warm weather.



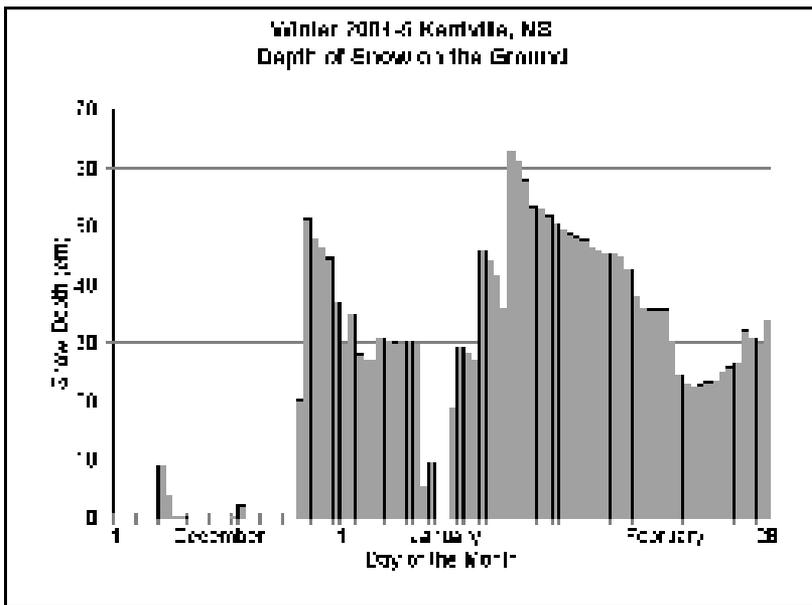
## Precipitation

It seems as if we had a lot of precipitation during the winter, but the overall season total was about two-thirds of the long-term average. The reasons for this, I think, are 1) the first half of the season never had more than three successive days without precipitation, and 2) more than usual proportion of precipitation was in the form of snow. I think everyone remembers the week of January 16–24, when we had a metre of snow fall during three successive storms. That week is clearly shown on the graph of snow on the ground by the three sudden increases in snow depth. The snowfall for the season was about average, but February was unusual in that it had only one-seventh the expected amount. February also was very dry: It received only 4 cm of total precipitation, and that helped reduce the depth of snow on the ground.

## Sunshine

It was a normal dreary winter, since cloudiness was only slightly less severe than expected. I don't have a figure for the maximum possible

bright sunshine hours, but the rule of thumb is that the Nova Scotia winter skies are covered by clouds about two-thirds of the time. My solar home worked reasonably well this winter with the moderate increase in solar heating.



### Wind

December and January were windier, with monthly mean wind speeds over 10 km/h, while February was better, with lower mean speeds. Interestingly, all three months had very windy days near the end of the month with wind speeds over 30 km/h.



# Eastern Annapolis Valley Weather Spring 2005

by Larry Bogan, Cambridge Station, NS

What a good start to spring this year. The snow that had been hanging around during the winter mostly disappeared on the 8th of March. That was the warmest and windiest day of the month, and the snow depth dropped from 34 to 9 cm while 33 mm of rain fell. More snow fell during a cold snap in the next week, but the snow was all gone by the last week of the month. Then there was April.

	Mean temp (deg. C)	Mean max/min temp (mm)	Snow- fall (cm)	Total precip. (mm)	Bright sunshine (h)
March (44 yr. average)	-1.2 (-1.7)	-5.3-2.9 (-5.2-3.3)	16.8 (44.6)	88 (107)	116 (133)
April (44 yr. average)	6.3 (4.5)	1.0-11.6 (-0.1-9.2)	1.1 (13.9)	103 (83)	187 (152)
May (44 yr. average)	9.1 (10.6)	5.0-13.2 (4.9-16.2)	0 (2.0)	180 (78)	99 (201)
Season (44 yr. average)	4.7 (4.5)	- -	17.9 (60.5)	371 (268)	402 (486)

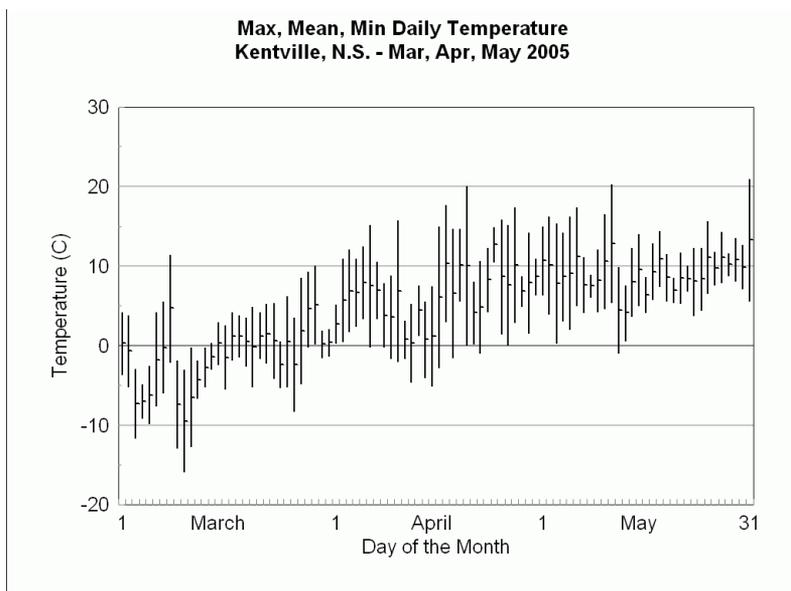
*Source: Food & Horticultural Research Centre, Kentville, NS.*

## Temperature

The season started out with slightly warmer than normal temperatures, and then in April we had a wonderful month, with the averages 1.6°C above normal. May was thus a big disappointment with its mean temperature 1.5°C below normal. Overall the season ended up slightly warmer than normal. On the chart of temperatures notice how the temperature rises during the first half of the season, then levels off and stays constant for

the last half of April and all of May.

While the mean temperatures in March and May deviated below normal, the mean minimum temperatures did not. It was the mean maxima that were high in March and April and 3°C low in May. Despite being a cold month, May had only one day with the minimum temperature below 0°C.

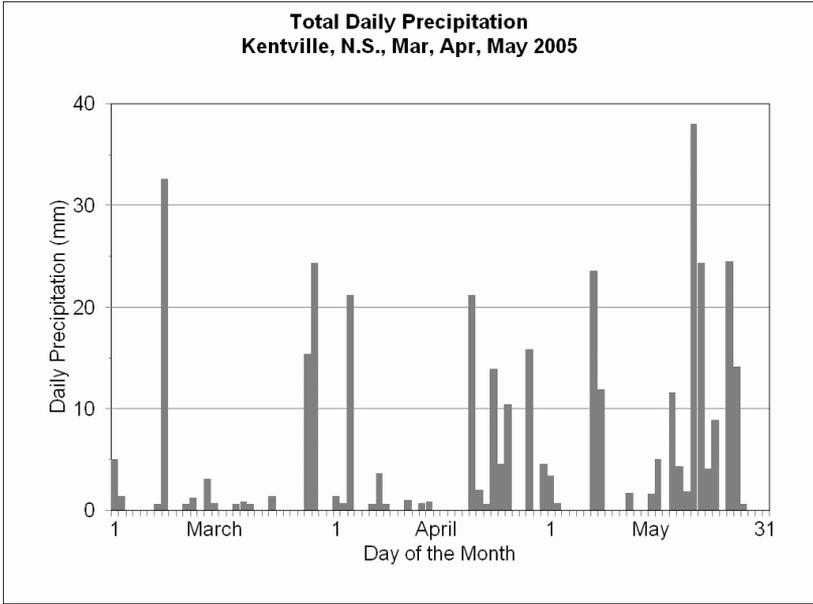


### Sunshine

As with temperatures, April was the brightest month of the three. May was a dark month with less than half of the expected bright sunshine hours. I have not seen many months with that small a fraction of normal sunshine. Whereas May should have one-third more sunshine than April, it actually had half of April's sunshine. March was also short on sunshine, but by only 13 percent. The season overall had 83 percent of the normal sunshine.

### Precipitation

The season was wet with only one period as long as five days without precipitation. The rest of the season had typically only two or three days between showers or rain. There were eight days with more than 20 mm of rain. The graph of daily precipitation shows how evenly the rains were



spread across the season. May was most extreme month because it had nearly half of all the rainfall for the season (180 mm of 371 mm). The season finished with 38% more rain than normal. At least we did not have anything like the 60 cm of snow for a normal season.

As of this writing, June has continued the trends of May and is darker if not as rainy. As a sailplane pilot, I desire warm, sunny days to generate the rising air that keeps me aloft. This season I have had only one flight so far, while in a typical year at this time I would have flown more than a half a dozen. By the time you read this, I hope real summer weather has arrived.



# What's In The Sky?

## by Roy Bishop

New Moon: July 6, August 5, September 3, October 3

Full Moon: July 21, August 19, September 17, October 17

Autumn begins on Thursday, September 22 at 19:23 ADT

### Planets

Venus, having lapped Earth when it transited the Sun on June 8, 2004, will catch up to Earth and lap us again (this time passing well north of the Sun) on January 13, 2006. Venus reached the halfway point in its race to lap us again when it passed behind the Sun last March 31. Currently Venus is the bright object low in the western evening twilight, and it is slowly approaching us.

Jupiter is currently high in the western sky as night begins, but drops lower and sets earlier as the weeks go by. As twilight deepens on the evenings of August 30 through September 3, Jupiter passes near Venus, very low near the western horizon. On the evening of Tuesday, September 6, about 8:15 p.m., look low in the fading western twilight for Venus, Jupiter, the crescent Moon, and the star Spica (in this sequence, clockwise from the upper left). All four will fit within a binocular field of view. By 8:50 p.m. this celestial quartet will have set.

Mars is in the morning sky, rising earlier and becoming brighter as the weeks go by this summer. Mars will be nearest Earth on October 30 and at opposition on November 7, providing Nova Scotians with the best view of this orange planet in many years.

### Large Full Moon

The Full Moons of July 21 and August 19 are the nearest, and hence largest and brightest, of the year. The big and bright Moon causes Fundy tides to be big and fast flowing. For more on these perigean spring tides, see the note on the July page of your BNS Calendar.

## **Meteors**

The Perseids are one of the best meteor showers of the year. This year is favourable for viewing the Perseids, since the Moon will be a waxing crescent, setting well before midnight and leaving the rest of the night in darkness. The peak of the shower is expected on Thursday and Friday nights, August 11 and 12. See the August page of your BNS calendar for viewing recommendations.

## **A Star Party**

Nova East is the annual star party hosted by the Halifax Centre of the Royal Astronomical Society of Canada (RASC), by the Nova Central Astronomy Club (NCAC) in Truro, and by the Minas Astronomy Group (MAG) of Wolfville. Nova East is held in late summer around the time of the new Moon at Smileys Provincial Park near Windsor. This year Nova East is on Labour Day weekend: September 2, 3, and 4. Viewing of the Sun and the nighttime sky for the public occurs on Saturday. If you wish to attend all events, including the talks and workshops, check the website <<http://halifax.rasc.ca/ne/>> for more information, registration, and reserving a campsite at the park. Anyone can attend. Families with children are especially invited. Last year approximately 100 people attended Nova East.

## **An Unprecedented, Man-made, Cometary Impact**

Early on July 4, part of NASA's Deep Impact space probe is scheduled to collide with Comet Tempel 1. The 372 kg impactor will slam into the comet's nucleus at a speed of 10 kilometres per second. The energy of the collision will be equivalent to the explosion of 5 tonnes of TNT and will blast a small crater in the side of the mountain-sized nucleus. Comet Tempel 1 has been visible in my telescope this spring as a small dim cloud of light (it is too faint to be seen with the unaided eye or in binoculars). From Nova Scotia, the scheduled moment of collision occurs after the comet has set on July 3, but on the evenings thereafter I shall be looking in great anticipation to see how much Comet Tempel 1 has brightened because of the sunlit cloud of debris released by the impact. Astronomy has historically been an observational science. On July 4 cometary astronomy becomes an experimental science!

## Blomidon Naturalists Society

# 2005 Membership Fees and Publications Prices

Each member of the Blomidon Naturalists Society receives four issues of the BNS newsletter annually. Because BNS is a registered charity, the society issues receipts for all donations. The membership fee itself is not tax deductible. Members may also join the Federation of Nova Scotia Naturalists through BNS and will receive FNSN News, the federation's newsletter. FNSN membership is not tax deductible.

Please send cheques or money orders in payment of membership fees and for publication purchases to

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No.	Membership classification	Price	Total
_____	Individual adult	\$15.00	\$ _____
_____	Family (number of family members _____)	18.00	\$ _____
_____	Junior (under 16 years)	1.00	\$ _____
_____	Federation of NS Naturalists membership	5.00	\$ _____
_____	Tax-deductible donation		\$ _____
_____	2005 BNS calendar (\$12 + postage)	13.50	\$ _____
_____	<i>Natural History of Kings County</i> (\$10 + post.)	12.00	\$ _____
_____	Annotated checklist of Kings County birds	6.00	\$ _____
_____	Blomidon Naturalist crest	5.00	\$ _____
	<b>Total</b>		<b>\$ _____</b>

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

## **Sources of Local Natural History**

**(compiled by Blomidon Naturalists Society)**

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

