

# Blomidon Naturalists Society

Fall 2000 - Volume 27 Number 3

## **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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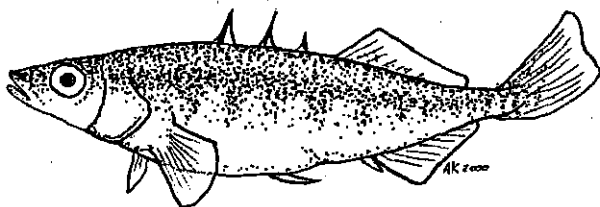
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### Whale Adoption Programs (as of August 2000)

Brier Island Whale & Seabird Cruises, based in Westport, Brier Island, Nova Scotia, now oversees the HUMPBACK ADOPTION program (\$20) Phone 1-800-656-3660 or e-mail <BRIERIS.@CLAN.TARTAN.NET.NS.CA> for information pamphlet. Adopters are provided with an annual report on sightings. A web site, [www.TartanNet.ns.ca/brierisl.html](http://www.TartanNet.ns.ca/brierisl.html), shows monthly updates of the current season's sightings.

East Coast Ecosystems, based in Freeport, Long Island, Nova Scotia, offers the SPONSOR A RIGHT WHALE program (\$35 minimum). Phone toll-free 1-888-854-4440 or e-mail <DEB.TOBIN@NS.SYMPATICO.CA> for an information pamphlet.

## EDITOR'S NOTES

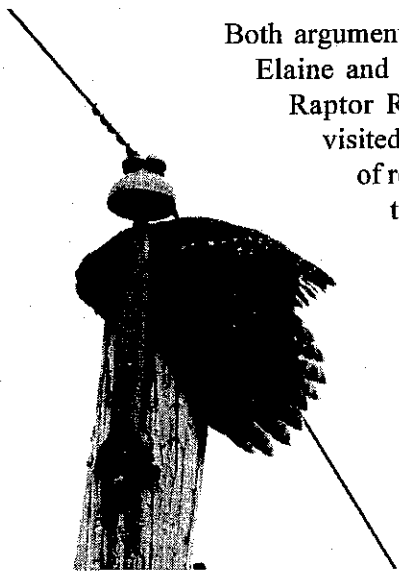
The Peregrine Falcon has been removed from the endangered species list and the Bald Eagle will soon follow. But these successes have prompted some biologists to call for reassessment of wildlife management priorities; in particular the value of raptor rehabilitation centres.

Some biologists assert that the money directed to raptor rehabilitation would be better spent on expanding habitat for endangered species. The rehabilitators however, argue that animals that come to grief because of man's activities; widespread use of harmful chemicals, extensive networks of power lines, and bird kills by automobiles, should not be left to die slow, lingering deaths. Many of these birds can be restored to full vigor and released back to the wild where, statistics show, such birds experience normal longevity and are usually assimilated back into the breeding population. They also point out that raptors are at the top of the avian food chain and that by monitoring their overall health and their numbers, warning signs of danger to preyed-upon species and to humans can be identified.

Both arguments have merit. Those of us who heard Elaine and Mike Kew tell us about the Atlantic Raptor Rehabilitation Centre, and who have visited their facility are probably supporters of rehabilitation. Both activities are certain to continue and in my view, can do so.

Those who see land acquisition and habitat restoration programs as the key to restoring declining populations are not going to reduce their effort and moreover, are probably reluctant to be presented as picking the pockets of the rehabbers. And as for the rehabbers, I have the impression that they could no more stop doing what they do than a bird can give up flying.

Mike McCall



*Dead Barred Owl*

**BLOMIDON NATURALISTS SOCIETY**  
**FALL 2000**  
**MEETINGS**

Regular BNS meetings begin at 7:30 P.M. in the Beveridge Arts Centre, Room 244, Acadia University, Wolfville. B.A.C. is across Main St. from the Atlantic Theatre Festival parking lot. All are welcome.

**Monday, October 16 (tentative) - Chris Harvey-Clark on "Charismatic Cartilaginous Canadians - Confessions of a Closet Elasmobranchologist"**. Chris will talk about the natural history and conservation challenges for Canadian sharks, skates (rays), and possibly sea turtles on both east and west coasts. Part of his content will lead nicely into our next meeting on Sable Island. Chris is an excellent speaker and photographer and is the author of the photographic field guide, "Eastern Tidepool and Reef".

**Monday, November 20 - Zoe Lucas** will talk about "Sable Island: Natural History and Review of Recent Research and Conservation Issues". Zoe is a well-known researcher on the island's horses, seals, birds, dunes and flora, beach litter, etc. She will characterize the island's history and biology, as well as current efforts to preserve it for future generations. Many of us remember her remarkable pictures, detailed knowledge from many years of work there, and dedication to the island's long-term well-being.

**Monday, December 11 - Sam Vander Kloet** will present "Vietnam Vaccinia". Translation of Sam's Latinized title is a fascinating slide-show about professional botanizing, especially for relatives of blueberries, of course, in Vietnam. He'll describe what it's like to travel there with a museum team of explorers, permits vs. bribes as necessary. \*\*NOTE: This meeting is on the *second* Monday of December rather than the more usual *third* Monday.

## Integrated Resource Management

A recent email on NATURE.NS from Mark Brennan of the Pictou County Naturalists may interest BNS members who did not receive it.

Many of you are no doubt aware of the recent public meetings held by DNR outlining the Integrated Resource Management plans for Public Lands across Nova Scotia; no doubt some of you attended these meetings. There is great and growing concern among many sectors of the public, including naturalists, that the IRM plan is hugely catering to industry. For instance under this plan less than one percent of new Crown Land has been protected, excluding existing protected areas.

In 1992 the provincial government promised to protect a representative sample of each of Nova Scotia's natural regions. To date the WWF says that only 16 areas out of 80 have a satisfactory level of protection. Another problem with IRM is that the senior level land use committee is made up entirely of DNR personnel with no involvement from any other department or public group. Now is the time for you to join the concerned people of Nova Scotia by signing onto the Nova Scotia Public Lands Coalition. We need groups, individuals, businesses, clubs, associations and most of all the general public to create a ground swell of support to protect our environment. If you are a member of an organization please consider raising this issue at the next meeting.

If you would like to view the IRM plan check out either of the following two web sites,

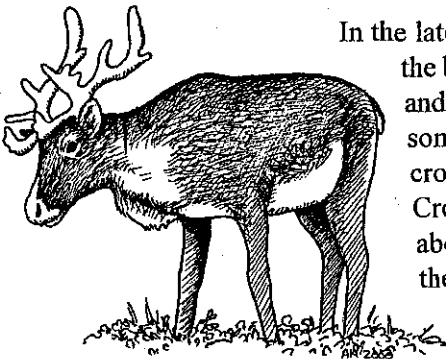
Ecology Action Center at:  
<http://www.supercity.ns.ca/~land/>  
(Look under "what's new")

Department of Natural Resources at:  
<http://www.gov.ns.ca/natr/irm/default.html>

## A Nature Trip, 1774 by Merritt Gibson

May 20, 1774 was cold, for the warming trend of the 1800s was not yet evident. I left my home in Canning and travelled on horseback through Sheffield Mills to circle the upper Habitant and Canard Rivers. The tide when full flooded those parts of these creeks that had not been dyked. Mr. Chipman, a successful farmer at the "Corner", near the west end of Church Street, had invited me to visit and meet his two guests, John Robinson and Thomas Rispin.

John and Thomas, farmers from Yorkshire County in England, had come to Nova Scotia on the ship Prince-George in the hopes of buying a farm. More importantly, to me, they were both keen naturalists. They immediately asked me about the large herds of "Carraboes", which they called Rein-deer, that lived in Nova Scotia. They had not seen Carraboes and asked if a trip were possible. I, too, had not seen them for several years and the trip was quickly arranged.



In the late 1700s, Carraboes summered on the barrens of what is now Colchester and Cumberland Counties. In autumn, some migrated to the Avon River, crossed it, and travelled up the St. Croix River to winter on the uplands above St. Croix. Others travelled up the "Gasperox" Valley and wintered on the meadows and barrens of its headwater lakes.

We planned a visit to the Gasperox Lakes hoping that some Carraboes would still be there. Allowing time to fish and nature-watch, I proposed a five-day trip. We left the "Corner" and travelled south through magnificent stands of pine and hemlock and up onto the Southern Upland. My guests were excited by the abundance of Mouse-deer (Moose) on the meadows around the lakes. They had not seen Mouse-deer in England and at eighty stone (1 stone = 6.4 kg) they were impressive animals - and so many of them!

As we passed one boulder our horses were startled by the scream of a Lucovie (Bobcat) that was sunning itself on the boulder. Startled, it leaped from the boulder and quickly disappeared into the woods. We also saw Otters in the lake and Mink and Sables (Weasel) on shore, and had a quick glimpse of a Fisher as it ran into the woods. We were impressed by the number of Porcupines. The Mi'Kmaq people collected the quills, dyed them with a yellow dye that they boiled from the roots of Goldthread, and used them in many designs to decorate their clothing.

We found only a few Carraboes when we arrived at Gasperox Lake, and had to hunt for a long time to locate them. We were too late in the season and most had already left on their migration downriver. We followed the ones that remained for much of the day for they were a new species for my guests. A pair of Grey Eagles (immature Bald Eagles) and a Buzzard (Red-tailed Hawk) circled overhead, and we watched a Fish-hawk (Osprey) diving for fish. For my vistor, the Fish-hawk so resembled a Kite that they insisted on calling it a Glead.

In the woods, we saw many Brown and Black Partridge (Ruffed and Spruce Grouse). We tried a couple of Black Partridge for dinner and regretted it. The meat was not as sweet as that of the Ruffed Grouse, perhaps because of their winter diet of spruce buds and needles. The Mi'Kmaq people called partridge "Pulowech".

We had to hurry back to the "Corner" for my guests would soon have to leave and they had not purchased a farm. However, we did take time to stop at the foot of the Uplands and watch an enormous flight of Wild Pigeons (Passenger Pigeons). Perhaps the flight was headed to Windsor to feed in the large stands of oak trees that grow there.

When we arrived at Mr. Chipman's home, we were delighted to learn that he had decided to sell our guests one of his farms. This farm was one of 262 acres, including 20 acres of cleared upland, 12 acres of dykeland, 230 acres of woodland, 2 log-houses and a log-barn. The price was a good one - 200 pounds! It had been a successful trip for both farmers and naturalists!



## A Crow Story

(The following Question and Answer appeared in the October 2000 issue of Cottage Life magazine and appears here by kind permission of the editor.)

Q. A number of crows frequent a tree near our dock, gabbing the afternoon away. Twice last spring we were surprised to see a crow fly to the water and come away with a sunfish in its beak. Is this normal? - GARY GREENWOOD, CAMERON LAKE, ONT.

Not one of the experts we consulted has witnessed this behaviour, but it didn't surprise any of them. "I wouldn't put anything out of the realm of possibility for a crow," says Mark Peck, an ornithologist at the ROM. "They will eat practically anything. I think it's unusual, but if the opportunity presents itself they'll grab those fish." Kevin McGowan, an expert on crows and curator of birds and mammals at the Cornell University Museum of Invertebrates in Ithaca, N.Y., agrees: "They'll go after anything that's small enough to be grabbed and eaten." Peck says crows are one of the most intelligent species of birds. For example, there are numerous stories of them working in teams, where one will distract the family dog while its partner feeds from Fido's dish. Given that incidences of crows fishing don't seem to have been previously recorded, you may want to keep a camera with you on the dock to document the next occurrence. "I've seen crows pick stuff up off the water before, but never a fish," says McGowan enviously. "That's actually pretty neat."



*Editorial Note: Actually, there has been at least one previous report of crows eating fish ("good-sized trout"), published in 1883 and cited by A.C. Bent in his classic series on the life histories of birds.*

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## Field Trip Reports

by Jim Wolford

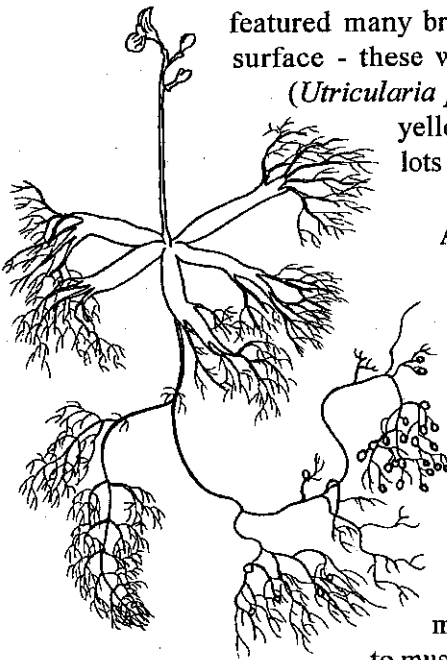
### Coastal Plain Plants

August 5, 2000

Nick hill lead a very small group on a bright, warm day for our bns field trip for coastal plain plants.

En route to New Elm along the New Ross Road at Murphy Lake, Jean Gibson is sure she saw a **bobcat** beating a hasty retreat back into the woods from the road.

West of New Elm, a water-lily-covered pond featured many bright pink, flowers all over the surface - these were the **purple bladderwort**, (*Utricularia purpurea*). Nick also showed a yellow-flowered **bladderwort** and lots of **sundews**.



At Eel Weir Stillwater, a very large marsh we were shown lots of **long's bulrush** (*Scirpus longii*), whose well-being and growth-forms are very much related to grazing pressure from muskrats. Nick described to us the "guerilla" vs. "phalanx" growth-forms, which are strategies related to how rich the soil is and how many competitors are in addition to muskrats.

Coastal plain plants are generally poor competitors; they do best under Nutrient-poor conditions and/or seasonally flooded habitats where the flooding keeps back competitors, especially shrubs. The "phalanx"

strategy involves the rhizome putting out a closely-spaced series of shoots or ramets, and this curved line of plants grows both forward and outward, creating a circular patch of nutrient-depleted soil which is very like a fairy ring of mushrooms. These open patches of ground provide temporary conditions for other plants to germinate, such as the coastal plain **lance-leaved violet** (*Viola lanceolata*). We saw lots of young violet plants in such bare circles.

Nick also told us that **long's bulrush** almost never flowers. Well, when a leader speaks in absolutes he is sure to be confounded; we found lots of colonies showing flowering "individuals", in one case, about 10 or more together. Nick also told us that flowering is often a result of some trauma, like fire. But most of the time they just reproduce vegetatively, from rhizomes, and probably often only one large clone will occupy a small wetland.

Nick also showed us lots of **tubercled (?) spikerush** (*Eleocharis tuberculosa*), which is an indicator of poor nutritional conditions, and lots of **mermaid-weed** (*Proserpinaca pectinata*) (leaves only), and **military rush** (*Juncus militaris*). Where the stillwater joins the pleasant river were lots of beautiful **pickerelweeds** were in bloom.

Across the road from the Stillwater is Shingle Lakes where along the water's edge were a few **golden crest** (*Lophiola aurea*), lots of flowering individuals of **intermediate-leaved sundew** (*Drosera intermedia*), some **yellow-eyed grass** (*Xyris difformis*) and **buttonbush** (*Cephalanthus occidentalis*). On the western edge of Ponhook Lake we stopped at 18-Mile Brook, and near there were two **Osprey** nest-platforms adjacent to N.S. Power lines; on one platform an adult Osprey was calling. Here the road has interrupted and altered the flow through a large fen. On the upstream side the **long's bulrush** is doing ok, but downstream of the road flooding occurs much less often and shrubs are winning out over herbaceous plants.

At Grassy Point on the southernmost end of Ponhook Lake a couple of **Common Loons** serenaded us. On the point we found lots of interesting plants: **dwarf chain fern** (*Woodwardia areolata*), the coastal plain species of **manna-grass** (*Glyceria obtusa*), lots of **golden pert** (*Gratiola aurea*),

a coastal plain club-moss (*Lycopodiella appressa*), red root (*Lachnanthes caroliniana*), and water lobelia.

(For a complete listing of the N.S. coastal plain plant species, see the four-page insert entitled "Flowers of the Coastal Plain", which was in the Aug. 1998 Shunpiking newspaper. These are now treasured collectors' treasures, so guard yours well!)

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## Whales and Seabirds off Brier Island September 5, 2000

At least 15 of us had preregistered for the 12:30 p.m. sailing from Westport, Brier Island, with Carl Haycock and Mariner Cruises, and we enjoyed a gorgeously calm, sunny day on the water.

On our way to Brier Island, along hwy. 101 between Bridgetown and Annapolis, we encountered scattered groups (totalling over 100 individuals) of reddish-brown **woollybear caterpillars** crossing the highway in both directions. I stopped to examine one, which was a **salt-marsh caterpillar** of the **acrea moth** (*Estigmene acrea*). They were fully grown and probably

All looking for places to pupate after having fed on a variety of trees, garden crops, and other plants, such as salt-marsh cord grass. There was flowering **purple (plague) loosestrife** in the roadside ditches and median at Bridgetown and a bit in a ditch just south west of Digby.

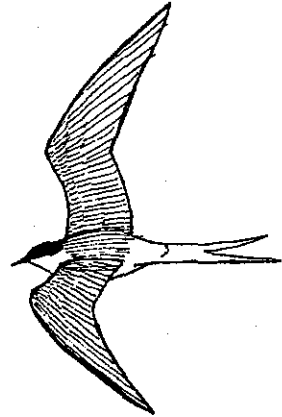
Carl Haycock welcomed us onto the Chad & Sisters II boat and introduced two other young naturalists, Kerry Graham and June Swift, who proved very helpful and friendly during the four-hour cruise.

First we headed out a few miles to the northwest and soon saw a distant **whale breach** once - it may have been a minke or a humpback though positive identification was not possible. We saw small groups of **harbour porpoises** (perhaps 20 seen in total) but no **Atlantic white-sided dolphins**,

though large groups have been seen hereabouts. Soon Carl alerted us to a **basking shark**, but the triangular fin turned out to belong to an **ocean sunfish** (*Mola mola*), which is a very strange-looking tropical fish that comes north in the Gulf Stream and, like the leatherback turtle, feeds mainly on jellyfish. This was my first sighting ever of one of these, so that was a highlight. (Later Peter Comeau told me that these are often sick or injured and those doing poorly are oriented at a 45-degree angle in the water, rather than either vertical or horizontal like healthy sunfishes.)

Our sightings of the sunfish and other things were helped by our being able to view them from a safe viewing platform on the vessel's roof.

At least 500 **Red Phalaropes**, with occasional **Red-necked Phalaropes** were sighted. Other sightings were a few hundreds of **Greater Shearwaters**, about 15 **Sooty Shearwaters** (no Manx seen, but Carl has been seeing small numbers), four **Northern Gannets** (one adult), four **Atlantic Puffins** (two swimming ones seen very well), one **tern** (Carl said Arctic), one **Common Loon**; about 25 **Herring Gulls** and five **Great Black-backed Gulls**. No storm-petrels, jaegers, skuas or fulmars were observed (the latter were strangely present into summer this year, and one was seen a couple days previously by Angus Maclean).



**Finback** or **fin whales**, were seen at a distance and were notable for their very visible tall spouts. In the same area, probably no coincidence (small fishes like herring abundant?) Were 1 + 2 **humpback whales**. The single humpback was probably a young whale that this boat had seen earlier; it prevented good viewing by making very long dives. But the other two, named **Vee** and **Luna**, allowed us lots of nice views as they kept diving repeatedly (and presumably foraging); however, they didn't do any kind of "show" for us, other than showing us their flukes several times. The dorsal fine of both of these humpbacks had very shiny white trailing edges, probably scars from parasitic acorn barnacles, which

drop off in northern waters and are re-acquired in the tropics during winter. In winter, the whales fast for months - hence the importance to them of our northern feeding areas.

As we passed the seal ledges, west of Northern Light, we could see the ledge's namesakes quite well; at least 10 **harbour seals** basked on rockweed-draped rocks exposed by the tide, and, in the water, at least four bigger and flat-headed **gray seals**.

Brier Island Whale & Seabird Tours has posted a chart of all the named humpbacks that have been seen in the Bay of Fundy since 1984, and all the years in which each has been sighted. Vee was first identified in fundy in 1984 and then seen in '84, '85, '86, '87, '88, '90, '91, '92, '97, '98, '99, & 2000. Luna was sighted in '86, '87, '88, '89, '90, '92, '93, '95, '99, & 2000.

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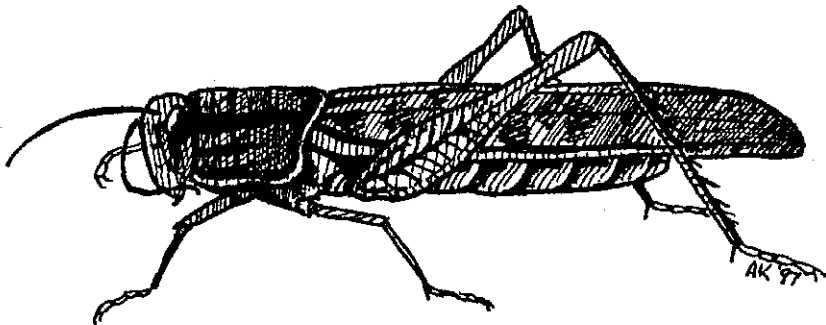
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## Valley Birds

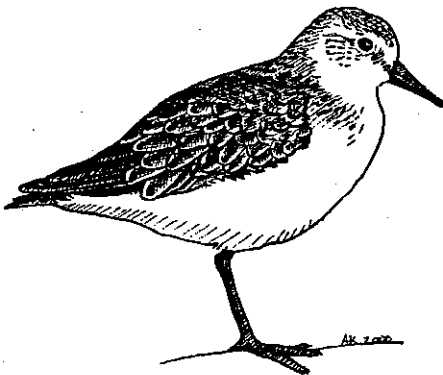
by Angus MacLean

Reports were sparse for the period and many common species were not reported at all.

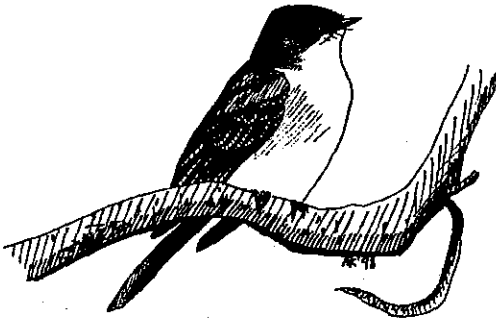
A Pied-billed Grebe was on Canard Pond on August 24 and perhaps the same one was at Harris Pond on September 15 (JCT). JCT was lucky to find an American Bittern at Grand Pré on August 25.

Five Wood Ducks spent a few days on the Saxon St. Pond (JCT, BBT) August 22-24 and 3 were still there in September (JWW). RBS reports that on September 13, there were still 10 Blue-winged Teal on Canard Pond and another 17 on Saxon St. Pond. This species is an early migrant.

On August 11, BLF was startled by an adult Goshawk attempting to take a Robin from a nest on his house at Wolfville Ridge. Only 1 Broad-winged Hawk was reported, an immature at Coldbrook on July 15 (AAM). On July 26 Art Stewart noted a pair of American Kestrels at Black Rock but no sign of nesting. RBS noted a Peregrine Falcon at Evangeline Beach on July 8, half-heartedly chasing the flocks of peeps. It was joined later by another adult and the two (and at times, three) harassed the shorebirds through August. At Windsor on August 12, JWW and his group, found two Peregrines, including an immature, chasing the flocks there.



Shorebird migration was late in the eastern Valley. RBS noted small flocks of Semi-palmated Sandpipers and Plovers on July 29 at Evangeline Beach. However the same day a flock of 15-20,000 was observed at Windsor Causeway along with good numbers of Black-bellied Plovers and Short-billed



Dowitchers (JCT). (By comparison, JCT noted on July 24-25, 1999, large flocks were already at Evangeline Beach). By August 4, larger flocks of peeps were at Evangeline Beach along with a range of larger species including a few Ruddy Turnstones and Red Knots. The latter

are scarce along our shores. On August 7 RBS could find only about 1000 Semi-palmated Sandpipers at Evangeline. However there was an equal number of Semi-palmated Plovers. Reports across the province indicate the latter species had an excellent breeding season. At Windsor on August 12, the Semi-palmated Sandpiper population was holding at about 20,000 and there were about 40 Willets with 300 each of Black-bellied Plovers and Short-billed Dowitchers. JCT & JT found about 7000 shorebirds at Grand Pré on September 9. In addition to 5000 Semi-palmated Sandpipers, there were 800+ Semi-palmated Plovers, 350 Sanderlings and 120 White-rumped Sandpipers.

On September 6 BLF found 300 Black-bellied Plovers and 12 American Golden Plovers in a field at Grand Pré. Harris Pond in Canning has always been the place to find Yellowlegs and this year was no exception. There were 37-45 Yellowlegs (mostly Greater) August 25-26 and 64 on September 15 (JCT). Solitary Sandpipers made an appearance at a small pond on Wolfville Ridge with 3 on August 27 and 5 on September 2 (GWT).

RBS discovered an adult Lesser Black-backed Gull near Canard Pond on September 13. As he notes, it was likely one of our regular winter residents. This species is noted for returning year after year to their wintering grounds. A rarity in the Valley, 2 Common Terns were at Grand Pré on September 15 (JCT, JT).

GWT reported the latest hummingbird on September 14 at Wolfville Ridge. Eastern Wood-Pewees were still singing at Kentville on September 9 (AAM). A pair of Great-crested Flycatchers had two attempted nestings



in the Coldbrook area but the results of each were uncertain (AAM). On September 15 Bernard Forsythe found a Western Kingbird feeding along a pasture south of White Rock. It was still there the following day (BBT).

The Chimney Swifts at the Robie Tufts Nature Centre in Wolfville were noted as follows: On May 8, 41 entered the chimney at dusk. Subsequent peak numbers, among fluctuations from night to night, were about 175 on May 18 and May 24, 270+ on May 30, 230 on June 3, and 220+ on June 12. (The largest number seen in 1999, the lowest ever, was 160.) After mid-June the nightly numbers in Wolfville were less than 100 and usually between 50 and 85. There were 122 on July 17 and 58 on July 27. After July 31 the numbers dwindled to less than 10 by August 8 and only one on Aug. 12. In recent years higher numbers occur at the Middleton Regional High School. High counts this summer were 430 on June 4 and 523 on June 9.

List of Observers:

BLF	Bernard Forsythe	AAM	Angus MacLean
JT	Jean Timpa	RBS	Richard Stern
GWT	Gordon Tufts	BBT	Bill & Brenda Thexton
JWW	Jim Wolford	JCT	Judy Tufts



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<i>Eranthus</i>	<i>Lilium candidum</i>
<i>Fritillaria</i>	<i>Amaryllis</i>
<i>Galanthus</i>	Paperwhites
<i>Iris</i>	Rock-garden Daffodill
<i>Muscari</i>	Large-flowering crocus
<i>Scilla</i>	Other species of crocus



# What's In The Sky?

by Roy Bishop

Full Moon: October 13, November 11, December 11

New Moon: October 27, November 25, December 25

The Winter Solstice is on Thursday, December 21 at 9:37 a.m. (AST)

The 21st century begins January 1, 2001.

## Meteors

Autumn brings two interesting meteor showers, but this year the phase of the Moon is unfavorable for both:

1. The Leonids (night of November 17/18). The Leonids produced a strong shower over Nova Scotia in 1998. As predicted, the peak of the 1999 Leonid shower occurred over eastern Europe and a weaker shower was seen from eastern Canada. How it will perform over Nova Scotia this year is uncertain. The Leonid shower occurs in the after-midnight sky. Unfortunately moonlight will hide the fainter meteors since the last quarter Moon rises about the time the shower begins. Pick a viewing site with a good view of the eastern half of the sky. Take warmer clothes than you think you will need, a comfortable reclining chair, a blanket and a thermos with a warm drink.

2. The Geminids (evening of December 13). This is one of the best showers of the year, equal to the Perseids of August, although clear December nights can be cold! Unfortunately a bright waning gibbous Moon rises in early evening. Its light will hide the fainter meteors.

## Planets

Venus is a brilliant beacon low in the southwestern evening twilight during October and November, and shifts higher in the evening sky through December and January. The brightness of Venus makes it unmistakable. Only the Moon and Sun outshine Venus.

Jupiter and Saturn rise in the evening north of east, and are in the sky all night. Saturn rises first, followed less than half an hour later by brighter Jupiter. Two naked-eye star clusters, the Pleiades and the Hyades, lie near the two planets making a striking pattern in the night sky.

Binoculars will show the four Galilean satellites of Jupiter (although all four may not be visible on a particular night). A telescope is needed to see the cloud belts of Jupiter and the rings of Saturn.

Mercury is well-placed in the morning dawn sky in mid-November. Look for it very low in the east-southeast as dawn twilight begins. On the morning of November 24th Mercury lies to the lower-right of the slender crescent Moon (look about 6:20 a.m.).

### **A Christmas Eclipse**

A partial eclipse of the Sun occurs on December 25th. The Moon passes in front of the Sun from about 12:30 until 3:30 p.m. At maximum eclipse about 2 p.m., the Sun will look like a Christmas cookie with a big bite taken out of it. There are at least three safe ways to view this eclipse:

(1) Use binoculars (do not look through them!) to project the Sun's image onto a sheet of cardboard located about 30 cm behind the binoculars. Practice this technique a day or two prior to the eclipse. It is safe to look at the Sun's image on the cardboard sheet, but do NOT look directly at the Sun, ESPECIALLY NOT through the binoculars!

(2) For a direct naked-eye view of the eclipsed Sun, look through a rectangular welder's glass, shade #14 (no other shade). Use extra caution if children are present since they may not appreciate the danger of looking directly at the Sun without a proper filter.

(3) One of the simplest, safest, and least known ways to observe the partial phases of a solar eclipse is "pinhole mirror projection". Take a small mirror and, with masking tape, cover all but a small section of the mirror's surface. The shape and size of the small opening is not critical, but a square about 6 millimetres on a side works well. Prop the mirror up on a sunny window sill and orient the mirror so the reflected sunlight shines on the ceiling or a wall of the room inside - but not directly into anyone's eyes! The spot of light on the viewing surface is an image of the Sun. The greater the projection distance, the larger, but dimmer, will be the Sun's image. The size of the opening on the mirror should be adjusted for the best compromise between image brightness and image sharpness. With this simple device, the progress of the Christmas eclipse can be viewed in complete safety in a warm room.

## **An Astronomical Telescope for Christmas?**

In a previous Newsletter, I gave my view concerning the "astronomical telescopes" sold in department and camera stores. A summary:

(1) Binoculars are the first optical instrument to acquire for use in astronomy.

(2) A beginning astronomer should know the night sky quite well, and have at least 6 months experience using binoculars on the sky before acquiring a telescope.

(3) Most telescopes displayed in camera and department stores are junk, a waste of money. For information on telescopes, see the magazines SkyNews, Sky & Telescope and Astronomy, and come to MAG (see below).

(4) Before acquiring a telescope, talk to people who have telescopes and, if possible, look through their telescopes.

### **MAG**

The Minas Astronomy Group (MAG) meets monthly (except July and August) usually on the second Saturday at seven on the second floor of Huggins Science Hall at Acadia. Like the meetings of the Blomidon Naturalists Society, MAG meetings are open to anyone and MAG members are of all ages and backgrounds. Call Roy Bishop (542-3992).



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## Summer Weather 2000

by Larry Bogan

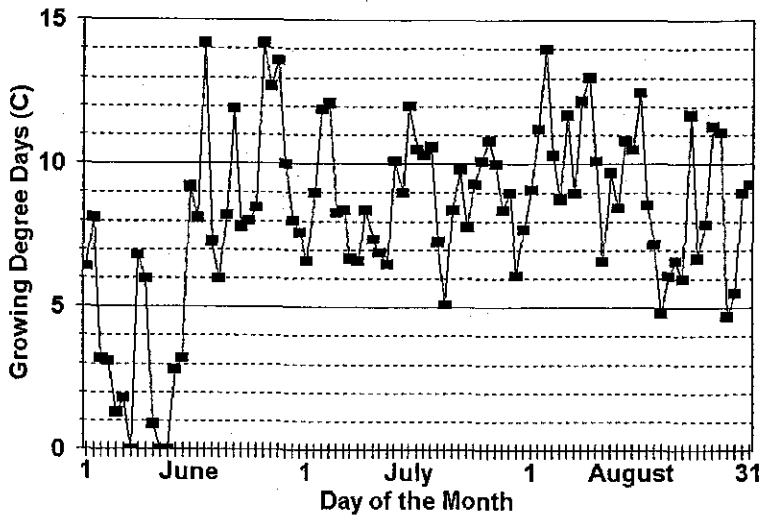
<i>from Kentville Agriculture Centre</i>	Mean Temp. (°C)	Daily Rainfall (mm)	Bright Sunshine (hours)
<b>March</b> (39 yr avg)	16.4 (16.1)	45.2 (67.8)	238 (211)
<b>April</b> (39 yr avg)	18.7 (19.3)	72.4 (70)	238 (232)
<b>May</b> (39 yr avg)	19.2 (18.6)	36.7 (92.2)	223 (216)
<b>Season</b> (39 yr avg)	18.1 18.0	154.3 230.0	699 659

The summer of 2000 had an even distribution of warmth and sunshine through out its length.

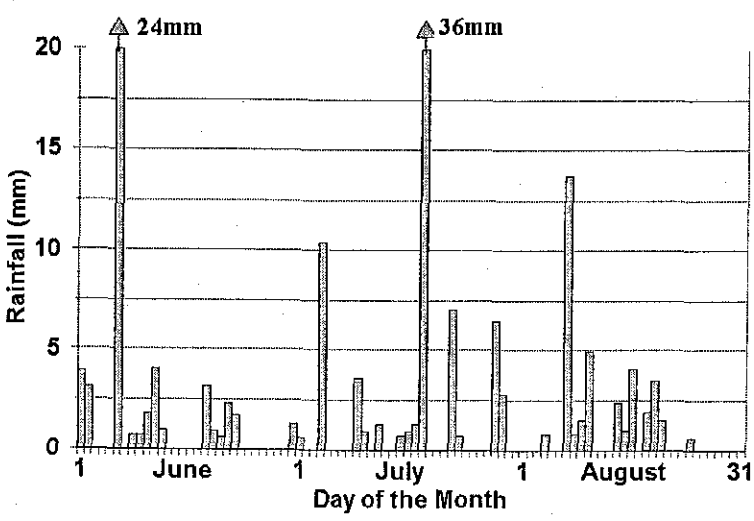
The mean daily temperature has been surprisingly constant from the middle of June to the end of August. Only early June was much cooler. This is dramatically illustrated in the chart of growing heat days over 10C\*. As you can see the heat-days were very small in that early June period. After that the growing heat-days stays mostly between 6 and 13 degree-days for the rest of the season. Gardeners will remember that the growing season was delayed due to a cool late spring. If you look at the mean temperatures of the months, they do not deviate much from the long term averages. June was average, July was 0.6 C cooler but August was 0.6 C warmer. Usually July is the hottest month but this year August took that honor. We had few extreme temperatures and only two days in June reached the 30 C mark or over.

We were dry once again this summer with only 2/3 of the normal rainfall in the season. The two above average temperature months (June and August) were short of rain while July just managed to receive a little more than the expected amount. The graph above shows the uneven distribution of precipitation. Half of the rainfall in July occurred on the 18th of July while nearly half of June's fell on the 6th of June. The

### Growing Heat Days above 10 C Kentville, NS June, July, August 2000



### Daily Rainfall Kentville, NS June, July, August 2000



rainfall on those two days accounted for over 1/3 of the total rainfall for the season.

In the same trend as the temperature this summer followed a similar pattern; it was very uniform in bright sunshine hours. This is easily seen in the very similar number of hours of sunshine for the three months. The only protracted cloudy period occurred from August 6 through 15 (3/4 of the rain for the month fell in this period). However, the second half of August was almost continuously sunny with only one day having less than 5 hours of bright sunshine.

Over-all it was a very pleasant summer although more rain would have been helpful.

*\* Growing Degree-days is calculated by subtracting 10 C from the mean temperature for the day. If the temperature is less than 10 C than the value is zero.*

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Please enclose a cheque or money order payable to "Blomidon Naturalists Society" and forward to:

Harold Forsyth  
RR #2, Wolfville, NS. B0P 1X0

Number	Membership Classification	Price	Total
_____	Individual Adult	\$15.00	\$ _____
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 Is this a gift subscription?                Yes       No

**Memberships are due January 1st, 2000**

**Sources of Local Natural History**  
(compiled by Blomidon Naturalists Society)

Information	Source	Office	Home
Rocks & Fossils	Geology Dept. Acadia U.	542-2201	
Fish	NS Dept. of Natural Resources	679-6091	
Flora - General	Ruth Newell	585-1355	542-2095
Fungi	Darryl Grund	585-1252	542-9214
	Nancy Nickerson	679-5333	542-9332
Lichens	Karen Casselman	424-7370	633-2837
Seaweeds	Darryl Grund	585-1252	542-9214
Mosses & Ferns	John Pickwell		681-8281
Birds - General	Bernard Forsythe		542-2427
	Richard Stern	678-4742	678-1975
	Gordon & Judy Tufts		542-7800
	Jim Wolford	585-1684	542-7650
	Jean Timpa		542-5678
Hawks & Owls	Bernard Forsythe		542-2427
Falcons & Eagles	Peter Austin-Smith		542-2109
Mammals	Tom Herman	585-1469	678-0383
Amphibians & Reptiles	Sherman Bleakney		542-3604
	Jim Wolford	585-1684	542-7650
Seashore & Marine Life	Sherman Bleakney		542-3604
	Jim Wolford	585-1684	542-7650
	Michael Brylinsky	585-1509	582-7954
Indian Prehistory & Archeology	Ellis Gertridge		542-2816
	James Legge		542-3530
Astronomy	Roy Bishop		542-3992
	Sherman Williams	542-3598	542-5104
	Larry Bogan		678-0446