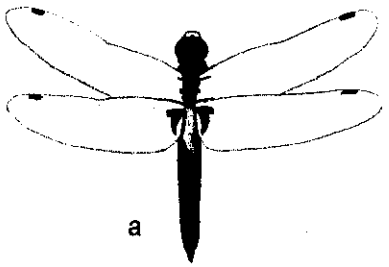

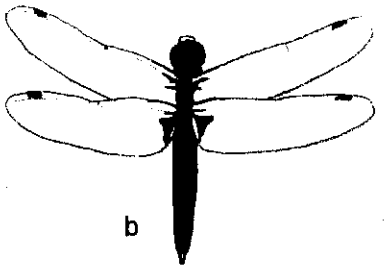

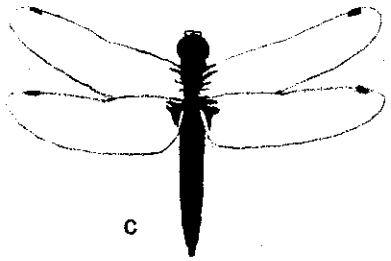

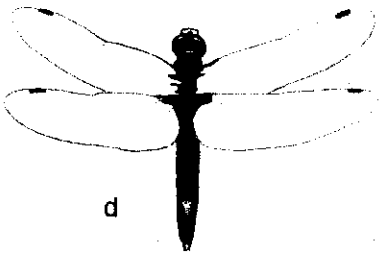

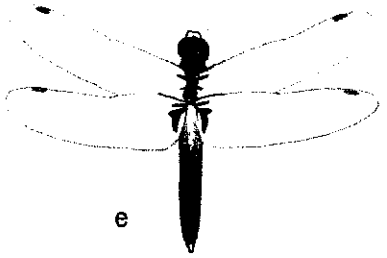

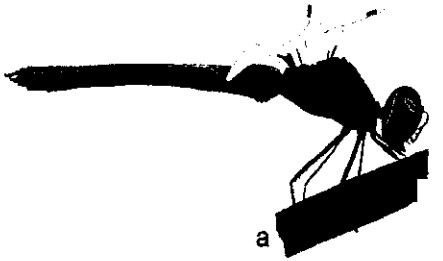

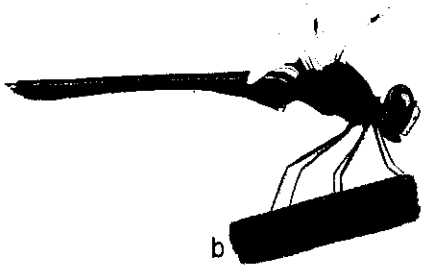

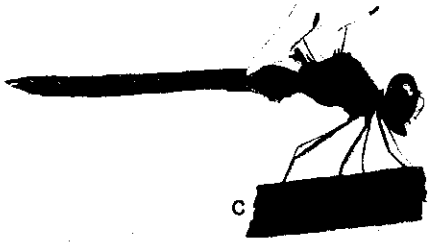

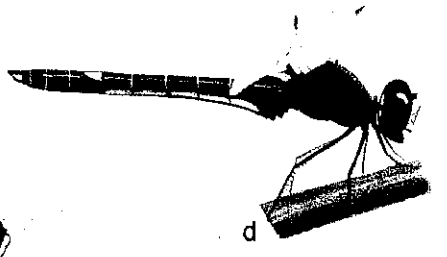

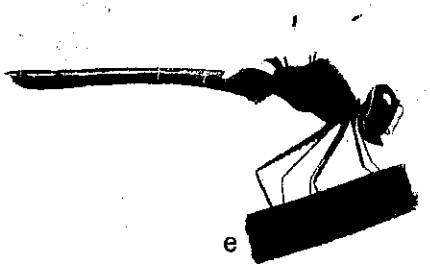

Blomidon Naturalists Society

Summer 2000 - Volume 27 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.)

The *Blomidon Naturalists Society Newsletter* is published quarterly, in March, June, October and December by
The Blomidon Naturalists Society
P.O.Box 127
Wolfville, NS, B0P 1X0

Printed in Canada. For subscription information, see 2000 Membership fees form in the newsletter. Please notify us at the above address if you change your address.

The Blomidon Naturalists Society is a member of the Federation of Nova Scotia Naturalists, the Nova Scotia Trails Federation, the Brier Island Ocean Study (BIOS), and an Affiliated member of the Canadian Nature Federation.

The Blomidon Naturalists Society is a registered charity. Receipts (for income tax purposes) will be issued for all donations.

Visit us on the web
http://www.go.ednet.ns.ca/~bns/home.htm

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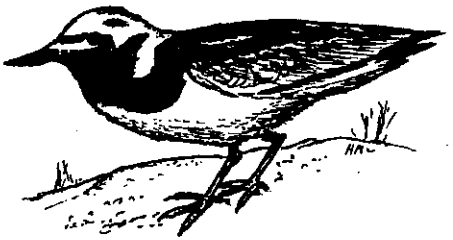
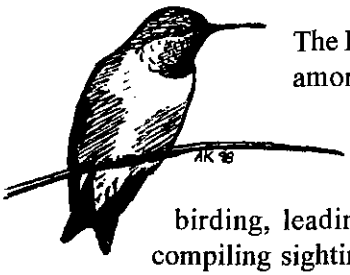


The Cover

The images on the front cover illustrate the differences between five species of dragonfly common in the Annapolis Valley. A short article by Matt Holder and Andrea Kingsley on pages 32-33 discusses the identification of these dragonflies, named the Whitefaces. These images will soon appear in a new field guide to dragonflies and damselflies of central Ontario, and are used with permission from the artist (Andrea Kingsley) and the publishers (The Friends of Algonquin Park).

EDITOR'S NOTES



The Blomidon Naturalists are fortunate to have among their number, several members who regularly devote a good portion of their time preparing contributions to this newsletter. Mind you, their activities - birding, leading field trips, recalling our history and compiling sightings (to name a few) are things they have elected to do because of their own interest. We are simply the beneficiaries of their willingness to commit their ideas and adventures to paper so we can be tuned in to things we might not have otherwise been aware.

But in the course of putting together this journal every three months, I see many of the same names cropping up. This is not a bad thing because I don't sense any staleness in the contributions. At the same time I expect that many readers have experiences or hear of unusual natural phenomena that could be shared with other BNS members.

To this end, I invite you to share your experiences, your thoughts or your theories through the newsletter. We don't seek BIG NEWS - although a Pulitzer or Nobel prize would be nice. But with more people contributing, we're sure to have a broader, deeper and more richly colored picture of local phenomenon than even our present industrious band of regulars is able to provide.

I also invite comments on the newsletter. In the year since I began this pleasant duty, I haven't heard or read a single comment on it. An optimist would say this means that the journal meets all reader's expectations perfectly. But I doubt it. Do let me know your views on any aspect of it; size, content, quality and range of illustrations, what you like most, what irritates you, use or non-use of color and frequency of publication for example. I can be reached at 678-6273, at RR#3 Centreville, B0P 1J0 or at MCCALL@ISTAR.CA. Any and all comments will be appreciated.

Mike McCall

BLOMIDON NATURALISTS SOCIETY
SUMMER/FALL 2000
MEETINGS & FIELD TRIPS

Regular BNS meetings are held at 7:30 p.m. on the third Monday of each month, July and August excepted. Meetings will be held at Acadia University, but specific locations will be announced at a later date.

Monday, September 18 - Tom Herman will give a slide talk entitled **"Burgess and Beyond: Voyages of an Inveterate Biophiliac"**. Tom will describe the significance of the fossil animals of the famous Burgess Shales in Yoho National Park, and recount the history of their discovery and debates over interpretation. He will also report on his recent Sabbatical trip to the Cook Islands in the South Pacific.

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

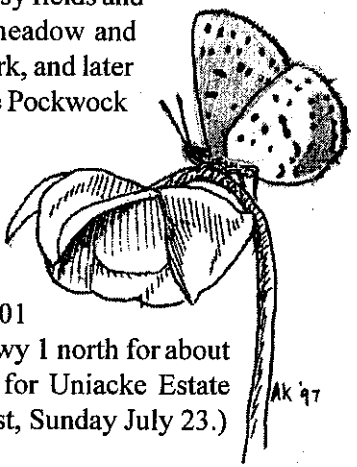
Monday, November 20 - Zoe Lucas will talk about **"Sable Island: Natural History and Review of Recent Research and Conservation Issues"**. Zoe is a well-known researcher on the island's horses, seals, birds, dunes and flora, beach litter, etc. She will characterize the island's history and biology, as 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. **NOTE: This meeting is on the second Monday of December rather than the normal third Monday of the month.

Field Trips

All begin at the Robie Tufts Nature Centre (RTNC), Front St., Wolfville, unless otherwise indicated.

Saturday, July 22 - The BUTTERFLIES of MOUNT UNIACKE - meet at RTNC at 12:45 p.m. or at Uniacke Estate Museum at 1:30 p.m. Join Linda and Peter Payzant (861-1607 evenings) for an afternoon walk looking for butterflies typical of grassy fields and woodland edges. We'll explore a meadow and woodland road in Uniacke Estate Park, and later move on to another woods road in the Pockwock watershed. We can expect a good variety, including Fritillaries, Blues, Sulphurs and of course several types of those challenging Skippers. Bring binoculars, a hat and insect repellent. Directions: Take Hwy 101 to Exit 3, off onto Hwy 1. Follow Hwy 1 north for about 6-7 km to Mount Uniacke. Watch for Uniacke Estate Park sign on left. (In case of overcast, Sunday July 23.)



Sunday, July 30 - NESTING SWIFTS and SWALLOWS at East Dalhousie. Meet leader Jim Wolford (542-7650) at 10 a.m. We'll drive to Greta & Errol Crossland's farm west of New Ross. Errol has had nesting Cliff Swallows in cans under his eaves for many years and there's a pair of nesting Chimney Swifts in the hayloft of their small barn. Bring lunch etc.

Saturday, August 5 (tentative) - COASTAL PLAIN PLANTS. Meet at 8 a.m. The leader will be Nick Hill (542-3449), but call Jim Wolford to confirm this outing (542-7650). This will require a fairly long drive southwest, perhaps to Wilson's Lake like we did many years ago. Features several Species-At-Risk like Plymouth Gentian, Water Pennywort, Sweet Pepperbush, etc. along seasonally flooded shorelines.

Saturday, August 12 - HIGH TIDE SHOREBIRDS. Meet leader Jim Wolford (542-7650) at 10 a.m. Bring lunch, binoc's, 'scopes, field guides, good spirits, etc. We might go elsewhere in addition to Grand Pré.

Saturday, August 26 - WHALES & SEABIRDS off Brier Island. The leader will be Carl Haycock. Meet at 9 a.m. at RTNC or noon at Brier Island. Call Mariner Cruises 1-800-239-2189 to book your own reservations for the 12:30 p.m. cruise and mention you're from BNS to get a discount. For more info, contact Jim Wolford (542-7650).

Wednesday, September 13 - WOLFVILLE'S SHERWOOD RAVINE (& RESERVOIR PARK?) - Meet at 7 p.m. A walk with Colin Bell (542-5567), who has organized local volunteers for managing the ravine trail.

Friday, September 29 - STARGAZING. Meet at 8:15 p.m. at RTNC or 8:30 p.m. at Grand Pré Park parking lot. Leader(s) to be announced. (Cloud date Saturday, September 30).

More field trips will be announced at the September BNS regular meeting.

Wolfville Waterfront Park

by Harold Forsyth

The new Wolfville Waterfront Park situated at the Wolfville harbour will have had its official opening on July 1, 2000. Much planning and work have been done since the Waterfront Development Committee was formed in 1995. The Blomidon Naturalist Society has been represented on that committee. The Park itself is attractively landscaped and it offers a beautiful panoramic view of the dykelands and Minas Basin with Blomidon in the background. It is also a convenient spot to see the dramatic change in tides. Four interpretive display panels will be on view in the Park. Sherman Bleakney has designed one on the dykelands, Roy Bishop one on the tides and Robbins Elliot has prepared one on the town history and one on the history of shipping in Wolfville Harbour. All are very informative and professionally displayed. Dr. Bleakney has designed two more panels which include the current natural history of the area and the natural history going back 5000 years. These will be produced when funding permits. If you haven't already visited the park it will be well worth your while to take the time to drop by.

Field Trip Reports

by Jim Wolford

A Walk on the Cleveland Property

Eric & Fran Cleveland donated this property of 53 hectares on Wolfville Ridge to the NS Nature Trust in December, 1997. The property consists of two parcels, about 0.5km west of the Ridge Stile Park, which extend partly or all the way down to the Gaspereau Valley Road. A third parcel lies between that road and the Gaspereau River.

Our party of 15, led by Tom Herman and including the property donors began our trip at the parking lot west of the Cleveland house. Tom walked us through varied woodland - hardwoods, mixed woods, coniferous woods and small clearings, along the Ridge to the west. On the western boundary of the property is the Dug Road, which took us back to the Ridge Road to the house of Judy & Gordon Tufts. Seven acres of the Dug Woods (including large hemlocks) had been clear-cut just a few years ago. After lunching back at the parking lot we drove down to the north road paralleling the Gaspereau River, and then walked through the hayfield and pasture past Holstein females and a Hereford bull to the river.

During our slow walks there were numerous long pauses for discussions concerning long-range plans for the property, general forest ecology and natural history, the alleged "beetle plague" in Halifax's Point Pleasant Park, dog ticks, etc.

Many meadow plants were in bloom: orange and yellow hawkweeds, oxeye daisy, blue vetch, chickweeds, bush honeysuckle (flower buds), etc. on the Ridge, and many of their stems showed white "spittle", which is secreted as protection by "spittlebugs" (sap-sucking larvae of froghoppers); blue-eyed grass, blue flag (iris), common milkweed (a small patch with flower buds), highbush cranberry, etc. near the river.

In the Ridge woods were some impressive red oaks, plus white ash, beech, young poplars, white birch, ironwood or hop-hornbeam with new fruits, white and red spruce, hemlock, and big pines visible only from the road below. One small beech trunk showed parallel furrows that could have been from bear claws.

Butterflies: Canadian Tiger Swallowtails, one **Monarch** (not far from the common milkweed patch), **Northern (pearl) Crescents** and one **Common Ringlet** were present.

Dragonflies: "White-tailed Skimmers" were engaged in territorial chases in a slow tributary of the river, and some other skimmers seen in the woods on the Ridge. Several green frogs were calling in the river tributary.

Birds: Alder Flycatcher, Ovenbird, and **White-throated Sparrows** which were singing along the Ridge. **Crows, American Robins**, and **Ring-necked Pheasants** were seen and heard. Near the river were lots of **Red-winged Blackbirds** and **starlings**. The two **Bobolinks** we saw are being monitored by George Alliston so that their young will be fledged from ground nests before the first cutting of hay by a cooperating farmer.

In the pasture a low-lying area which has not been farmed for a while, has a new fence to exclude cattle - erected by a farmer who volunteered his labour. It is already showing signs of "going back to nature". The Nature Trust is examining a cooperative project there with Ducks Unlimited, aimed at restoring a bit of wetland along the river, where many former floodplain ponds were drained for farming.

Intertidal Mud
May 21, 2000

This field trip ("Yummy Muds of Minas" to use Sherman Bleakney's phrase) was requested by the Halifax Field Naturalists and co-offered to the Blomidon Naturalists Society. We had a perfect day for it (sunny & warm) but low tide was not very low. There were about 40 participants. Several were enthusiastic youngsters, good at finding things, and one of whom found us a very dead small skate (ray) at lunchtime. A reporter from the Kentville Advertiser newspaper also joined us.

I passed out several information sheets: Sherman Williams' ingenious monthly graphic summary of the tide-times and amplitudes for the Minas Basin (see his website for updates); a list of common intertidal critters and seaweeds; and a recent article by Sherman Bleakney about his visit to an "Alien Landscape", namely the Kingsport lowest intertidal zone,

during an extremely low, low tide almost exactly one year ago (the opposite of our tide today).

At the Kingsport wharf parking lot is a small dune with marram grass (*Ammophila*). To the north are impressive but rapidly eroding sandstone cliffs extending to Longspell Point and beyond to Blomidon.

The protected side of the wharf has a small salt-marsh, through which we walked to get to the mud of the receding tide. There were zillions of **mud snails** (*Nassarius*), which are omnivorous scavengers and also eat the microscopic algae on and in the mud called **diatoms**. The snail abundance is a testimony to the incredible productivity of this ecosystem - much of the production is exported by the giant tides to who knows what distance? (Certainly to the Fundy whales and probably farther.)

On the mud surface were wall-to-wall tiny piles (castings) of indigestible materials from the tubes of buried **polychaete worms**, the marine equivalent of earthworms. Later I dug some of these up with my shovel - ***Heteromastus*** with no common name (like most intertidal critters) are very skinny & fragile segmented worms that we could see in the cracks of the dug mud. Other worms seen included the larger pink "**bloodworms**" or "**baitworms**" (*Glycera*) which are exported for fish bait as far away as the Carolinas; large, white, flat, slimy **nemertine worms** called *Cerebratulus*; and **bamboo worms** (*Clymenella*) in tubes of sand.

In the middle intertidal zone east of the wharf were some tall poles, which had earlier been used to support a gill net for estuarine fishes (e.g. gaspereau, flounders, skates, etc.).

On the upper intertidal sand were lots of serpentine tracks made by a whitish, flat, **marine sowbug** (an **isopod** crustacean) called *Chiridotea*, comparable to a wood louse on land. Crawling on the wet surface of mud, rather than sand, were the famous **mud shrimps** called ***Corophium***, the well-studied principal food for the hordes of Semipalmated Sandpipers in July-September. With a shovel I was able to show their U-shaped burrows.

We found numerous **shells** of various **snails** and **clams**, and later dug up some very small **soft-shelled clams** (*Mya*) in the upper intertidal zone.

Other shells or living molluscs included **slipper-shells** (*Crepidula*), **periwinkles** (*Littorina*), **dogwinkles** (*Thais*) -I showed a mussel shell with a dogwinkle's hole drilled through it - **basket shells** (another *Nassarius* species), **moon snails** (*Lunatia*)(I showed a clam shell with the beveled hole from one of these predators), **razor clams** (*Ensis*), **pandora** (*Pandora*), **surf clam** (*Spisula*), **false angel-wing** (*Petricola*)(these burrow in soft sandstone or firm clay), etc.

Apparent carcasses of dead **rock crabs** were shown to often be just cast-off "skins" or exoskeletons shed during the moulting process (a healthy sign of growing crabs).

In shallow tide-pools we saw lots of tiny **hermit crabs** (*Cancer*) in their snail-shell-homes (usually basket shells), lots of mostly small **sand shrimps** (*Crangon*), swimming and crawling **amphipod** crustaceans (Gammarids) and tadpole-like **hooded shrimps** (Cumaceans), tiny coils of sediment (castings) from the feeding of more **polychaete worms** below the surface, and an eel-like **rock gunnel** (common under low-intertidal rocks).

Lots of **blue mussels** (*Mytilus*) occupied a large flat outcrop of sandstone well north of the wharf, and oodles of **barnacles** (*Balanus*) with them and on them. How many readers know that barnacles are crustaceans, i.e., they are shrimp-like critters standing on their heads in the shell and open up to use their hairy legs for filter-feeding during high tide. They are very tough, being exposed by the low tides for several hours, twice a day, all year long!

Seaweeds seen included **rockweeds** (*Ascophyllum & Fucus*), **sea lettuce** (*Ulva*), **Enteromorpha**, **Porphyra** ("nori"), and others washed in from subtidal waters e.g. **Dulse** (*Rhodymenia* or *Palmaria*).

I tried to show some plant-like colonies of a **hydrozoan**, *Obelia* (newer name *Laomedea*), hanging under some large sandstone formations, but they were extremely uncommon this year, for some reason. Hydrozoans are cousins of jellyfish and anemones - they have stinging cells for catching small animals in the water and for defense. Look them up in a seashore field guide or introductory zoology textbook.

After the trip, one participant wandered north onto Longspell Point and found a large nestlings in a large bird-nest at the base of the sandstone cliff. I checked on this a week later; it proved to be a very picturesque **raven nest**, set into a recess in the rock, sculptured by water over hundreds or thousands of years.

The field trip plan included a very rapid trip then to Grand Pré, with the (unrealized) hope of walking to some 4000-year-old fossil stumps of trees of an old forest. Those who still have a 1999 BNS Calendar can see a picture of Sherman Bleakney standing next to one of these barnacled covered stump. Still and all, we had a good time on the shore at Northeast Grand Pré, alias The Guzzle, and were rewarded by viewing **black swallowtails** along the dyke and a few **Semipalmated Plovers** and **Least Sandpipers** on the flats. (On any low tide you can walk toward the seaward point of Boot Island and quickly sight a few of the many old stumps.)

I love to show off the mud and its creatures without common names. Perhaps we can look ahead next year and pick a big low tide in order to see Bleakney's "alien landscape" of wall-to-wall living razor clams, cruising moon snail predators, lots of sponges, etc. I'll also offer a slide-show on Yummy Muds any time!

Amphibians
June 10, 2000

The South Shore Naturalists Club requested this trip, which was also offered to the BNS. About a dozen others made a nice group on this overcast, calm, cool day.

Prior to setting out from the RTNC on a gray, dull day, I handed out information sheets to the dozen people that turned up and played taped calls of all eight species that are vocal in Nova Scotia. We drove to Gaspereau, to the home of the late Cyril Coldwell's son, Ross. Just below his house is a lily-filled pond where we viewed several **green frogs** fairly closely, and one or two calls were heard plus a **spring peeper**. Flowers included **blue flag** (iris) and **cuckooflower**.

At "Goshawk Woods" (known as such to some of us) west of Gaspereau we walked into the coniferous woods and turned over pieces of wood, and it wasn't very long before a girl said she had a couple of "worms". They were adult **redback salamanders**, a species that lays its eggs inside rotting wood and never goes anywhere near the water. Also present were lots of **sowbugs** or **wood lice** under the logs.

In the Bald Eagle nest north of White Rock Pond, two large nestling eaglets were observed. Two adult eagles flew in, one perched nearby, and a third adult flew past the nest-site.

Our major pond was on the Wolfville Ridge, a shallow spring-fed one that Sherman Bleakney alerted me to years ago. To get to it we had to walk through a field of flowering hay (with Waldon Coldwell's permission). Last year on about the same date we found several raft-like floating egg-masses of **green frogs**. Not so this year, but several **greens** and a few **peepers** were calling. We saw also an adult **leopard frog**. On our approach to the pond, disturbances in the shore shallows proved to be large overwintered **tadpoles** of the green frogs. We also saw lots of green remains of egg-masses of **yellow-spotted salamanders**, the hatchlings of which were abundant on the bottom of the pond.(The green is a symbiotic alga which helps the developing salamander larvae by producing oxygen.)

Using a rusty dip-net and an enamel pan, I was able to show everyone the common life-forms in the pond water. We were all amazed at the abundance of some of the animals, such as young **water boatmen**, **damselfly** larvae, and **water fleas** (small crustaceans). Other life-forms included filamentous **green algae**, small **leeches**, a few **mayfly** larvae, **water striders**, **whirligig beetles**, adult and baby **backswimmers**, a smallish adult male **giant waterbug** carrying eggs on its back, and large larvae and smallish adults of **predaceous diving beetles** - the latter larvae and adults were of two different species.

Our final stop at Hennigar's Farm Market was not just for ice cream. But the overcast, cool day was not conducive for basking turtles. We did see a couple of **painted turtles** but not the exotic and illegal **red-eared slider** (turtle) which has been there for at least a couple of summers. (I do know it's still there.)

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Then we drove to our final stop, Silver Lake at Lakeville, where last year's field trip found oodles of large 2-year-old **tadpoles** of **bullfrogs**. Today's weather didn't favour them being in the shallows, and we only saw a single yearling **bullfrog** at the west end of the lake. (But I returned on sunny June 17 and found at least a dozen of the big **tadpoles** there.)

Blomidon Park Nature Walk
May 28, 2000

A small but enthusiastic group of 8 participants joined Sherman Williams and me on an overcast May 28 at Blomidon Provincial Park on for a "Parks are for People" nature walk, I believe the overcast was beneficial in several respects: Colours were nicer, both for plants and for field-marks for birds, and the **blackflies** were minimized.

This standard walk at this time of the year begins at the northeast corner of the Park campground. We parked in the open field and immediately found lots of flowers: **strawberry**, **hobblebush** (a favourite of mine), **rosy twisted-stalk**, (**hairy solomon's seal** with flower-buds), **toothwort**, **baneberry**, and **purple trillium** (many of which were already spent).

We only walked about one kilometre on the Joudrey Trail along the cliff, to the temporary pond and then to the first look-off point. At the beginning we saw oodles of this year's leaves of **wild leeks**, a truly special and rare plant that is thankfully protected here - I "sacrificed" one bulb of this onion for a taste for everyone — it's easy to see how it could become a "collectible" to the point of nearly or completely disappearing, as has been reported elsewhere in North America.

Along the path, other flowers seen were **dewberry**, **bunchberry** (few), **fly honeysuckle**, no **violets** noticed, and **clintonia** (only one plant had

opening flowers). If one walks the entire loop in this area, **spring beauties** and **dutchman's breeches** and **yellow violets** should be findable at this time of year. The latter also occur south of the main picnic area of the Park.

We didn't see many birds, and a couple of enthusiasts were frustrated by my lack of hearing ability, since I couldn't hear many songs that they were trying to learn. We did, however, see or otherwise detect **American Robins**, **American Redstarts**, **Black-throated Green Warblers**, **Northern Parula** (warbler), **Swainson's Thrush** (one posed at the pond), and a drumming **woodpecker** of some kind.

The temporary pond in the woods had only a moderate amount of water in it, and it usually becomes a marshy carpet of **sensitive**, **cinnamon**, and **royal ferns** (weird site for the latter) by mid-to-late summer. I used a dip-net plus an enamel pan to show some pond life. The very special and rare **fairy shrimps** were abundant, full-grown, at their reproductive best with every female having an egg-sac. There were a few adult **water scavenger beetles**, two of which were seen to be eating fairy shrimps. Other forms of pond critters included black **flatworms** or **planarians**, **snails**, red-coloured and slow-swimming **water mites** (arachnids), "**water fleas**" (small crustaceans), **water boatmen**, **mosquito** larvae ("wigglers") and pupae ("tumblers"), **phantom midge** larvae, no caddisfly nor damselfly nor dragonfly larvae seen (all probably present, though), and fairly well-developed **tadpoles** (probably of wood frogs).

At the first viewpoint along the cliff, we had good visibility of Five Islands on the Parrsboro shore where a large gypsum vessel swung at anchor waiting for the next high tide.

On our way back to the cars, we met Sherman Williams, who delivered two more participants and led the first group out of the Park. On a repeat showing of the pond life, I discovered or created a large hole in the dip-net! However, I still managed to show the lovely fairy shrimps a second time.

Cape Split Nature Walk
May 27, 2000

Sherman Williams led our group of 13 on this event, the numbers probably reduced by Apple Blossom Weekend events and a gray, chilly day. But it was quite nice in the woods, with many varieties of flowers. Birds were not greatly in evidence.

On the drive to cape split, in bloom were **yellow rocket** and **cuckooflower**.

Flowers seen on the walk from scots bay trailhead to "the split": **red elderberry, skunk currant, white violets** (lots), **goldthread, common dandelion, coltsfoot, toothwort**, many **purple trillium**, including two beige flowers with reddish centres, carpets of **spring beauties, rosy twisted-stalk** (I've never seen so many and with lots and lots of lovely bells), **dutchman's breeches, fly honeysuckle, blue violets** (we didn't try to identify these, but there were oodles in the woods and at the tip of the cape), **dewberry** species, **small-flowered buttercups, striped maple, gooseberry, star-flowered ("false"?) Solomon's seal, downy alder** (formerly *Alnus crispa*, now *A. viridis crispa*), **starflower, bunchberry, strawberry**. A non-flowering plant in bloom was **white spruce** in the "drunken forest" or krummholtz or tuckamore at the cape tip - staminate cones were shedding pollen, and lovely reddish-purple ovulate cones (female) were present. Nobody knew whether the latter were receptive or compatible at the same time with the staminate products (pollen).

Plants with flower buds included: **clintonia, false solomon's seal** (1), **hairy solomon's seal** (1), and **wild ("false"?) lily-of-the-valley** - Sherman told us something I didn't realize about the latter plant, while we stood among oodles of them with no flower-buds: in a carpet of these plants, most or all are connected under the soil-surface by rhizomes or roots, forming a large colony of "surface individuals"; we had to search a bit to find just occasional plants in that carpet with flower-buds; so those "individuals" with no flowers probably manufacture food for the entire colony, and only some of that (perhaps variable from year to year? in given microlocalities) is devoted to producing flowers and berries. (The last part is my guess from what Sherman told us he has "rooted out" in his yard.)

Other plants on our walk: **ferns** of quite a few kinds, in various stages of resurrection. The **ostrich ferns** near the tip of the Cape were up quite far with ostrich-shaped fronds. This location always seems strange to me, but there's a colony in a similar-looking spot at Cape Blomidon, too at the northeast corner of the Provincial Park campground.

Birds: Songbirds that were either seen by me or seen/heard by others included **American Robins** (a few), **American Redstarts** (3), **Black-throated Green Warblers** (3), **Yellow-rumped (Myrtle) Warblers** (2), **Ovenbird** (1), **Black-and-white Warbler** (1), **Golden-crowned Kinglet** (1), **Dark-eyed Junco** (1), and, at the trailhead, **Purple Finches** (3). **Great Black-backed Gulls** had small downy youngsters at their nests. There were about 35 **Double-crested Cormorant** nests, all with incubating or brooding adults, I think (no 'scopes present). In the water, there were some **Common Eiders** and a very tight swimming flock of about 35 **Black Scoters**, which showed us some synchronous diving. But most impressive by far were the aerobatics of two **Common Ravens** and especially an adult male **Peregrine Falcon**. These three birds gave us numerous passes in the very strong and cold winds, while we lunched in a sheltered spot with good visibility. The peregrine had no difficulty soaring, without flapping, in all directions, and a few times we saw it dive, once at one of the ravens. The falcon's speed and prowess is difficult to describe. Whether the falcon was actually foraging is always difficult to tell. It's probably very opportunistic about this, especially early in the nesting season, when it only has to feed the female and itself, but I always suspect there is an element of fun in everything that these incredible flying machines do.

Mammals: I didn't see any small mammals, but I did see scats of snowshoe hare, porcupine, and deer, and other signs of red squirrels. Deer tracks were in the mud, and we found one tree-trunk that had been de-barked and girdled this past winter by a porcupine.

Sherman led us along the southern cliff to the "Little Split" beach, where I always wonder about the integrity of the rope that helps us descend to the rocks below!

We began our walk at about 9:45 a.m., and most were back to their cars by 4:30-5 p.m.

Ships and Birds of Kings County, a Century Ago

by Merritt Gibson

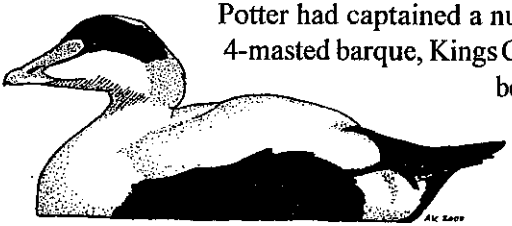
I had looked forward to May 20, 1900 for several weeks. This was the day that Harold Tufts and I planned to start our birding trip by ship from Canning down the Bay of Fundy. The day proved to be more exciting than I had anticipated. First, we were joined by Robert Borden from Grand Pré, home from Ottawa for a few days after completing his first term as our Member of Parliament. Second, I saw a rare bird, or maybe not - you decide!

Robert travelled to Canning on the Windsor-Annapolis Railway and stayed overnight at the Waverly Hotel. I always enjoyed visiting the Waverly Hotel for, apart from the beautiful woodwork and luxurious appointments, it had a high tower from which I could scan the Habitant Creek for birds.

Harold was in Parrsboro, but crossed to Kingsport on the daily ferry, the S.S. Evangeline. The S.S. Evangeline had previously operated on the Annapolis River, interconnecting the Windsor-Annapolis Railway with the Digby-Yarmouth Railway. Its trip through the Annapolis marshes was a popular one for birders.

At 8 a.m. on May 20, I met Robert at the Hotel and we walked across the street to the Government Wharf. (There was no Aboiteau Road in 1900 and high tide brought ships up the Habitant River.) Canning harbour was a busy one, often with several ships lined up waiting their turn to dock.

We boarded the S.S. Brunswick, a supply ship that operated weekly between Canning and St. John, and from ice-free Margaretsville in winter. Captain Alfred Potter, Master Mariner, was in command. In his younger days, Potter had captained a number of ships including the 4-masted barque, Kings County. The Kings County had been built in Kingsport and at 2061 tonnes was one of the largest wooden sailing ships registered in Canada.



The trip down Habitant Creek towards Kingsport was an eventful one. A Marsh Hawk (Northern Harrier) sailed along beside the ship. Temperatures were cool and many shorebirds were still on the marsh. I saw Beetle-Head or Black-breasted Plover (Black-bellied Plover), Yellow-legged Plover (yellowlegs), Red-breasted Sandpiper (Red Knot) and several small flocks of "peeps". The Red-breasted Sandpiper was popularly called Robin Snipe. Oddly, there were no Stone Curlew (Willet) although they were common in southern Nova Scotia.

One bird caught my attention, it looked like a small Hudsonian Curlew (Whimbrel)! A grey bird with long legs and a down-curved bill, but it had a decidedly reddish tinge and lacked the dark lines on the head typical of the Hudsonian Curlew. Was it an Eskimo Curlew? Huge flocks of Eskimo Curlew had visited the Minas Basin up until 20 years ago, but now were extremely rare. Furthermore, they usually visited in autumn, not spring! Unfortunately, Robert was talking (politicking?) to Captain Potter and missed the sighting.

Harold joined us at Kingsport and we proceeded around the point. There were many American Coot (Surf Scoter) diving about the shoals. As we approached Blomidon we met the tugboat Millie K (K for Kinsman) pulling rafts of logs to Kingsport for use in shipbuilding. The logs had been cut on top of Blomidon and slid down the mountain on a trough-type scoot.

Large numbers of Grey Gulls (Herring Gulls) nested on Cape Split. Capt. Potter slowed the ship while Harold scanned the colony. A few years previously (May, 1896), Harold had found the first (and only!) Ring-billed Gull in Kings County and he wanted to see another, but had no luck. There were no Shag (cormorant) on the Cape. They were very rare throughout Nova Scotia in 1900. However, I told Robert about my trip up the Bay of Fundy in 1606 with Champlain and de Poutrincourt to look for minerals. Shags then were abundant and de Poutrincourt had climbed to the top of the Split to collect their eggs, for Champlain claimed the eggs "to be very strengthening to the stomach". However, once on top, de Poutrincourt lost his courage to climb down and endured the indignity of having the ship's crew lower him by rope. Champlain was highly amused and later named the Split, Cap de Poutrincourt. (The name was changed to Cap Fondu, meaning "split", in the mid 1700s.)

The trip down the Bay produced three Red-throated Diver (Red-throated Loon), a few late Long-tail (Oldsquaw), and, most excitingly, one Red Phalarope. Harold, on October 17, 1898, had found the first Red Phalarope recorded in Kings County on the Grand Pré dykes following a north-easterly storm. Near the shoals about Canada Creek, Potter stopped the ship so we could watch one group of 25 and a second group of 12 Harlequin Ducks riding the waves and diving among the rocks. Beautifully marked birds, they were often called "Lords and Ladies". Harlequins were common along the rocky Bay of Fundy in 1900, but would be an "Endangered Species" by the end of the new century.

We watched for gannets as we approached Harbourville. Robert spotted the first one, an immature bird high-diving for fish. Later we saw two more, but the larger numbers of previous years were not present, nor were there any adult birds. We were disappointed for we knew that gannets had nested at Harbourville as recently as 1898. However, the rock ledges now were deserted.

Capt. Potter slowed the ship again at Isle au Haute where there were good numbers of Shoal Ducks (Common Eiders) and Grey Gulls. Robert wanted to watch the Shoal Ducks for they were unusual about the Minas Basin and he had not had a good view of them. Harold, of course, was still looking for another Ring-billed Gull. (Saddle-backs or Greater Black-backed Gulls were not common in 1900 and found mainly on freshwater lakes.) We left the S.S. Brunswick at Margaretsville for we did not have time to cross to St. John, and returned to Canning by train.

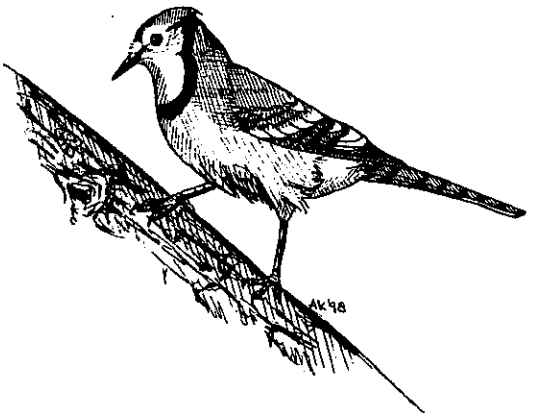
In the years to come, Robert Borden became Prime Minister of Canada and wrote many letters about the birds at "Glensmere", his home in Ottawa. Harold Tufts, a dentist, published several papers on Nova Scotian birds in the "Ottawa Field Naturalist", and his copious notes were available to his brother Robie when writing the "Birds of Nova Scotia". Capt. Potter returned to sea from retirement at the beginning of World War 1 to captain sailing ships carrying lumber to England. While it was necessary to avoid enemy submarines and mine fields as he approached England, he made one trip in the record time of 16 days. I, of course, became a member of the Blomidon Naturalists Society.

The Learning Curve
by Mike McCall

Before we moved to the North Mountain from Toronto some four years ago, I was aware that I would be living close to a principal migration route for shorebirds and could fulfil a long held desire to be witness to this annual phenomenon. And a copy of Robie Tuft's "Birds of Nova Scotia" told that I would still be seeing most Ontario species - although they wouldn't be dripping from the trees or fighting for space in mist nets, as often seemed the case at Long Point.

But the first three years here proved less than exciting with respect to other species. I had thought that with 90 acres of land less than a kilometre from Fundy, about 1/5th of which had been recently logged over and was therefore largely open, I would regularly see a great variety - hawks, falcons, warblers, thrushes, grouse and of course, feeder visitors. But my birding treks around the property and the limited number of species at my feeder were a bit of a letdown. "Not much going on here," I grumbled.

Well, I was wrong. There certainly isn't as much variety here as in Southern Ontario but there's plenty to look for - and to find. I just had to learn to be a better birder. For example, warblers aren't exactly dripping from the trees as they seem to do at Pelee and Long Point at certain times of the year, and because they love to conceal themselves in the high forest canopy, I had to learn to identify them by song and note. This has proved to be a challenge; I'm not yet expert but I'm a lot better at it than I was. Then I had to learn the property - what was I most likely to see and where. Once again I was able to learn. After hundreds of walks in the woods I came to know where I'd find grouse; where the Veery and Swainson's Thrush liked to hide; the bush in a boggy area preferred

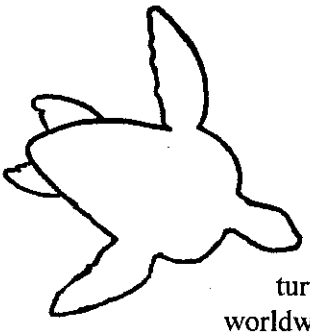


by the Common Yellowthroat, which trees the Alder Flycatcher's song came from; what part of the vault contained the Barred Owl. "My" Barred Owl, of course. Where did the Black-throated Green spend its time? (near our spare accommodation cabin). And on what date I could expect to hear the evening 'sneeep' of "my" Woodcock and catch the first sight (and sound) of a newly arrived hummer.

But the birds also had to learn. The first year saw little activity at my feeder array. A few goldfinches and some chickadees. But now the word is out and my feeder is constantly attended. Purple Finches flutter and fight; juncos feed on the tray and on the ground. Ditto the white-throats. Raiding bands of Evening Grosbeaks appear with increasing regularity. Song Sparrows pick up fallen seed and roly-poly Mourning Doves mince daintily about beside them. A Downy Woodpecker occasionally parks on the tray and probes for bits. Cheeky Red-breasted Nuthatches hector me from the feeder roof if I'm too slow refilling the suet sack. Pine Siskins and their relatives, the goldfinches, can drain the tube feeder in half a day. Once, a female Northern Cardinal stopped for a few minutes and (once only) a Fox Sparrow scratched about. The joint is jumpin'.

And as I write this (July 1st) newly fledged Tree Swallows dip, dive and chatter outside my window – I know they're shouting "Mom, this is FUN!"

Is there a moral or a message here? Not really. Just that what first appears to be dross can turn out to be gold. You just - as the TV commercial says - "have to earn it".



Laying Leatherbacks
by Jim Wolford

In early April I had the moving experience of watching huge, endangered leatherback turtles laying eggs on a beach in the southernmost Caribbean. All species of sea turtles are threatened, but nesting leatherbacks worldwide have declined 80% in less than 20 years!

Threats include boat-collisions, hookings or entanglements from fishing efforts, plastic and other debris ingested mistakenly for jellyfish (normal prey of leatherbacks), poaching of eggs and adults, and human developments on beaches. Much of their basic natural history is poorly known, e.g. whereabouts of juveniles and males, age at maturity, and lifespan for example.

In 1998 and 1999 the Nova Scotia Leatherback Turtle Working Group discovered, aided by 350 fishermen, that leatherbacks are abundant along our Atlantic shore in summer. Many will remember the satellite-tagging of "Sherman", whose movements were followed for 54 days from off Cape Breton to Newfoundland and then southward - the transmitter "died" in late October offshore from Virginia.

On the night of April 7-8 I was at small hotel on a beach in Trinidad. At 10 p.m. we tourists were called by the hotel's turtle-guides to witness quite a spectacle. Guides and wardens patrol the beach to both monitor and protect the nesting turtles. These giants are very easily disturbed until they begin to dig the nest-chamber. Before that each takes some time to choose a spot, then first digs a large body-pit to accommodate a body shell that can measure 2 metres.

No flash-pictures were permitted, and flashlights illuminated only the hind end of the female. We were able to talk in low tones. The digging of the egg-chamber was fascinating and took a long time. The hind flippers are used alternately as effective sand-scoops, and are able to dig quite deeply into the sand. Then several dozen white, round, quite large, and leathery-shelled eggs are laid. On top are usually laid some

small, unfertilized eggs, which may then shrink to provide additional space to ease the hatching which occurs about 60 days after laying.

The female takes a long time covering the egg-chamber and patting the wet sand down quite firmly, before using the front flippers to sweep sand over nest as well as the large area around it. Presumably this is intended to confuse would-be predators or poachers.

The whole nesting effort, using enormous amounts of energy, takes about 1.5 hours. Additionally, in many nesting locations, including this beach, the turtles are disoriented by lights along the shore and cannot find their way back to the sea, despite loudly crashing waves only a few metres away! Such lights also confuse hatchling babies around the world.

The guides showed us how to help the turtles find the sea by using a stout bamboo pole to "steer" them, and it was a great feeling in the early morning to help one of the confused females.

The Dynamic Ocean
by M. J. Dadswell

The ocean is a dynamic place. Tides, winds, and seasonal heating and cooling of the earth all cause movement of the ocean waters. Vast current systems develop, moving millions of cubic meters of seawater north and south on the globe. The Gulf Stream originates in the Caribbean Sea, flows north along the east coast of North America, then crosses the Atlantic bringing warm water to the coast of Europe. Tropical palm trees can grow in Scotland at the latitude of Labrador and the sea along the coast of northern Norway which is north of the Arctic circle never has ice. The Labrador current flows south from Hudson's Bay and Baffin Strait carrying cold water to the coasts of Newfoundland and the Maritimes and bringing icebergs to cause excitement and problems.

These major currents combine with coastal topography, the outflow of rivers and the local tides to create numerous current systems around Nova Scotia. There are three around our coast: one that flows out of Northumberland Strait and hooks around northern Cape Breton (it also went south before the Canso causeway construction); one that flows down the east coast from Guysborough County before turning offshore at about Shelburne; and the third that does a counter-clockwise cycle through the Bay of Fundy flowing northeast along the Nova Scotia shore and southwest along the New Brunswick shore.

Living in these current systems fish swim with them to feed (a free ride to lunch), and against them to move to their spawning grounds. Fish also move in response to their physiological needs with respect to water temperature. As the ocean warms and cools with the seasons, fish swim north and south selecting the water temperature that is appropriate for their species and maintaining themselves at the temperature that is optimum for their growth and survival. Some fishes, such as herring and mackerel, move in tight schools, others such as shad and pollock, in loose aggregations and still others, such as salmon and the various sharks, as individuals. The movement of fish brings food resources to other animals and humans. Birds aggregate to feed on herring, seals and fish-eating mammals follow shad and salmon into river mouths and humans exploit the moving fish for livelihood or recreation.

Some fishes move only a short distance. The tom cod which inhabit Minas Basin run up the local rivers in vast numbers to spawn. They are known as frost fish because their spawning runs occur around Christmas time. The runs attract Bald Eagles, which have migrated south from Labrador and Newfoundland and aggregate in the hundreds around river mouths like the Shubenacadie to feed on the easily accessible, bite-size morsels. Smelt are similar. Their spawning runs in spring attract large numbers of humans, providing recreation and a tasty treat. Other fishes move immense distances. Atlantic salmon from the Maritimes leave our rivers in spring (at the time the serviceberry blooms) as small, 12-15cm smolts and migrate north to the Labrador Sea between Newfoundland and Greenland. There they drift, feed and grow in a vast gyre of the North Atlantic that may take them as far east as the Faroe Islands and Iceland and as far north as Baffin Island.

In the ocean during their feeding migration salmon aggregate where the temperature is between 2°-10° C but they are most abundant where water temperature is 7°C. After two years at sea they return to their home rivers as fat, silvery salmon, 70-80cm long and weighing 4-5 kg. American shad spend 4-5 years at sea before maturing. After they leave their nursery river they migrate north and south along the east coast of North America wintering off North Carolina and Virginia and spending summers in the Bay of Fundy, the Gulf of St. Lawrence and off Labrador. All this swimming (about 4000 km a year) keeps them at a relatively constant temperature of 12°-16° C. They also swim fast. A shad we tagged in the Bay of Fundy in September was captured in the Saint Johns River in Florida in early December. To make that movement the shad swam 1700 km at an average rate of 19km each day. Not bad for a 45cm long fish!

Other fishes move even farther. Tuna use the Gulf Stream as their home. Bluefin tuna spawn in the Caribbean during winter then migrate north to feed in the Gulf of St. Lawrence during summer. Some keep on going. Tuna that have been tagged off the east coast of North America were later captured off the west coast of Europe as far south as Spain. Tuna tagged off Spain have been captured in the Caribbean and it is thought that individual fish migrate completely around the North Atlantic. When you think about it, that is not really too difficult for a fish that is 3-4m long, a torpedo-shaped mass of muscle that weighs 500kg and can swim

continuously at speeds of 20km/h. A bit more startling is that the lowly, rather slow moving dogfish (a shark) does this also. Every summer, female dogfish migrate into the Minas Basin. It appears they do this because the warmer water of the Basin accelerates the growth of their gestating young and they can have their live-born pups in the warm water. Since it takes 14 months to two years for the pups to grow to their birth size inside their mother, a mother dogfish probably uses every advantage she can. But dogfish tagged in Newfoundland have also been captured off western Europe. Quite a swim (or drift) for a fish that only averages about 80cm.

Because little fishes move, bigger fishes that feed on them also move. Every summer sharks migrate north into the Bay of Fundy to feed on the migrating shad, gaspereaux, herring and mackerel. Large, captured sharks cause excitement among humans and tales of their capture usually appear in the local paper or fisheries scientists hear about it. Using records from the last 150 years we were able to piece together the movement of sharks around the Bay of Fundy. It seems they enter the bay on the southern side (Nova Scotia coast) move into the basins at its head during July and August and pass along the New Brunswick shore in fall, the same route as the dominate water flow in the bay. Mackerel sharks are the most abundant but there are also threshers and white sharks. The great white shark has been captured numerous times in the Bay of Fundy. In 1965, a great white was captured off Burnt Coat Head in Minas Basin (near Noel) during August. The fisherman that caught it had quite a surprise when he hauled his gill net and discovered a 5m long shark with very big teeth.

Of course in order to study such fish movements the biologists have to move also. During the 1950's when our research group was working on the American shad our studies took us south in winter as far as Georgia and north to Quebec in spring to study the spawning runs in various rivers. In June, all the biologists would aggregate in our field house on the shores of the Bay of Fundy as the summer run of shad would migrate past. I remember well the telephone call that came in from a fisherman that had captured our first shad tag return. I was in my office in the Maritimes in February as he said "I'm from Welaka, Florida, and I've got one of you'all's fish down here".

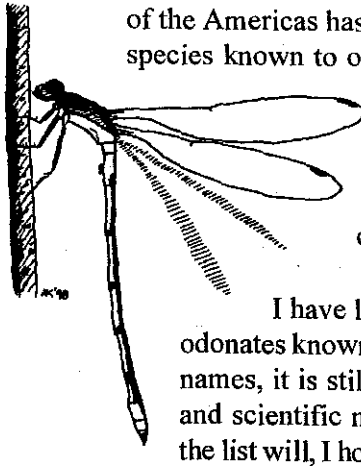
What Do You Call That Dragonfly?

by Matt Holder

Dragonflies are conspicuous insects, familiar to many as the "horse stingers" or "darning needles" of childhood expeditions to the creek, swamp or lake. Contrary to what the old folks told you when you were young (or what you old folks tell your young!), dragonflies do not sew up the lips of little boys and girls who tell lies, nor do they sting or otherwise harm you, although you may receive a nasty nip if you catch one and place your finger up to its relatively powerful mandibles. Instead, they are large insects that prey upon everything else smaller than them, which usually includes the pesky mosquitoes, black flies and deer flies that swarm around us during the spring and summer. With their smaller relatives, the damselflies, they comprise the insect order Odonata, otherwise referred together as odonates.

Odonates have received much attention during the last decade or so, as more and more naturalists expand their horizons and begin to learn about these interesting insects. This attraction may be due to any number of factors, from their often beautiful colouration to their interesting behaviour, from their manageable diversity to the relative ease with which they may be identified. There are now half a dozen regional field guides available, and there are several more due out soon that cover a broader range, and amateurs may use these to reliably identify most of the odonates they see and catch in the field without resorting to mind-boggling technical references. Perhaps one of the driving forces behind the recent "odonate boom" is that learning is contagious, and as more and more people go out and find interesting species, some new to the province, others new to science, one is encouraged to jump on the wagon. Whatever the reason, we now know more about our native odonates than we ever have in the past, and we will continue to learn as long as we keep exploring our province (or back property).

Since the popularity of odonates among amateur naturalists is new compared to other groups, like birds or even butterflies, the most common way to refer to a species is by using its scientific name. I still use scientific names, although I'm sure I mispronounce the Latin when I mention them out loud (so I tend to write everything down instead). For those of us that prefer to use English names whenever possible, the Dragonfly Society



of the Americas has an "official" list of English names for all species known to occur north of Mexico. Some of them are quite spectacular, such as the Uhler's Sundragon, the Stygian Shadowdragon, the Lyre-tipped Spreadwing and the Dragonhunter (so named for its habit of catching and eating other dragonflies).

I have listed below the English names of the 116 odonates known to occur in Nova Scotia. Even with these names, it is still a good idea to include both the English and scientific names of odonates you are reporting, but the list will, I hope, clarify the situation. Beware that some books include names not on the list, either because they used an earlier version of the DSA list or because they just decided to create their own. For a more comprehensive list, I refer you to the online version at http://www.ups.edu/biology/museum/NAdragons.html. While you're surfing, you may wish to visit the DSA information site (hosted by IORI) at www.afn.org/~iori/dsaintro.html, and a great site created by Stu Tingley may be found at www.geocities.com/yosemite/8425/odonatNB.html. Happy odonating!

Zygoptera - Damselflies

Calopterygidae

Calopteryx aequabilis -**River Jewelwing**
Calopteryx amata -**Superb Jewelwing**
Calopteryx maculata -**Ebony Jewelwing**

Lestidae

Lestes congener -**Spotted Spreadwing**
Lestes disjunctus -**Common Spreadwing**
Lestes dryas -**Emerald Spreadwing**
Lestes eurinus -**Amber-winged Spreadwing**
Lestes forcipatus -**Sweetflag Spreadwing**
Lestes rectangularis -**Slender Spreadwing**
Lestes unguiculatus -**Lyre-tipped Spreadwing**
Lestes vigilax -**Swamp Spreadwing**

Coenagrionidae

Amphiagrion saucium -**Eastern Red Damsel**
Argia fumipennis -**Variable Dancer**
Argia moesta -**Powdered Dancer**
Chromagrion conditum -**Aurora Damsel**
Coenagrion resolutum -**Taiga Bluet**
Enallagma aspersum -**Azure Bluet**
Enallagma boreale -**Boreal Bluet**
Enallagma carunculatum -**Tule Bluet**
Enallagma civile -**Familiar Bluet**
Enallagma cyathigerum -**Northern Bluet**
Enallagma ebrium -**Marsh Bluet**
Enallagma exsulans -**Stream Bluet**
Enallagma hageni -**Hagen's Bluet**
Enallagma minusculum -**Little Bluet**
Enallagma vesperum -**Vesper Bluet**
Ischnura posita -**Fragile Forktail**
Ischnura verticalis **Eastern Forktail**
Nehalennia gracilis -**Sphagnum Sprite**
Nehalennia irene -**Sedge Sprite**

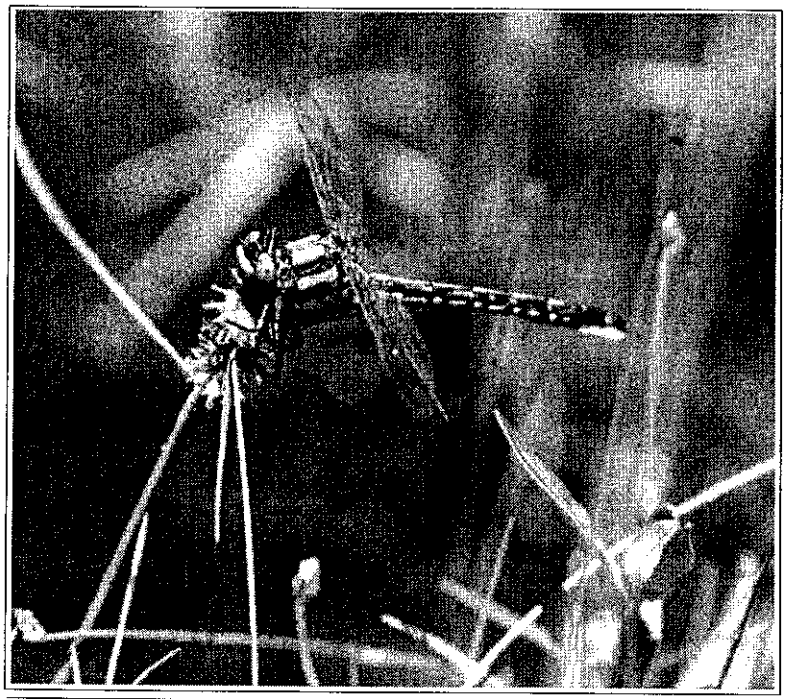
Anisoptera - Dragonflies

Aeshnidae

Aeshna canadensis -**Canada Darner**
Aeshna clepsydra -**Mottled Darner**
Aeshna constricta -**Lance-tipped Darner**
Aeshna eremita -**Lake Darner**
Aeshna interrupta -**Variable Darner**
Aeshna septentrionalis -**Azure Darner**
Aeshna sitchensis -**Zigzag Darner**
Aeshna subarctica -**Subarctic Darner**
Aeshna tuberculifera -**Black-tipped Darner**
Aeshna umbrosa -**Shadow Darner**
Aeshna verticalis -**Green-striped Darner**
Anax junius -**Common Green Darner**
Basiaeschna janata -**Springtime Darner**
Boyeria grafiana -**Ocellated Darner**
Boyeria vinosa -**Fawn Darner**
Gomphaeschna furcillata -**Harlequin Darner**

Gomphidae

Dromogomphus spinosus -**Black-shouldered Spinyleg**
Gomphus adelphus -**Mustached Clubtail**
Gomphus borealis -**Beaverpond Clubtail**
Gomphus descriptus -**Harpoon Clubtail**
Gomphus exilis -**Lancet Clubtail**
Gomphus spicatus -**Dusky Clubtail**
Gomphus ventricosus -**Skillet Clubtail**
Hagenius brevistylus -**Dragonhunter**
Lanthus parvulus -**Northern Pygmy Clubtail**
Ophiogomphus anomalus -**Extra-striped Snaketail**
Ophiogomphus carolus -**Riffle Snaketail**
Ophiogomphus colubrinus -**Boreal Snaketail**
Ophiogomphus rupinsulensis -**Rusty Snaketail**
Stylogomphus albistylus -**Least Clubtail**
Stylurus scudderi -**Zebra Clubtail**



Gomphus borealis *(Beaverpond Clubtail) is a species that was once considered very rare in Canada, but due to the increase in interest, naturalists are discovering it is not as scarce as previously thought.*

Cordulegastridae

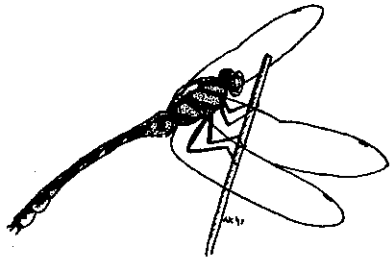
Cordulegaster diastatops -**Delta-spotted Spiketail**
Cordulegaster maculata -**Twin-spotted Spiketail**

Macromiidae

Didymops transversa -**Stream Cruiser**
Macromia illinoiensis -**Illinois River Cruiser**

Corduliidae

Cordulia shurtleffii -**American Emerald**
Dorocordulia lepida -**Petite Emerald**
Dorocordulia libera -**Racket-tailed Emerald**
Epitheca canis -**Beaverpond Baskettail**
Epitheca cynosura -**Common Baskettail**
Epitheca princeps -**Prince Baskettail**
Epitheca spinigera -**Spiny Baskettail**
Helocordulia uhleri -**Uhler's Sundragon**
Somatochlora brevicincta -**Quebec Emerald**
Somatochlora cingulata -**Lake Emerald**
Somatochlora elongata -**Ski-tailed Emerald**
Somatochlora forcipata -**Forcipate Emerald**
Somatochlora franklini -**Delicate Emerald**
Somatochlora incurvata -**Incurvate Emerald**
Somatochlora kennedyi -**Kennedy's Emerald**
Somatochlora minor -**Ocellated Emerald**
Somatochlora septentrionalis -**Muskeg Emerald**
Somatochlora tenebrosa -**Clamp-tipped Emerald**
Somatochlora walshii -**Brush-tipped Emerald**
Somatochlora williamsoni -**Williamson's Emerald**



Libellulidae

Celithemis elisa -**Calico Pennant**
Celithemis martha -**Martha's Pennant**
Erythrodiplax berenice -**Seaside Dragonlet**
Leucorrhinia frigida -**Frosted Whiteface**
Leucorrhinia glacialis -**Crimson-ringed Whiteface**
Leucorrhinia hudsonica -**Hudsonian Whiteface**
Leucorrhinia intacta -**Dot-tailed Whiteface**
Leucorrhinia patricia -**Canada Whiteface**
Leucorrhinia proxima -**Red-waisted Whiteface**
Libellula exusta -**White Corporal**
Libellula incesta -**Slaty Skimmer**
Libellula julia -**Chalk-fronted Corporal**
Libellula luctuosa -**Widow Skimmer**
Libellula lydia -**Common Whitetail**
Libellula pulchella -**Twelve-spotted Skimmer**
Libellula quadrimaculata -**Four-spotted Skimmer**
Nannothemis bella -**Elfin Skimmer**
Pantala flavescens -**Wandering Glider**
Pantala hymenaea -**Spot-winged Glider**
Sympetrum corruptum -**Variegated Meadowhawk**
Sympetrum costiferum -**Saffron-winged Meadowhawk**
Sympetrum danae -**Black Meadowhawk**
Sympetrum internum -**Cherry-faced Meadowhawk**
Sympetrum janeae -**Jane's Meadowhawk**
Sympetrum obtrusum -**White-faced Meadowhawk**
Sympetrum rubicundulum -**Ruby Meadowhawk**
Sympetrum semicinctum -**Band-winged Meadowhawk**
Sympetrum vicinum -**Yellow-legged Meadowhawk**
Tramea carolina -**Carolina Saddlebags**

It's Small and Red with a White Face....

by Matt Holder and Andrea Kingsley

Now that you know what to call different species of odonates in English, it may be a good idea to know how to tell them apart! Despite the complicated nature of technical keys devoted to dragonflies and damselflies, most (but not all) species can be identified quite readily. Often it is still necessary to catch them to see their colours and patterning well enough, but you can usually identify an odonate without attempting to examine the shape of its genitalia. With this short note and accompanying illustrations, we give some pointers on how to identify one small yet common group of odonates, the whitefaces (*Leucorrhinia*).

These small dragonflies with distinctive white or near white faces (hence the name) may be found mostly during the first half of the summer, flying near creeks, beaverponds, marshy lakeshores or bogs. Males, with their black bodies marked with red, often perch on vegetation near water waiting for females (black marked with yellow) to fly past. You can watch the anxious males as they keep a watchful eye for anything moving near to them, and will fly up to meet approaching females, other males, and even odonates of other species. The ease with which they can be observed and the interesting behaviour they display have fueled many student projects!

In Nova Scotia, there are six species of *Leucorrhinia*. Five are common throughout much of the province, including the Annapolis Valley. The males of these species are illustrated in colour on the front and back covers and are briefly discussed below. The sixth species, Canada Whiteface [*L.patricia*], has recently been discovered in Cape Breton and probably doesn't occur in the valley (and is not illustrated).

The male **Frosted Whitefaces (a)** has extensive whitish pruinosity (a waxy substance that develops with age) on the base of its abdomen that often completely obliterates the red patterning underneath. They are small whitefaces, have an all-dark dorsal surface to the abdomen, and an almost plain red side to the thorax, without much black striping.

Crimson-ringed Whiteface (b) also has an all dark abdomen, but is larger than Frosted. The base of the abdomen has twocomplete red rings

going around the abdomen on two separate segments. Pruinosity tends not to be as extensive as on other whiteface species.

Hudsonian Whiteface (c) males have red spots on the dorsal surface of the abdomen, almost right to the end. They are small, like Frosted, but do not develop a lot of pruinosity. It is our only species that has spots going all the way down the abdomen (but be aware that females of the other species, the identification of which I am not discussing, have yellow spots going down the abdomen like a male Hudsonian).

The male **Dot-tailed Whiteface (d)** has a very distinctive triangular pale spot near the tip of the abdomen. This patterning is diagnostic.

Finally, male **Red-waisted Whiteface (e)** have all dark abdomens (although the odd individual may have some very thin red markings on the dorsal surface) and will often develop a lot of pruinosity around its base, obscuring the red patterning. They may be separated from Crimson-ringed by the larger black marks on the sides of the thorax and the one (not two) complete red ring going around the base of the abdomen.

The identification of whitefaces can be straightforward, but it isn't the easiest of groups to sort out (which is why we did this note). For more basic identifications, or coverage of other groups, we suggest picking up one or two of the following regional guides (see below). Soon, there will be available a continent-wide photographic field guide to dragonflies (excluding damselflies), entitled "Dragonflies Through Binoculars" by Sid Dunkle. Finally, there is a great reference on the Internet, a website maintained by some people in Massachusetts. We strongly suggest visiting their website at http://www.capecod.net/~bnikula/on2.htm.

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Atlantic Emergency Response Team (ALERT)

by Anne Ferrero

Bay of Fundy is a unique aquatic region, home to many birds and sea mammals. The population of avian species swells with the seasons as migratory birds add their numbers to the already present non-migratory and pelagic residents. Likewise the population of sea mammals fluctuate as the whales join seals and otters in the coastal waters.

This bay with its inherent beauty, is an integral part of the economy for Nova Scotia and New Brunswick. It plays a key role in supporting an ever growing tourism/ecotourism industry. Fundy has long provided the resources to support the regional fishing industry. The Bay also serves as a waterway for the transportation of fossil fuels and raw materials. However, the "boat/ship" use of this body of water presents the threat of serious contamination. Most people are unaware that small-scale bilge contamination is chronic. This is the most damaging form of oil contamination presently occurring in the Bay, but a greater problem is on the horizon.

The relatively large oil tanker and shipping freighter traffic means that the Bay of Fundy is overdue for a large-scale oil spill; we all recall the Exxon Valdez disaster in Alaska. Thus far we have been very lucky but given the amount of traffic our luck is unlikely to hold. Oil tankers of this type frequent the waters of the Bay en route to the Irving refinery in Saint John, New Bruswick. The Canadian Wildlife Service, Environment Canada, the Coast Guard, Dept. of Fisheries and Oceans, Irving Oil and community action groups in New Brunswick and Nova Scotia are seeking a means to minimize the disastrous impact of a large scale oil spill in the Bay. The question is not "if" a spill occurs, but "when": it is almost inevitable. Because of this, representatives of each of the above organizations have formed a committee, ALERT (Atlantic Emergency Response Team) to prepare a contingency plan for a combined oil-spill response.

In the past year, much of the actual plan has been formulated. An international oil-spill responder, Tri-State Bird Rescue and Research, from Delaware, U.S.A., has been retained. The government agencies have specified their roles and will provide appropriate support. Irving Oil Ltd. provides both organizational personnel and partially subsidizes ALERT. The most important component of this combined effort, however,

is community involvement. Under supervision, trained members of the community will assist in collecting, cleaning and recording data on the affected wildlife. Time is critical, not only to individual birds, but to those species whose populations are already in question. We need to be prepared to minimize the impact to our shore of a spill.

To achieve this goal, a non-profit organization will be formed. This organization will be responsible for the implementation of the contingency plan for the Minas Basin to the Digby Neck region. It will include co-directors, contact people, collectors and cleaners. Eastcoast Waterways, Ltd. in New Brunswick has successfully completed this task, and is offering to share its know-how with us. I am presently looking for a few committed people to be directors of this non-profit organization. I am also compiling a list of people interested in being a part of the response network.

Members of the Blomidon Naturalists Society who would like to become involved in ALERT are asked to contact me, Annie Ferrero at by email at AFERRARO@NS.SYMPATICO.CA, by phone at 902-765-2425 or by mail at 319 Cassidy Rd. RR #1 Kingston, NS B0P 1R0.

Awards for Former Young Naturalist

In 1993 Charina Cameron won the BNS Young Naturalist Award. At that time she was studying bees, and then as a senior at Horton High School she has continued to be recognized for another project, "Bee Heard", which explores how honeybees perceive sounds.

At the Annapolis Valley Regional School Board Science Fair she won various awards, plus a scholarship from Acadia University, where she plans to study either biology or physics. In May she also participated in the Canada-wide Science Fair in London,Ontario, and in June represented Canada at the International Science and Engineering Fair in Detroit. Among her awards were one from the Canadian Acoustical Association, a scholarship from the University of Western Ontario, and another scholarship that enabled her to attend a month-long summer research program at the Weizmann Institute of Science in Israel.

Congratulations, Charina. If beginnings are any indicator your success seems assured. We wish you well.

Valley Birds
by Angus MacLean

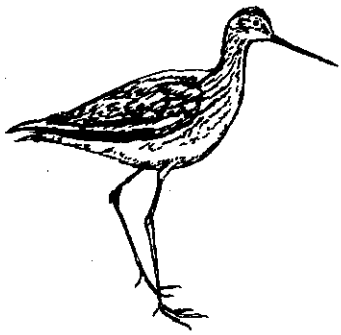
A late Red-throated Loon was spotted in the Minas Basin on April 30 (Sheila Hulford) and a Pied-billed Grebe was first noted on April 15 at Hennigar's Marsh, Sheffield Mills (AAM, RBS).

A Great Egret was found (by BLF, Sandra Forsythe) on April 9 near Canning. This individual moved around quite a bit but was found by several others during the next few days. On May 11 an American Bittern flew into the Cornwallis River marsh at Kentville (AAM). Merritt Gibson discovered a Glossy Ibis on April 14. The bird was seen by several others until the 18th but proved elusive for many. It fed in a wet pasture and also in a small marshy area, north of Canning (fide AAM).

An adult Snow Goose was found on April 15 along the Habitant River (near Canning). This individual was banded. Two were reported there a few days later (RBS, BLF, AAM). Mike McCall reports an unusual recurrence of a Eurasian Green-winged Teal at Saxon St. Pond on April 2, almost to the day where one was observed last year. Likely the same individual but it did not linger. There were two pair of Northern Shovelers on the Port Williams Sewage Ponds on May 22 (George Forsyth). On May 27, four males and two females were sighted at Belleisle Marsh (NSBS Field Trip). However JJN reports only two there on June 17. JET reports a pair at the Wolfville Sewage Ponds, the latest sighting on June 12. Three pair of Gadwall were at Belleisle Marsh on May 27 (fide AAM). A female Tufted Duck was at Harris' Pond (Canning) on April 15. Found by JWW, it was later seen by RBS and AAM.

Turkey Vultures continue to be scarce in Kings Co. but last summer were regularly seen near Middleton. So far the only report is from the road to Margaretsville where two were seen June 6-7 (George Estey fide JCT). At Kentville on May 1, a Sharp-shinned Hawk chased an American Crow for a distance then the crow chased the hawk until they were out of sight (AAM). This species did not seem to be common at all this spring.Two Broad-winged Hawks were perched together on tops of short spruce on Butler Road (southern Kings Co.) on May 13 (AAM). A Golden Eagle was seen on May 20 following the Wolfville Ridge (GWT). Several other sightings were reported in late winter at Pereau and the

North Mountain, perhaps all the same individual. An American Kestrel was at Grand Pré on April 15, likely a spring migrant. This species is an unusually uncommon nester in the Valley (AAM). An adult Peregrine Falcon was along Saxon St. on May 7 (BBT)



Two Virginia Rails were heard calling at a small marsh along the railroad tracks, west Wolfville. This is an uncommon nester in the Valley. Two Soras were also heard calling in the same marsh (m.o.). On May 27 a Sora was seen swimming a distance across an impoundment at Belleisle Marsh. I had never seen them swim before but this may not be that unusual? (NSBS Field Trip). There were at least six singing males in the two central impoundments (AAM). An American Coot was found on the Cornwallis River behind the Evergreen Nursing Home in west Kentville (Mike Hawkeswood, JCT). Later on May 23, one was on Harris' Pond, Canning (JCT, JET). 19 Greater Yellowlegs were seen just south of Canning on May 5 (JCT).

The number of Barred Owls nesting and the number fledged in BLF's boxes were down considerably from last year. Only four pairs fledged seven young. Last year 14 pair fledged 35 young. It is presumed this reflects a sharp decline in *Microtus* populations. Short-eared Owls were noted many times on the Grand Pré dykelands and in Avonport. At the latter, seven were noted perched on ice cakes in early spring. The roost of Long-eared Owls in Lower Canard did not materalize this past winter.

Ruby-throated Hummingbirds were first reported on the North Mountain on May 5 (Joanne Maxwell fide JCT). JCT also noted she saw the first female on May 18.

A very elusive Red-bellied Woodpecker spent most of the winter in west Wolfville and was last seen in early May (fide JCT). An adult Yellow-bellied Sapsucker spent some time on April 4 searching the pines in our backyard in Coldbrook (AAM).

The first report of Olive-sided Flycatchers was of four on Butler Road, June 4 (GWT, JCT). The Eastern Wood-Pewee was not heard until May 22 which is very late (AAM). An early Yellow-bellied Flycatcher appeared at Coldbrook on May 13 (AAM). On May 27 there were many (10+ singing males) on NSBS field trip to Mickey Hill Wilderness Area, Annapolis Co. led by Sharon Hawboldt. A Least Flycatcher was heard at Palmeter Woods, Kentville on May 8. By mid-May they were common in their localized habitat. Some of their habitat has been lost in recent years due to the drive for pulpwood but these birds are still common in eastern Kings Co. (AAM). Eastern Phoebes are an uncommon nester in the Valley. There may be two pair around the White Rock area (BLF), a pair at Steam Mill and another pair on Rte. 221 near Welsford (AAM), a pair at Bear River (JET) and a possible pair at Kingston (Barb & Pat Giffin). A pair of Great Crested Flycatchers appeared in Coldbrook on May 18 and since that time have been heard and seen up to the present (June 27). A pair nested in this area last year (AAM)

Two Blue-headed Vireo were heard in Palmeter Woods, Kentville on May 5 for first time this year (AAM). These are quite common in Eastern Kings. No reports of when the first Red-eyed Vireo showed up but they were noted everywhere by late May.

Purple Martins are a rare migrant through the Valley; apparently most go directly to their breeding colonies in Oxford and Amherst as few are reported in NS (or NB) in migration. Three were reported with Barn Swallows on May 20-21 at Medford, Kings Co. (Ken Cheslok, Jacquie White, fide JCT). Merritt Gibson asked whether the Barn Swallow populations were down this year. Although no one had direct comments, no doubt this is true. However RBS noted on May 7, there were many hawking for insects over Canard Pond and on May 11 JCT found many (with Banks) over Saxon St. Pond.

The first Veery was heard at Palmeter Woods, Kentville, on May 8. Not heard again until May 18. Extremely common in wet woods in the eastern Valley (AAM). A Gray-cheeked Thrush was found at Coldbrook on May 16. This individual was observed for about 25 minutes (AAM). Several of this very rare visitor were seen on the SW isles this spring.

Gray Catbird were first heard (and seen) along the Cornwallis River, Coldbrook, on May 12. This is an abundant summer resident in scrub growth (AAM). Northern Mockingbirds are so common in eastern Kings that reporting has fallen off. One was at Canning on April 10 (BBT) and a pair have been present a this species to arrive. There were many (7-10 heard) Canada Warblers on the NSBS Field trip to Mickey Hill on May 27. GWT & JCT had two on Butler Road on June 4.

American Tree Sparrows lingered across the province this spring but none later than a pair in Greenfield (Kings Co.) where they attempted nesting and were last seen May 27 (JJN, Trina Fitzgerald). Swamp Sparrows are fairly early migrants but many seen in the Valley in early spring continue on to nest elsewhere. Four to five were singing May 1 in an alder swamp, Kentville but later only two pair remained (AAM). Lincoln's Sparrows were reported from Methal's Bog (BLF). Another known breeding area lies just south of Blomidon P.P.

Wolfville continues to be a stronghold for Northern Cardinals. Gerry Trueman reports a pair at her feeder on April 15 and a male on May 5. Several males heard singing in other areas of the town (fide BBT). Along Alders Ave. in New Minas, two pair have been present for several years and are presumed nesting. Males wander looking for mates; several heard in Coldbrook at various times did not stay (AAM). A male (and later) a female Indigo Bunting was at the feeder of Pat Martell's, Grand Pré on May 24. Another male was at G. Trueman's, Wolfville, on May 26.

A Rusty Blackbird was heard & seen flying in Kentville on May 12. This individual was in the area all winter. Several pair nest along Butler Road (AAM, GWT). One Common Redpoll was still at Tom Regan's feeder, Canard, on May 26. Singles lingered elsewhere around the province.

List of Observers:

BLF	Bernard Forsythe	AAM	Angus MacLean
JJN	Joe Nocera	RBS	Richard Stern
JT	Jean Timpa	BBT	Bill & Brenda Thexton
GWT	Gordon Tufts	JCT	Judy Tufts
JWW	Jim Wolford	m.o.	many observers

North American Migration Count
by Judy Tufts

To everyone who participated in the Spring 2000 North American Migration Count on May 13, a great BIG THANKYOU. There were some wonderful sightings included. Without your enthusiastic participation and observations this project would not be the success it is. Your efforts are greatly appreciated.

Some highlights:

1- Little Blue Heron was found near Tangier, Hlfx Co.

4- Great Egret: 1- Cherry Hill/Broad Cove, Lun Co.;
1- Port Joli, Queens Co; 2 - in Richmond Co. with one each in Grand River and Alderney Point, Richmond Co.
1- Snowy Egret in a marsh in Lower LaHave, Lun Co.

5- Green Heron: Shelb Co: 1 - Lockeport, 1 - Ingomar; and 1 on CSI, Shelb Co., 2 - Seal Is., Yarmouth Co. (Acadia U. Biology Dept. bird-banding students)

6- Canvasback and one Wood Thrush were observed by Art Crowell in a fishing area north of Sheet Harbour, Halifax Co. A second Wood Thrush was heard on Bon Portage Is. by the Acadia U. bird banding team.

1- Glossy Ibis and 3 adult American Oystercatchers on CSI

2- Upland Sandpiper: 1-off the Old Lingan Rd. in Cape Breton Co; 1- on CSI, Shelburne Co.

1- White-eyed Vireo: Bon Portage Is. Banded by Acadia U. bird banding team.

1- male Red-bellied Woodpecker and 1 Blue Grosbeak were found on Brier Is, Digby Co.

1- Long-eared Owl heard in Upper Clyde, Shelb. Co.

1- male Hooded Warbler on Seal Is. Banded by the Acadia U. team.

1- Pine Warbler coming to a feeder in Dartmouth.

1- female (eastern) Summer Tanager coming to the Marshall's feeder near Sunnybrae, Pictou

1- female Dickcissel coming to the Macdonalds' feeder in New Waterford, C.B. Co.

1- Field Sparrow on CSI

Finally 24 warbler species were recorded as well as 124 Ruby-throated Hummingbirds.

215 species were counted; 120,647 individual birds were tallied. The best year ever !! (In 1999: 192 species with 92,179 birds)

Participants: Owling - 28; Regular - 389; Stationary - 45; Feederwatchers - 406.

You can all be very proud of your outstanding efforts. Well done.

Species	Anna	Hants	Kings	Species	Anna	Hants	Kings
Red-throated Loon	3	-	3	American Coot	-	-	1
Common Loon	9	9	13	Killdeer	6	23	28
Pied-billed Grebe	-	2	-	Greater Yellowlegs	3	5	1
Red-necked Grebe	4	-	-	"Eastern" Willet	4	25	34
Double-crested Cormorant	71	25	137	Spotted Sandpiper	8	8	11
American Bittern	5	6	-	Semipalmated Sandpiper	-	15	-
Great Blue Heron	5	4	27	Least Sandpiper	-	-	9
Canada Goose	66	140	26	Common Snipe	7	25	6
Wood Duck	8	2	6	American Woodcock	5	22	2
Green-winged Teal	2	5	46	Bonaparte's Gull	-	-	1
American Black Duck	26	386	211	Ring-billed Gull	-	-	11
Mallard	8	41	96	Herring Gull	101	71	830
Blue-winged Teal	4	10	7	Great Black-backed Gull	9	26	355
Northern Shoveler	-	-	1	Black Guillemot	-	-	8
American Wigeon	-	16	2	Rock Dove	68	211	194
Ring-necked Duck	25	33	8	Mourning Dove	108	339	314
Lesser Scaup	-	-	1	Great Horned Owl	-	1	-
Common Eider	96	-	50	Barred Owl	1	21	31
Black Scoter	100	-	210	Common Nighthwk	-	1	-
Surf Scoter	27	60	3	Chimney Swift	155	-	79
White-winged Scoter	1	-	-	Ruby-throated Hummingbird	14	19	29
scoter sp. *	300	-	-	Belted Kingfisher	4	10	10
Bufflehead	25	-	-	Yellow-bellied Sapsucker	2	21	5
Hooded Merganser	1	-	5	Downy Woodpecker	26	44	102
Common Merganser	4	15	4	Hairy Woodpecker	12	47	40
Red-breasted Merganser	-	4	1	Black-backed Woodpecker	-	3	-
Osprey	3	17	2	Northern Flicker	23	170	117
Bald Eagle adult	-	31	14	Pileated Woodpecker	3	17	9
Bald Eagle imm *	-	14	7	Eastern Wood-Pewee	-	-	1
Northern Harrier	5	14	6	Yellow-bellied Flycatcher	-	-	1
Sharp-Shinned Hawk	3	2	6	Alder Flycatcher	1	-	1
Northern Goshawk	-	1	2	Least Flycatcher	5	-	8
Broad-winged Hawk	-	5	5	Eastern Phoebe	-	-	5
Red-taileded Hawk	8	17	41	Eastern Kingbird	1	-	7
Rough-legged Hawk	-	1	2	Tree Swallow	749	325	411
Buteo sp. *	2	-	-	Bank Swallow	82	3	4
American Kestrel	5	32	5	Cliff Swallow	109	-	20
Merlin	1	1	7	Barn Swallow	230	235	99
Rng-necked Pheasant	40	103	143	Gray Jay	7	2	3
Ruffed Grouse	3	16	14	Blue Jay	94	302	367
Virginia Rail	-	-	2	American Crow	154	666	648
Sora	2	-	3	Common Raven	15	111	234

Species	Anna	Hants	Kings
Black-capped Chickadee	112	474	406
Boreal Chickadee	-	23	5
Red-breasted Nuthatch	9	42	75
White-breasted Nuthatch	8	10	25
Brown Creeper	-	3	1
Winter Wren	6	4	5
Golden-crowned Kinglet	5	37	34
Ruby-crowned Kinglet	11	146	92
Veery	1	-	1
Swainson's Thrush	-	-	2
Hermit Thrush	10	46	18
American Robin	134	848	626
Gray Catbird	1	1	3
Northern Mockingbird	-	-	15
Bohemian Waxwing	2	-	1
Cedar Waxwing	1	1	-
European Starling	185	1393	1252
Blue-headed Vireo	5	40	80
Red-eyed Vireo	3	2	16
vireo sp. *	11	-	1
Nashville Warbler	1	12	13
Northern Parula	18	16	29
Yellow Warbler	31	10	58
Chestnut-sided Warbler	10	1	3
Magnolia Warbler	4	9	9
Cape May Warbler	-	2	-
Black-throated Blue Warbler	1	-	1
Yellow-rumped Warbler	70	219	206
Black-throated Green Warbler	47	40	86
Blackburnian Warbler	8	2	-
Palm Warbler	10	59	21
Blackpoll Warbler	-	-	3
Black-and-white Warbler	38	32	55
American Redstart	1	-	1
Ovenbird	29	19	95
Northern Waterthrush	8	12	19
Mourning Warbler	1	-	-
Common Yellowthroat	11	4	9
Wilson's Warbler	1	-	-
Canada Warbler	-	-	3
Northern Cardinal	5	-	6
Rose-breasted Grosbeak	25	15	28
American Tree Sparrow	-	12	18
Chipping Sparrow	16	37	89
Savannah Sparrow	11	65	102
Fox Sparrow	-	1	1
Song Sparrow	111	340	432
Lincoln's Sparrow	-	-	1
Swamp Sparrow	10	28	7
White-throated Sparrow	34	131	117
White-crowned Sparrow	6	7	11
Dark-eyed Junco	47	307	183
Bobolink	21	9	55

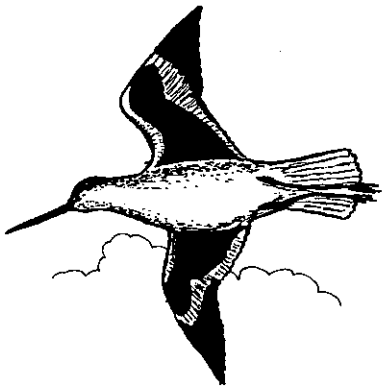
Species	Anna	Hants	Kings
Red-winged Blackbird	553	380	344
Rusty Blackbird	3	13	7
Common Grackle	229	670	483
Brown-headed Cowbird	11	23	19
blackbird sp. *	1	3	4
Baltimore Oriole	2	-	1
Pine Grosbeak	-	8	-
Purple Finch	81	425	286
Common Redpoll	-	7	5
Pine Siskin	14	65	58
American Goldfinch	122	364	452
Evening Grosbeak	53	267	132
House Sparrow	32	194	186
* Indicates unidentified or sub-species			
Time Start	600	500	530
Time Stop	2130	2200	2130
OWLING			
Hours	0.25	2	0.5
Kms		2	
#Parties	1	4	2
#Observers	2	4	4
REGULAR			
Hours Foot	29	115	81
Hours Car	8.75	170	40
Hours Boat	5.5	2	
Hours bike		3.5	2
Hrs other (ATV)			
Km Foot	55	137	126
Km Car	118	543	737
Km Boat	12.5	5	
Hours bike		32	15
Km other (ATV)			
#Parties	12	39	32
#Observers	16	54	45
STATIONARY			
Hours	1	1	12
#Parties	2	1	6
#Observers	5	1	9
FEEDER WATCHER			
Hours	58.5	69	112
#Feeder watchers	25	41	58
#Feeder stations	23	33	50

Spring Weather 2000

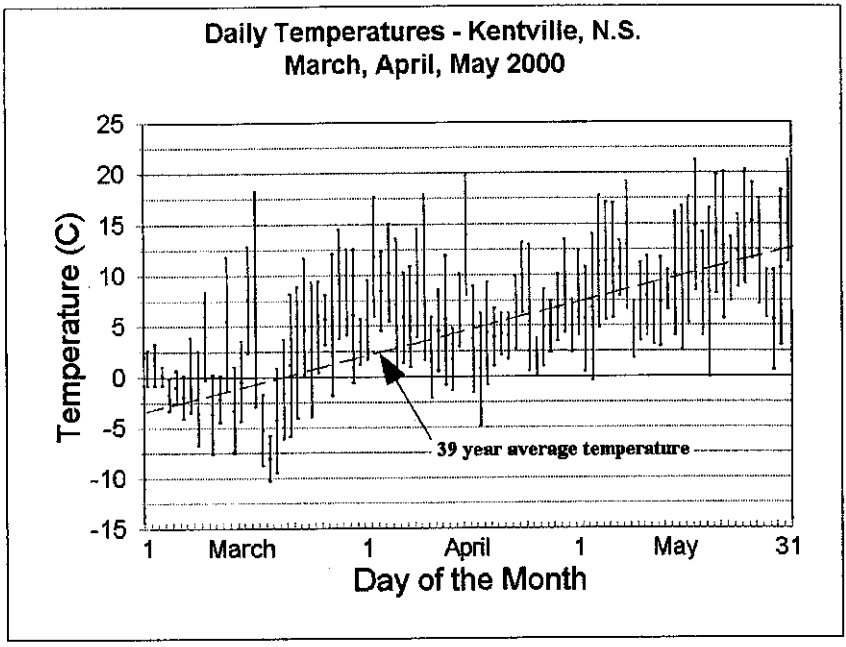
by Larry Bogan

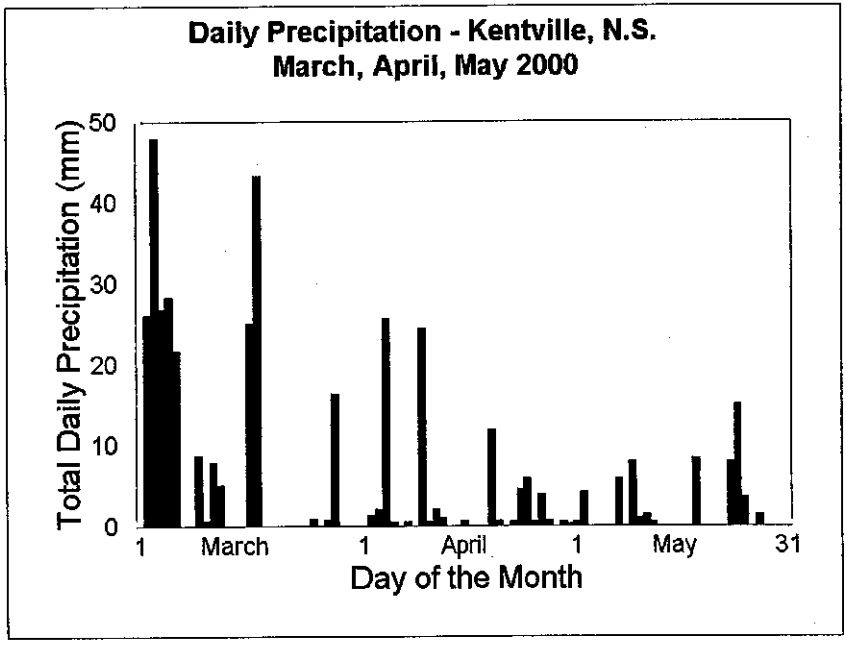
from Kentville Agriculture Centre	**Mean Temp.** (°C)	**Snowfall** (cm)	**Total Precip** (mm)	**Bright Sunshine** (hours)
March (39 yr avg)	5 (-1.0)	83 (45)	259 (106)	139 (133)
April (39 yr avg)	6.1 (4.5)	0 (15)	89 (83)	116 (152)
May (39 yr avg)	10.1 (10.6)	0 (2)	58 (78)	178 (202)
Season	5.9	83	406	433

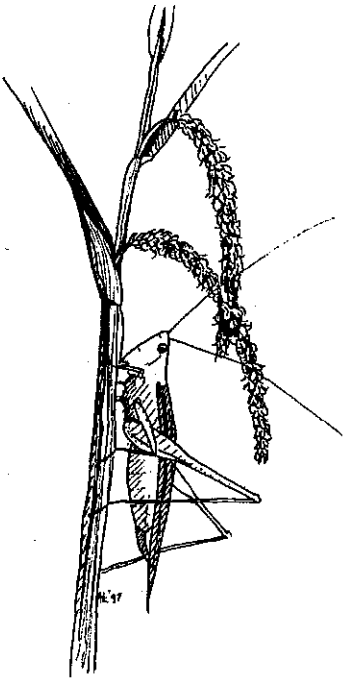
What an interesting season of contrasts. Really, it was a gradual progression from a very wet and warm March to a dry but cooler May. If you look at the graph of daily precipitation, you will notice the dramatic decrease in the frequency and amount of rainfall from March to the end of May. The dryness continues now in June as I write this. March had more than normal snowfall, all of which occurred in the first half of the month (remember the snows of the winter had melted completely at the end of February). There were 27 cm on the ground during the first week and shortly after that melted there was another 17 cm fall which was gone within the week.



The cloudiness does not agree with the precipitation. While March had the normal amount of sunshine, it had nearly 2.5 times the average rainfall and May had 88% of the usual sunshine hours with 3/4 of the average rainfall. Usually we expect less sunshine when there is more rain or snow falling.


Daily Temperatures - Kentville, N.S.
March, April, May 2000
Temperature (C)
25
20
15
10
5
0
-5
-10
-15
39 year average temperature
1
March
1
April
1
May
31
Day of the Month


Daily Precipitation - Kentville, N.S.
March, April, May 2000
Total Daily Precipitation (mm)
50
40
30
20
10
0
1
March
1
April
1
May
31
Day of the Month



Blomidon Naturalists Society
2000 Membership Fees

Each member receives four issues yearly of the BNS Newletter. The Blomidon Naturalists Society is a registered charity. Receipts for income tax purposes will be issued for all donations. The membership fee itself is not tax-deductible. Members may also join the Federation of Nova Scotia Naturalists through the BNS and will receive their quarterly newsletter; the membership is not tax-deductible.

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	$ _____
_____	Family	$18.00	$ _____
_____	Individual Junior (under 16 years)	$1.00	$ _____
_____	Federation of NS Naturalists Membership	$5.00	$ _____
	Tax-deductible donation	_____	$ _____
		Total	$ _____

Name: _____

Address: _____

_____ Postal Code: _____

Phone: _____

Type of membership: Individual Adult ☐ Individual Junior ☐ Family ☐ (Number of people) ☐

Join the Federation of NS Naturalists? Yes ☐ No ☐

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