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LE NATURALISTE DU N.-B.

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Pen and ink drawing by
Don Kimball, Sackville, N.B.

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Don Kimball, Sackville, N.-B.

From the Editor

We very much regret the absence of our editor, Gayl Hipperson, who has been called away by the grave illness of her father. Putting together a newsletter is not easy as it might appear and we are extremely happy and pleased with Gayl's efforts. This issue has a variety of articles she had assembled before her departure.

With spring and a renewed zest for the outdoors, perhaps readers will find the search for wild onions, chives and garlic challenging and appetizing; we have an interesting article to help you sniff them out. Caves periodically appear as a topic in nature magazines. In this issue we have a report on our New Brunswick caves. Birdwise, there is the interesting report of Philadelphia Vireos singing 'out of tune' and I, for one, will have my ears perked to the limit this summer, to find out whether I have sometimes been calling Philadelphias Red-eyed Vireos by mistake.

To know that a species can be brought back from near extinction and that it's happening in our 'neck of the woods' is exciting. The report on Peregrines is certainly good news for naturalists, as is the slow recovery of the upper Saint John River from pollution.

Alas, sad news for our federation is the sudden death of the well-known and highly respected naturalist and former museum curator, Stan Gorham. A longtime friend pays tribute and tells us more about this quiet, kind man.

Nature News, as usual, is of interest as is the book review section. Lastly, a horror story about the bloodthirsty horse and deer flies will help you look forward to summer. The only remedy I can recommend is to get romantic about the early dawn on the Kingston Peninsula.

Mary Majka, for the
Editorial Committee

YES, THIS IS VOLUME 13

As the person responsible for putting the cover together for the first issue of the year, I was reminded by our diligent editor to be sure to change the volume number. Unfortunately, I inadvertently changed it by two and in the rush to get the material to the printers didn't notice the error. Thus, we ended up with volume 14, instead of volume 13. Please make a change on your copy.

David Christie

From the President

After another rather unusual winter, spring is at last here, an exciting time for naturalists. Alas, for many of us, a sad note clouds this usually happy time. We have lost one of our most prominent naturalists, Stan Gorham, well-known former curator at the New Brunswick Museum. In another part of this newsletter we pay tribute to Stan. Let me just say that he was one one of a kind, somebody who demonstrated that interest in nature in one's youth can become a life's vocation.

Young people do not appear to be drawn to our clubs and yet practically every 'kid', if encouraged will pour out a whole long list of observations, questions, stories about natural things he or she remembers. It is with some perplexity that I ask myself the question, why do naturalists who are so interested in nature regard this to be an adult preoccupation? Why couldn't, for example, a birdwatcher introduce a child (his own or his neighbour's) to a few common birds by inviting him or her for a short field trip or a half hour observation of a bird feeder? Perhaps a fishing trip could not only be a lesson in hook baiting (a grizzly affair for me) but a lesson in outdoorsmanship where no garbage is thrown into the water, the fire carefully doused and nature treated with respect. Why couldn't all those expensive tools in the basement be used to cut some bird boxes from some old boards and a child invited to help put them together and find a place to hang them up. That child will not forget those lessons.

This spring I challenge everyone of you to start a young naturalist on the way. The pleasure will be yours and a youngster will grow up caring for this planet. To this end we invite you to look around and find a young person, age 11 to 15, who would be willing to go to a nature camp this summer (all camp fees paid by the federation). The camp for children age 11 to 13 takes place in July at Tabusintac and is run by the Atlantic Center for the Environment. Young people age 13 to 15 have a chance to go canoeing for a week on our New Brunswick rivers. Our committee will choose from submissions sent on or before 15 June 1984. We ask for a letter from the young naturalist telling us how he or she was introduced to nature (hopefully by you) and a letter from you telling us about that youngster. Simple enough! Let's all look around for those who will take over from us, experiencing not only the enjoyment we derive from nature but also the care and love with which we handle the natural world.

I hope to see you during the summer at one of the field trips our federation is organizing and certainly you will be on hand for the annual meeting at Florenceville. Have a wonderful summer!

Mary Majka

REMARKS BY LIEUTENANT-GOVERNOR G. F. G. STANLEY AT THE PROCLAMATION OF THE BLACK-CAPPED CHICKADEE AS NEW BRUNSWICK'S PROVINCIAL BIRD

I take great pleasure in being in the distinguished presence of the Canadian Nature Federation, on the occasion of my signing a Proclamation declaring the provincial bird of New Brunswick to be the Parus atricapillus, the Black-capped Chickadee.

The movie comedian, the late W. C. Fields, revelled in using words that rolled off the tongue - and he used the phrase, 'my little chickadee' as a term of endearment. 'My little chickadee', there is an affectionate sound to it - much more so than 'my little Parus atricapillus.' Obviously, Fields did not know that the 'chickadee' was also known as the 'titmouse'. Or he would have contrived to put the two words 'chickadee' and 'titmouse' together. In fact he would have delighted in doing so.

The chickadee is the charming and evocative name of a bird of great personality and usefulness. And as the people of New Brunswick wisely chose the violet as the provincial flower in 1936 - when they were asked to choose a provincial bird, through a newspaper campaign, they showed the same insight and understanding of their province in selecting the Black-capped Chickadee.

The chickadee is a cheerful little companion, even through the long, cold winter. His bright song 'chidtadee - dee - dee' delights us all, and his bright song 'spring's here' encourages young and old alike. Such a busy, little bird, working so hard for his sustenance - eating enormous quantities of tiny insects and weed seeds to nourish its small body. A handsome and compact little fellow, readily accustomed to feed close to human beings - his special charm is the fact that he is cheerful in all kinds of weather. Both males and females help raise their young, showing concern for the eggs and affection for the baby birds.

As the naturalist Taverner expressed it - 'I have never seen a discouraged chickadee'. An attractive, industrious, friendly little bird - enthusiastic under all kinds of conditions. What better symbol could New Brunswickers have chosen?

Sackville, N. B., 13 August 1983.

Of all the birds in the apple tree,
None is so gay as the chickadee.
For today he's acclaimed
And henceforth is named
New Brunswick Bird - by George Stanley.

(1983 CNF Conference limerick contest)

STANLEY W. GORHAM

Francis R. Cook

(The following is taken with the author's permission from a tribute prepared for the Canadian Field-Naturalist by Stan Gorham's long-time friend and colleague, Francis Cook, Curator of Herpetology at the National Museum of Natural Sciences, Ottawa.)

On 22 March 1984, Stan Gorham lost a prolonged battle with a succession of heart problems, and died in hospital in Halifax. At his request, there was no memorial service, and he was cremated. It is difficult to credit the passing of this quiet, tough man with the salty yet disarmingly humble demeanor, the sometimes punishing lifestyle yet incredible resilience, kindness and humour - the last crisis was too easy to take lightly, as he had overcome so many difficulties and disappointments that Stan Gorham appeared to be literally indestructable.

Stan was born in Brown's Flat, New Brunswick, and raised on a farm in the hard times between two World Wars. He was an uneven student, and finally, with the severity of educators of the time, his grade eight teacher dismissed him from class, sending him home with a note to his parents to keep him there, that there was no hope of him passing, and that he might better be started on whatever way he was to support himself without further waste of the school's time.

At the end of the school year Stan appeared and won the right to sit for the final exams - and, having poured over his books in the interval, proved the faulty judgment of his dismissor by passing. That, however, ended his formal education. Years later, as a veteran of the Second World War, he could have had government support to pick up the lost educational years, but he was by then working hard to raise a family.

Before the war, Stan served in the merchant marine, and during it with the Canadian Navy. The latter years left their mark, and he had many stories of bravery and danger of others, but no tales of his own. Only determined questioning would reveal that he had spent the war aboard munitions supply ships where one shell reaching these vulnerable targets might mean the sudden end of all aboard. No option for heroics, only the simple need to serve and unflinchingly accept the odds.

Stan achieved the rank of first mate in the merchant navy, an accomplishment of which he was justly proud.

Sometime before or during his travels on merchant and naval ships, perhaps from his youth, Stan's interest in herpetology was aroused. In ports around the world he visited museums and talked

to curators, and concluded that there was a need for a modern checklist of world amphibians with complete synonymies and ranges; the last such list was published in the 1880's, and the modern literature was increasingly diffused in papers published throughout the world. One of his first contacts with a great American herpetologist (now deceased) came when he wrote him of his idea; he was curtly told to forget it, he had neither the background nor education to tackle the job. Yet no one who had the background or the education had the time or inclination then to undertake such a project.

Undaunted, though never forgetting the rebuff, Stan took on the project anyway, and for fifteen years combed the world amphibian literature, compiling names and sifting through conflicting learned opinion on the validity of each.

It was not an easy task, because it was actually his third concurrent job. In 1953 he had joined the staff of the National Museum in Ottawa as a technician in the zoology section. Technicians were not overpaid in those days and to support a large family Stan also held a night job with an office-cleaning firm. The amphibian checklist was fitted in at lunch, what was left of the evenings, and on weekends. Despite this routine Stan was always a husband and father devoted to, rather than isolated from, his wife and family, with time for his friends as well.

While with the National Museum, Stan was part of many field expeditions; to southern British Columbia for bird surveys with W. Earl Godfrey in 1955, to the Arctic with Don McAllister, and on many oceanographic expeditions for both fish and invertebrates.

Near the end of his National Museum employment he became the first technician in ichthyology and herpetology and, later, solely herpetology technician. In 1965 a long hoped-for job at the New Brunswick Museum opened up, and because the family farm had been vacant since the death of his father he could better support his family there, and have, in addition, more independence to pursue his interests. At the New Brunswick Museum he progressed from Assistant Curator to Curator of Vertebrate Zoology to Acting Head of the Natural Sciences Department; ill-health forced a premature retirement in 1983.

In 1954, while still with the National Museum, Stan discovered the first Four-toed Salamanders in Quebec, collecting them near his home in the Gleneagle region. The incident is so typical of his low-key approach that it bears repeating. When Sherman Bleakney, then Curator of Herpetology, arrived one Monday morning there sat in the middle of his desk a bottle containing live Four-toeds, with no label or explanation. Sherman erupted with immediate curiosity qualified with irritation because of the lack of data, only to have Stan wander in and comment blandly 'Find something interesting, Sherm?'. Only slowly did Stan admit

credit for the discovery, and more slowly yet did he reveal the locality of the find that was of such interest to Sherman's zoogeographic studies. Stan had postulated earlier that the species should be in the area but as Sherman had been skeptical Stan felt justified in maintaining the suspense as long as possible.

Stan produced many popular articles and scientific papers in the course of his career. During his time at the National Museum the first results of his literature surveys came out in the form of three papers comparing the amphibian faunas of different parts of the world, published in The Canadian Field-Naturalist.

His project gained him international recognition, but also some criticism for oversights in some of his published work. He had never received the funding necessary to systematically travel and exhaustively examine world amphibian collections, but this was a poor excuse for the lack of appreciation for the dedication he had put into the work within the limits imposed upon him, or for Stan's vast knowledge of amphibian literature.

Perhaps the ultimate in published bad taste was a remark by American Scientists J.D. Lynch and A. Schwartz who commented that 'Gorham, not a herpetologist,...' was in error on a matter of taxonomy. Ultimately, the New Brunswick Museum did publish his complete list of valid names for the amphibians of the world, but much of the detail he had accumulated has never been published. Nor has there been any real recognition of the catalytic stimulus of Stan's efforts in forcing attention on the problems of enumerating and listing the described valid forms in the world.

Stan was from solid New Brunswick United Empire Loyalist stock, and not much given to admiring Yankee style to begin with. He never, to my knowledge, submitted a single article to an American herpetological journal. He did, however, accept funding from the American Philosophical Society to investigate one of his special interests: the frogs of the genus Platymantis isolated on the Fiji Islands, doing field work there in 1966 and publishing several papers on his findings.

In contrast to his reception by some American herpetologists, his reception in Europe was warm and respectful. There he was judged not by whether he had degrees from accepted universities or was a part of the current upper clique, but on his work, his knowledge, his interests and his determination. Perhaps also his lack of brashness and self-advertisement more fitted him for respect there than in America.

A high point of Stan's life was a trip in 1977 to Russia, sponsored by a grant from the Canadian Department of Foreign Affairs, during which he was able to meet and discuss holarctic herpetological problems with eminent Soviet scientists. To his

regret, a chill in the cool-warm cycle of Canada-Russia diplomatic relations subsequently prevented a much looked-forward-to reciprocal visit from one of these scientists.

Not all Stan's global travels were so satisfying. During an ill-fated expedition to the Falkland Islands in 1967, he contracted parrot fever (psittacosis), which may have contributed to the progressive erosion of his health in later years.

Stan contributed specimens to herpetologists all over the world, and was made a fellow of the London Zoological Society for his contributions of live specimens to the London Zoo. His Canadian collections enriched the holdings of the National Museum of Natural Sciences and form the backbone of the vertebrate collections of the New Brunswick Museum.

Not the least of his varied efforts was in encouraging young herpetologists: one of his earliest contributions was a paper in The Canadian Field-Naturalist on keeping amphibians in captivity. Besides myself, John Gilhen, of the Nova Scotia Museum, Don McAlpine, and many others have profited from his knowledge of amphibians in the field, and from his urging to do research of our own.

Throughout his efforts, Stan's wife, Rene, was his strength, typing and proofreading manuscripts and voluminous correspondence, and sharing the raising of their six children.

In 1975, the boy from Brown's Flat who barely made it through the eighth grade was recognized for a subsequent lifetime of scholarly contribution, and Stan Gorham was awarded an honourary Doctor of Sciences degree from the University of New Brunswick. Dr. S.W. Gorham achieved academic recognition the hard way.

Stan was a meticulous and dedicated scholar, who yet had grown up in a time and setting where man was measured by the quantity he could drink - and Stan was a match for any man. He was a delightful story-teller, though not necessarily for parlor-room company. With a prodigious memory and sense of excellence of the past generation of herpetologists, he was yet unfailingly patient and encouraging to anyone interested in amphibians whatever their age or education. A rough ex-seafarer, a Loyalist of the old school, Stan was self-made, self-deprecating, warm, sympathetic, critical, understanding, generous, sensitive, and vulnerable. There are a legion of people who will miss him, and find it hard to believe that he is gone.

CAVING IN SOUTHERN NEW BRUNSWICK

Frank W. Withers

To tell or not to tell - that is the question often facing successful fishermen and hunters, discoverers of interesting plants, scenic sites, good restaurants, and caves.

New Brunswick Museum Assistant Curator, Donald McAlpine, the province's main authority on caves, says that precisely because caves here are relatively unspectacular, and thus unlikely to get formal protection, they ought not to be advertised.

Evidence for this view lies in the difference between two caves within the city limits of Saint John. Howe's Cave, easily accessible and within 300 paces of Sandy Point Road, is spattered with grafitti and strewn with garbage; its rudimentary speleothems are worn and broken. Harbell's Cave, a little more difficult to find and considerably more difficult to travel, is untouched and clean; its bare rock flushed by an icy stream. A major concern among naturalists is the disturbances of bat colonies, which are not very large or numerous in this part of the world.

Against the need for protection of caves is their recreational value, the need for scientists and others to study and share their knowledge, and the inclination, partly a matter of bread and butter, of reporters like me to tell about everything they hear and see.

During the past year, accompanied by Donald McAlpine's brother Roy, president of the Saint John Wilderness and Hiking Club and an experienced caver and rock climber, and sundry relatives and friends, I visited four of New Brunswick's 15 known solution caves (caves formed by water dissolving limestone or gypsum). Two of them, and the underground lake at Demoiselle Creek in Albert County, I had visited several times during the 1960's. The only noticeable change appeared at Green Head in Saint John. There, what I remembered as a relatively clear upward sloping floor, had become a maze of fallen rock.

My visits could not be termed explorations. They were simply tours by a nosey reporter. Measurements and other data are lifted from reports made by McAlpine and other researchers.

My impression that there were fewer bats fits in with the opinion of scientists that even occasional visits by human beings may sharply reduce bat populations in their hibernating or resting caves. In 1904, G.F. Matthews wrote of a 'great number' of bats

using Howe's (or Oliver's) Cave when it was first discovered in the 1860's. In the 1940's, Travis Cushing reported 'numerous hibernating bats'. A 1975 census numbered them at 15 and when McAlpine visited the cave on January 7, 1977, only 10 bats were counted.

Eastern Pipistrelle hanging head downwards, the usual position for bats, during hibernation in a New Brunswick cave.

At the Hillsborough Bat Cave on November 9, 1974, naturalist David Christie and others estimated hibernating bats to number about 350, but on November 14, 1976, McAlpine reckoned them at only 150.

Donald McAlpine's 1979 paper, 'Preliminary Investigations on the Solution Caves of New Brunswick' suggests many New Brunswick caves are not entirely suitable for bat hibernation and therefore it is important to protect whatever bat colonies there are.

Of the seven bat species in New Brunswick, the commonest hibernating in caves are the Little Brown Bat (Myotis lucifugus) and the Long-eared Bat (Myotis septentrionalis), with the Eastern Pipistrelle (Pipistrellus subflavus) seen rarely.

In the course of visits to a dozen caves in New Brunswick, Nova Scotia and Cuba, I have never seen any wildlife other than bats, at the most three or four at a time.

Because caves here are short in length and of recent (post-glacial) formation there are no strictly cave-dwelling animals in New Brunswick caves such as white, blind fish and salamanders found in some parts of the world. McAlpine and other researchers have identified various insects, spiders, worms and other fauna typical of caves in this region, but aside from the bats, the only animal sign likely to be noticed by the recreational caver is porcupine dung and, in Kitt's Cave alongside Kings County's Hammond River, the remains of a beaver dam.

New Brunswick caves are small by any standard. Compared to the 18 kilometres of passages in Castleguard on the British Columbia - Alberta border, ours vary from an estimated 300 metres in the sealed-up Archie's (or the Devil's) Hole to the 14 metre Glebe Pot, both in Kings County.

Howe's Cave, explored and roughly charted by Robert Matthew and Allen Jack in the 1800's was rumored to extend from the eastern extremities of Saint John to the Reversing Falls in the west. Dr. William MacIntosh, Curator of the New Brunswick Museum, and other visitors have pretty well dispelled that idea, although it is recognized that some of the impassable holes in its walls could lead to other more extensive caverns.

Don McAlpine puts the main passage length at about 121 metres. It forms the elongated cross member of a T with a short entrance passage as the leg. This is a point for cavers to remember, not only in Howe's Cave but in many otherwise simple and easily travelled caves. In seeking the exit, it is possible to pass and repass the rubble-strewn way out unless it is marked with something easily identified in the dark.

The entrance is a steeply sloping eight-metre crawl down the side of a funnel ending at a hole best entered feet first on one's back. The trip alternates between stooping and crawling among sharp edged boulders and welcome but treacherously sideways-slanting paths through seven-metre high chambers.

At other points only the slender can slither snake-like along several metres of slimy tunnel. Both the northern and southern arms of the main passage fetch up in small pools of water about 17 metres below the surface. In spring, water backs up about a third of the way along the southern arm.

There is some flowstone and cave coral on the walls. Stalactite formation, where it has not been knocked off, is confined to a few small bumps on the ceiling. Draperies, sometimes extending across a metre or so of ceiling but hanging down only three or four centimetres, form limey ridges as evidence that speleothem formation continues.

Much more in evidence are such things as a lipsticked inscription, 'Anthony and Cleopatra, 55 BC,' and grinning spray-painted skulls. That inspires doubt in all such calling cards but there is an air of age and authenticity in the name 'Coster' or 'Foster' and the date 1877 scratched or chiselled on one rock face.

Green Head Cave overlooking a Saint John River beach on the city's northwest limits is interesting mainly for its approach and the view from its quarry face entrance. The approach involves a small climb and then a crawl along a narrow outward sloping ledge to a vertical cleft which opens into a narrow passage sloping upward 45 metres to rubble blocking further passage. Tree roots hanging down into the tunnel, as in Howe's Cave, indicate the passage ends near the top of the 60 metre high cliff overlooking an abandoned lime quarry on the shores of the wide and beautiful Grand Bay.

The third cave within the Saint John city limits is Harbell's. A small deeply ditched brook disappears into a wooded knoll creating an appropriate beginning to a chilly, wet and tiring crawl and climb of about 60 metres in length.

The stream and entrance passage spiral down a corkscrew track along which it is necessary for most of the distance to wriggle in a nearly horizontal position with either head or feet in icy water. The corkscrew opens into a narrow crevasse several metres deep which must be traversed by jamming toes and heels, chest and shoulders between opposite walls a metre or so above the narrow water-filled bottom.

The rumbling torrent that makes Harbell's an uncomfortable spot also sweeps the roughly striated walls of all mud and slime, giving good friction for traversing or chimneying even where there is no other toe or finger hold.

After about five or six metres the crack ends on a ledge leading to a narrow twisting tunnel which gives onto a lip of a three metre waterfall.

My companions, Roy McAlpine and Stephen McIntosh, clawed their way to one side of the fall and dropped to a small beach at its foot. Unwilling to risk the jump I slid down through the waterfall, filling my hip waders with ice water in the process. The chilly torrent tumbles along a bit further to a point 15 metres below surface where a pool, yet to be explored, blocks further progress for any but scuba divers.

Another cavern with a good sized stream through it is Kitt's Cave, the only one with more than one entrance-exit.

This muddy 100 metre cavern is generally entered through a hill-top depression with a passage dropping down to a fairly level stream bed. The trip involves travelling upstream, sometimes through the water and sometimes along a narrow beach or through elevated passages through which the stream scalloped its way in earlier millennia.

The trip involves a couple of short, steep climbs, at the top of one of which there is a vista of a big boulder-littered cavern. The passage ends in a deep pool, filled apparently by a hillside spring, and out of which the stream flows back to near the entrance where a fork in the passageway takes it to a stream-side exit into the Hammond River. The remains of a beaver dam can be seen at a point about midway along the length of the cave.

There is no crawling or climbing to be done at the Demoiselle Creek underground lake in the Albert County gypsum and oil shale area. There, a low gypsum roof overhangs a deep cold pool which divers have explored a few metres back without finding any evidence of an extended cavern or tunnel.

There is also the 45 metre Stuart's Ridge Cave in Albert County. Another spot of geologic interest in that county, which is home to New Brunswick's only oil wells, is the Devil's Half Acre in Fundy National Park. There a number of cracks and holes, one reported 30 metres deep, hold ice well into July and pose hazards to unwary walkers. Albert County also has the widely known Hopewell (flower pot) Rocks and several shallow sea caves worn into the sandy cliffs.

Naturalist-photographer Michael Burzynski writes in the Provincial Information Services quarterly New Brunswick of caves at Corbett Brook near Fredericton, and I have seen big funnel-like karst depressions along the bank of the Meduxnekeag Stream west of Woodstock. A local farmer tells of seeing the land collapse to form one of these depressions some years ago. The pits have never been excavated for subterannean passages and now are grown up in bushes and small trees although still easy to find.

Other Kings County caves are at Markhamville, Waterford, and Parlee Brook. Archie's Hole was sealed in 1969 after the Havelock Cement Company, which sometimes used it as a dump, rescued a girl who became stuck in a narrow passage. Oil spilled there at one time was reported to have surfaced at a point a mile and a half away.

Other New Brunswick caves also periodically face the threat of closure or being used as dumps. Still, lacking the spectacular

speleothems tourist look for, (and in any case being too small and potentially dangerous for that trade), they remain interesting phenomena for the sport caver, the geologist, the naturalist and the occasional thin wanderer whose curiousity wins out over his claustrophobia.

PHILADELPHIA VIREOS IN NEW BRUNSWICK

Don Kimball

New Brunswickers, curious about the varied bird life they discover in our province, undoubtedly soon become acquainted with our most abundant and noticeable vireo as it moves about the dense foilage of suburban and woodland shade trees. Once learned, the Red-eyed Vireo's rather long-winded but pleasant song is quite easily recognized. Often the bird will pause only briefly from its seemingly never ending singing, to pick off an available insect spied in the deciduous foilage.

Though much less familiar to most naturalists, if they know it at all, another species of vireo can also be found here, often sharing the same habitat in some areas with the Red-eye. Smaller and rather nondescript, the Philadelphia Vireo is easily overlooked. Slightly larger than a warbler, it often possesses a song almost identical to the Red-eyed Vireo's.

While conducting avifaunal surveys for the Canadian Wildlife Service in the St. Leonard/Black Brook Depot area during the summer of 1982, I was fortunate enough to observe a pair of Philadelphias, though only briefly, in an isolated mature hardwood stand, thick with deciduous undergrowth. The surprise was the male's startling song, which so closely resembled its Red-eyed counterpart's, that seeing the bird was the only sure method of revealing its identity.

In May of 1983, days before the arrival of Red-eyed Vireos and the first leaves, three Philadelphia Vireos were present not far from the area where the pair had been sighted the previous year,

singing aggressively and chasing one another about overhead. Since many migrants move through this area in north-central New Brunswick during this time period, these birds were at first presumed likely to be migrants. As the summer season progressed, however, at least three males established territories in the area along this edge of mature hardwood forest. Approximately one mile away in a similar edge habitat, three more males were found sharing the maple-beech forest with Red-eyed vireos, Scarlet Tanagers, Black-throated Blue Warblers and many other forest species.

Later in the season, hours of searching and closely watching several males yielded no hint of a vireo nest, until finally a male was spotted approximately 30 ft. above in a maple sapling. Singing quietly in a whisper-like rendition of the normally loud vireo song, this Philadelphia male was only inches away from a female, watching as she threaded and worked new material into a skeletal framework beginning of a nest. Later in July, while on eggs, she refused, vireo-like to budge and literally had to be shoved off the nest to reveal the four rust-speckled white eggs. Later, she brooded four newly hatched young.

Several of the Philadelphia Vireos observed sang very clear and defined Philadelphia-like songs -- slow and rather high pitched. Others were shockingly similar to Red-eyes, and had to be actually seen to be positively identified! The clincher, when given by Philadelphias, is a high pitched agitated note -- a nasal 'it it' -- which in no ways resembles the Red-eye's harsh, complaining 'nyaa'.

The good numbers represented in this area, of these small but interesting vireos, might suggest that many are overlooked by the naturalist, and probably many more are present in our province than believed. Individuals, especially those which sing the near-identical Red-eyed Vireo song, are passed over quickly by even the keen birder, who misses a glimpse of one of our more interesting, but less familiar residents.

The forces of waste and pollution
Are destroying our earth and its oceans.

Will our birthright be sold
For industry's gold?
We <u>all</u> must provide the solution.

(1983 CNF Conference limerick contest)

EXPERIENCING A TEMPERATE DAWN

Henrik Deichmann

Like most field biologists, I've been up and away before daybreak more times than I could count. Generally, the reason for the early rising is participation in a Breeding Bird Survey, early-light photography or a migration watch. Just this past summer I decided to experience a dawn for its general rather than specific offerings. What follows is an account of the dawn on July 30, 1983, at Summerville, on the Kingston Peninsula. While preparing for the early morning rising, I had in mind that the date selected might be quite 'dull', compared to a day in earlier summer or spring. Now that its over, I don't think so.

0415 AST — Outside, a light zephyr-like breeze, so light as to be virtually imperceptible. The temperature is a pleasant 20 degrees Celsius. Setting to the southwest is the 'C' of the waning moon. To the east, there seems to be a hint, just a hint, of a glow... ever so slight. No apparent animal life as yet.

0430 — A Spring Peeper calls stridently from a nearby small pond. Heard no more, its utterance must have been the last call of night, rather than the first call of day!

0515 — There's now definitely significant light to the east, but still the lantern near my chair is providing welcome illumination for my early day reading. I raise my eyes from my book just in time to see a small bat (a Little Brown?) fluttering almost moth-like about the eaves of our old home. Suddenly, it vanishes under a cedar shingle.

0530 — The first bird call! The characteristic abrupt buzz of a Nighthawk as it goes ghosting past.

0545 — Suddenly, the territorial call of the Song Sparrow pours forth. Repeated proof, that Melospiza melodia is, in truth, well named. At this point, I anticipated maybe an early Robin, but such is not to be the case. A couple of Alder Flycatchers begin their two part calls, followed by a Veery, then the 'witchety, witchety' of the Yellow-throat. The birds are really coming to life. Then, from the nearby forest of Barlow's Bluff, the rollicking,

0545 (Cont'd) operatic song of the Winter Wren. An almost sinister element intrudes into my enjoyment of the avian symphony as the silhouette of a Raven on patrol appears. Then, just a minute before the hour, the bird music is interrupted by a resonant splash 'Smack!' The source? Salmon, I immediately think - what other fish would produce such a loud sound.

0600 The moon is sinking rapidly, nearly faded from view. It is now apparent that I will be denied a clear bright dawn, as light, thin cloud appears over the east, towards Rothesay-Renforth. Ah, the first call from a Robin at last!

I think for a moment of the resident White-tail doe, who would soon be leading her twins unobtrusively off into the forest's seclusion, and the local raccoons, who would cease their nocturnal wanderings. Next a Goldfinch gives its flight call, and from an undisclosed location in the nearby shrubbery, a Blue Jay blurts out 'Jay, Jay'...

0610 + ... 'Here I am... I see you... do you see me',... the audio signature of that most durable of day singers, the Red-eyed Vireo begins. As the morning progresses, the bird is true to its reputation... durable it certainly is!

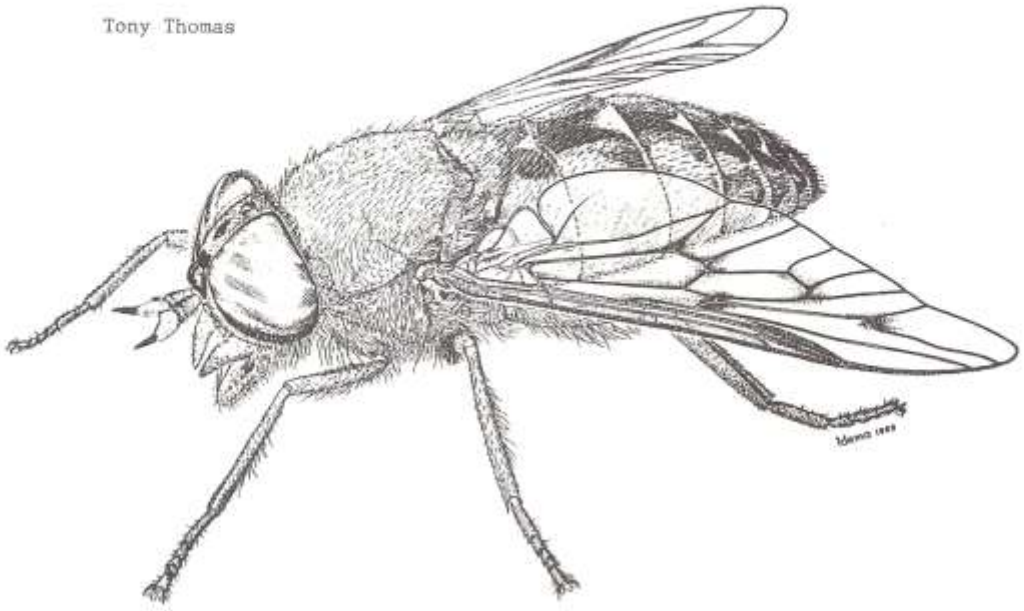
0630 to 0730 To the pleasant background, the mosaic of sound, is superimposed the pleading, attention-demanding calls of sibling White-throats, a confirmation of summer's reproductive capacity. The sight of adult Barn Swallows performing mid-air transfers to newly airborne young is a visual example of the season's production.

0800 and DAY! The sun's welcome disc appears. Warmth coaxes open the delphiniums, and soon the resident pair of Hummingbirds are breakfasting on the nectar. I join them with yet another coffee, while picking up on the somewhat melancholy, pitch variable, coooo-co-co-co of the Black-billed Cuckoo. Then, to the accompaniment of the Red-eyed Vireo's litany, I take up a hammer, and begin my day's allotted work, mentally recalling and savouring my experience of the birth of another day.

I have been on the equator, and have been exposed to the abrupt switch from night to day and day to night, so characteristic of the low latitudes. Probably, it's this exposure which made me appreciate even more the gentle transition with which we are blessed here in the temperate regions. If you haven't already, try getting up before the birds sometime. I know it had special meaning to me.

"Bugs!"

Tony Thomas



Female of *Hybomitra lasiophthalma* (Macquart).
Manual of Nearctic Diptera. Vol. 1.
Agriculture Canada, Monograph No. 27. 1981

HORSE FLIES AND DEER FLIES

Family: Tabanidae

Beautiful flies
With shining eyes
Of deep green hue and marvelous size
With golden sheen
On bars of green
And depths opalescent that glow between
Such are the eyes
Of these beautiful flies.

(From a poem, Deer Flies, written in 1930 by Professor J. G. Needham, Cornell University.)

Beautiful flies indeed! Maybe for those courageous enough to examine a female as she prepares to lance your skin and mop up the blood! As a family of insects though, the tabanids actually do

have the most beautiful eyes. The function of the patterning is unknown, but it does prove useful to the specialist as an aid in distinguishing between similar species. Unfortunately the colour dissappears soon after death leaving only a vague shadowing of the pattern.

Tabanid flies should be familiar to all naturalists for it is they who seek out you, rather than vice-versa as for most other animals. They go by several colloquial names throughout the world. In North America, members of the genus Chrysops are termed deer flies whereas the larger species, in the genera Hybomitra and Tabanus, are the horse flies, moose flies and bulldog flies.

The last of the four verses of Needham's poem finishes:

So trim, so airy, so expedite
so big a terror
For such a mite
So quick to see, so prone to bite
How does she carry
Her appetite?

Females of most species require a blood meal to develop eggs. Invariably the feast is obtained from a vertebrate, usually a large mammal, although some species feed on birds or reptiles. The nutrients in the blood meal become the yolk in the flies' eggs. In addition to the female's blood meal, both the sexes require sugars to stay alive and as an energy source for flight. These sugars are obtained from the nectar of flowers. This presents a special problem for the females. They have to fill up with nectar in order to fly and search for a host, but still be able to imbibe rather large quantities of blood when and if the opportunity arises. The answer to their storage space problem is to have a separate 'holding' tank for the nectar, from which small amounts are passed into the stomach to provide the energy for flight - the original fuel-injection system! Thus, when a blood source is discovered there is always an empty stomach to receive it.

Prodigious amounts of blood are ingested; in the space of a few minutes a female will imbibe her own weight in blood. One blood meal suffices to develop one batch of eggs, about 200, all laid at once in a single large egg mass. After oviposition, another blood meal is required in order to develop a second batch of eggs. Some females may survive to lay three egg masses, but one or two masses is probably the usual maximum.

Obtaining a blood meal can be a hazardous undertaking as hosts tend to be somewhat less than willing to part with their blood. Vampire bats, requiring a daily blood meal, feed at night when their hosts are asleep. Mosquitoes inject an anesthetic to produce a relatively painless bite (although pain may develop after the mosquito has left). Tabanids are diurnal

and produce no anesthetic; leaving them to contend with alert hosts that feel every bite. All considered, the percentage that succeed in obtaining a blood meal is probably low. The larvae of some species are able to store food reserves, as fat, to the extent that the adult female does not require a blood meal to develop eggs.

Each female deposits her large egg mass on the leaves of plants growing in wet areas. The eggs hatch and the larvae fall to the substratum and dig in. The larvae of horse flies are carnivorous, seeking out and killing all kinds of living animals of suitable size. Killing is by means of a poison which is delivered by a system almost identical to that of rattlesnakes.

The food of deer fly larvae is not known. After feeding for one or two summers, the larva changes to a pupa. A week or so later the pupa wriggles to the surface and the fly emerges. Females live for about two weeks and are most common in the wet areas which are the larval habitats. We know from rearing larvae that the sex ratio of males:females is 1:1, yet males are rarely seen in nature.

Because of their proclivity for blood, tabanids are known transmitters of various diseases throughout the world. Fortunately, no species in New Brunswick has been associated with disease transmission either in man or domestic animals. The annoyance factor probably does reduce milk yield in cattle, however, as well as the productivity of man and other animals during the summer.

About 350 species in 27 genera have been recorded from North America; 100 of these are found in Canada and 53 species, in six genera, in New Brunswick. Tabanids, at least females, are well represented in collections and the distribution of most New Brunswick species is known. Most of the collecting has been in the southwest portion of the province with very little collecting in other areas. New locality records turn up each year, and two, as yet undescribed, species have been found recently in the Fredericton area.

TWO BOOKS TO WATCH FOR!

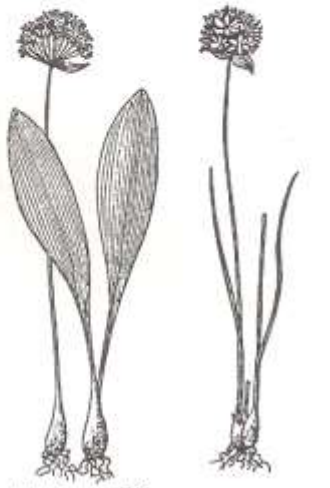
Freeman Patterson is a well-known photographer and writer, so it is not surprising to see that another book of his will be released at the end of May; the title: Namaqualand, Garden of the Gods. What makes this book launching remarkable is that the book will appear at the same time as one written by his sister, Doris Calder, whose work deals with the history of the Kingston Peninsula, home to the Pattersons, Loyalists by origin. All Our Born Days is a work of love, but also the work of a dedicated, gifted writer. Which only goes to prove: like brother, like sister!

Rare New Brunswick Plants

GARLIC, RAMPS, AND CHIVES - THE WILD ONIONS OF NEW BRUNSWICK

Hal Hinds

There aren't many plants you can identify by stepping on them, but you will certainly know the wild onions if you tread on them. Any part of the plants that is broken exudes the unmistakable oniony order. The characteristic flavor and odor of all these onions is due to an acrid, volatile oil, allyl sulphide. Although all our species are edible, and can be used as a flavoring for your wild salad or as a vegetable, only the chives are frequent enough to allow collecting for the table.



WILD LEEK WILD GARLIC

What are we apt to step on here in New Brunswick? There are three species and two varieties of wild onion found in our province. These are Wild Leek (Allium tricoccum), Wild Garlic (Allium canadense), and Chives (Allium schoenoprasum var. schoenoprasum and var. sibiricum). The Wild Leek, also called ramps, is known from only four or five locations in the province. It is a plant of deep, rich, and sweet-soiled alluvial bottomlands along rivers, at the base of calcareous escarpments, and, rarely, in mature upland hardwoods. It grows in shade with such plants as Sugar Maple, White Elm, Hop Hornbeam, White Ash, Blue Cohosh, Trout Lily and Bloodroot, to name a few. The leaves of the Wild Leek are broad and flattened and disappear in early to mid summer as the flowering stalks appear.

In the southern Appalachians, where Wild Leek was very common, the mountain folk each spring went 'on a rampage' for ramps, collecting great quantities for soups, stews, pickles and potherbs. They even had special clothes they wore just for ramping since the onion odor soon permeated whatever they wore and was impossible to remove.

The Wild Garlic is known with certainty from only three sites on the Saint John River in New Brunswick. It is not as conspicuous as the Wild Leek because of its leaves which are narrow and resemble grass leaves. In the province it occurs in rich soil on partly

shaded river banks which are often rocky. Wild Garlic flowers, which appear in July, are usually replaced on the flowering stalk by bulblets.

Chives occur in New Brunswick on exposed rocky or gravelly sites bordering several rivers. It is an uncommon plant, but not rare. We are all familiar with the appearance of the cultivated chive and the wild variety (var. sibiricum) differs only in being less robust with leaves shorter and bulbs less bunched. The cultivated chive is sometimes found in the province around old house foundations where it may persist for many years if not too heavily shaded.

If you should be walking the alluvial bottomlands or rocky banks of New Brunswick, keep your nose attuned to that pungent, savoury odor of onion, and if you should find a patch of Wild Garlic or Wild Leek, I would be interested in your report. Your secret is safe with me!

The following key will help you name your oniony find.

WILD ONIONS OF NEW BRUNSWICK

Choose Either A or B

A. Leaves very narrow, tubular or flat, present at flowering time.....Go to C & D.

B. Leaves flat, broadly lance-shaped, 1-3 dm long, 2-6 cm wide, with slender stem, usually shrivelling before the whitish flowers appear. Wild Leek (Allium tricoccum)

Choose Either C or D

C. Leaves tubular; flowers well developed in a hemispherical or subglobose cluster..Go to E & F.

D. Leaves flattened; flowers few or none, whitish or pink tinged, usually replaced by small whitish or purplish bulbs. Wild Garlic (Allium canadense).

Choose Either E or F

E. Leaves slender, 1-2 mm thick, + equalling to overtopping the flowering stalk; bulbs crowded. Cultivated chive (Allium schoenoprasum var. schoenoprasum).

F. Leaves larger, 2-4 mm thick, rarely reaching as high as flowering stalk; bulbs few or solitary. Wild Chive (Allium schoenoprasum var. sibiricum).

Nature News

December 1983 - February 1984

David Christie

Having experienced two and a half weeks of mild, late fall weather in December, New Brunswickers were treated to three weeks of spring in February. Any burgeoning spring fever, however, was nipped in the bud when winter returned with a vengeance in March. Average winter conditions prevailed during the remainder of December and in January.

Mammals

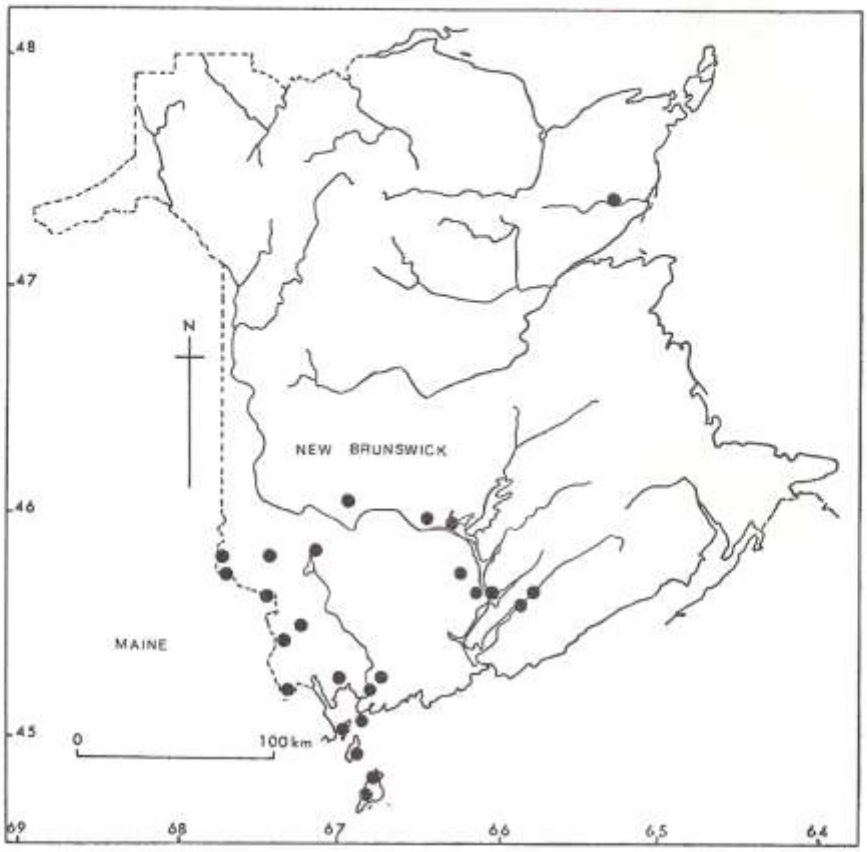
Since mentioning Gray Squirrels in the last issue, I have had more reports from beyond their stronghold in the central and southern Saint John Valley. To the north Erwin Landauer saw one at Tobique Narrows May 10 last year and a few have dispersed as far as the lower Miramichi where there were apparently three different squirrels at Nelson-Miramichi, Douglastown and Chatham this winter (Bert Woulds, George Cadogan, Katherine Asoyuf, Doris Carter). Harry Walker notes that he has had only about four other reports from that area over the years. To the southeast, one has been seen in Shediac (fide Gerald Walsh), one in the Sunny Brae section of Moncton (Fred Lloyd), and another at Germantown, near Riverside-Albert, this winter (Mary Majka and DSC). I have also learned that two frequented a sugarbush at Baltimore, west of Hillsborough, last spring (Gerry Jones).

Gray Squirrels are doing well, not only at the edges of their range. In reporting them 'all over the place' at Fredericton, Marguerite McNair writes, 'They are very demanding little critters and have glared in the window until I found some treat for them -- anything from fruit cake to chocolates.' Yes, they are doing very well, indeed!

Birds

The following notes concentrate on observations that supplement the information contained in the Christmas Bird Counts.

Two Common Loons were inland as late as December 4 at Fredericton, where there was also a Barrow's Goldeneye December 5-11 (Peter Pearce). The only Great Blue Heron reported during the winter was at Daniels Marsh, west of Hopewell Cape, January 3 (Doreen Rossiter). Also missed on the CBC's was King Eider, two males of which were spotted at St. Andrews February 8 (David Clark).



New Brunswick, showing locations of Bald Eagle nest sites, 1974-80 (from Stocek and Pearce, 1981; Can. Field-Nat. 95: 430).

The highlight of the early winter were some Tundra (Whistling) Swans, the first reported in the province since 1966. The first, seen at Chance Harbour December 12 (David Nason) was subsequently shot by a hunter and eventually given to the New Brunswick Museum. On December 16, two appeared in the New Horton section of Shepody National Wildlife Area (Shannon and John Inman) and one remained there till December 18 (v.o.). Evidently these swans were part of a flight that was blown off course by a weather disturbance, for there were several reports in Maine and Nova Scotia at the

same time. The usual migration route of this arctic nester is via the Great Lakes to Chesapeake Bay.

Canada Geese appeared very early during the mild February weather. The earliest were seen February 13: 25 at Harvey, Albert County (Harold Brewster), 18 at nearby Mary's Point (Mary Majka) and, surprisingly, one inland at Centreville (Theresa Davenport). They continued to be seen sporadically in the Harvey area for the rest of the month and, two weeks early, about 25 were noted at Oak Point on the 28th (Renie Gorham), the same day a lone Am. Black Duck was at Lower Jemseg (Enid Inch).

Bald Eagles were reported frequently, especially in the areas where they were seen during the CBC but also at St. Martins (Ted Sears), Bloomfield, Kings County (DSC et al.), Mactaquac (Pearce et al.), near Wapske (fide Rabatich) and at Riley Brook and Nictau (Wilma Miller et al.). Laverne Rabatich reports hearing of a possible nest near Tobique Narrows which she hopes to be able to check this summer. If anyone else knows of an eagle nest at a location not shown on the accompanying map (from a 1981 paper by Rudy Stocek and Peter Pearce; Canadian Field-Naturalist 95: 428-433) please contact Rudy Stocek at the Maritimes Forest Ranger School, R.R. #5, Fredericton. Since the map was prepared, a nest was discovered along the Petitcodiac at Stoney Creek, but it was destroyed when part of the tree broke in summer 1983. It is also reported that the known nest at Tabusintac River was not active during 1983 (Larry Morris).

An American Kestrel at Cambridge-Narrows, believed to be the one that successfully overwintered last year, was last seen in its usual location January 22 (Anthony Carpenter) this winter. Perhaps it moved out because of increasing snow depths but it may have weakened and died. A Merlin was at Saint John January 17 and a light gray Gyrfalcon there January 30 (Jim Wilson).

Purple Sandpipers were missed on the upper Bay of Fundy CBC's but 40 were at Mary's Point January 15 (DSC and Majkas). Two Ring-billed Gulls were at Fredericton as late as December 4 (Pearce) and a Great Black-backed Gull reached as far inland as Florenceville February 24 (Ford Alward). A few Black-legged Kittiwakes and Razorbills were still to be seen at Point Lepreau February 28 (SJNC). Those species occur there regularly earlier in the winter. Farther up the bay where they are very rare, there were three Thick-billed Murres swimming along the shore of Fundy National Park January 5 (Angus MacLean and Rob Walker).

An Atlantic Puffin was a victim of the storm of January 31 when it flopped down into a snowbank in Donald Arsenault's Moncton yard. The 'feisty' young Puffin survived its enforced trip far from the sea, the attentions of the Arsenault's cat, and a taxi ride to a pet shop for evaluation, and was later released at Dipper Harbour (Brian Dalzell et al.).

In addition to the areas reporting Mourning Doves at Christmas, eight began coming to a feeder at Brown's Flat January 17 (Orville Anderson). A good number survived the winter, including 18 at Florenceville and about 10 at nearby Williamstown (Alward; Jean Carmichael). At Saint John West, one flock that numbered 19 at the beginning of February had disappeared by mid-month; a few tail feathers in the snow suggested attack by a hawk or other predator (Reg Smith).

At least one Snowy Owl was reported intermittently at Saint John (v.o.) and up to three were present on the Tantramar Marsh in January (Al Smith). The only other report came from Jacksonville where one was seen January 27 and 31 (Alward & Paul Carmichael). In addition to the CBC reports, a Barred Owl was photographed at Florenceville December 28, the day of the local count (Bill Crowhurst), and one was at nearby Wicklow February 13 (Lorna Maddox and Jeanette Greene). Short-eared Owls were seen 'occasionally' on the Tantramar Marsh (Al Smith) and one at Hartland January 15 (Pearce et al.). Many observers were hoping to see a Great Gray Owl this winter. A major incursion brought many of these northern owls to eastern Ontario (23 on the Ottawa CBC) and southwestern Québec. Unfortunately, New Brunswick was too far east to participate fully in the invasion and the only one reported was at Ketchum Ridge, near Glassville, January 7-8 and again, briefly, two to three weeks later (Sally McIntosh).

In reporting a Belted Kingfisher at Newcastle February 24 (Maxine Tozer), Harry Walker tells us that Chester Creighton mentions seeing kingfishers 'almost every winter' at the nearby fish hatchery.

Readers should note that, officially (in the current A.O.U. Checklist), there is now only one Three-toed Woodpecker, the species most recently known as Northern Three-toed and formerly as American Three-toed Woodpecker. It is found around the world in the Northern Hemisphere. In our region it has a barred black and white area on the back and is less numerous than the Black-backed Woodpecker, which we have been used to calling Black-backed Three-toed Woodpecker (formerly Arctic Three-toed). We must now try to stop thinking of the Black-backed as having three toes on each foot and reserve the three-toed name for our rarer species.

Now, I hope no one will be confused when I write that an additional Three-toed Woodpecker appeared periodically in a dead fir at Strathadam, near Newcastle (Margaret Russell). By winter's end the bird had stripped almost all the bark from the tree. Several observations of Black-backed Woodpeckers were reported in the Florenceville area, including four in one tree January 10 (J. Greene) and two at Williamstown February 15 and 23 (Raymond and Lorena Green et al.). Pileated Woodpeckers included one at Public Landing February 12 (Harry Miller) and one at Midway,

near Riverside - Albert, February 13 (Mary Majka and DSC).

Winter Horned Larks, in addition to the three on the Sackville CBC, were five at Moncton January 13 and three at Sussex January 18 (DSC). Returning migrants appeared in the last week of February: one at Cambridge (April Robinson) and one singing near Centreville (J. Carmichael) on the 24th, four at Hartland (Alward) and six at Wicklow (J. Greene) on the 27th and three at Waterside on the 28th (R. Walker).

A few Red-breasted Nuthatches and Brown Creepers were seen during the winter in Fundy National Park, where they had been missed on the CBC (R. Walker).

Trees that retain fruits into winter are often attractive to species such as robins, mockingbirds, waxwings and Pine Grosbeaks. At Newcastle five American Robins were feeding in a crabapple January 15 (Mrs. Melbourne Henderson) and at Sunny Corner one was seen near hawthorns January 14 (Earlene Hunter). A flock of about 70 Bohemian Waxwings in the Newcastle - Chatham area from late December to late February (v.o.) were frequently seen about apples. In the CBC listing this species should be added to those seen there during the count period. Small to medium-sized flocks were reported in several parts of the province all winter including St. George (fide Gayl Hipperson) and Sussex (Mary Majka).

Northern Shrikes, in below average numbers at Christmas, seemed to increase about the middle of January. Among the areas where they were seen were Musquash (SJNC), Williamstown (J. Carmichael), and Sisson Ridge (Landauer). Enid Inch was fortunate to observe one singing at Gagetown February 11. Another interesting observation was made March 21 by Rob Walker who watched a shrike with a dead vole near Jemseg. Noting the bird's laboured flight just barely clearing the ground, Rob observes that a full-grown Meadow Vole is about the biggest prey a Northern Shrike can carry.

The Pine Warblers seen during CBC period were last seen at Saint John West December 24 or 25 (Bill O'Brien) and at Riverview in late January (Barbara Swinamer, fide Dalzell), but one evidently survived at Saint John West, where Denise Johnston saw one March 14. Another showed up at a Riverside - Albert feeder January 10-11 (Myrtle Beaman and Mildred Carpan).

The only Field Sparrow of the winter was killed on the road at Waterside December 11 (R. Walker). Two or three Savannah Saparrows were seen along the dykes at New Horton December 18 (Dalzell) and one rather weak bird spent a few hours at my Mary's Point feeder during the January 11 snow storm. Of special note this winter was the occurrence of an 'Oregon Junco' at Owen Washburn's feeder at Lower St. Marys, Fredericton, from December 24 until February 20 (v.o.). The bird, which was photographed, is apparently the first

good record for New Brunswick of an Oregon subspecies of Dark-eyed Junco. The only Lapland Longspur reported visited Doreen Rossiter's feeder at Alma January 21-22 in a flock of 150 Snow Buntings.

The mild weather stimulated some movement of blackbirds during February. A Redwing was noted at St. Stephen beginning February 1 (Roy Proctor), a male began to visit Cecil Johnston's Saint John West feeder February 13 and about 30 appeared at Mrs. B. Elman's in Saint John February 21, along with a few Common Grackles and Brown-headed Cowbirds. The Northern (Baltimore) Oriole on the Fundy Park CBC was at Doris Hatt's feeder December 3-24.

The Evening Grosbeak was the finch that attracted most attention in early winter but the emphasis later shifted to Pine Siskins. Reports from some Saint John feeders were: February 8, arrival of a flock of 30 (O'Brien); February 11, up to 36 from only eight in late January (C. Johnston); February 15, increase to 200 from 20 (R. Smith). At Riverside - Albert about 40 began feeding in mid-February (Beaman and Carpan). Enid Inch writes 'lots this winter, several other people report them' in the area of Gagetown and Cambridge-Narrows and Wilma Miller was feeding about 40 most of the winter. Siskins were more abundant in eastern Maine where, in the Guillemot (13: 8), Bill Townsend writes, 'If you do not have any at your feeders then you must not be feeding birds... There are so many in my neighbourhood that the local catfood dealer has almost gone out of business and yet there is no decrease in the numbers of siskins.'

Abbreviations

CBC - Christmas Bird Count
DSC - David S. Christie
et al. - and others
SJNC - Saint John Naturalists' Club
v.o. - various observers

There once were two birders who spied on
A rare flycatcher vermilion.
But the bird they were stalking
Was a tanager "hawking" -
And now they've returned to oblivion.

(Limerick composed in honour of a moulting
tanager impersonating a Vermilion Flycatcher)

Book Reviews

Moss Flora of the Maritime Provinces. By Robert R. Ireland. National Museum of Natural Sciences (Ottawa), Publications in Botany, No. 13, 1982, 738 pp., 415 plates. $25.00.

Reviewed by Stephen R. Clayden.

What naturalist has not stopped on occasion to inspect a moss-covered log or to admire the mossy, green carpet in an old-growth spruce forest? Yet, arresting as their colour, growth forms and habitats may be, mosses are seldom collected and identified by the amateur botanist. Part of the deterrent to closer study is the small size of most species and the related notion that they 'all look alike'. The same might be said, however, of spruce, fir and tamarack trees if they could be reduced in stature to an inch or two. Mosses have been aptly referred to as the 'forests of Lilliput'. Their distinctive traits are visible only at a minimum magnification of roughly 40 to 400X. A simple 10X hand lens is sufficient for the recognition of most genera and many common species, but a microscope is indispensable for critical identifications. Normally, a low-power dissecting scope is used to prepare slide-mounts of leaves or of portions of the spore-bearing capsules and these, in turn, are examined under a compound microscope to determine cell shape and ornamentation, leaf dentation and other characters.

Moss collectors in the Maritimes have long felt the need for a manual which would bring together an up-to-date taxonomic treatment, good illustrations and keys, and accurate information on the composition of the regional flora.

Moss Flora of the Maritime Provinces fulfills this need on all accounts and can therefore be highly recommended to professional botanists, university students and keen amateur naturalists who have access to a microscope. For the forester and ecologist engaged in vegetation classification in the Maritime Provinces, the appearance of this book will make it increasingly difficult to sidestep his or her taxonomic homework by the use of such epithets as 'feather moss sp.' or 'Sphagnum sp.'.

The book is addressed to 'those persons who would like to identify and learn the mosses of the Maritime provinces'. The beginning student will find short but lucid introductory chapters on moss structure and life cycle as well as on techniques of collection, curation and microscopic examination. These are followed by a list of collectors of Maritime mosses, a bibliography of floristic works and texts on moss biology, a summary of the principles of botanical nomenclature and a synopsis of moss classification.

The Maritime moss flora, as presently documented is comprised of 381 species whose distribution patterns closely resemble those characteristic of the vascular plant flora of the region. Mosses of predominantly boreal distribution, for example, are well represented in all three provinces, whereas eastern coastal plain species are few in number and are confined mainly to southern Nova Scotia. The author identifies seven such 'floristic elements' and lists some of their characteristic species. A similar discussion of moss habitats and substrates, while not included, would have been useful to students with an interest in ecology.

Mosses are commonly found sterile (without capsules), and for this reason, identification keys must rely heavily on less well-defined, vegetative characters. The keys in this flora are no exception, but the construction of the key to genera is enhanced by generous spacing and the use of prominent sub-headings to highlight important divisions in the long series of couplets.

Descriptions and illustrations of the genera and species constitute the bulk of the work. Despite the rather uneven quality of reproduction of the habit drawings, the illustrations on the whole are an outstanding feature of the book. A full-page plate consisting of several individual figures is devoted to each species. The species descriptions include a summary of distinguishing features, habitat, Maritime distribution (by county), overall range and chromosome number. Each of these categories of information is set off by a heading in bold-face type, a feature which allows for rapid scanning of the text. In many cases, supplementary remarks are provided on the distinction of closely related species, on peculiarities of the Maritime populations of certain taxa or on popular moss names. Few species, incidentally, have common names, the result of the comparative lack of attention accorded to mosses by naturalists and common folk. Users of this book with access to another recently published flora, Mosses of Eastern North America by H. Crum and L. Anderson, will note minor differences of taxonomic interpretation between the two works. Ireland, for example, recognizes certain species of Sphagnum, Dicranum and Atrichum as well as recently proposed generic segregates within the family Mniaceae which are reduced to synonomy with other taxa by Crum and Anderson.

The flora is concluded by an extensive, fully illustrated glossary which is printed, along with the list of references and taxonomic index, on paper of contrasting beige colour. This is another very helpful concession to the beginning student and an indication of the careful thought that has gone into the content selection and layout of the book. By today's standards, it is certainly a bargain at $25.00. In consolation to the naturalist seeking a non-technical book on mosses, it may be reported that Dr. Ireland is currently preparing a field guide to common and conspicuous Maritime species, to be illustrated with colour photographs and published, likewise, by the National Museum of Natural Sciences.

CWS PEREGRINE RELEASE PROGRAM

The Peregrine Falcon was never abundant in the Maritime Provinces, but was considered a rare resident and transient. Locations of only 13 eyries have been recorded in New Brunswick and Nova Scotia. A concentration of historical nest sites occurred in the upper Bay of Fundy, where five were located along the Minas Basin and Minas Channel, and three were perched on the New Brunswick cliffs of Chignecto Bay and the Petitcodiac River. The last active peregrine eyrie in New Brunswick was reported about 1960 at Matthews Head, Albert County. Since that time, peregrines observed in the province have been transients.

The decline in the number of peregrines has been almost world wide. As early as the 1950's the reduction in the number of active nests in Great Britain was considered serious; by 1965 population declines were reported from most of Europe and North America south of the tree line. Today the Peregrine Falcon has world recognition as an endangered species.

In 1970, the Canadian Wildlife Service began a program to breed peregrines in captivity. The resulting peregrines were to be used to re-introduce the species to areas where it no longer nested and to increase native populations in areas where severe reductions had occurred.

The first re-introduction in the Maritime Provinces took place in 1982 when six young peregrines from the breeding facility at Wainwright, Alberta, were released at two sites: three near Advocate, Nova Scotia, and three at Fundy National Park, New Brunswick. Six additional birds were released in July 1983 and more releases are expected in 1984 and future years.

The released peregrines have a standard monel metal band on their left leg and a red band on their right leg. The location of any sightings of peregrines, banded or unbanded, should be sent to Myrtle C. Bateman, Wildlife Biologist, Canadain Wildlife Service, P.O. Box 1590, Sackville, New Brunswick E0A 3C0

Peregrine Falcon

UPPER SAINT JOHN RIVER BROUGHT BACK TO LIFE

(from Environment Update, Nov. 1983, bimonthly publication of Environment Canada)

A 10-year joint Canada-United States effort has dramatically reduced pollution on the upper section of the Saint John River, making it once again suitable for fishing and swimming. Recent water quality surveys have revealed the best results in over 20 years.

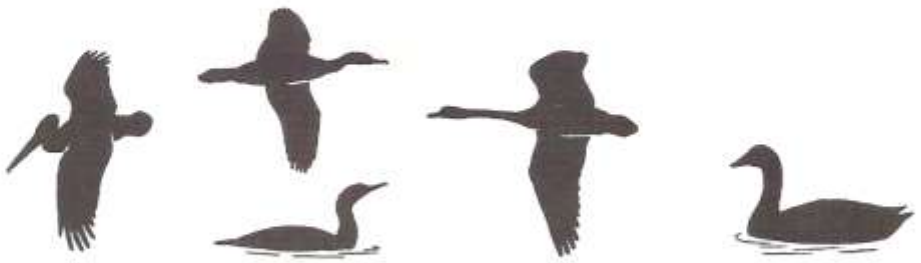
The upper section of the river forms part of the border between Canada and the United States. Intensive water pollution surveys in 1960 and 1969 revealed that industrial wastes and municipal sewage were depleting oxygen in the water, killing certain fish and insect species, and spoiling the water for swimming. In the 1960's, there were 17 potato starch factories, two large pulp and paper mills, several food processing plants, and several municipal sewage outlets on that section of the river.

In 1972, the governments of Canada and the United States established a formal working group, the Canada-United States Committee on Water Quality in the Saint John River, bringing federal, provincial and state officials together. Their work resulted in the installation of special treatment equipment in the mills and plants, and the construction or expansion of municipal sewage treatment facilities.

In 1981, and for the first time in at least 20 years, the ratio of dissolved oxygen in the water reached adequate levels for salmon and trout.

Not all the water quality problems in that stretch of the Saint John River have been solved, but the committee's work shows how countries and different levels of government can work together to restore polluted rivers.

WHO'S WHO? (See page 79)



ENVIRONMENT CANADA SUPPORTS RESEARCH IN HUMANE TRAP DEVELOPMENT

OTTAWA -- Environment Canada will provide $1.5 million over a four-year period for the research and development of humane trapping devices and methods, Environment Minister Charles Caccia, announced April 5.

The money will be used to field-test devices already in different stages of development and for their further modification, as well as for research into new and more humane and effective trapping devices and methods.

An additional $350,000 will be provided to train trappers in the use of these devices, and for the development of national standards to govern humane trapping practices.

The funds will go to the recently formed Fur Institute of Canada (FIC), whose primary responsibility will be research and development of humane devices and methods for the trapping of fur-bearing animals and for trapper training.

Maritimes Nest Records Scheme

With the onset of the 1984 nesting season the Maritimes Nest Records Scheme enters its 25th year. Thanks to the collective efforts of all contributors, the Scheme will mark its 25th anniversary by exceeding 30,000 cards in its repository. The data bank now contains nearly 3000 cards for American Robin, close to 2000 cards for Barn Swallow and over 1000 cards for Osprey, Red-winged Blackbird and Common Grackle; eight species have over 500 cards and over 250 cards are on file for an additional 16 species.

In 1983 a record number of 97 individuals contributed to the Scheme. If you know of people who may be interested in recording nesting information, please have them contact us for a supply of cards and instructions. The MNRS provides an opportunity for naturalists to make a significant contribution to a scientific repository and new co-operators are always welcome.

Al Smith
Canadian Wildlife Service
P.O. Box 1590
Sackville, New Brunswick
E0A 3C0

Fundy Guild Inc.

Guilde de Fundy Inc.

Two years ago, a group of people from the Alma and Albert areas joined together to form an association which would cooperate with Fundy National Park in supporting the park's mandate for the protection and interpretation of its heritage resources, by complementing park programs with services such as publications and special activities.

Since then a group of 15 to 20 volunteers have been working towards making the Guild a success, aided to no small degree by $36,000 of seed funding from Parks Canada. For two summers, a small sales outlet, stocking natural history and outdoor recreation books, has been operated in the Alma Beach information office.

Two Guild products have been produced: a poster of Alma Beach at low tide, painted by local artist Peggy Anderson Woolsey, and a waterproof map of the park's trail system with descriptions of each trail. The Guild's current project is a 32-page, full colour book, depicting the tides, scenery and natural history of the Bay of Fundy. This ambitious undertaking, a quality souvenir for visitors to the Bay of Fundy region, will be available in both English and French editions.

Other products to be produced this year are a children's activity book based on park themes, post cards, and an interpretive folder explaining the giant Fundy tides. In the planning stages are a guide to birdwatching in and around the park, posters depicting park scenes and an interpretive folder on the spruce-fir forest.

Last year, during the Alma Jubilee, the Guild co-sponsored a boat race and a performance of historical songs by Peter Pacey. This summer Peter Pacey will be returning for the Jubilee and a heritage weekend, on a bicentennial theme, is planned for August 4-5.

Membership is open to anyone wishing to encourage or participate in the Guild's projects. Members receive a Guild button, annual report and a mail order catalogue of publications. To join, send $2 to Fundy Guild, P.O. Box 104, Alma, N. B. E0A 1B0.

David Christie

CANADA WORKS PROJECT

Our federation has been fortunate to receive a $13,000 Canada Works grant from the Department of Employment and Immigration.

Our application, made in conjunction with the Canadian Wildlife Service, will be used in Shepody National Wildlife Area, Albert County. For 14 weeks a crew of three people will make those areas more accessible to visitors by clearing and preparing trails, board walks, small foot bridges, a parking lot and picnic tables, even building a few bird boxes.

One of the sites is well known to New Brunswick naturalists. That is the Mary's Point shorebird location; the others are the newly created impoundments, done with the financial support of Ducks Unlimited (Canada), at Germantown and New Horton. - MM

FEDERATION BRIEFS

Each year the NBFN presents briefs to government agencies and participates in public meetings. Recently Parks Canada invited us to attenda meeting in Fredericton to discuss the draft policy for National Marine Parks. The subject is of special interest to New Brunswickers because of the proposed West Isles National Marine Park near Deer Island.

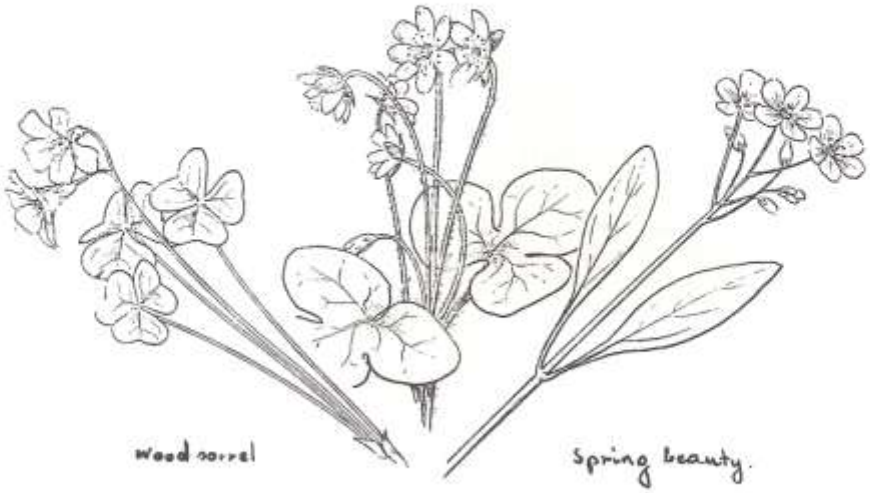
Establishing such a park will not proceed swiftly. Many concerns have to be resolved and problems solved, among them the interests of fishermen and local inhabitants. However, as naturalists we would welcome devlopments that would obviously benefit our interest in marine life and afford protection to the most unique features of the West Isles archipelago. Our brief, while endorsing the concept of National Marine Parks urged caution and made suggestions of ways some future problems might be solved or avoided.

Another brief was presented to the City of Fredericton, urging the city fathers to reconsider plans to construct a sewage lagoon smack in the middle of Garden Creek, one of the loveliest small valleys in the city. We suggested that the area, instead, should become an urban green-space, a plan that has been proposed by the neighbourhood's residents.

ANSWERS TO WHO'S WHO? SILHOUETTE QUIZ

From left to right: pelican, cormorant (swimming and in flight), swan, goose.

Spring bouquet!



There once was lady called Majka
Who sped around like a pika,
The conference she planned,
Turned out to be grand,
There really is no one quite like-a!

(1983 CNF Conference limerick contest)

Events Calendar

June 3, Odell Park, Fredericton
Field trip for songbirds; meet 6:30 am at Lady Beaverbrook Gymnasium, UNB, Fredericton. Fredericton Field Naturalists' Club.

June 8-10, Federational Annual Meeting Weekend, Florenceville
Our annual meeting hosted by the Valley Naturalists. A variety of outings and meetings from the Dept. of Agriculture Centre at Wicklow, Trans-Canada Highway, 5 km north of Florenceville Bridge.

Friday: registration (8-10 pm); thrushes field trip (8:30 pm)
Saturday: registration (8:30-9:30 am); Oakland Mountain (9:30 am); Carleton County marshes (1:30 pm); Meduxnekeag flora (1:30 pm); bean supper (6:30 pm); annual general meeting (8 pm)
Sunday: birds at Riverbank (7 am); Knoxford lakes (9 am).

Registration: $5 per person (includes supper). Make cheque payable to Valley Naturalists and send to Ansel Campbell, RR 1, Stickney, N.B. E0J 1N0 (392-5921).

June 30, The Wolves
The Wolves, four rocky islands and an islet in the Bay of Fundy 10 km south of Beaver Harbour, are a major seabird nesting area; about 5000 pairs, mainly Herring and Great Black-backed Gulls, Common Eider, Double-crested Cormorant, Black Guillemot, a few Great Blue Herons. We will make a boat trip around the islands and land on East Wolf, the largest one which has relatively few seabirds but supports a good variety of coastal flora.

Limited to 25 persons. Cost: $15 per person. Register with Mary Majka, RR 2, Albert, N.B. E0A 1A0 (tel. 882-2100). Meeting place: Beaver Harbour wharf at 9:00 am. Return at 5 pm. Bring a lunch. Please bring your own life jacket.

June 17-20, Tourism and Conservation Workshop
At Acadia University, Wolfville, N.S. Tourism, especially in rural areas, is often seen by development promoters as a means of economic development based on an important natural resource; conservationists see it as a way of conserving the resource while still promoting economic development. The workshop will examine to what extent these concepts are true, possible methods for making them true, and the problems inherent in such approaches.

Registration and materials $30. Further information from the organizers, the Atlantic Center for the Environment, 39 S. Main Street, Ipswich, MA 01938.

June 22-29, Canadian Botanical Association 20th Annual Meeting
At UNB, Fredericton. A symposium on the development of woody plants and other technical papers June 25-27. Field trips to eastern N.B. June 22-24, the Nashwaak Experimental Watershed project June 24, western N.B. June 28-29, southwestern N.B. and the Quoddy coast June 28-29, half day tours in the Fredericton area June 26.

Further information from Dept. of Biology or Dept. of Forest Resources, UNB, Fredericton, N.B. Telephone 453-4666.

June 30, Portobello National Wildlife Area
Day long trip by canoe, open to first 15 people with canoes. Contact Glenda Turner, phone 454-9153. Fredericton Field Naturalists' Club.

Summer programs, Sunbury Shores Arts and Nature Centre
Sunbury Shores offers varied programs at its centre in St. Andrews: fine arts, crafts, historical explorations, children's programs and natural science, including birds at The Wolves July 7, astronomy Aug. 3-4, edible wild plants Aug. 11-12, the herring weir fishery Aug. 12 & 26, whales Aug. 20-24 and 27-31, and full day whale watching trips Aug. 18, 19, 25, and 26.

Further information from Sunbury Shores, Box 100, St. Andrews E0G2X0 (529-3386).

Summer Programs, Atlantic Center for the Environment
The Living Rivers Program, based at Tabusintac, is an environmental education camp for youngsters. Ages 11-13 from July 1-6, 8-13 and 15-20 for a fee of $75; ages 14-17 from July 25 - August 3 for $100.

The North Woods Canoeing Program, based on the St. Croix River, concentrates on outdoor skills and freshwater natural history. Ages 13-15 from July 1-6, 11-16 and 22-27 for a fee of $75; ages 16-18 from August 1-10 for $125.

Further information from The Atlantic Center, 39 South Maine Street, Ipswich, MA 01938-2321 (Tel. 617-356-0038).

July 8, Killarney Lake Park (FFNC)
Birds and flowers. Meet at 6:30 am at Lady Beaverbrook Gym, UNB, Fredericton.

July 27-30, Mount Carleton Provincial Park
A 3-night stay in log cabins at Bathurst Lakes. Hearty campstyle food, trail hikes and canoeing to observe the landscape, vegetation and wildlife of our forested, primitive park centred on the Maritimes' highest point. Bring your own bedding and towels. Meet at noon, Friday, July 27, at Bill and Wilma Millers' at Nictau, NE of Plaster Rock. Trip concludes early Monday afternoon, in time for participants to return home that day.

Limited to 15 persons. Cost: $50 per person (includes meals). Make cheque payable to N.B. Federation of Naturalists and send to Wilma Miller, Nictau, RR 1, Plaster Rock, N.B. E0J 1W0 (Tel. 356-2409).

July 28-29, Mary's Point - thousands of shorebirds
Fredericton Field Naturalists' Club trip to Mary's Point for shorebirds. Meet 6 am at Lady Beaverbrook Gymnasium, UNB, Fredericton.

August 11-12, Mary's Point - thousands of shorebirds
Past the peak but still large numbers and good variety of shorebirds. NBFN gathering at Mary's Point, Harvey, Albert County, for the high tide shorebird roosts, beginning 11 am August 11 and 12 noon August 12.

Sept. 30 - October 4, Entomological Society of Canada
To be held at Algonquin Hotel, St. Andrews. Short courses, field trips and symposia on resource management, resource modelling, chemical control, biological control, population dynamics, and aquatic insects of peatlands and marshlands. Information: G. Boiteau, Agric. Canada, Box 20280, Fredericton.

NEW BRUNSWICK FEDERATION OF NATURALISTES

277 Douglas Avenue, Saint John, N.B., Canada E2K 1E5

LA FEDERATION DES NATURALISTES DU NOUVEAU-BRUNSWICK

277, avenue Douglas, Saint-Jean, N.-B. Canada E2K 1E5

Téléphone: (506) 693-1196

The federation is a non-profit organization formed in 1972 to facilitate communication among naturalists and nature-oriented clubs, to encourage an understanding of nature and the environement, and to safeguard the natural heritage of New Brunswick.

La fédération est une organisation sans but lucratif formée en 1972 pour faciliter la communication entre les naturalistes et entre les divers clubs axés sur l'étude de la nature, pour encourager une meilleure compréhension de la nature et de l'environnement naturel, et pour sauvegarder le patrimoine naturel du Nouveau-Brunswick.

FEDERATED CLUBS/CLUBS FEDERES

Chignecto Naturalists' Club	P.O. Box 1590, Sackville, E0A 3C0
Fredericton Field Naturalists' Club	P.O. Box 542, Fredericton E3B 5A6
Grand Lake Naturalists' Club	c/o L. Girouard, RR 1, Minto, E0E 1J0
Kennebecasis Naturalists' Society	P.O. Box 1931, Sussex, E0E 1P0
Miramichi Naturalists' Club	276 Heath Court, Newcastle, E1V 2Y5
Moncton Naturalists' Club	42 Broadway Street, Moncton E1A 3Y2
Saint John Naturalists' Club	277 Douglas Avenue, Saint John, E2K 1E5
Valley Naturalists	P.O. Box 95, Florenceville, E0J 1K0

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Sustaining	$20.00

Membership privileges include subscription to N.B. Naturalist.

Please make cheques payable to:
N.B. Federation of Naturalists
Mail to: David F. Smith, Treasurer,
149 Douglas Avenue,
Saint John, N.B., Canada
E2K 1E5

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Veuillez faire votre chèque à l'ordre de La Fédération des naturalistes du N.-B. et postez à: David F. Smith, trésorier
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Saint-Jean, N.-B., Canada
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