



# N.B. Naturalist

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~~2, April 1975~~

This issue we feature an article on a subject very different from the active interests of most members - subterranean caverns, a fascinating damp, dark habitat to be found in only a few parts of New Brunswick where limestone and gypsum occur.

We would remind you that the number to the right of your name on the address label indicates the year for which your membership is paid. If you still have a "4", change it to a "5" by sending your renewal to the treasurer. \*\*

Editorial Committee.

HOWE'S CAVE, SAINT JOHN, N.B.  
Donald McAlpine

## HISTORY

Like many natural features surrounded with an air of mystery, certain legends have grown up around Howe's Cave. The most popular of these was the belief that the cave extended for miles underground, eventually surfacing at the Reversing Falls in the west of the city or on Rothesay Avenue in the east. The story teller had his choice. These notions were dispelled by Dr. William MacIntosh (then curator of the New Brunswick Museum) in a short article in the Times Globe in 1937. Nevertheless, in the minds of many local residents Howe's Cave continues to snake through miles of rock. Like many caves, when Howe's was first discovered, stories of hidden treasure circulated. However, the unromantic truth stated by one resident must be accepted: "I was never able to find anything but bats and slime."

An article published by G.F. Matthews (1904) indicates that Howe's Cave, less familiarly known as Oliver's Cave, was first discovered in the 1860's by a man named Oliver. The name Howe's no doubt results from the fact that a lake of that name is situated nearby.

The location of the cave may have been known before the previously mentioned decade, since dates carved on the wall represent the years 1811 and 1824. The year 1877 scrawled in red spray paint leaves all cave graffiti suspect however.

When the cave's location was first announced in the 1860's, two members of the Natural History Society of New Brunswick set out to explore it.

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\*\* See note on page 21.

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Exactly how much Allen Jack and Robert Matthew explored is not clear. However, they did file a rough map of the right hand passage with the society.

Through the years legions of young boys have journeyed into the dark recesses of Howes Cave. Today hardly a wall remains that does not carry the carefully etched year and name of some intrepid young explorer. Garbage litters almost the entire length of the passage and in a number of places one is in constant danger of cutting one's legs on broken glass.

#### GEOLOGY

Howes Cave is situated in the Green Head Group, the oldest and most extensive limestone and dolomite formation in the area. Alcock (1938), a geologist with the Canadian Department of Mines and Resources, states that most of the rock in the area is more or less metamorphosed to crystalline types, that dips are steep, and that there is considerable local irregularity. He regarded the Green Head Group as Archean in age.

Caves form in carbonate rocks due to their high solubility. All ground water contains substances in solutions. The ability of water to dissolve carbonates results from its content of  $\text{CO}_2$ . The resulting combination of the two (carbon dioxide and water) is a dilute carbonic acid ( $\text{H}_2\text{CO}_3$ ) that virtually eats its way through the rock, particularly at points of weakness (faults, joints, etc.) over a period of millions of years. Rainwater absorbs some of its  $\text{CO}_2$  from the atmosphere though most of the  $\text{CO}_2$  is provided by soil bacteria as the rainwater percolates down through the humus and soil.

Investigation has indicated that most caves develop through solution below the water table and emerge as the water table drops. When a surface stream finds its way into a cave passage the sand and gravel it carries enlarges the cave by corrosive action (geological process of erosion by solution combined with mechanical wear) versus the solution action of carbonic acid that takes place below the water table. Stream action has played only a minor part in the formation of most caves. Scallop (oval-shaped solution hollows) on the walls and ceiling of passages and caverns indicate stream action has played a major role in the development of Howes Cave. That the cave is preglacial in origin (Matthews 1904) is made evident by side passages steeply inclined towards the surface that are choked by glacial debris.

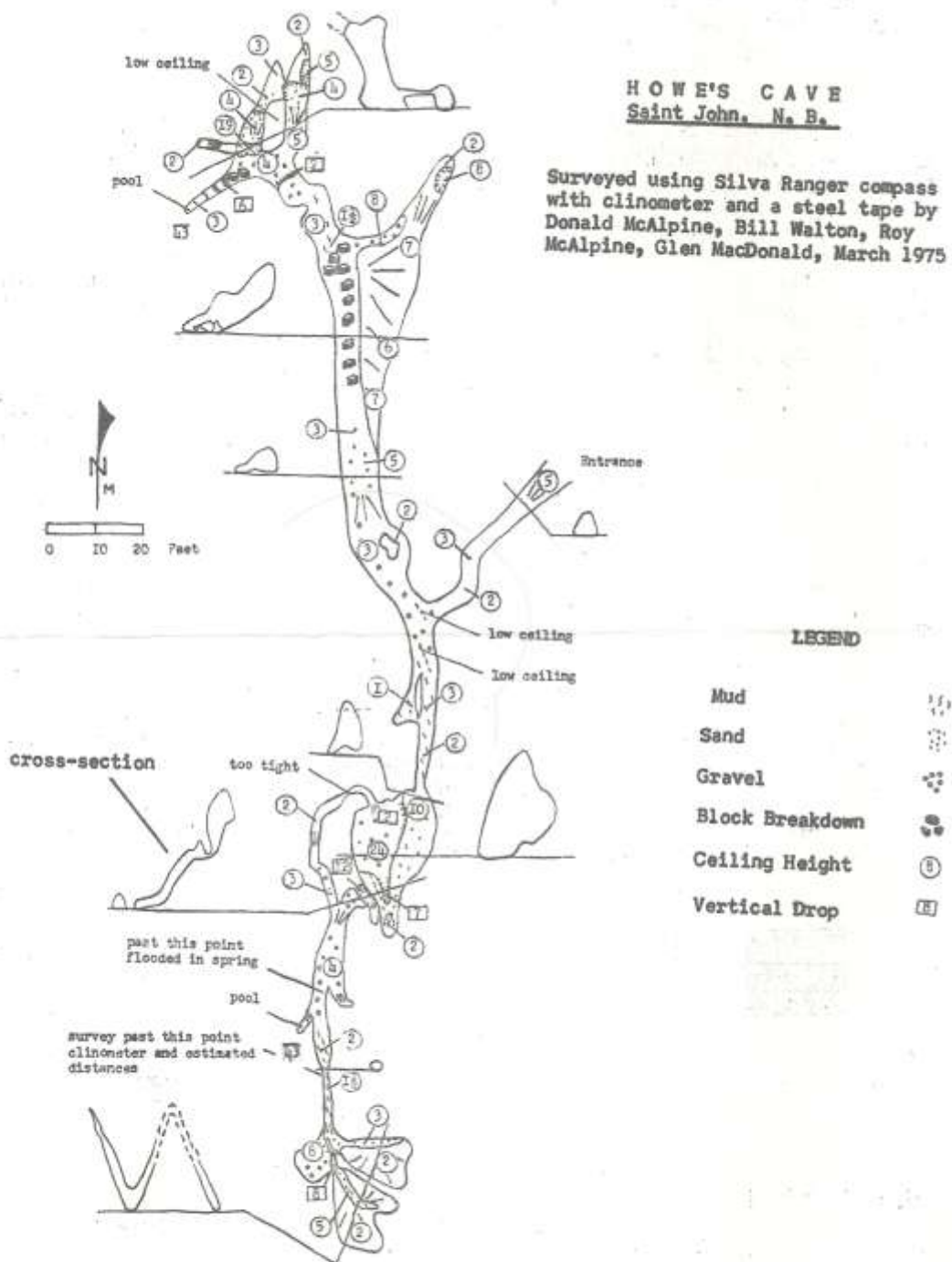
Speleothem (the generic name for cave deposits, e.g. stalagmites, stalactites, flowstones, etc.) development has been poor in Howes Cave. In any case much of what has formed has been destroyed by previous visitors. Small buildups of flowstone have occurred on the walls in some of the passages. In areas where water has been trickling down the inclined rock of the ceiling, draperies have developed. Some are a foot to a foot and a half in length but rarely hang down more than an inch or two. Most of the stalactites have been broken off. The largest remaining one measures two and a half inches in length. Cave coral, irregular clusters of rounded knobs of calcium carbonate can be found on the walls of the lower right hand passage. In one spot where water has been dripping for countless years a crude rimstone pool about six inches in diameter has formed. The speleothems which have formed are crude and not very attractive. In winter ice stalagmites form on the floor about 30 feet from the entrance. Delicate ice crystals and draperies form in the same area and closer to the entrance. Matthews (1904) mentions the breathtaking spectacle of hoar-frost that can form as the moisture in warm air flowing from the cave condenses at the mouth.

#### FAUNA

The fauna of caves is divided into three groups, the troglobites, the troglaphiles and the troglonexes. The troglobite lives in caves and nowhere else. It completes its life cycle there. The troglaphile can complete its life cycle in caves but may also do so in suitable habitat outside caves. The troglonexes must complete their life cycle above ground but periodically enter caves, usually for protection from predators or weather.

**HOWE'S CAVE**  
**Saint John, N. B.**

Surveyed using Silva Ranger compass  
with clinometer and a steel tape by  
Donald McAlpine, Bill Walton, Roy  
McAlpine, Glen MacDonald, March 1975





Since the Wisconsin glaciers last retreated from this region 11,000 years ago, little time has elapsed for populations of strictly cave inhabiting creatures (troglobites) to evolve. However, Howes Cave does contain a varied assortment of troglomorphic cave animals mostly arthropods. Bats represent the major troglomorphic cave animal in Howes Cave. When the cave was first discovered, Matthews (1904) noted that the Little Brown Bat Myotis lucifugus hung in large numbers. Today bats in Howes cave are not as common. On March 15 of this year I counted only fifteen bats in all. Two species were in evidence. Seven were Long-eared Bats Myotis keenii while the remaining eight were Little Brown Bats. A recently dead Smoky Shrew Sorex fumeus was collected in the left hand chamber on March 2. Benfield (1974) states that shrews sometimes enter caves in search of low-hanging bats.

In the spring, plant detritus is washed into the cave and is particularly evident in small pockets in the wall. This provides an area in which Rove Beetles Lobrathium collare, springtails, roundworms and earthworms Aporrectodes tuberculata find suitable habitat. In a number of damp areas on the ceiling in the right-hand passages Sowbugs Oniscus asellus can be found. Harvestmen can be found in both the right and left hand passages and caverns. In one area I noted eight clustered in a sheltered spot on the wall. Harvestmen are known to enter caves to seek shelter during the winter months. When spring comes they spread out into the surrounding forest. Bits of spider webbing covered with delicate droplets of water are often seen in nooks and crannies and about the ceiling. Their producers are less often found. The spider species discovered was the Cave Orb Weaver Meta monardii. Fly pupae can be seen on the walls in a few locations. The Camel or Cave Cricket Ceuthophilus brevipes, a very common troglophile species in many caves was present. At one point a small, dull yellow land snail was noted crawling about a muddy passage. None of the species mentioned are present in large numbers. Undoubtedly more thorough investigation would reveal some more species.

#### SURVEY

It took approximately fifteen hours underground to complete the survey of Howes Cave. A Silva Ranger compass with clinometer, and a one hundred foot steel tape were used. The compass was hand held at each of the thirty-two stations.

The entrance to Howes Cave is in an outcrop of limestone. The first twenty-five feet are bare sloping rock. Most of the cave ceiling is very irregular, due mainly to the amount of scalloping that has taken place. The floor is generally composed of mixed gravel or mud. In some places there has been considerable breakdown and the floor is littered with fair sized rocks. In the lower right hand chamber, large boulders are present and one must worm one's way between them to get to the passage below.

The deepest part of the cave was forty-three feet below the entrance. At this point in both the right and left hand passages a pool was met. On March 15 the water temperature was 34° and the temperature of the air inside the cave was 40°. The air temperature in the cave must remain fairly stable. The bats in particular would be sensitive to temperature change. If the temperature dropped too low they would freeze. If it rose too high they would burn off their fat reserves and not survive the winter.

During spring thaw a considerable amount of water must move through Howes Cave. Bits of plant debris are deposited quite high on some of the walls. This heavy movement of water would indicate Howes Cave is still in at least a seasonally active stage of development.

#### ACKNOWLEDGEMENTS

I would like to thank Bill Walton, my brother Roy, and Glen MacDonald for their help in surveying Howes Cave. Thanks also to David Christie, Stan Gorham and

Dr. John Reynolds for their help in identifying specimens and to the Geology Department at U.N.B.S.J. for the loan of a compass for use in the survey.

#### TREE-SQUEAKS

Many participants in this winter's Christmas Bird Counts reported their impressions of mammal abundance. Three species deserve special mention.

Because of the good evergreen cone crops, Red Squirrels Tamiasciurus hudsonicus were particularly common and conspicuous throughout most of the province and Snowshoe Hares Lepus americanus were noted as "more common than last year, though still somewhat scarce", suggesting that their population is beginning to increase towards one of its cyclic peaks. On the other hand, there was only one mention of the Lesser Tree-squeak Noisindatria acadica, which was reported heard on the ridge south of Nictau.

It is the third straight year of apparent scarcity of tree-squeaks in New Brunswick, possibly related to a series of moderate winters. For some reason, they have much higher reproductive success during severe weather. The young are usually born in December when a large supply of hibernating insects is available in crevices in the bark.

A small, rather rotund, squirrel-sized insectivore, the tree-squeak is so nocturnal that it is seldom seen. It is quite vocal at night and if agitated may call frequently from its nest-hole during the day. The high-pitched "sqweek" is thought to be the only call of the female, whereas males can also utter a prolonged, deeper "krree-ee-ee-ek". Dull brown in colour, tree-squeaks are related to moles and shrews, with which they share a pointed snout for capturing insects in narrow spaces, and to the now extinct Snouters of the Pacific Archipelago of Hi-yi-yi (Natural History 76(4): 8-13; April 1967).

The Lesser Tree-squeak occurs throughout the Maritime Provinces (except the smaller offshore islands), eastern and northern Maine and the Gaspé, while the larger, grayer Dusky Tree-squeak N. canadensis occupies spruce-fir forests from Newfoundland to northern Alaska. Some authorities consider them both as mere subspecies of the Old World Common Tree-squeak Noisindatria imaginaria - D.C.

#### Nature News (Winter 1974-75) David Christie

Following the light precipitation and slightly warmer weather than usual in December, winter set in with gusto. January was just slightly colder than normal but brought up to 70% greater amounts of snowfall. Snowfall declined during February but became heavy again in March. February averaged about 4° below normal. All in all it was generally regarded as an old-fashioned winter.

#### Mammals

Coyotes now seem well established in the Carleton County area. Donald Kinball sent a photo of an adult reported to weigh about 47 pounds. It was caught in January by Bill Jordan in the Windsor area. Mr. Jordan has heard coyotes near his home several times. Apparently a smaller one was shot a few miles away.

David Cartwright of the Fish & Wildlife Branch has gathered information on wild canids taken during the trapping season. He reports a 40 lb male on Dec. 12 at Windsor; a 36 lb male on Dec. 13; a 30 lb female on Jan. 13 and a 47½ lb male on Jan. 13 (perhaps the same one photographed by Kinball) all at Knowlesville; and a 38 lb male at Deersdale on Mar. 20. In addition a male was killed on a road at Bathurst Jan. 25 and a female at Musquash on April 2 (found by Donald Austin).



David Cartwright refers to these animals as wild canids because of the hybridization that occurs. Most may be coyotes, some are "coydogs" (dog-coyote hybrids) and there is the possibility of a Timber Wolf being found. The three can be very difficult to separate.

Ted Sears reports seeing a Coyote near St. Martins on April 5, the second he had seen. The first one had been at almost the same spot during summer 1974. Alan Madden also mentions canids. He says that 3 "coyotes" were reported to have killed sheep near Siegas in Madawaska County late in March. Those may have been ordinary dogs running free, rather than coyotes.

During the Woodstock Christmas Bird Count Dec. 27, Bob Speer and others watched three Bobcat playing along the side of a road. Wilma and Bill Miller were surprised to see a Marten in their backyard at Nictau Jan. 3. Few of us are fortunate enough to see either of those species so well.

### Birds

The Christmas Bird Counts, as previously reported, gave a fairly good idea of the state of bird populations this winter. The following notes will touch only a few other highlights.

A Great Blue Heron at Dalhousie in December (Alan Madden) was particularly unusual for that northern area. Canada Geese were reported several times in January and February, including two that spent most of February at the mouth of the Missisquoi River at the Nova Scotia border (various observers). A Snow Goose at Fundy Park Dec. 3 was very tame (Henrik Deichmann, Les Gray). A male and two female Canvasbacks seen at Westfield March 11-12 (Cecil and Doris Johnston et al) suggest that they may have wintered in the area since the same number had been seen there late in December. A large number of Common Eider, about 1000, were seen daily at White Head in late December and early January (Nancy Small).

Marjorie Gray reports 3 Bald Eagles at Woodstock Feb. 17. At Oak Bay John Edwards saw 2 eagles March 9 but people there reported that up to 9 at one time had been seen around animal offal earlier in the winter. A very late Osprey was seen at Spruce Lake, west of Saint John, Dec. 10 (Peter McKelvey). A late Am. Kestrel (Sparrow Hawk) at Lamèque Dec. 1 (Hilaire & Rose-Aline Chiasson) was unusual for northern N.B. An occasional Kestrel may remain all winter in southern N.B.

Gray Partridge, although gone from most areas where they were once established, are still hanging on - a flock of 19 were reported at Belliveau Village, Westmorland Co., on Feb. 23 (fide Wes Knapper). An unusual overwintering Ruddy Turnstone was seen at Haces Bay Feb. 17 by Ken Ross. Apparently he also saw a Dunlin in February at St. Andrews. Our normal winter sandpiper, the Purple, was reported in great numbers at Haces Bay February 9. Cecil Johnston reports "thousands" moving along the shore in flocks of about 150 to 200.

Two Razorbills at Fundy Park Dec. 3 (Deichmann) were interesting so far up the bay. Nancy Small writes that her husband and son would see about 1000 Devoilies a day on the fishing grounds off White Head Island during the last week of December and first week of January.

When the snow began to get quite deep in mid and late February Saw-whet Owls began to appear in populated areas. Seven that were found dead and brought to the museum all had empty stomachs and were very thin. Several birdwatchers reported sightings in February and March. The less often seen Long-eared Owl was reported once this winter - one at the Reversing Falls in Saint John on January 19 (Johnston).

The Northern Three-toed Woodpeckers discovered in the woods behind Fort Beauséjour at Aulac Dec. 30 (Stuart Tingley and Bruce Mactavish) continued to be reported till at least Feb. 23 (various observers). At least one male and three females were there. (Up to 6 Black-backs were in the same woods). Other Northerns reported were one at Gondola Point Nov. 30 (Jim Wilson), one near Newcastle Jan. 11 (Harry & Ian Walker) and two females between Sisson Ridge and Riley Brook Jan. 19 (Erwin Landauer). Along with the Mactavish and Hartland Christmas Count records that makes an excellent winter for them.

A Mockingbird was seen at Riverview in mid January (Jill Tilley) and another passed the winter at a feeder in Sackville (fide Al Smith). A female Varied Thrush at a feeder in Hampton from early January until at least Mar. 5 (Mr. & Mrs. H.S. McCleave et al) was one of the most unusual species seen this winter.

A Ruby-crowned Kinglet came to a feeder in Alma from Jan. 6 to Feb. 5 (Doris Hatt). Although no Bohemian Waxwings were found on the Christmas Counts some appeared in late winter in northern N.B. A flock of 35 were feeding on crabapples at Douglasfield Mar. 9-22 (Walkers, Leloup, Underhill and Ward) and 57 were at Sisson Ridge Mar. 12 (Landauer).

Obviously related to the wintering of Yellow-rumped (Myrtle) Warblers in the Cape Tormentine area, where a surprising 21 were found on the Christmas Count, is Leo Martin's observation of three on Shediac Island Feb. 9. A careful search would perhaps reveal other wintering areas along the Northumberland Strait shore. One Myrtle appeared a week before Christmas and spent the winter at a feeder at Lincoln (Freeman Ogilvie).

A flock of 8 Rusty Blackbirds that appeared at a feeder at Westfield Jan. 5 (Johnston and Kit Graham) had increased to about 20 by March 12. Normally, winter records are of one or two birds together such as the single birds this winter at Memramcook (Red McManus) and Melrose, Westmorland Co. (Tingley).

In addition to a Cardinal at Rothesay all winter (Mrs. S.R. Jones), a male was seen at East Saint John in early March (fide Hugh Cunningham) and a pair were at a feeder in St. Stephen in January (Willa MacCoubrey).

The only major change in finch populations during the winter was an increase in Pine Siskins in parts of eastern N.B. in mid to late February. Harry Walker reported "a great many" in the Newcastle area and numbers were also seen on the Isthmus of Chignecto (fide Smith) and near Fredericton (Mike Burzynski, Harold Hatheway). That movement probably results from the running out of the supply of seeds in the northern woods.

Two Field Sparrows appeared at a Cambridge feeder in mid January and one survived till the end of February (Enid Inch, Eva McConnachie).

#### Fishes, Amphibians

The unprecedented numbers of Menhaden that invaded the Saint John River last summer continued to occur through the winter. On December 19 about 200 were found dead or dying at Sandy Point, Saint John (Don Patterson). Cause of the kill is unknown. Large numbers were taken by fishermen at the mouth of the Kennebecasis Jan. 15 (Cunningham) and about 2000 were caught off Kennebecasis Island Feb. 5 (fide Ken Baxter).

We don't expect amphibian observations in winter. However, I found two Leopard Frogs sitting at the edge of a spring at Mary's Point, Albert County, on Dec. 7. On the 22nd, one was still actively swimming in the spring. In May when the snow had melted away, both frogs were found dead, the probable price of selecting a poor overwintering area.



Note from the Co-editors

The preceding portion of this number was prepared for release in April, but having been delayed for many reasons - all of them the responsibility of D.C. - has now been turned into an issue covering almost all of 1975. There follow notes and information from spring, summer and fall. During 1976 we plan a regular bi-monthly publishing schedule.

Because of a decreased level of service to the members and subscribers during 1975, the federation's board of directors decided to credit all paid up members for membership through December 1976. Anyone who didn't pay their 1975 fees will be required to contribute in 1976. The number beside your name on the address label reflects your current status.

Members are invited to contribute articles and information for the N.B. Naturalist by sending them in care of David Christie, 277 Douglas Avenue, Saint John.

David Christie  
Mary Majka

HONORARY MEMBERS ELECTED

At the federation's annual meeting in Loggieville on August 16, Nettie Moore and Willa MacCoubrey were elected as honorary members in recognition of their contribution to the study of nature in New Brunswick and of the work they have done to promote interest in others.

Nettie is right! When informed that she had been elected an honorary member of the federation she was very pleased but hoped it wasn't because she is a woman. And I have to admit my guilt. It was I who mentioned that since it was International Women's Year, it would be fitting to select a woman. Of course we do not need any excuse to honour Willa and Nettie who for years have taken such an active part in all sorts of activities connected with natural history and various organizations.

They have not only observed and reported many observations but were constantly on the lookout for those rare and unusual occurrences which others would surely have overlooked. They have promoted and supported our movement from the very start and have given of their time and hospitality to many. It is, therefore, with great pride that the N.B.F.N. adds Willa MacCoubrey and Nettie Moore to our two other honorary members, W. Austin Squires and the late Bruce S. Wright.

Willa MacCoubrey, a retired nurse, is a resident of St. Andrews where her charming little house is visited by a great many birds attracted to nest boxes, well-stocked feeders and ample shrubbery. Many years of carefully recorded observations make her the most knowledgeable birdwatcher of her area. She and her sister Habelle have donated many hours guiding visitors to St. Andrews' oldest church. Willa is an active member of the Sunbury Shores Arts and Nature Centre for which she leads a number of field trips each year.

Nettie Moore, a resident of Fredericton, is a member of a York County family that has produced several well known naturalists such as her father the late W.H. Moore. A tremendously active lady who thinks nothing of taking off on a jaunt to Grand Manan to be where the action is during spring or fall migration. She will be encountered with a pair of binoculars at a marsh, beach or other productive habitat, not surprising often in the company of Willa. Nettie is retired and her example should be an inspiration to all those who do not know how to fill their leisure hours. She is a founding member and former president of the Fredericton Field Naturalists' Club and has been a volunteer leader of nature walks for school children in Odell Park. - H.M.



NATURE NEWS

David Christie

Herewith are reported some of the highlights of observations during the spring, summer and fall. Thanks go to all those who wrote or phoned. Many interesting items, not mentioned here have been added to the museum's files on the flora and fauna of New Brunswick.

At the suggestion of two members of the federation's executive I have altered my method of reporting the names of observers. These are now indicated in most cases by initials rather than by surname as I have done in the past. Observers' names are listed in full at the end. I would very much like to know whether you favour or disagree with this change. The old style is used in the winter "Nature News" on pages 18-20.

Non-birds

Al Smith writes that a Cougar was reported to him at Westcock near Sackville Apr. 27. Two possible Coyote pups were seen crossing the road near Mechanics Sett., Kings Co., on July 12 (BB, AD, fide KND). A Hoary Bat found dead at Saint John Aug. 7 (JF) was given to the museum. They are infrequently reported.

A very puzzling observation comes from Raymond Kane who saw three or four Beluga (White Whale) - like animals near Hatfield's Point in Belleisle Bay on May 25. They were visible up to a mile away and were seen swimming first up and later down the bay. The large, white animals would alternately surface, making a 12"-18" wake and then swim underwater for a short distance. The description seems to fit the Beluga but it is extremely unlikely that that species would appear in the Saint John River, it not being inclined to wander such from its nearest range in the St. Lawrence estuary.

A Garter Snake on Adam Island in Passamaquoddy Bay (OGH) is interesting in that small islands often lack many of the less mobile species common on the neighbouring mainland or large islands. In this case Adam Island is separated from Deer Island by just three quarters of a mile of open water.

A hundred or more Gray Tree Frogs were calling at the Barker's Point gravel pit breeding area in Fredericton when it was visited by a museum field party June 24 (SMA et al). We are very interested in locating other areas where that frog occurs in New Brunswick.

Peter deMarsh was impressed by incredible numbers of sticklebacks, probably Three-spined, at Miscou Island June 10. He watched a school about ten fish wide and 50 to 75 yards long passing from the east shore through an inlet to the salt marshes. He thinks most of them were egg-bearing females.

A most unusual occurrence was an influx of Squid to the Saint John River in early September. 10 were taken from the Ketepec area for the museum's collection (SMB, SMH). I am not aware of squid being in the river previously but they may well have been. Many other forms of marine life occur regularly or occasionally.

Birds

A Horned Grebe in breeding plumage was at Paunchy Lake in the Tintramarre Nat'l Wildlife Area July 12 (SDW). Harold Hatheway thinks that a puzzling grebe at Oromocto Lake August 4 was probably a Horned in moult. The species is not normally found here during summer. A late Pied-billed Grebe was at Douglas Nov. 29 (BJS, IHS).

Sooty Shearwaters were unusually common around Grand Manan in mid fall, surprisingly outnumbering Greaters. For instance, from the Grand Manan Ferry 70 Sooties and 20 Greaters were seen Sept. 20 (DWF et al) and 13 Sooties and no Greaters on Oct. 11 (DSC, MFN). On the latter date, there were also 4 Manx Shearwaters. The Chiasson's saw a large flock of Gannets, estimated at over 1000 birds, off Miscou Island May 25. The birds were probably from the Bonaventure Island colony across the bay in Quebec.

Only a small number of southern herons and allies were reported in 1975. A Snowy Egret was at Chance Harbour May 20 (PM) and a Great Egret at Saint John West June 10-11 (CLJ et al). 2 Glossy Ibises were at Sackville Apr. 16-17 (ADS, EH), and 2 were at Chance Harbour Apr. 19-23 (S.J.N.C.), 3 at Dipper Harbour May 1 (JG, MR, NH, HWH) and 2 at Saint John West about the end of April (GD). An unusual fall record was of a Glossy Ibis at St. George Sept. 12 (CGH).

42 Canada Geese at Miscou Island Aug. 30-31 (J-PL) were more likely very early fall migrants rather than birds that had summered there. A pair of Gadwall were at Mary's Point, Albert County May 24 (DSC, CGH). Ruddy Ducks were again at the sewage lagoon in Saint John West throughout the summer (CLJ et al).

Henrik Deichmann reports a "mini migration of hawks" at Micmac Camping Area in Fundy Park. In a matter of a few minutes on May 9, 1 Sharp-shinned Hawk, 5 Red-tailed Hawks, a Bald Eagle and an Am. Kestrel flew past. On October 10, at Southwest Head, Grand Manan, Ken and Mary Edwards saw two flocks of hawks wheeling and circling overhead. There were about 75 birds in total. Although they were very high the shape and behaviour of the wheeling birds was very much like that of Broad-winged Hawks that the Edwards have seen migrating in Ontario. However, the date seems very late for that quantity of Broad-wings in New Brunswick. Three of the rare Cooper's Hawks - one of them chasing a Broad-wing - were seen at Lower Jemseg Sept. 1 (EI, HI, RSI, JT). During May 2 Bald Eagles were around Miscou Island where they have not been seen in recent years (HC, RAC). Only four Peregrine Falcons reports have come my way. They are 2 at Douglas May 2 (BJS, MHS), 1 at Mary's Pt. Sept. 20 (DSC, MFN), 1 at Southwest Head Oct. 9 (KFE, MCE) and 1 near Haute-Aboujagane Nov. 8 (R Bel).

A Yellow Rail was heard calling at Midgie May 25 (DWF) and June 19 (SIT). About 30 Virginia Rails were heard in the Tintamarre N.W.A. the night of June 29-30 (DWF, SIT). American Coots were particularly common this fall, 50 on the Sewage Lagoon at Saint John West Nov. 16 (CLJ) and 12 at Germantown a few days earlier (KHD) were overshadowed by the 200 or more at Amherst Point Bird Sanctuary, N.S. that month (CD).

An Am. Golden Plover, very scarce in spring, was at Lower Jemseg May 21 (EI). A Black-bellied Plover, with pure white plumage except for the black axillars that it displayed when it flew, had Davis Finch puzzled at first. That bird was at Castalia Sept. 19-20. Wes Knapper reports that hunters in the Moncton area found Am. Woodcock very scarce during the fall. An early Purple Sandpiper was seen at Michias Seal Island July 28 (RB).

A number of New Brunswickers have been cooperating with Canadian Wildlife Service studies of shorebirds in the Maritimes. I have been doing weekly counts at Mary's Point which is one of the important areas for the small "peeps", of which the Semipalmated Sandpiper is most abundant. This year the first fall migrant Semipalmated Sandpiper was seen there July 5. On July 17 there was a marked increase in their numbers (NH). The peak numbers on one of my regular counts was 200,000 on July 26, but on the 29th, the day following the passage of Hurricane Blanche, Mary Majka was overwhelmed by their numbers which she thought were four to five times as great as they had been on the 26th - i.e. perhaps 800,000 to 1,000,000!



Radar studies have shown that many shorebirds pass over the Maritimes without stopping, so possibly the hurricane's passage grounded many of them, causing a spectacular one day concentration.

Gary Morrison who directs the shorebird surveys has also been carrying out a banding and colour-marking program in the Moosonee area on James Bay. About 4000 shorebirds were handled this summer. Several Semipalmated Snodpipers and one Semipalmated Plover with yellow dyed breasts and bands were seen at Mary's Point, and others were reported in Nova Scotia and down the American coast.

Among the scarcer fall migrants were a Baird's Sandpiper and 3 Stilt-Sandpipers at Castalia Sept. 19 (DWF et al), a Willet at Cocagne Bar Sept. 22 (SDW), a Buff-breasted Sandpiper at Machias Seal Aug. 25-29 (RB), 8 of them at Miscou Aug. 30 to Sept. 1 (J-PL) and 2 more Buff-breasts and a Wilson's Phalarope at Saint John West Sept. 2 (EI, HI, RSI). Very unusual for spring was a Stilt Sandpiper at Lower Jemseg May 1 (NH, HNM).

An adult Lesser Black-backed Gull was seen well in comparison with other species at Castalia Marsh on Sept. 18 by Davis Finch, Charles Bernstein, and Robert and Olga Chase. It was the second acceptable New Brunswick report of that European gull which appears occasionally on this continent. One famous individual is now spending its seventh consecutive winter at Digby, N.S. The usual wandering Laughing Gulls were seen at Machias Seal Islands 2 or 3 adults from June 21 to July 2 and an immature on Aug. 1 (RB). An adult Sabine's Gull spent all day June 15 at Machias Seal (RB). No Little Gulls were reported to me from New Brunswick, though they were undoubtedly present, particularly at Deer Island. One was seen just across Northumberland Strait at Borden, P.E.I. on Sept. 14 (CGM).

Common Terns were feeding abundantly at the Long Eddy tide rip, off northern Grand Manan, in September, 1800 being seen Sept. 16 (DWF et al). 150 were still there Oct. 5 (DSC, MFMs). From one to four Roseate Terns were seen almost daily at Machias Seal Island July 23 to Aug. 19 (RB et al). Another Roseate was seen near Deer Island Aug. 10 (CGM).

Common Puffins were surprisingly numerous in the Grand Manan Channel in September. From the Grand Manan ferry 70 adults were seen Sept. 16 and 40 on the 20th (DWF et al).

Eggs were laid in a Mourning Dove nest near St. Andrews in May but one of the adults was found dead and the nest failed (LM, MB). A Yellow-billed Cuckoo was at Castalia Oct. 7 (DSC, MFMs).

A couple of last winter's Snowy Owls stayed late. One was seen at Cambridge May 28 (WGs). Another remained at Darlings Island, Kings Co., from May 8 well into July (EST, CLJ et al). Two Hawk Owls were reported in the fall - one at Fundy Park Nov. 24 (KHD et al) and one near Haute-Aboujaggonne Dec. 14 (RBeI).

An immature Red-headed Woodpecker was seen at Gexmantown, Albert Co., Oct. 1 (RGH). Four Northern Three-toed Woodpeckers were still in the Fort Beauséjour woods Apr. 18 (GB).

Great Crested Flycatchers in parts of the province where they are not common were 1 at Lutz Mountain June 15 (SDW), 1 at Machias Seal June 19 and 25 (RB), 1 at Erbs Cove, Belleisle Bay, July 1 (RDW) and a family of 4 at Cambridge Aug. 7 (JT). Purple Martins were down from normal in the Fredericton and Washdemoak areas (EI, BJS), a result of the 1974 die-off during cold spring weather. On June 22 Doug Whitman found only four Cliff Swallows at the Turtle Creek dam where normally there have been 100+ nests. Charles McEwen's Cliff Swallows at Irishtown, north of Moncton, were down 40% this year but his Purple Martins were in near normal numbers.

Mr. McEwen blames the spruce budworm spraying for the reduction of his Cliff Swallows because they foraged over the nearby forest during cool weather in the spraying period (fide SDW).

1974 produced the first Carolina Wrens in the province. This year brought an additional record: 1 at Fredericton Oct. 6 and 10 (HH, PAP). Short-billed and Long-billed Marsh Wrens were seen in the Tintramarre N.W.A. again this summer (SIT, DWF). One Long-bill was at Fundy Park Headquarters Area May 28 (SL, AN). A House Wren was singing at Hammond River in early June (JGW) and one was seen at North Head Sept. 18 (DWE).

A fair number of Mockingbirds were seen in spring and fall, and two instances of breeding were reported, at Hillsborough (GR) and Lower Cape Bald (RM). A northern N.B. Mocker was at Duff Lake March 31 (GAM) and a far northeastern Wood Thrush was at Lamèque May 20 (HC, RAC). A Wood Thrush nest was watched at Sisson Ridge June 2-15 (EL). Thrush of the year was a Townsend's Solitaire at Mary's Point Oct. 25 (DSC, BHA) - the second record for the province. Among very few Bluebird reports were a pair at Alma June 9 (DJ) and a pair at Westfield June 22 (CLJ).

A Blue-gray Gnatcatcher was at Mary's Point May 18 (DSC) and another was there Oct. 27-29 (DSC, BHA, CGM). A flock of 20 Bohemian Waxwings was seen at Trout Brook, north of Newcastle, Apr. 13 (HEW, IWK, IWD). A considerable number of those western waxwings appeared late in the fall. Two very early ones were at Mary's Point Oct. 19 (DSC, MFM). In late November and early December flocks were seen at River-view (SDW), Moncton (RW), Cambridge and Fredericton (fide BJS) and Fair Vale (W, fide JG).

Spruce budworm spraying was reported to have caused many bird deaths in the Upper Tobique valley (RPR, EL, VM). Songbird activity seemed less than usual in Riley Brook-Nictau area during the federation's canoeing weekend June 28-29. Certainly, all kinds of flying insects were very scarce then. One hopes the budworm was hit as hard; severe defoliation of 1975 growth had already occurred.

Most interesting warbler of the year was a Yellow-throated Warbler, the first provincial record, photographed at Machias Seal Island Aug. 11 by Richard Blacquiere. Also of note were a Golden-winged Warbler at North Head Aug. 26 (KFE), an Orange-crowned Warbler at Deep Cove, Grand Manan Oct. 9 (SIT, RD, MFM, DSC) and 2 Prairie Warblers at Machias Seal Aug. 17 and again on Aug. 25 (RB). Prairies are quite usual there during August. Yellow-breasted Chats were seen in the Grand Manan area in August and October and also at Lepreau (Oct. 17-LS) and Saint John West (Oct. 18-EJC).

An immature male Yellow-headed Blackbird was at Machias Seal Aug. 26 (RB) and a similar bird was at Martinon, St. John Co. on August 31 (ESM). An Orchard Oriole was at Machias Seal June 20 (RB). An oriole seen at Fundy Park Headquarters Area, on May 19 was a puzzle to Con Desplanque and his wife. The bird had a brilliant orange head and breast and a white patch on its black wings. A photo taken (without a telephoto lens) most closely resembles a male "Bullock's Oriole" but with very little or no black markings on the head and a smaller than usual wing patch. A young male Summer Tanager was at Ragged Point, Saint John May 18 (KB) and a young male Western Tanager was photographed at Machias Seal June 19 (CAM, CW, RB). The latter was the third New Brunswick record and the first to be photographically documented.

A Cardinal was at Fair Vale in early June (fide JG) and two were seen near Saint John late in November (MP, SMG).

Several Indigo Buntings were reported in southern N.B. from May 11 through June. During the fall Pine Grosbeaks and Common Redpolls have been numerous in most



areas indicating a considerable exodus from the north.

The few reports of Dickcissels included a flock of 6 at Mary's Pt. Oct. 26 (DSC). Rufous-sided Towhees were also scarce this year. A Seaside Sparrow was at Machias Seal Aug. 13-15 (RB) and a Lark Sparrow was at Point Wolfe in Fundy Park Aug. 3 (SDW). Field Sparrows returned to the Prospect Street nesting area in Fredericton and one was heard singing near McAdam June 11 (AAD).

#### Observers and Reporters

The following contributed information used in the foregoing accounts:-

Ken Baxter (KB), Ben Beduhn (BB), Mrs. Raymonde Belliveau (RBe), Richard Blacquierre (RB), Gordon Burns (GB), Hilaire Chiasson (HC), Rose-Aline Chiasson (RAC), David Christie (DSC), Mrs. E.J. Cram (EJC), Andy Dean (AAD), Henrik Deichmann (KHD), Peter deMarsh (PD), Con Desplaque (CD), André Dho (AD), Gordon Dow (GD), Ken Edwards (KFE), Mary Edwards (ME), Davis Finch (DWF), Mrs. James Fraser (JF), Mrs. S.M. Gardner (SG), Mr. & Mrs. Wm. Gilchrist (WG), Joyce Golden (JG), Stan Gorham (SWG), Harold Hatheway (HH), Hal Hinds (RH), Gayl Hipperson (SGH), Ron Hounsell (RGH), Barry Hughson (BH), Helen Inch (HI), Erid Inch (EI), Spencer Inch (RSI), Cecil Johnston (CLJ), Dave Joslin (DJ), Raymond Kane (RK), Wes Knapper (WK), Erwin Landauer (EL), Jean-Paul Lebel (J-PL), Simon Lunn (SL), Willa MacCoubrey (HWM), Alan Madden (GAM), Chris Majka (CGM), Mary Majka (EM), Mieczyslaw Majka (MFM), A. McFeteridge (AMCF), Peter McKelvey (PM), Reid McManus (RM), Laraine Miller (LM), Marilyn Miller (MM), Wilma Miller (WM), Nettie Moore (NM), Charles Munn (CAM), Margaret Patterson (MP), Peter Pearce (PAP), Gordon Rattray (GR), Rudi Richter (RPR), Mary Ross (MR), Beverley Schneider (BJS), Marc Schneider (MS), Louise Shonaman (LS), Allan Smith (ADS), Evan Smith (ESM), Elsa Stanley (ES), Joyce Thorne (JT), Stuart Tingley (SIT), Harry Walker (HEW), Ian Walker (IWK), Ian Ward (IWd), Mrs. Ward (W), Ron Weir (RDW), Doug Whitman (SDW), Claudia Wild (CW), Jim Wilson (JGW).

#### WILDFLOWER BLOOMING DATES

David S. Christie

Not as much response as expected was received to my request for blooming dates of spring flowers, but the reports were quite well scattered around the province. More than 10 species were reported from each of 14 areas.

Not all 23 species for which I requested dates occur throughout the province. Erwin Landauer found the most, 22 species at Sisson Ridge on the Tobique, while Mary Pugh reported 21 species at Mactaquac and 19 at Fredericton, and Della Layton found 18 at Stoney Creek in Albert County.

Hilaire & Rose-Aline Chiasson (Ile Lamèque), Marjorie Gray (Woodstock), Francoise Howard & family (Saint John), Alan Madden (Tide Head, Rest. Co.), Mrs. M.C. Morehouse (Pennfield), Doug Whitman (Riverview) and myself (Saint John, Caledonia Mountain, and Harvey, Albert County) mentioned more than 10 species. Andy Dean (AAD), Muriel Evans (E), Mary Majka (Kingston), Don McAlpine (DMcA), Harvey McLeod (HMcL), Marguerite McNair (MMcN), Rudy Stoeck (RFS) and Ralph Whiteley (RW) reported a smaller number of species. Many thanks to all of you for participating.

Although a few species were reported earliest at Saint John or Pennfield on the Fundy coast, it was the general pattern that flowers first appeared in the Fredericton-Mactaquac area or at Woodstock, a few days later in the Tobique and Petitcodiac valleys and at Saint John, later still at Lamèque and Tide Head in the north, and finally, about 2 to 3 weeks behind, at 1200 feet elevation on Caledonia Mountain, Albert County. My general impression is that blooming was a few days later than average during May.

In the accounts that follow, if the date is underlined it indicates that more

then ten plants were in bloom at that time. The observer's initials are given for reports from Saint John, Fredericton and some other localities. If there are no initials the data is from the observer listed for that place.

Speckled Alder - On April 14 at Saint John alder catkins had softened and lengthened but were not yet shedding pollen (DSC). Apr. 20 (24) Mactaquac and Fredericton (MP), Apr. 22 (27) Stoney Creek, May 4 Sisson Ridge, and before May 9 Caledonia Mountain.

Trembling Aspen - There may be some problem deciding when the catkins of this species are open enough to call it in bloom. It was reported at Riverview Apr. 13 (SDW), earlier than any of the alder dates. Other reports were: Apr. 27 (30) Stoney Creek, Apr. 29 (May 2) Fredericton (MP), May 1 (4) Saint John (FH), May 5 (7) Tide Head, before May 9 Sisson Ridge and between May 10 and 17 Caledonia Mountain.

White Elm - May 5 Woodstock, May 6 (8) Fredericton (MP), before May 9 Sussex (DSC), May 9 Mactaquac, May 26 (27) Tide Head.

Bilberry/Shadbush - A nice logical series of dates was obtained. May 17 (21) Fredericton (RFS; MP), May 18 Woodstock, before May 20 Jemseg and Cambridge (DSC), May 20 Kingston, May 20 (20) Riverview, May 20 (22) Stoney Creek, May 21 (24) Saint John (FH), before May 22 Sisson Ridge, May 25 Harvey, May 31 Caledonia Mountain.

Pin Cherry - May 18 (20) Sisson Ridge, May 20 Woodstock, May 21 Fredericton (MP), May 24 Mactaquac, May 24 Saint John (FH), May 26 Pennfield, May 26 (28) Riverview and Stoney Creek, May 29 (30) Tide Head, before May 31 Harvey, before June 7 Caledonia Mountain.

Apple - May 24 Woodstock, May 24 Mactaquac, May 24 (29) Fredericton (MP; May 26 (30) RFS), May 26 (29) Sisson Ridge, May 28 (30) Stoney Creek, May 30 (June 3) Pennfield, after May 30 Parkindale, Albert Co. (DSC), June 2 (3) Saint John (FH), before June 7 Harvey, June 10 (11) Tide Head, well before June 17 Caledonia Mountain.

Choke Cherry - Two reports near the Fundy coast about May 24 were too early to have been this species. June 1 Fredericton (MP, 5th RFS), June 1 Woodstock, before June 5 Sisson Ridge, June 5 Saint John (DSC), June 6 (10) Stoney Creek, June 6 (full bloom) Mactaquac.

Rhodora - May 24 (before 31) Kingston, May 25 (before 30) Saint John (FH; DSC), May 26 (June 1) Pennfield, May 29 Fredericton (MP), before May 30 Anagance - Petitcodiac (DSC), before June 2 Sisson Ridge, June 1 (4) Stoney Creek, June 6 (full bloom) Mactaquac, before June 7 Harvey and Caledonia Mtn., June 7 Ile Lamèque.

Dogtooth Violet - Before May 9 Quispamsis (DSC), May 9 Mactaquac, May 10 Fredericton (RFS; 11th - AMD & MMcN), May 10 (14) Sisson Ridge, May 10 or 11 Harvey, May 11 Woodstock, May 16 Riverview, May 20 (20) Tide Head, before May 24 Caledonia Mountain, May 28 (30) Pennfield.

Red (Purple) Trillium - May 6 Fredericton (MMcN), May 9 Mactaquac, May 11 Woodstock, May 13 (15) Sisson Ridge, May 24 (24) Tide Head, May 24 Caledonia Mtn. (RW).

White Violet - This could include a variety of species. Most early reports are probably Viola incognita. May 8 (14) Pennfield, before May 11 Harvey, May 15 (24) Saint John (FH), May 18 Woodstock, before May 20 Kingston, May 20 (20) Riverview, May 21 Ile Lamèque, before May 22 Sisson Ridge, May 23 (29) Fredericton (MP), May 26 Tide Head, before May 31 Caledonia Mtn.

Blue Violet - Most reports are probably of Viola septentrionalis. At Harvey, there are dates for three species namely: before May 11 V. selkirkii, before May 18 V. septentrionalis, and May 24 V. cucullata. Other dates: May 12 Fredericton (MMcN), May 16 (21) Saint John (FH), May 18 Woodstock, May 18 (19) Riverview, May 19 (19) Pennfield, May 19 (22) Stoney Creek, before May 28 Sisson Ridge, May 27 Ile Lamèque, May 28 Tide Head.



Goldthread - In several areas this may have been missed when it first began to bloom. May 10 (before 20) Saint John (FH; DSC), before May 20 Kingston, May 24 Mactaquac (MP), before May 25 Harvey, before May 26 Sisson Ridge, May 26 (26) Pennfield, May 26 (29) Stoney Creek, June 1 Ile Lamèque.

Painted Trillium - May 18 (21) Pennfield, before May 22 Sisson Ridge, May 22 (25) Stoney Creek, May 25 Riverview, May 25 Tide Head.

Starflower - Between May 17 and 22 Pennfield, May 25 Riverview, May 29 Fredericton (MP), May 31 Sisson Ridge, June 1 (4) Stoney Creek, before June 7 (Harvey), June 11 Ile Lamèque, June 6 Mactaquac (MP).

Canada Mayflower - Two reports in mid May must surely have been Mayflowers (Trailing Arbutus) rather than this "wild lily-of-the-valley". May 25 (30) Sisson Ridge, June 2 Fredericton (MP), before June 3 Saint John (DSC), before June 6 Mactaquac, June 5 (8). Stoney Creek, before June 7 Harvey, after June 15 Caledonia Mountain, before June 22 Forty Mile Brook, Nepisiguit River (DSC).

Bunchberry - May 26 (26) Pennfield, May 28 (before 30) Saint John (FH; DSC), May 29 (June 1) Fredericton (MP), May 30 (June 14) Sisson Ridge, before June 7 Harvey, June 6 Ile Lamèque, June 8 (10) Stoney Creek, June 13-15 Caledonia Mountain.

Celtsfoot - Of limited distribution this species was not much reported. At Saint John we have dates for three different slopes. Apr. 8 south-facing (HMcL), Apr. 12 (12) east-facing (DSC) and Apr. 16 (21) west-facing (FH). Other reports were: May 2 (2) Campbellton (GAM), before May 9 Sisson Ridge, and before May 20 Kingston.

Dandelion - The great spread of dates is undoubtedly indicative of some plants growing in particularly warm locations, such as about buildings. Apr. 14 (A/D), 22 (May 6 - MP) and 26 (McCN) at Fredericton, ca. Apr. 20 Moncton (DMcA), May 2 Woodstock, May 3 (8) Stoney Creek, May 10 (20) Sisson Ridge, before May 12 Saint John (south-slope-DSC; May 17 & 19 west slope - FH), May 12 (17) Riverview, May 13 (21) Ile Lamèque, May 14 (16) Pennfield, May 21 (21) Tide Head, before May 24 Harvey, after May 30 Caledonia Mtn.

Wild Strawberry - May 14 (16) Pennfield, May 15 Woodstock, May 16 (before 20) Saint John (FH; DSC), May 16 (19) Sisson Ridge, May 17 (19) Stoney Creek, May 19 (19) Harvey, May 20 Tide Head, before May 24 Mactaquac, May 25 (25) Riverview, May 25 Ile Lamèque, before May 30 Caledonia Mountain.

Yellow Rocket (Winter Cress) - Before May 23 Hampton (DSC), May 24 Mactaquac, before May 26 Sisson Ridge, before May 27 Saint John (DSC), May 27 Fredericton, before May 31 Harvey, before June 13 Caledonia Mountain, June 13 Ile Lamèque.

Tall Buttercup - June 3 (11) Saint John (FH; DSC), June 11 Fredericton, June 11 (17) Sisson Ridge, between June 10 and 14 Pennfield, June 14 Mactaquac, before June 15 Harvey and Millville (ME), June 15 (19) Stoney Creek, June 15 Woodstock, June 18 Caledonia Mountain, June 20 Ile Lamèque, before June 22 Forty Mile Brook (DSC), before June 23 Tide Head.

Oxeye Daisy - This species was first reported within a ten-day period almost throughout the province. June 14 (14) Fredericton, June 14 Mactaquac, before June 15 Millville (ME), before June 17 Penobscuis-Petitcodiac (DSC), June 17 Woodstock, June 18 (20) Sisson Ridge, between June 18 and 21 Pennfield, June 21 Ile Lamèque, June 22 Riverview and Saint John (FH), before June 23 Tide Head, June 22 Harvey, between June 22 & 26 Caledonia Mtn., June 20 (30) Stoney Creek.

#### Maritimes Nest Records Scheme

Some observers have been contributing data to the Maritimes Nest Records Scheme, P.O. Box 1590, Sackville, N.B. The number one nest-finder during 1975 was Ron Weir who submitted 248 cards, including 41 nests of 14 species of warblers. One

of the nests that especially interested him was a Redstart nest in which the male was a year old bird in immature plumage. For five of the eight White-throated Sparrow nests he kept track of the colour morphs - some adults have brown head stripes, others have white ones. Two nests had white males paired with brown females, one had a brown male and white female, one had both sexes white, and the fifth nest had one brown and one white bird, but he was unsure which sex each one was.

(6) If you have not been participating in the nest records scheme you may receive cards and a report by writing to Allan D. Smith. Most participants report only a few nests annually but each one is a valuable contribution to the scheme's data base.

- D.C.

#### DEATHS

It was with great sadness last spring that we learned of the passing of two of our members. Our sympathies go out to their families.

Druce S. Wright of Fredericton was elected as an honorary member of the federation in 1974. A wildlife biologist and long-time director of the Northeastern Wildlife Station he was well-known for his very popular wildlife books and for his investigations of the Eastern Panther.

Helen Boyles of Grand Falls was an enthusiastic supporter of the federation from its beginning. She was always in attendance at the annual meetings and was particularly active in helping to make our weekend outings on the Tobique a great success.

#### WILDERNESS COMMITTEE FORMED

A steering committee was recently formed to work towards establishment of a wilderness area in New Brunswick. Our president, Henrik Deichmann, is representing the federation and would be pleased to receive any of your ideas. For instance:

1. Do we want a wilderness area in New Brunswick?
2. What would you want to do in a wilderness area?
3. Is there any activity you feel should not be carried out in a wilderness area?
4. What do you feel are the essentials of a wilderness?
5. What is your concept of a wilderness?
6. Are you willing to help work towards the designation of a wilderness in New Brunswick?

Send your ideas to K.H. Deichmann, Box 73, Alma, N.B.