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Celebrating our 50th Anniversary

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Send submissions to the Editor by the 15th of the month prior to the publication date (March, June, September, December) to the address above, by fax to (613) 533-2499 to the attention of Sharon David, or by e-mail to davids@psyc.queensu.ca. The editor uses WordPerfect 7, but submissions are accepted in most formats from most programs, IBM or MacIntosh. Please include a printed copy in case of disk error. Photographs, articles, and drawings can be scanned by the editor.

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The Blue Bill
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President's Page

Paul Mackenzie

This is the *Blue Bill* issue of December 1999. In the perspective of geologic time, the turn of a millennium is not a very momentous occasion, and the date December 31st, 1999 is as arbitrary a turning point in time as the border between the U.S.A. and Canada is an arbitrary division of space. There are even purists who explain that the true turnover should be at year 2001 AD. Since the media have trumpeted the occasion, and the survivalists have prepared for doom, it has become fashionable among cynical pundits to describe the millennium as a non-event.

However, for those of us who will not live to see another century change, let alone Y3K, it is a good excuse for a little more long term evaluating and planning than we do from day to day. It is in fact a chance to exercise our imaginations a little, and I have come to feel that there is a powerful force in human imagination.

On December 31st, 1899, Kingston was a very different place, and the KFN did not exist. Who at that time could have foreseen the changes in our lifestyle and environment that have occurred here during the past century? And who can predict what Kingston or the KFN will be like by December 31st, 2099?

If the local population continues to grow we can foresee some of the likely changes. So far our chemical warfare through antibiotics and pesticides has kept ahead of most resistant organisms. But our population could crash through new epidemics, or if cumulative pollution or nuclear war poisons our life supports. We do not know if genetic engineering will have begun to change the human species. We do not know if the rich-poor gap will widen or narrow. How will our political democracy evolve in an age of instant communication, into a kinder world, or into anarchy?

Which of our wild areas and wetlands will have been preserved? Will our KFN properties remain as they are today? Will it be safe to ramble in places like Lemoine's Point or Bell's Island? What species will have gone and what new ones will have invaded?

Will the KFN exist as such? Will there still be any interest in the hobby of listing bird sightings? Will several clubs spin off for those interested in birds, or plants or perhaps butterflies? How many members will the KFN have in a hundred years? How many would be ideal? We are over 300 now and growing. We have not regarded numbers as our strength, nor been aggressive in recruiting new members. Interested people manage to find those with like interests. That will persist and is perhaps sufficient.

We can be confident that the beauty and complexity of nature will still fascinate people of all ages. We can be sure that the many of the values we treasure will still be important to future generations. Let us continue to enjoy and do our bit to preserve for the centuries the riches we have experienced. And we are preserving the KFN story in our archives.

Great Backyard Bird Count 1999

Jessie Deslauriers

For four days, from February 19 to 22, 1999, 47 birders in this region counted birds in their immediate area. Reports came from Portland, Bath. Godfrey, Hartington, Battersea, Odessa, Seeley's Bay, Verona, Harrowsmith, Enterprise and Amherst Island as well as Kingston, and the former Pittsburgh and Kingston Townships. Some observers only counted on one day, while others participated on all four.

They were among the 16,240 people who took part in the Second Annual Great Backyard Bird Count, organized by the National Audubon Society and the Cornell Laboratory of Ornithology to monitor the status of winter birds across North America. Data were submitted to a special Internet site for analysis, a site which received 41,509 submissions.

In North America, the ten most frequently reported birds during this count were Mourning Dove (23,780), Northern Cardinal (21,357), Dark-eyed Junco (20,919), American Crow (17,250), House Finch (17,012), Blue Jay (16,486), Black-capped Chickadee (16,143), Downy Woodpecker (15,951), American Goldfinch (15,030) and Tufted Titmouse (15,002).

In our local list the top bird was the Starling (1,582). Then came 825 American Goldfinches, 646 Mourning Doves, 544 House Sparrows, 409 Chickadees, 221 Tree Sparrows, 191 Blue Jays, 153 Purple Finches, 142 House Finches, and 141 Juncos. The Crows just missed the top ten, with only 134 reported.

Other notable highs for the local list were 117 Downy Woodpeckers, 107 White-breasted Nuthatches, 105 Cedar Waxwings, 99 Cardinals, 77 Hairy Woodpeckers, 31 Robins and 26 Canada Geese. In all, 40 species were reported from our area. Three of these were sent as special observations – 4 Tundra Swans, 2 Eastern Phoebes and a total of 11 Chipping Sparrows.

Hawks also appeared on our list, with 11 Red-tailed, 2 Rough-legged, 2 Kestrels, 2 Sharp-shinned and 1 Cooper's.

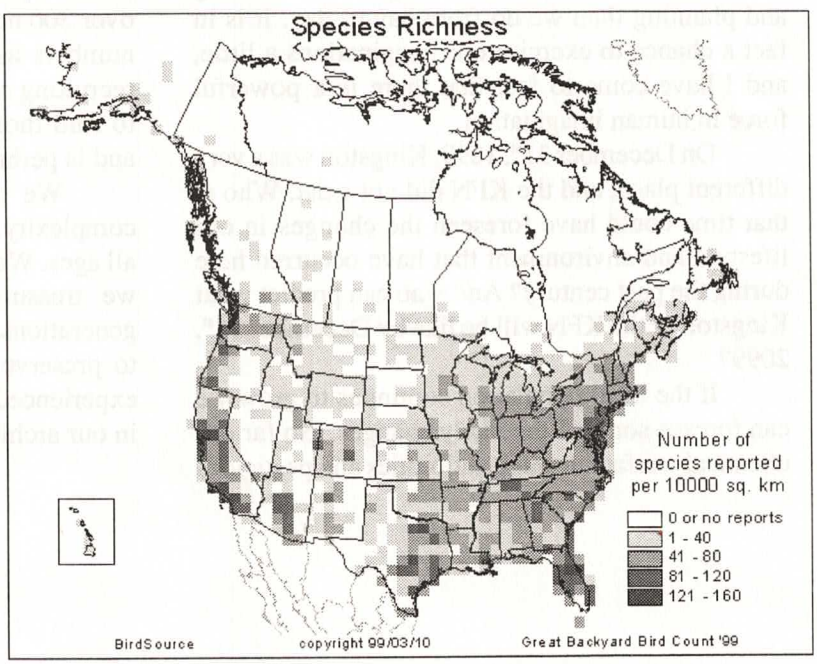
The northern migrants were conspicuous by their absence, with only 6 Pine Grosbeaks flying overhead being reported, and no Evening Grosbeaks, Redpolls, Crossbills and Snow Buntings seen.

However, 2 Great Blue Herons were spotted, as were 2 Horned Larks, 4 Song Sparrows, 5 White-throated Sparrows, 12 Red-winged Blackbirds, 4 Bluebirds, 2 Brown Creepers and 31 Robins. The most exciting: the 2 Phoebes which were seen and not just heard. What those two flycatchers were doing back this early is a mystery.

Also submitted, for the fun of it, was the report of 1 coyote and 2 feral cats from one observer.

It is expected that once again people will be asked to participate in the next count in the year 2000. Watch the nature columns in Kingston This Weekend and Forever Young for notice of the count.

[Editor's Note: This year's count is February 18-21, 2000. Keep abreast about the count and see maps from last year's data by visiting Cornell's web site at: http://www.birdsource.org/gbbc/index.html]



Report of the KFN Bird Records Committee for 1997, 1998, and 1999

Ron D. Weir

The Committee made decisions on a total of 31 sightings of birds involving 33 reports. A total of 28 was accepted, 4 were not accepted. In one other report, the species identification was unknown and the Committee's help was sought in providing a definitive answer, which the Committee was unable to do.

Species that should have written reports or photos sent to the KFN Rare Birds Committee are the following.

1. Any species new to the Kingston area.

2. Any addition to the list of species proven to breed in the Kingston area.

3. Any of the following species found within the Kingston area, which appear on the Kingston checklist:

Pacific Loon, Eared Grebe, Leach's Storm-Petrel, Northern Gannet, Brown Pelican, American White Pelican, Great Cormorant, Little Blue Heron, Tricolored Heron, Yellow-crowned Night-Heron, Greater White-fronted Goose, Ross' Goose, Cinnamon Teal, Tufted Duck, Common Eider, King Eider, Harlequin Duck, Gyrfalcon, Sharp-tailed Grouse, Northern Bobwhite, Yellow Rail, King Rail, Whooping Crane, Piping Plover, American Avocet, Willet, Eskimo Curlew, Marbled Godwit, Western Sandpiper, Curlew Sandpiper, Pomarine Jaeger, Parasitic Jaeger, Long-tailed Jaeger, Laughing Gull, Black-headed Gull, Mew Gull, Black-legged Kittiwake, Ross' Gull, Sabine's Gull, Ivory Gull, Arctic Tern, White-winged Tern, Thick-billed Murre, Razorbill, Black Guillemot, Chuck-will's-widow, Rufous Hummingbird, Acadian Flycatcher, Say's Phoebe, Gray Kingbird, Scissor-tailed Flycatcher, Bewick's Wren, Northern Wheatear, Mountain Bluebird, Bicknell's Thrush, Varied Thrush, Hermit Warbler, Yellow-throated Warbler, Kirtland's Warbler, Prothonotary Warbler, Worm-eating Warbler, Kentucky Warbler, Summer Tanager, Blue Grosbeak, Dickcissel, Lark Sparrow, Lark Bunting, LeConte's Sparrow, Nelson's Sharp-tailed Sparrow, Harris' Sparrow, Smith's Longspur, Chestnut-collared Longspur, Western Blackbird, Yellow-headed Blackbird.

4. Any reports of birds seen out of season at four weeks before earliest arrivals or four weeks after latest departures as summarised in *Birds of the Kingston Region* (1988).

Reports Accepted at the 1999 Meeting

Mountain Bluebird, *Sialia currucoides.* One, Point Peninsula, N.Y., 18 February 1997 (DWP).

Tufted Titmouse, *Baoelophus bicolor.* One at feeder near Morton, 1 January to 8 February 1998, many observers, photo (BR).

Smith's Longspur, *Calcarius pictus.* One 1st year male, Amherst Island, 22 April 1998, photo (RKE, VPM).

Peregrine Falcon, *Falco peregrinus.* One, Newburgh, 3 May 1998 (CG).

Black-necked Stilt, *Himantopus mexicanus.* One, Bath (Lennox Station), 26 May 1998 (GB).

American Avocet, *Recurvivostra americana.* Two, Amherstview Sewage Lagoon, 20-25 June 1998, many observers, photo (BR).

Canada Goose, *Branta canadensis hutchinsi.* One, small race of the Canada Goose, Clayton, N.Y., 12 November 1998, photos (NL).

Summer Tanager, *Piranga rubra.* One, Kingston feeder, 16-26 November 1998, many observers, photos (BR).

Pacific Loon, *Gavia pacifica.* One, Point Peninsula, N.Y., 29 November 1998, photos (LBC).

Ferruginous Hawk, *Buteo regalis*. One, Amherst Island, 13 March 1999 (NM, SB).

Spruce Grouse, *Falcipennis canadensis*. One, Tamworth, 21 March 1999 (ST).

Ferruginous Hawk, *Buteo regalis*. One, Prince Edward Point, 4 April 1999 (RDW, JHE), present to at least 21 April 1999 and seen by many observers.

Yellow-throated Warbler, *Dendroica dominica*. One, Prince Edward Point, 10 May 1999 (DR).

Curlew Sandpiper, *Calidris ferruginia*. One, Amherstview Sewage Lagoon, 6 June 1999, many observers (RDW).

Reports not accepted at the 1999 meeting

Blue Grosbeak, *Guiraca caerulea*. One, Prince Edward Point, 23 May 1999.

Black-throated Gray Warbler, *Dendroica nigrescens*. One, Prince Edward Pt., 12 May 1999.

Purple Sandpiper, *Calidris maritima*. One, Prince Edward Point, 28 May 1999.

Reports accepted at the 1998 meeting

Northern Gannet, *Morus bassinus*. One immature, Little Cataraqui Creek, Kingston, 21 December 1996 (KFE).

Le Conte's Sparrow, *Ammodramus leconteii*. One, Prince Edward Point, 14 May 1997 (PH).

Black Vulture, *Coragyps aura*. One, Prince Edward Point, 21 May 1997, many observers, photo (DC).

Tricolored Heron, *Egretta tricolor*. One, Amherst Island, 1 June 1997, many observers (RDW).

Curlew Sandpiper, *Calidris ferruginia*. One, Amherst I., 20 July 1997, several observers (RDW)

Blue Grosbeak, *Guiraca caerulea*. One at feeder, Elmwood, 2 November 1997 (MCE).

Varied Thrush, *Ixoreus naevius*. One at feeder, 4 December 1997 to 25 March 1998, Kingston, 8 December 1997, photo, many observers (RDW, BR).

Black Rail, *Laterallus jamaicensis*. One, Perch River, N.Y., 19-21 June 1997 (NL).

Reports not accepted at the 1998 meeting

Northern Gannett, *Morus bassinus*. One, near Napanee along highway 401, 19 April 1997.

Grasshopper Sparrow, *Ammodramus savannarum*. One, Amherst Island, 1 January 1997.

KFN Rare Birds Committee:

M.H. Edwards, K.F. Edwards, R.K.F. Edwards, J.H. Ellis, M.J. Evans, V.P. Mackenzie, R.B. Stewart, R.D. Weir (Chair).

Observers Submitting Reports Cited in this Report:

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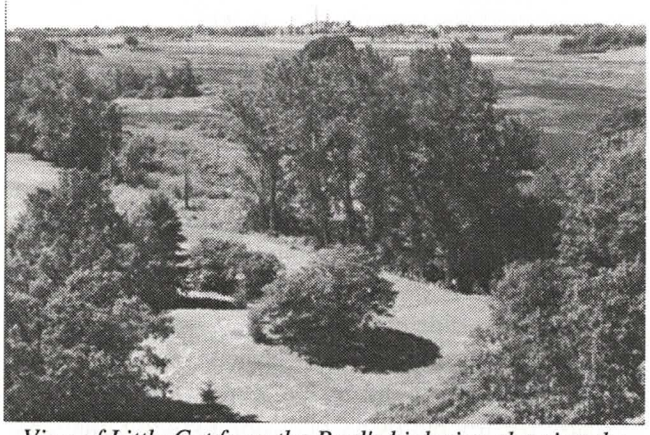
Animal Tales from Little Cat 1983-1999

Gerald Walton Paul

For over 16 years, I've lived in a high-rise on Greenview Drive, Kingston, across from Squaw Point's oak and white pine forest, beside the Rideau Trail and the Dupont Railway spur. During this period, sauntering almost daily on tracks and trail that run from Bath Road to Lake Ontario between the western boundary of the Cataraqui Golf and Country Club and the eastern edge of the marshes of Little Cataraqui Creek, I have encountered most of the creatures that inhabit this area and many that visit seasonally or only now and then.



View of Little Cat from the Paul's high rise, showing the Rideau Trail and Golf Course. Photo Gerald Paul.

In an earlier article, Birding Little Cat - 1983-1994 (*Blue Bill*, March, 1995) using a largely numerical approach I focussed on sightings of various species of birds. In the present essay I focus on selected special encounters experienced alone or with a companion during more than 3,000 walks in Little Cat. The critter-encounters described in detail are deliberately chosen as representative of animal life in this urban marsh. The images are designed to give readers the feel of Little Cat but the angle of vision is narrowed so as to emphasize encounters with fauna. Flora encounters are reserved for a possible future contribution.

Snipe

Over the pond in the marsh, between the train tracks and the mid-trail boardwalk, standing beside last year's cattails on which male Redwings and a lone female were swinging, I heard a Snipe winnowing. Training my binoculars on the sky, I followed the sound in a complete circle but failed to get even a fleeting glimpse of my quarry. Recalling the trouble I'd had sighting jet planes I heard overhead, and how I'd eventually learned to spot them by looking ahead of the sounds I heard, I practised a similar procedure.

Within a minute or two, I had the Snipe in view and with care was able to follow its cyclic, erratic flight. I almost screwed my neck off and felt new muscles being strained as I twisted and turned in response to the flight of the snipe. Suddenly, I lost my own identity and sensed that I was part of the flight – no longer an earth-bound observer, but a participant in this remarkable aerial display. When I could no longer hear the winnowing, scanning the humps, clumps and hummocks of grasses and reeds in the pond, I spotted another Snipe – perhaps a female judging whether or not the territory being mapped out by the male above was adequate for a summer union. Continuing along the boardwalk, ignited by the encounter with the Snipe, I pondered questions about the mystery of the marsh.

Red Fox

I'd always had a fondness for foxes. Appreciated their cunning, enjoyed their playfulness, marvelled at their jaunty gait and rippling fur. Each sighting – on moonlit night or sunny day – enriched my love of foxes.

Recently, a close encounter with a Red Fox revealed a deep-set fear beneath my mask of love. Walking south on a section of the Rideau Trail, I met a fox going north. My heart went out to bushy tail. Love at a distance.

Both of us kept walking. When the fox failed to give ground, fear grabbed me. Too close for comfort. I thought of frothy bite, rabies, lingering death. I could hear its breathing, smell its scent, almost feel its fur. Panicking, I groped in the brush for a weapon, found a length of rusty pipe, and with martial shout lunged at the oncoming fox. As I charged, the fox turned sharply, and noisily trotted off into the marsh.

Pondering the cause of this swift transformation of love into fear, I considered an evolutionary explanation. Perhaps Loren Eisely was right. Something from the hidden midnight of my past – the fear of the stranger when the stranger was two eyes in the dark beyond the fire at a cave-mouth – had made me fearful of the fox.

Reflecting further, I entertained the notion of a connection between my fear and the fox's invasion of my critical space. Love at a distance was love I controlled. I could admire motion, colour, form and wiliness. I could enjoy observing the movement of pristine muscles, the ripple of sun-struck fur, the rhythmic sag and sway of fox-skin just below the muzzle, and the bouncing buoyancy of its beautiful brush. But when the fox got close enough for physical contact, I found the creature much too close for comfort. No longer in control of the relationship, my fox love turned to fox fear.

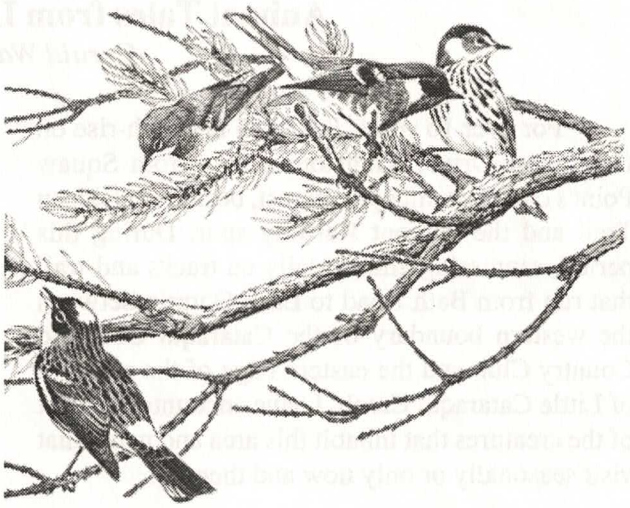
Was my fear of the fox precipitated by the threat of intimacy? As long as the fox appeared to fear me, I loved the fox. But when it failed to show fear of me, its friendliness engendered fear in me. As long as the fox kept its distance, my love for the fox was as pure as that of St. Francis for birds. But as soon as the fox closed the distance between us, love fled and fear rushed in.

Caresses and cuddles are not part of the story of my close encounter with a fox. I learned there is hidden fear in remote love. Only when the one we say we love moves closer is this fear revealed. Brooding over my fox-fear, I confess the limitations of my arm's-length love, and hope that in future close-up encounters, my fear will be displaced, if not by love, by wonder.

Wood Warblers

Each autumn day, I walk a city stretch of Little Cataraqui Marsh and watch the warblers fuelling up with insects for their migratory flight across Lake Ontario. The numbers decrease with the onset of October. In spite of the beauty of autumn leaves, these arriving and departing birds bring a lingering sadness that disturbs my joy.

Constituting, one of the largest bird families in North America, their beauty is inversely proportionate to their size. Stunning rainbows, gorgeous flowers, nuggets, gems and kaleidoscopes, like kilted Scots dancing the Highland fling,



A group of Spring Warblers.

warblers dazzle me with their plaids and amaze me with their acrobatic feats. Warblers are the golden earrings of the bird kingdom. They glitter with glamour. Though flimsy and fragile, they swing and sway with grace and gaiety. They come like a flutter of quaking aspens inspired by the breath of an autumn breeze. When they go, they leave me with two side-by-side emotions – joy and sadness.

Departures bring to consciousness the sadness of the human condition. We come into this world ready for joy but every occasion evoking gladness also evokes sadness. Even as I rejoice over the arrival of a winged joy, a dirge of sadness surfaces. As I watch the warblers dwindle in number and see no more the leaves move where these beauties moments earlier were busy catching flies, their departure awakens that sadness which is the twin of joy.

One early October evening, I fell asleep with lines from Wilfred Campbell's poem, Indian Summer, running through my mind. Dawn found me on the spur railway line behind my Kingston condo. While catching glimpses of my butterfly-birdlets, the poem was reenacted for me. Blue Jays called. Sumachs reddened. Marshes misted. Maples leaned. Above me, wild warblers were flying south. Something was missing from the poem: the sense of sadness that accompanies my joy as in Little Cat I watch the sudden arrival and speedy departure of up to 28 species of fall warblers – the winged twin emotions of autumnal skies.

Ermine / Short-tailed Weasel

In early March, 1988, while walking slowly along the Squaw Point trail, a male Ermine, having detected my presence pulled out its bag of tricks for me. It was royally robed in white with a black spot on its tail. Darting in and out of a hollow fallen pine log, it peeked with its red eyes, leaped, darted, dashed, and undulated like a wave, a roller coaster, a snake. I was fascinated with it and I believe it was fascinated with me. I began to believe the tale "A Drinker of Blood" by naturalist Grant Watson that tells how weasels and stoats have the power to hypnotize their prey so that a mouse under the weasel's spell puts up no struggle against its predator.

On another occasion (November 30th, 1994) walking with my companion, Shirley, at the bend in the trail where spruce trees with mini-skirts dominate the west side, out of the ground cover on the east side between the trail and the golf course, emerged an Ermine. For five minutes, we watched it scamper among the vines and rocks, disappear only to appear again. My whistling kept its attention and it entertained us, albeit evoking a touch of fear. It momentarily stood up straight like a squirrel begging for food, approached us, brushed my shoe with its paws, then retreated.

I had read of Ermine getting so frantically excited that they've scrambled up an observer's leg. With its beady eyes and its inexhaustible energy, its seemingly random scrambling here and there – made me wonder if we should move to a safe distance from this potentially dangerous blood-sucking speedster. But we held our ground until the Ermine left the circus ring to do whatever instinct would have it do. Though I whistled for a few more minutes, the Ermine failed to reappear. As we left, we squeezed hands knowing that we had shared in a special encounter with a remarkably flashy, energetic, bold, excited, serpentine, furtive, fugitive and curious critter.

Muskrat

Muskrats belong to the marsh. Everywhere there are signs of their presence. They swim among the lily pads that decorate the cattail marsh. They scamper across the railway tracks from one pond to another. They carry food and nesting material in their teeth as they glide across the waters. They plunge underwater on one side of the boardwalk only to emerge on the other side Their lodges dot the wetlands as far as the eye can see. Once in a while, they emerge in winter. In early spring, I often see their dead carcasses on the tracks and roads nearby. They seem especially susceptible to road kill when they begin their spring travels. I don't know why.

On the south side of my condo, in 1994, looking over the golf course, I watched and listened to the chainsaws cutting down a row of aging poplars on the west side of the Golf course beside the Rideau Trail. The following February through my scope I watched a muskrat eating the tender bark of the smaller limbs of the fallen giants. The muskrat came regularly during the winter to this spot where it ate at leisure. It came from a woodpile in the yard of a house on the east side of the 13th fairway. A question, as yet unanswered, arose in my mind: Was this muskrat living in a woodpile rather than in a self-built house or bank lodge? And, if so. how did it survive the winter?

Early one summer morning in 1985, as I was walking near the condo outdoor pool on my way to Little Cat, I noticed a dried-out furry object under the pool fence. Taking a closer look, I realized it was a dead muskrat. Its hind-end was on the pool-side of the fence and its front end was outside the fence. The points of the bottom wires of the fence were twisted inward. In front of the muskrat was a trough obviously dug by the muskrat's claws in an effort to get out. My reconstruction of what happened was that this was an animal accident. The muskrat had slid under the fence without incident although it was likely a tight squeeze.

Once in, perhaps to get a drink of chlorinated water, having finished its business it returned to the entrance and attempted to exit. It managed to get its head through the hole and its front paws but its shoulders got stuck. Working feverishly with its claws it tried to dig its way out. As the hole deepened, more of the muskrat squeezed through. Had its energy lasted, the determination it displayed in its frantic digging pattern would have led to a successful escape. But, alas, the clawing movement downshifted from feverishly swift to lacklustre slow. Finally, close to freedom but not yet there, the muskrat died. Before leaving the scene of the muskrat's demise, I took pictures of the sad scene

That was 14 years ago, but whenever I look at these photos, I'm inspired by the indominable spirit the muskrat was endowed with for survival.

Great Horned Owl

Although I have trouble picking up the clues and predicting the killer in the mysteries of Agatha Christie and in shows such as Murder She Wrote, I've learned how to read the signs that point to the presence of a Great Horned Owl. So successful is my record in this regard that I dare to propose that the technique I use to uncover the hiding place of *Bubo virginianus* may have some relevance for those who boldly undertake to search for even more secretive creatures.

In nesting season, I regularly saunter south down the marsh-edge trail to the white pine woods a kilometre south of my home in search of my feathered quarry. This owl is large. It stands about 20 inches high and has a wing span of 55 inches. Although a creature of such size should not be hard to find, nothing could be further from the truth.

Big Bird seldom flies during broad daylight. Critter of dense woods in dusk and darkness, it's out and about when most of us are eating our evening meal, watching the late news, or dead to the world. Even if we happen to go for a night stroll, we're not likely to see this dark shape gliding through the darkness.

To find *Bubo*, I've learned to take an indirect rather than a direct approach. In broad daylight, I look for easy-to-find signs of its hard-to-find presence. Although I'm convinced the owl is somewhere in the high branches of one of the trees, I begin, not by looking up, but by looking down. With eyes glued to the ground, I walk slowly around the trunks of towering pines. When I find large splashes of whitewash (excrement) I scrutinize the vicinity. If gray pellets (regurgitated small sausage-sized bundles of bones, feathers, hair and fur) are scattered about, excitement mounts at the prospect of sighting my hidden quarry.

Sensing it's time to shift my focus from signs to what they signify, I crane my neck and peer into the labyrinth of a 70-foot pine. To an owl, a single tree is like an entire forest is to us. There are hiding places everywhere. Niches number in the tens of thousands. Branches bend, knot, sprawl. Evergreen needles distort shapes, filter light, enhance

Adult Great Horned Owl with its downy chick high in the White Pines at Little Cat. Photo Gerald Paul.

concealment. The density of the foliage mixes shine and shadow on the trunk near which the owl is wont to stand – silent as a sentinel.

To make matters worse, at the height an owl prefers it shrinks drastically in size. To find *Bubo*, I must downsize my search-image and look for a tiny owl rather than a big one. Besides adopting Lilliputian vision, I must also look for a bit of the owl rather than the entire bird. Seldom do I get to view an entire owl from head to claw. Instead, I glimpse an ear tuft, or a belly-bar or a glint of a half-open eye camouflaged by cones and needles wavering in the wind.

Sometimes after a long search, raising my 10x40 binoculars I spot the hem of the owl's garment. From the bits and pieces, hints and glimpses I'm afforded, my mind's eye shapes and feathers my slim sightings into a fully fledged owl.

When I finally catch a glimpse of the Great Horned Owl, it's often only a momentary and fragmentary sighting. But a memorable one, indeed.

Snapping Turtle

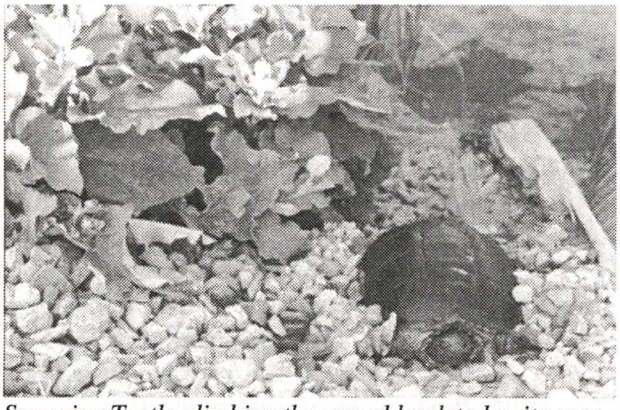
I often see Painted Turtles sunning themselves on marsh clumps or partially sunken logs but Snapping Turtles only appear regularly in June. Annually, early in June, Snapping Turtles come out of the marsh to lay their eggs. They emerge looking like prehistoric creatures

camouflaged with decorative material – pond weed, duck weed, pond scum. This condition, perhaps because of my Irish blood, I refer to as "the wearing of the green."

During this period, I sometimes find them between the rails of the spur line. I pick them up gingerly with a hand on each side of the mid-carapace, and slide them gently down the bank. Encountering one of extraordinary proportions, I placed a cane-length stout stick in front of the snapper. Living up to its name, grabbing the stick, it held on tenaciously while I carried it away from the rails to safety. Over the years I've discovered the remains of four or more snappers that have been killed by trains while making their journey to suitable egg-laying spots.

On June 8, 1998, I observed two Snapping Turtles climbing the steep bank at the culvert that carries the water from a tiny creek beneath the rails into Little Cataraqui Creek. I watched them dig 10 to18-centimetre flask-shaped cavities in the heavy gravel, thrust their hind-ends into the holes and remain there for a considerable time laying their round, rubbery eggs which usually number between 25 and 50. Then, with their heavy claws they scraped gravel into the holes to cover the eggs. The following day, I counted 13 places in this single spot that showed evidence of snappers laying eggs. I looked forward to being lucky enough in the future (9-18 weeks depending on the weather) to see the little ones scratch through the gravel and crawl down the bank into the water.

But two days later, I discovered egg fragments scattered all along the bank. Claw-marks at the entrance of the nests plus scat indicated that raccoons had come at night, dug out the eggs and feasted on the potential snappers. Since this scenario happens every year at this spot, I can't help wondering how enough Snapping Turtles manage to survive and keep off the endangered list.



Snapping Turtle climbing the gravel bank to lay its eggs. Photo Gerald Paul.

Evident in this tale is that nature in the marsh is not at all like that depicted by Disney. Ruthless competition is the law of the marsh. It also strikes me as unfair that one predator – the raccoon – attacks another – the Snapping Turtle – not directly, where the struggle would be fair, but through taking the unprotected eggs of the other.

Beaver

Throughout my years in the marsh, beaver have always been present except for short periods when they have been taken away by various authorities. They have built lodges in the south-west corner of the long-boardwalk pond, at the mid-point of the west side edge of the boardwalk, just off the rails on the south-west corner of the southern woods I call the Trillium Woods, in Cataraqui Creek on the northern side of Squaw Point and in the little creek beside my Greeenview condo. Accompanying some of the lodge-building was the building of dams, plugging of drainage ditches, pipes and culverts, and the destruction of trees.

In late October, 1995, at the end of the long boardwalk, the poplar grove, excellent in spring for incoming warblers, was pretty well demolished. With trail blocked and falling trees hanging and sprawling at different angles, I was confronted with a disaster area. I felt something had to be done but was indecisive as well as perplexed. On the one hand, the proximity of the lodge to the boardwalk made for easy viewing of adult Beavers and their kits. I could see that watching the beavers at work and play could advance the cause of nature appreciation and conservation. On the other hand, the destruction of the poplar grove was putting an end to the pleasure of watching the warblers that favoured the grove. I ended up calling the Cataraqui Conservation Authority. I was told they were also getting complaints of flooding from nearby landowners. Within a week the beaver were gone.

Moving from the south-side tenth floor to the north-west ninth floor of our condo in late September 1997, while admiring the view of the

marsh from our balcony, we immediately noticed beaver at work in the little stream that flows into nearby Little Cataraqui Creek. In October, I counted eight Beaver hardly a stone's throw from my balcony. Bank Beaver, they were working feverishly to plug the culvert and raise the water level for their bank lodge. The railway crew arrived with a crane and a pole, as long as a telegraph pole, which they used to unplug the culvert and end the risk of the railroad being flooded. Successful, the water level dropped drastically and the lodge was high and dry. But, the crew had hardly departed, when the beaver went to work. A parking lot light from Bayswater Apartments allowed us to watch them work through the night. By morning, the culvert was plugged and the water level rapidly rising for the lodge.

The next morning, back came the railroad gang, who, after hours of work, cleared the culvert once again. This plug...unplug sequence was repeated for a number of days. Meanwhile looking around the area I discovered not only poplars but ironwood trees had been felled. A beautiful stream-side oak was ringed with beaver teeth and with the cambium gone, I knew it would never leaf or live again.

Wildlife Rescue was called about the problem and before long a rescuer arrived with his equipment. He spent a lot of time catching them and first blocked off the open culvert with a metal sheet so as to keep the beaver from swimming away. During the night he trapped four but informed me that four others had got away into the main stream and could be back. To date, the Beaver have not returned.

One day in May, I had the pleasure of observing a River Otter undulating like a huge fish through the waters of the pond from the long boardwalk. Returning home after a lengthy study, I checked Banfield's *Mammals of Canada* to get a detailed description of an Otter. The description perfectly matched what I had observed. The next day, I brought my wife Shirley and daughter Cathy with me to the pond to see this rather rare sighting in Little Cat. Spotting a large animal perched on a mound of dead cattails, I excitedly pointed to it and exclaimed: "There's the Otter". The response from both companions was: "It sure looks like a Beaver to me!"

Taking a closer look, what I now saw was a long-haired critter that looked not like a sleek Otter but like a bulky Beaver. When it got off the mound, we saw not an otter but a Beaver tail, not otter motion but beaver motion. I learned from this experience that perception can be deceptive. Carrying a search image of an Otter I'd seen the day before had led me to think I'd found an Otter once again, when it was actually a Beaver I was seeing!

Eastern Screech Owl

Early in 1999, a series of Wood Duck nesting boxes were erected in Little Cataraqui Creek through the cooperation of Ducks Unlimited, Cataraqui Region Conservation Authority and the Kingston Field Naturalists. During my walks, I've seen various birds perching on the boxes. My list includes: Great Blue Heron, Black-crowned Night Heron, Eastern Kingfisher, Tree Swallow (often nesting in them), Double-crested Cormorant, Robin, Eastern Phoebe, Eastern Kingbird, Red-winged Blackbird, Ring-billed Gull, Song Sparrow, Wood Duck.

On June 1, 1999, at 8 pm, from the Apple Mill on Bath Road my partner and I with our binoculars were pleased to see in a nearby bird box, what we were sure was an Eastern Screech Owl. The yellow eyes, the tiny ear tufts, the round face could hardly be mistaken. We recalled the Easter weekend KFN trip to Cape May in 1987 when Art Bell had stopped the bus to look at a Wood Duck's box situated in a pond. To our surprise, a Barn Owl popped out its head a couple of times. Thus, having had this earlier experience of an owl in a box designed for a Wood Duck, we didn't hesitate to make a positive identification of the critter in the box at the Apple Mill.

Calling up Bob Sachs we reported our find but agreed not to put the sighting on the hot line because to do so would result in a lot of twitchers arriving and possibly disturbing the bird. We did call two friends who studied the box and came to a similar conclusion: We'd discovered a Screech Owl! Always aware of the importance of double checking whenever possible, a few days later, armed with a scope, we checked it out with 15-45 magnification. The result: We were even surer of our find.

However, mulling over our various sightings of the inhabitant of the bird box, we wondered why the owl never changed position, was always present, remained motionless and stared blankly. The following day, again with the scope, our sightings were similar to earlier ones. This time, however, we tried other theories to account for what certainly looked like an owl. At first, we wondered if it was a two dimensional picture of an owl placed there by those who had erected the boxes in order to scare away predators on whatever bird happened to nest there. Checking another box, we found the same image. It began to seem unlikely that Screech Owls were occupying two nests close to one another. Peering inside the hole with a different angle of vision, we constructed a non-living theory and tested it with our eyes and with reason. Perhaps the yellow eyes were actually brass washers with a dark bolt through them and the ears were pieces of leather to form hinges so the back flap of the box could be opened for cleaning.

The more we studied the nest box holes the more we liked this theory. What we were seeing was not an owl, or even a picture of an owl to scare away predators. What we were seeing were two brass washers with bolts through their centres and leather hinges unintentionally shaped like ear tufts. In retrospect, we're glad our find was not immediately put on the hot line. I'm embarrassed enough as it is. This experience does show how the search image influences what we think we see. Observation is not accomplished by the eye alone but also with the aid of mind-derived constructs that can deceive us at times.

Grey Squirrel

In his book, *Familiar Animals of America*, Will Barker recalls a legend about the squirrel that lived in the Garden of Eden. At that time it had a tail like that of a rat. Horror-stricken on witnessing the eating of the forbidden fruit by Adam and Eve, it drew its tail across its eyes to shut out the sight of original sin. As a reward for its distaste of evil, the squirrel received a feathery tail of great beauty and utility.

The utility of its tail I have frequently witnessed during my walks. Making up ten inches of the squirrel's 20-inch length, I have seen it skilfully used as parachute, shade, whisk, shield, blanket, umbrella and balancing rod.

I've always found squirrels, and particularly the Eastern Grey Squirrel (that comes in a delightful array of colours ranging from blonde to black) most delightful critters. The striking beauty of their tails triggers images of a treble clef, the frame of a lyre, a pleasing curve in a painting by Picasso.

If art imagery reveals the beauty of the squirrel's form, music imagery reveals the mystery of its movements. There is the making of a symphony in the motion of a squirrel. Hear the music! Catch the rhythm as he plays: Now here. Now there. Up a tree. Down a tree. Tail up. Tail down. Under. Over. Leap. Squat. Hurtle. Scamper. Right side up. Upside down. Chatter, chatter, chatter...gone.

The Grey Squirrel is the one critter that one is sure to see during a saunter in Little Cat in any month of the year. Even during the ice storm of January, 1998, on a treacherous walk I heard only Crows but saw a black phase squirrel leaping from icy limb to icy trunk of an oak in Squaw Point. I've watched them lope long distances on wires between poles, leap from tree to tree like Flying Squirrels, gobble up the sunflower seeds I place in winter on a fallen log where Nuthatches, Tree Sparrows, Juncos, Cardinals and Chickadees have a hard time competing for my ration with this voracious critter.

A memorable event occurred in the fence between my condo and the 14th Tee of the Golf Course in winter. The fence is entwined with vines and shrubs like a knit quilt. In between the layers was a Grey Squirrel. Trying to get at it was an immature Red-tailed Hawk. The hawk began by perching on the top of the fence and eyeing the squirrel skulking in nature's lattice work. When the squirrel moved, the motion attracted the hawk. Clawing down the wire fence, it swiped at its intended prey with its deadly talons. But the heavier vine stock took the brunt of the attack and the squirrel moved deeper into the cover.

Not to be deterred, the hawk clawed again through the diamond-shaped fence holes and managed to rake the squirrel's back and draw blood. Repeatedly, the hawk tried to claw the squirrel. Although it sometimes succeeded, the squirrel somehow avoided a lethal blow. The struggle lasted about 20 minutes. The hawk perched once again on the top of the fence, eyed the critter for a few

minutes then flew off to the pines of Squaw Point to look for easier prey. The bloodied but still intact squirrel lingered long enough in the vines for me to note it had suffered a number of superficial wounds. But, its speed, agility and survival instinct had saved it for another day of frisky and rhythmic life in the woodlands of Squaw Point.

The young Red-tailed Hawk that was hunting the Gray Squirrel among the vines on the chain link fence. Photo Gerald Paul.

Virginia Rail

Although rather secretive, Virginia Rails are often seen on the edges of the marsh especially in the early morning or just before dark. I've seen them in every pool, ditch, mudflat, marsh edge from Bath Road to the south end of the second boardwalk. On occasion, I've watched them walk across the train tracks and along the boardwalks. A family, in 1998, used to be visible to casual passers by from the little bridge near the end of Greenview Drive. Although often seen alone, I've observed male and female and little black chicks all at the same time. Usually, I just come upon them as I saunter along the tracks or trail. Sometimes I make clicking notes separated by a second or two and they respond by coming out of cover. I've occasionally used a tape that has a minute or so of a number of rail calls including those of Clapper, Black, King, Yellow, Sora. Since Virginia's respond to any of these calls indiscriminately. I believe that some rail family sound bytes are inherited by all rails.

Often I've been close enough to take pictures of Virginia Rails. By mid-June the chicks are actively running about and bring the adults into view much like what happens when the young marsh hens venture out of the cattails. On the evening of May 4th, 1996, just after sunset, I was walking along the tracks playing my varied rail calls, when rails from both sides came out on the tracks. I counted thirteen, and new ones kept arriving. Some flew the short distance towards me while others fluttered up the banks or walked with little hesitation. Of course I had no camera. I felt like the Pied Piper of Hamelin playing my tape and leading these critters down the rail line. They called constantly even when I turned the recorder off. A few raced towards me and actually gave me a scare thinking it was an unheard of attack on a human being by a squadron of Virginia Rails. They had come out of last year's sagging tangled cattails. In gorgeous colour, twitching their tails they kept their eyes on me and added their voices to the tape-calls. They did not leave me; I left them at nightfall. Stumbling home, I carried an image of the marsh that would trigger wonder all the days of my life.

Concluding Note

During my 16 years living on the edge of Little Cat and making almost daily excursions I have seen strange sights, encountered critters representative of marsh life and learned a few lessons from these precious, urban wetlands. Like Thoreau, I believe that there's enough in my backyard to keep me interested for the rest of my days. It's only a small area but as William Blake has pointed out it's possible:

"To see a World in a Grain of Sand,
And a Heaven in a Wild Flower,
Hold Infinity in the palm of your hand,
And Eternity in an hour."

If space permits, I plan in a future issue of *The Blue Bill* to describe the marsh's flora and other creatures that continue to provide me with hints and glimpses of the mystery of Little Cataraqui marsh.

Forest Mapping

Anne Robertson

The KFN has applied for the Forest Tax Incentive Programme for the Helen Quilliam Sanctuary. This programme results in greatly reduced taxes but involves "management" of the woodlands. Management in our case is for the wildlife. Regular records must be submitted to maintain our status as a managed forest. Such things as Wood Duck box monitoring and maintenance, trail maintenance, guided educational walks and forest mapping as well as regular forest bird monitoring are amongst the aims for the next five years.

On September 1, 1999 eight teen naturalists and four leaders mapped part of the Art Bell Trail. This involved first learning to identify the tree species present and then running two transects in areas of different habitat. In each area four transects of 30 meters length and two meters width were done twice bordering the trail – this gave a surveyed area of 60 metres by eight metres or close to 500 square metres.

The first area of study was the valley near where the lakeshore part of the trail starts to rise. The number of each species in each size category along the transect was recorded. There were three size categories (dbh, diameter at breast height, 0-10 cms., 10-30 cms., and 30+cms.). Average height of trees in each category was recorded as well. The results are shown in Table 1.

After lunch a similar excercise was done in the upland area near the right angle turn in the trail, and are shown in Table 2.

Table 1: Valley area of the Art Bell Trail where the trail starts to rise from the lakeshore:

Species	dbh 0-10cm	dbh 10-30 cm	dbh 30+ cm
Yellow Birch	0	1	3
Eastern Hemlock	0	4	0
Soft Maple	2	2	3
Hard Maple	38	18	0
White Birch	3	2	5
American Beech	1	1	0
Ironwood	0	1	0
Bitternut Hickory	0	2	0

Table 2: Upland area of the Art Bell Trail:

Species	dbh 0-10cm	dbh 10-30 cm	dbh 30+ cm
Hard Maple	40	28	7
Bitternut Hickory	0	3	2
Red Oak	0	2	0
Cork Elm	3	1	1
White Birch	7	0	0

The conclusion is that both these areas are dominated by hard (Sugar) maple. In size the upland has more mid size and large maples, both areas had many small maples. A greater variety of species was recorded in the valley area (8 species as opposed to 5 species in the upland area) and the species composition was different. No Red Oaks or Cork Elms were seen in the wetter area of the valley where Yellow Birch, Eastern Hemlock, Soft Maple, American Beech and Ironwood were recorded.

This was an attempt to begin the process of forest mapping and "a good way to learn some trees".

Many thanks to Teen Naturalists Greg, Ben, Alex, Philina, Lora, Stephan. Melissa, Stephanie and Andrew as well as drivers Jackie Bartnik and Larry McCurdy.

Special other recordings were a Tree Frog, a Wood Frog, a Red Eft and a couple of Loons. Anyone visiting the Helen Quilliam Sanctuary is invited to report sightings and activity to the KFN phone line for the record. If you would like to learn about forest mapping and help us get a better picture of the forest in the H.Q. Sanctuary please let us know so we may contact you when a trip is planned.

Book Review

Anne Robertson

WINTERGREEN: Reflections from Loon Lake. By Monte Hummel. Key Porter. 1999, 224 pages, $26.95 (available online at www.chapters.ca for $16.17)

Loon Lake is north west of Verona and the property this book describes is monitored by the KFN on behalf of the NCC (Nature Conservancy of Canada). It is easy to identify with the detailed descriptions of the author through the seasons ranging from astronomy to evolution and encompassing a wide variety of wildlife observations in forest and wetland, by canoe, snowshoe or on foot – I have to admit to never having seen a sit print of a coyote in the snow! Monte is a forester, a hunter and a fisherman but above all he is passionate about the natural world and very much at home in it in all seasons. He wrote this book by hand, mostly by candle light, in his cabin at Loon Lake where he manages to escape at regular intervals from the pressures of his job as president of the World Wildlife Fund, Canada. This delightful little book, in the tradition of the *Sand County Almanac*, will ring true for many readers and perhaps make you think about your outdoor experiences in a different light.

An easement on this property has determined its future for 999 years. There is a brief description of how you too may be able to protect some property and even get some tax relief in the process!

For me this is a classic description of life in our part of the natural world and well worth reading.

Fall Round-up, 6-7 November 1999

Ron D. Weir

The 34th KFN Fall Round-up took place between 1500h Saturday 1998 November 6 and 1500h Sunday November 7. Participants numbered 30. During Saturday, sun with scattered cloud, West winds 25-40 kph and temperatures around 8°C prevailed and continued through Sunday when temperatures varied from 6°C in the early morning to 9°C during the afternoon, although the brisk winds shifted from the North.

A total of 127 species was realized, which is above the 29 year 1970-1998 average of 119. Four new species (Swainson's Hawk, Eastern Wood Pewee, Traill's Flycatcher, Cape May Warbler) were added to the Count list, the cumulative total of which rises to 225 species. Noteworthy finds included the 1 Trumpeter Swan, 3rd record, by Parties #4 and #5; 1 Osprey, 6th record, by Party #5; 1 Ruddy Turnstone, 6th record, by Party #2; 1 Marsh Wren, 4th record, by Party #4; 1 Swainson's Thrush, 4th record, by Party #6; 1 Black-throated Blue Warbler, 2nd record, by Party #6.

The following species were found by one or two parties only:

Party # 1: Blue-winged Teal with Party #8.
Party # 2: Least Sandpiper, Ruddy Turnstone.
Party # 3: Swainson's Hawk, Eastern Bluebird.
Party # 4: Turkey Vulture, Marsh Wren.
Party # 5: Osprey, Red-shouldered Hawk, Semipalmated Sandpiper, Common Raven.
Party # 6: Swainson's Thrush, Black-throated Blue Warbler, White-winged Crossbill.
Party # 7: Snow Goose, Cooper's Hawk, Eastern Phoebe, Tree Swallow.
Party # 8: Red-throated Loon, Golden Eagle, Purple Sandpiper, Little Gull, Barred Owl, Saw-whet Owl, Eastern Wood Pewee, Traill's Flycatcher, Ruby-crowned Kinglet, Bohemian Waxwing, Cape May Warbler, Field Sparrow, White-crowned Sparrow, Pine Grosbeak, Pine Siskin.

Record high numbers were tallied for three species that include 75,200 Oldsquaw, 1050 Bufflehead, and 250 Pine Siskins. The Purple Sandpiper and White-winged Crossbill were last seen on the Fall Roundup in 1989, the Ruddy Turnstone in 1986.

The totals in the following table have had known duplications removed so that the total individuals for a species may not equal the sum of the contributions from each party. The results provide a reasonable estimate of the numbers of birds found. The composition of the parties and the sites visited are given after the table. Following the 24-hour count, birders met at the home of Marian and Joel Ellis for the pot-luck supper. Marian and Joel were again great hosts and a warm thank you is extended for their continued hospitality.

The assembly of the species list after dinner was greeted with much fanfare and fun. The Art Bell Trophy, inaugurated in November 1992 for the party with highest species total on a Spring and Fall Round-up, was awarded to Party #8 which tallied 105 species. The runner-up, Party #7 at 79 species, was awarded the coveted Purple Vulture, which is a paper maché model of a species so far not recognized by the American Ornithological Union.

Party #1: Josette Arassus, Faith Avis, Kathy Innis, Laurie Wright (Belle I., CRCA Division Street, Elevator Bay, Westport area).
Party #2: Jaye McLaughlin, John McLaughlin (Cataraqui R., Belle I., Elevator Bay, Wolfe Island, outer Montreal Street).
Party #3: Lynn Bell, Hugh Evans, Bob Stewart. (Belle I., Elevator Bay, Front Road, Amherstview Sewage Lagoon, Prince Edward Point, Waupoos peninsula in Prince Edward county).
Party #4: Erwin Batalla, Alexandra Simmons (Glenburnie area, Elevator Bay, Perch River, N.Y., Point Peninsula, N.Y.).
Party #5: Marg Hendrick, Annette Mess, Winnie Smith, Dave & Lillian Willison (Perch

River, N.Y., Lyndhurst, Seeley's Bay, Gananoque, Wellesley I., Hill Island).

Party #6: Basia Lodzinski, Michael Palmer (Amherst Island, Nicholson's Point).

Party #7: F. Bauder, Chris Grooms, Kurt Hennige, Ken Kingdon, Bob Sachs (Elevator Bay, Little Cataraqui Creek, Prince Edward Point, Amherstview Sewage Lagoons, Wolfe Island).

Party #8: Joel Ellis, Peter Good, Bud Rowe, George Vance, Ron Weir (Belle I., Elevator Bay, Lemoine Point, Hillview Marsh, Amherstview Sewage Lagoon, Prince Edward Point, Hay Bay, Sillsville, Wilton Creek).

Party #9: Miscellaneous: Leslie Couter (Wellesley Island).

SPECIES	PARTY NUMBERS									
	#1	#2	#3	#4	#5	#6	#7	#8	#9	TOTAL
Red-throated Loon	-	-	-	-	-	-	-	1	-	1
Common Loon	x	-	-	x	3	2	8	4	-	19
Pied-billed Grebe	x	-	2	x	12	-	16	21	-	50
Horned Grebe	-	-	2	-	-	3	10	70	-	85
Red-necked Grebe	-	-	-	-	-	1	-	12	-	13
Double-cr. Cormorant	x	2	60	x	-	-	20	60	-	140
Great Blue Heron	x	3	2	x	2	2	6	4	1	20
Trumpeter Swan	-	-	-	1	1	-	-	-	-	1
Tundra Swan	x	40	3	-	-	-	54	1	-	58
Snow Goose	-	-	-	-	-	-	14	-	-	14
Canada Goose	x	3000	730	x	800	200	5000	2500	50	10000
Wood Duck	-	2	-	-	2	1	-	-	-	5
Green-winged Teal	-	1	3	x	-	13	16	75	-	110
American Black Duck	-	4	15	x	20	10	30	120	-	200
Mallard	x	300	410	x	205	28	500	1100	50	2500
Northern Pintail	x	-	100	-	28	4	20	100	-	250
Blue-winged Teal	1	-	-	-	-	-	-	1	-	2
Northern Shoveler	x	20	22	-	16	3	20	125	-	200
Gadwall	-	2	100	x	2	-	40	110	-	250
American Wigeon	x	40	160	x	150	-	500	1150	-	2000
Canvasback	-	1	-	x	-	-	-	2	-	5
Redhead	-	-	-	x	-	-	-	2	-	3
Ring-necked Duck	-	4	60	x	1150	-	2000	37	-	3200
Greater Scaup	x	100	255	x	-	-	15000	3500	-	22000
Lesser Scaup	x	1000	36	x	4	20	600	60	-	1700
Oldsquaw	-	-	6	-	2	-	200	75000	-	75200
Black Scoter	-	-	-	-	-	-	4	6	-	10
Surf Scoter	-	-	-	-	-	-	2	2	-	4
White-winged Scoter	x	-	16	-	-	-	200	2000	-	2216
Common Goldeneye	x	1	-	-	-	-	400	350	-	750
Bufflehead	x	40	30	x	21	54	300	600	-	1050
Hooded Merganser	x	1	43	x	30	-	50	20	-	145
Common Merganser	x	1	106	-	-	-	20	10	-	135
Red-br. Merganser	-	-	-	x	-	16	5	50	-	72
Ruddy Duck	x	-	-	1	8	1	5	10	-	25
Turkey Vulture	-	-	-	1	-	-	-	-	-	1
Osprey	-	-	-	-	1	-	-	-	-	1

SPECIES	PARTY NUMBERS									
	#1	#2	#3	#4	#5	#6	#7	#8	#9	TOTAL
Northern Harrier	x	1	2	x	-	-	6	1	-	12
Sharp-shinned Hawk	-	1	1	x	-	-	-	1	-	4
Cooper's Hawk	-	-	-	-	-	-	-	1	-	1
Red-shouldered Hawk	-	-	-	-	1	-	-	-	-	1
Swainson's Hawk	-	-	1	-	-	-	-	-	-	1
Red-tailed Hawk	x	2	8	x	5	2	15	5	-	35
Rough-legged Hawk	-	-	-	2	-	-	2	1	-	5
Golden Eagle	-	-	-	-	-	-	-	1	-	1
American Kestrel	-	3	4	x	-	3	2	2	-	15
Ruffed Grouse	x	1	1	-	-	-	2	2	-	7
Wild Turkey	-	-	-	-	-	-	-	-	5	5
American Coot	-	5	2	x	75	-	100	280	-	460
Killdeer	x	-	-	x	7	2	5	17	-	34
Greater Yellowlegs	x	5	-	-	-	-	8	3	-	15
Lesser Yellowlegs	-	1	-	-	-	-	1	-	-	2
Ruddy Turnstone	-	20	-	-	-	-	-	-	-	20
Sanderling	-	20	-	-	-	-	-	8	-	28
Semipalmated Sandpiper	-	-	-	-	2	-	-	-	-	2
Least Sandpiper	-	10	-	-	-	-	-	-	-	10
Pectoral Sandpiper	-	-	-	-	4	-	-	2	-	6
Purple Sandpiper	-	-	-	-	-	-	-	1	-	1
Dunlin	x	20	-	-	-	-	55	125	-	200
Common Snipe	x	-	-	-	-	-	3	1	-	5
Little Gull	-	-	-	-	-	-	-	1	-	1
Bonaparte's Gull	x	1	125	x	150	20	200	450	-	900
Ring-billed Gull	x	100	1090	x	450	9	400	500	-	2600
Herring Gull	x	200	53	x	6	3	200	250	-	650
Great Bl-backed Gull	x	1	4	x	2	11	40	210	-	270
Rock Dove	x	100	20	x	75	2	50	50	-	250
Mourning Dove		x	4	52	x	12	12	80	50	- 200
Eastern Screech Owl	-	-	-	x	-	-	3	1	-	5
Great Horned Owl	x	1	-	x	-	-	2	6	-	11
Barred Owl		-	-	-	-	-	-	-	1	- 1
Long-eared Owl	-	-	-	-	-	-	2	1	-	3
N. Saw-whet Owl	-	-	-	-	-	-	-	1	-	1
Belted Kingfisher	-	1	-	-	-	-	-	1	-	2
Downy Woodpecker	x	3	1	x	3	4	4	2	-	20
Hairy Woodpecker	-	1	2	x	1	4	1	4	-	14
Northern Flicker	-	-	1	-	-	-	-	1	-	2
Pileated Woodpecker	-	1	-	-	2	-	-	-	-	3
Eastern Wood Pewee	-	-	-	-	-	-	-	1	-	1
Traill's Flcatcher	-	-	-	-	-	-	-	1	-	1
Eastern Phoebe	-	-	-	-	-	-	1	-	-	1
Horned Lark	-	2	-	-	-	-	50	6	-	58
Tree Swallow	-	-	-	-	-	-	3	-	-	3
Blue Jay	x	14	4	x	25	23	20	30	-	115
American Crow	x	8	16	x	12	7	20	30	-	90

SPECIES	PARTY NUMBERS									
	#1	#2	#3	#4	#5	#6	#7	#8	#9	TOTAL
Common Raven	-	-	-	-	1	-	-	-	-	1
Bl-capped Chickadee	x	20	30	x	70	15	40	65	-	240
Red-breasted Nuthatch	-	1	-	-	-	-	-	1	-	2
Wh-breasted Nuthatch	x	2	3	x	13	5	4	2	-	30
Brown Creeper	-	-	-	-	-	-	1	1	-	2
Marsh Wren	-	-	-	1	-	-	-	-	-	1
Golden-cr. Kinglet	-	-	-	-	-	2	10	40	-	52
Ruby-crowned Kinglet	-	-	-	-	-	-	-	2	-	2
Eastern Bluebird	-	-	1	-	-	-	-	-	-	1
Swainson's Thrush	-	-	-	-	-	1	-	-	-	1
Hermit Thrush	-	-	2	-	-	-	1	2	-	5
American Robin	x	4	81	x	5	26	18	250	20	375
American Pipit	-	-	-	-	-	-	18	2	-	20
Bohemian Waxing	-	-	-	-	-	-	-	1	-	1
Cedar Waxwing	-	30	58	x	-	16	500	300	-	900
Northern Shrike	x	-	2	x	-	1	2	6	-	13
European Starling	x	400	500	x	600	50	500	200	-	2200
Cape May Warbler	-	-	-	-	-	-	-	1	-	1
Black-thr. Blue Warbler	-	-	-	-	-	1	-	-	-	1
Yellow-rumped Warbler	-	-	30	-	-	2	2	25	-	59
Northern Cardinal	x	2	2	x	-	-	3	4	-	13
Am. Tree Sparrow	x	20	14	x	12	-	150	32	-	230
Field Sparrow	-	-	-	-	-	-	-	1	-	1
Vesper Sparrow	-	1	-	-	-	-	-	1	-	1
Song Sparrow	-	-	-	-	-	-	5	9	-	14
Swamp Sparrow	-	-	-	-	-	-	6	1	-	7
White-thr. Sparrow	-	-	1	-	-	-	-	1	-	2
White-cr. Sparrow	-	-	-	-	-	-	-	1	-	1
Dark-eyed Junco	-	30	66	x	5	7	10	85	x	205
Snow Bunting	x	30	1	x	-	26	100	26	x	185
Red-winged Blackbird	x	200	-	x	1025	18	30	4	x	1375
Rusty Blackbird	-	-	-	x	-	-	-	1	-	2
Common Grackle	-	-	-	-	2	-	-	25	-	27
Brown-headed Cowbird	-	8	-	-	-	-	-	1	2	11
Pine Grosbeak	-	-	-	-	-	-	-	1	-	1
Purple Finch	-	-	-	-	1	-	-	25	-	26
House Finch	x	4	6	x	2	2	5	45	-	66
White-winged Crossbill	-	-	-	-	-	-	9	-	-	9
Common Redpoll	-	-	-	-	-	-	-	4	-	4
Pine Siskin	-	-	-	-	-	-	-	250	-	250
American Goldfinch	x	12	21	x	12	11	20	200	-	285
Evening Grosbeak	-	-	-	-	-	-	2	2	-	4
House Sparrow	x	40	15	x	15	18	30	25	-	145
Total Species	48	61	56	56	50	45	79	105	x	127
Participants	4	2	3	2	5	2	5	5	2	30

Raccoon Rabies in Ontario

Sharon David

As many of you must already have read or heard about – raccoon rabies arrived in Ontario this past summer in the Brockville-Prescott area. We should all become more aware of this disease and prepare for the spring/summer 2000 season that may result in more cases. The MNR website has an excellent section on rabies at http://www.mnr.gov.on.ca/MNR/rabies/. Following this article is a reprint of an article Bob Stewart wrote about raccoon rabies that appeared in *Blue Bill* in 1997.

Three cases of raccoon rabies were confirmed in a 1,400-square kilometer area, through testing by the Canadian Food Inspection Agency. The first case was in Maynard on July 14th, the second near Brockville in mid-July, and the third case September 17th near Oxford Station (see Figure 2). Raccoon rabies is a strain that is spread mainly by raccoons. It was first identified in the 1940s in Florida and has been moving slowly northward. It reached the New York/Ontario border in the past few years, and has now reached epidemic levels in many northern US States. The MNR's suspicion at this point is that rabid raccoon(s) crossed the Prescott border from New York, possibly hitch-hiking on vehicles.

Upon confirmation of the first rabid raccoon in Maynard in July the MNR initiated its Point Control Plan the goal of which is to eliminate wildlife infected with raccoon rabies thereby preventing the spread of the disease throughout Ontario. If a single raccoon rabies case is not contained, an outbreak would rapidly spread across the province due to the high population density of raccoons in Ontario (There are estimated to be 1 million raccoons in southern Ontario, about ten times the number of foxes). In the U.S., peaks of raccoon rabies incidence have been noted during the fall, in relation to dispersal and denning activities, and during the spring following the breeding period.

The Trap-Vaccinate-Release (TVR) program has been in effect for several years as a tactic to prevent raccoon rabies from becoming established in the Niagara Frontier and along the St. Lawrence River. By live-trapping, vaccinating and releasing raccoons at major Ontario-US border crossings a defence against the possible spread of raccoon rabies into Ontario occurs. By immunizing a sufficient number of raccoons against rabies in border areas, MNR minimizes the potential for the virus to spread to raccoon populations and to pets and humans.

Ontario has one of the lowest incidence of rabies in North and South America. The MNR's Rabies Research Unit is internationally recognized for its expertise in immunization of wildlife against rabies. For the past 25 years, the Rabies Unit has conducted one of the most successful campaigns to eliminate rabies carried by foxes. Incidence of rabies in fox in Ontario has been reduced from thousands of cases a year to almost none over the past 10 years, and has been virtually eliminated in eastern Ontario through the oral vaccine-bait program. This is the first time a strain of rabies has been eliminated in a large area of North America. The Rabies Unit has been working on both sides of Ontario's borders to combat the raccoon rabies virus, and is accelerating research to develop an oral vaccine for raccoons in order to more effectively immunize large populations of the animals. These buffer zones of vaccinated raccoons should prevent any rabid raccoons that enter the areas from creating a raccoon rabies outbreak or epizootic. That is, in the buffer zones, the odds are that a rabid raccoon will succumb to rabies before transmitting the disease to a susceptible individual.

The Raccoon Rabies Contingency Plan was developed as a joint effort of the Ontario ministries of Natural Resources, Health and Agriculture and Food and Rural Affairs, the Canadian Food Inspection Agency, regional governments, local police services, humane societies and other agencies, and is outlined in detail under the Point Control Plan at http://www.mnr.gov.on.ca/MNR/rabies/response2.html, and was implemented for controlling the spread of raccoon rabies this summer. The Maynard rabid raccoon was found in a rural area which reduced chances of people and pets having come into contact with the animal. In

this immediate zone, within a five-kilometre radius from the spot where the rabid raccoon was found, all raccoons and skunks were destroyed because vaccinating an infected animal has no effect on protecting the animal from rabies and therefore doesn't help prevent the spread of the virus. In a buffer zone around the Point Control all raccoons and skunks were vaccinated (Figure 1).

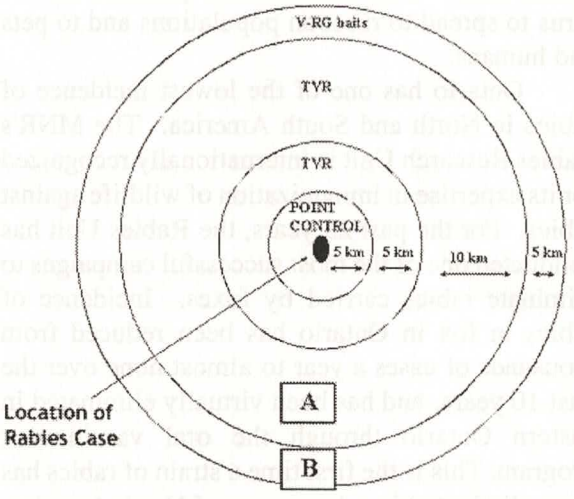


Figure 1: Point Control and Buffer Zones of Trap-Vaccinate-Release (TVR) and Rabies Baiting (V-RG).

Research has determined that destroying all raccoons in the immediate area is the best way to ensure that those which have become infected will not carry the disease further. Past experience dictates that there is a good chance of success. If no attempt is made at controlling point infections, the additional economic load, both provincially and federally, due to raccoon rabies, would total several millions of dollars. That prediction is certain based on experience in the United States. The cost for a single Point Control Program was estimated in the MNR's 1998 Point Control Program document at $20,000 to $75,000 depending on what personnel and options were available at the time of the infection.

The above design is based on movements of radio-collared and live-trapped raccoons in urban and rural areas of southern Ontario. That is, the design assumes that the initial reported case of raccoon rabies is the first case in the area and that the rabid raccoon did not travel outside of the area designated as the population reduction zone during the period when it was clinically rabid or capable of transmitting rabies to susceptible individuals. The design also assumes that animals vaccinated in the buffer zone surrounding the population reduction zone will be protected against rabies before any animals in the population reduction zone that were not trapped, develop clinical rabies and can transmit the disease to individuals in the vaccination zone. The design also assumes that the incubation period for raccoon rabies is about 30-40 days, the clinical or infectious period is 5-10 days and that raccoons will develop immunity 7-14 days post vaccination. It also assumes that the time from when the suspected rabid animal is submitted until it is deemed to be raccoon rabies is no longer than 7 days and that trapping in the population reduction zone begins 24 hrs post notification that the case is indeed raccoon rabies. Any delay in the process would jeopardize the success of the point infection control tactic.

The distribution of raccoon rabies cases would determine the strategy that the MNR would implement. If 3 cases are located within 5 km of each other they were to reconsider their options, i.e. forget point infection control and purchase vaccinia-rabies glycoprotein (VR-G) baits to bombard the area. If raccoon rabies becomes widespread in Ontario i.e. 10 or more cases distributed over a wide area or many cases occur in a small area, then consideration should be given to purchasing VR-G baits and aerially distributing them over the outbreak area. With a large number of cases, timing would be critical to contain the outbreak. TVR over a large area would take too long to implement to provide for effective containment of an outbreak.

The anti-rabies bait is a small, dark-brown cube of fish oil and wax polymer. The bait is hollow and open on two ends and contains a sachet of US-produced Vaccinia-Rabies Glycoprotein (Raboral V-RG), an oral anti-rabies vaccine. This vaccine was developed by Cornell University, N.Y., and is the only oral vaccine available for use against the raccoon rabies strain of the rabies virus. The anti-rabies vaccine will not harm pets but will not immunize them against rabies. MNR recommends that people who come into direct contact with a bait see their doctor as a precaution. The vaccine is not considered harmful to humans.

In the U.S., peaks of raccoon rabies incidence have been noted during the fall, in relation to dispersal and denning activities, and during the spring following the breeding period. Therefore, the most effective period to implement a point infection control tactic in Ontario would be between March and late November during any given year. In all likelihood, if the tactic is implemented during the winter it would fail to contain/eradicate a raccoon rabies outbreak.

Analysis of capture-recapture data suggests that the above tactic will work during May, June, July, October and November of any given year. However, should the first raccoon rabies case/cases occur during August/September, the point control effort will likely fail based on an analysis of raccoon movements during that period (55% of 328 raccoons in Niagara moved > 10 km from their original point of capture during August/September, 1994 and 30% moved > 20 km). It is recommended that the control zone be expanded using TVR or through distribution of V-RG baits if the first raccoon rabies case occurs during August/September.

Since the second and third Ontario Raccoon rabies cases were detected in August and September the MNR proceeded with a baiting phase and dropped 50,000 anti-rabies baits early in September. On September 27th the MNR dropped another 31,500 anti-rabies baits in a 450-square kilometre zone north of Oxford Station to expand the zone of protection where a third rabid raccoon was found within the area covered by the first aerial baiting. Raccoons that eat the baits are immunized against rabies within two weeks of ingesting the vaccine. MNR also dropped baits in New York state along the St. Lawrence River to provide further protection for Ontario (Figure 2).

Several raccoons on both Wolfe and Howe Islands (where TVR has been occurring for the past

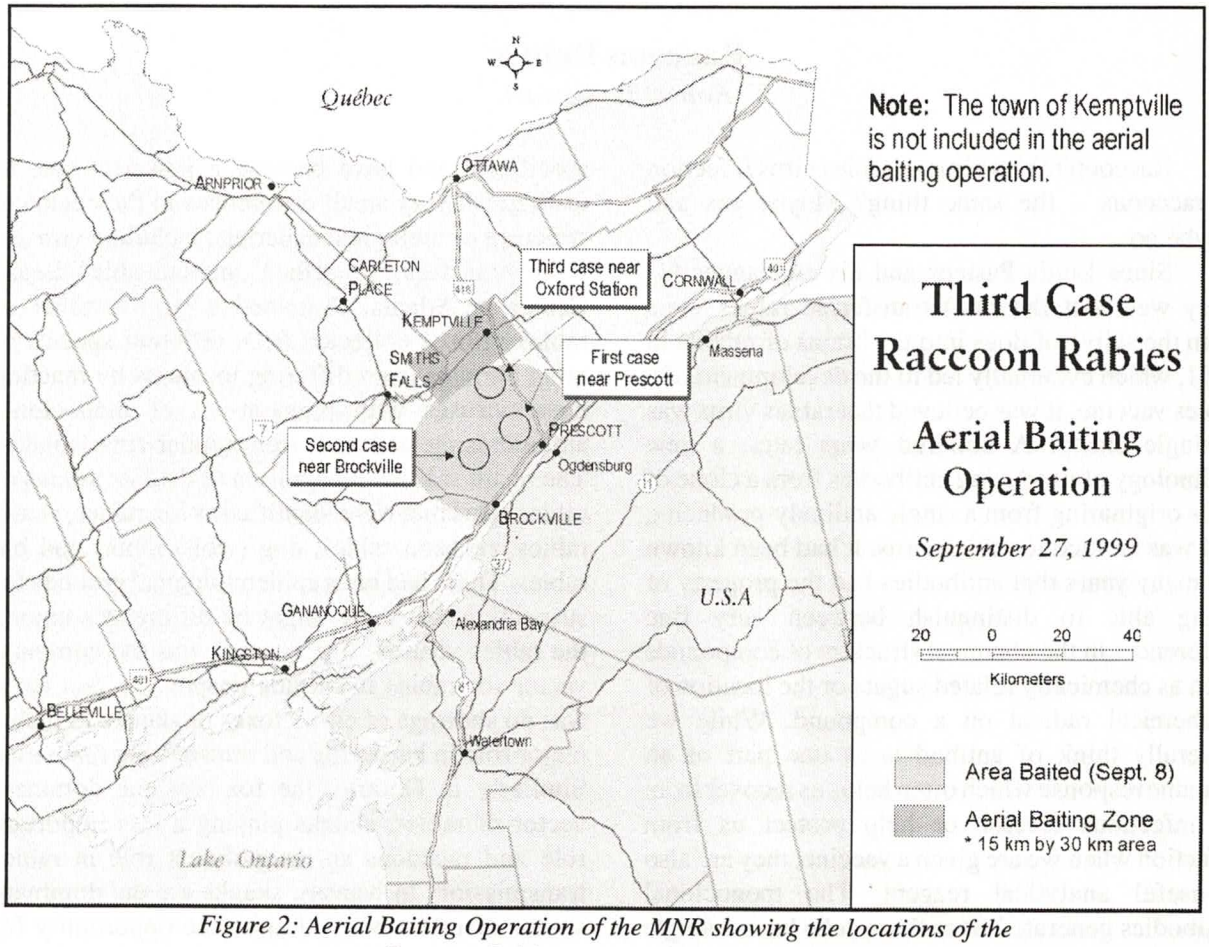


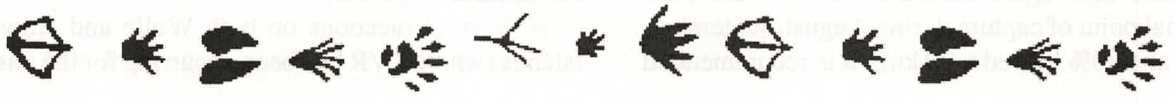
Figure 2: Aerial Baiting Operation of the MNR showing the locations of the Raccoon Rabies cases and Baiting zones.

2 years) were tested for raccoon rabies this summer as they were suspected of carrying the rabies virus, but the results were negative for rabies. Distemper severely impacted eastern Ontario raccoons this summer and was most likely the cause of the suspected rabies cases as symptoms of tameness is similar to rabies.

Sources:

Government of Ontario press releases available through their news release site at http://www.mnr.gov.on.ca/MNR/csb/news/:

- Protection Measures for Confirmed Rabies Case in the Prescott-Maynard area of Eastern Ontario.
- Raccoon Rabies Protection Program For Maynard Area.
- Some Facts About Rabies.
- MNR Continues Aggressive Control Measures After Second Case of Raccoon Rabies Found Near Brockville.
- MNR Expands Zone of Protection Against Raccoon Rabies in Eastern Ontario.
- MNR Projects to Combat Rabies in Ontario.
- Protecting the Public Against Raccoon Rabies in the Brockville-Prescott Area.
- MNR, 1999. MNR Responds to Raccoon Rabies Case with Protection Measures.
- MNR Expands Zone of Protection Against Raccoon Rabies in the Brockville-Prescott Area.
- MNR Broadens Protection Measures for Third Case of Raccoon Rabies.



Raccoon Rabies

Robert B. Stewart

Raccoon rabies virus or rabies virus infection of raccoons – the same thing? Maybe yes and maybe no.

Since Louis Pasteur and his colleagues [1] (they were not the first) transferred rabies virus from the saliva of dogs into the brains of rabbits in 1881, which eventually led to the development of a rabies vaccine, it was believed that rabies virus was a single entity. A hundred years later, a new technology of producing antibodies from a clone of cells originating from a single antibody-producing cell was applied to rabies virus. It had been known for many years that antibodies had the property of being able to distinguish between very fine differences in the chemical structure of compounds such as chemically related sugars or the location of a chemical radical on a compound. While we generally think of antibodies as one part of an immune response which often helps us recover from an infectious disease or help protect us from infection when we are given a vaccine, they are also a useful analytical reagent. The monoclonal antibodies generated from these cells have a single specificity and have become a powerful tool to distinguish very small differences in the chemical structure of biological materials, including viruses.

Jean Smith [2] at the Communicable Disease Center in Atlanta, examined a large number of rabies viruses collected from different species of rabid animals from differing locations by reacting these viruses with preparations of monoclonal antibodies she had made from similar virus isolates. The result was the recognition of distinct strains of rabies virus that were identified as fox rabies, skunk rabies, raccoon rabies, dog (wolf) rabies and bat rabies. There had been epidemiological grounds for suspecting that there might be differences among the rabies viruses. The raccoon was the dominant vector for rabies in Florida despite the fact there was no shortage of either foxes or skunks to play a major role in harboring and transmitting this virus. Similarly in Ontario, the fox was the dominant vector of rabies, skunks playing a less important role and raccoons an insignificant role in rabies transmission. In Kansas, skunks are the dominant vector of rabies virus despite the opportunity for

other species to become involved. It was of interest to us in Ontario to find that our skunk rabies virus was the fox strain and distinct from the Kansas skunk virus. Similarly, rabies virus isolated from rabid raccoons in Ontario is the fox rabies strain and distinct from the raccoon strain of rabies virus.

The answer to our question then is that rabies virus isolated from a rabid raccoon in Ontario is most likely to be the fox strain but since the raccoon strain of rabies virus is found in raccoons in New York state within 50 km of the Ontario border in both the Niagara and Thousand Islands regions it could also be that strain.

The raccoon strain of rabies virus was first recognized in Florida in the 1950's and expanded into Georgia, Alabama and South Carolina [3]. Between 1977 and 1981 over 3500 raccoons were moved from Florida to Virginia where they were released [4]. Since some of these animals were in the incubation stages of rabies, the outbreak was initiated and 16 rabid raccoons were identified in Virginia in 1981. The virus was transferred more than 500 km in one step and started the epizootic of raccoon rabies that has moved north into NY state where it is within 50 km of the Ontario border in the Niagara and Thousand Islands regions. It has also moved into Vermont and is within 25 km of the Quebec border. As raccoon rabies has moved northward there has never been an epidemiological jump as great as 500 km but there has been evidence of rabid raccoons having been released (a flea collar was found around the neck of one of these) some distance from the nearest raccoon rabies cases.

Raccoon rabies moved from Virginia to Maryland and Pennsylvania, and from Pennsylvania to New Jersey and reached New York in 1990. The epidemiology of this disease presented a different scenario than we experienced with fox rabies in this province. The raccoon is such a highly urbanized animal and appealing in appearance and behaviour that human-rabid raccoon encounters became frequent. A typical scenario was the family dog let out in the evening, encountering a rabid raccoon in the backyard, the family on hearing a commotion, going out and rescuing both dog and raccoon and bringing both into the house. The post-exposure rabies vaccine inoculations for the family members handling the raccoon that invariably follow could amount to thousands of dollars, depending on the political jurisdiction and the family's health care coverage. A family cat exposed to a rabid animal can represent a more serious problem since a rabid cat is considered more dangerous to family than a dog. This well-meaning contact initiates other problems that have significant costs attached to them. The euthanasia of the wild animal and the pathological examination required to prove rabies, the evaluation and treatment of the family pet, which, depending on the jurisdiction, may require a period of quarantine or perhaps a booster of rabies vaccine might suffice. This is the kind of scenario that potentially awaits us in Ontario.

This article does not deal with rabies pathogenesis and our still justifiable fear of the disease. It remains very much the case that once the signs and symptoms of rabies develop, death is almost a certainty. It is also noteworthy that despite the high incidence of raccoon rabies and human contacts in the US, there has not been a human death attributed to this virus strain. Is this because of a high degree of effectiveness of the post-exposure vaccine treatment or is the raccoon strain less virulent for humans than perhaps the dog or bat strains? I believe a really important "take home" is to appreciate and enjoy our wildlife but do not touch.

"Appreciate and enjoy ... but do not touch."

Raccoon rabies can be controlled by the implementation of an oral vaccination program using a genetically recombined virus.

The models suggesting that this kind of an approach is feasible come from the experience in countries such as Switzerland which used a wildlife vaccination approach to control fox rabies and Ontario which also appears to have succeeded in bringing fox rabies under control. The Ontario

experience goes back to 1967 and in many areas of research such as epidemiological modelling, the design, manufacture and delivery of baits containing rabies vaccine, the design of rabies control models in urban areas using a trap-vaccinate-release system (TVR), has been a global leader. It is this latter system that is currently in place in an attempt to prevent the entry of raccoon rabies into Ontario. Raccoons are live-trapped, tagged, a blood sample taken and a premolar tooth extracted. The animal is then vaccinated with a commercial killed rabies virus vaccine used for domestic animals, and released back into its environment. The program has concentrated on the area in Niagara between the river and the Welland canal and in the Thousand Islands region at obvious points of potential raccoon entry, ie: bridge areas, marinas, etc. The belief is that if a sufficiently high proportion of the raccoons are immunized against rabies, the entering rabid raccoon will not be able to initiate an epidemic since the encounter with another immunized raccoon will result in a dead-end for the spread of the virus. The tagging identifies the raccoon should it be retrapped in the future, the tooth allows an age determination and the blood sample can be assessed for antibody to rabies and/or other viruses (an important consideration when we consider the use of a proven live virus vaccine).

We (I have the privilege of chairing the Ontario Rabies Advisory Committee and at one time with my colleagues in the Department of Microbiology and Immunology at Queen's worked to develop strains of rabies virus that might be used in the field as live attenuated vaccines), predicted that raccoon rabies would enter the province by 1994 - 1995. There is no evidence that this has happened and if it had, a successful TVR program would leave it undiscovered.

The US has used a genetically recombined viral vaccine. The major partner in the preparation is vaccinia virus (the virus used to immunize against smallpox in days gone by). Introduced into the DNA gene of this virus is a DNA copy of that part of the rabies virus RNA gene that codes or gives rise to the major immunizing antigen of the rabies virus. When this virus is fed to an animal, such as a fox or raccoon, the vaccinia virus multiples and as it does it produces sufficient quantity of the rabies component to immunize the animal against rabies. This virus preparation has not been approved for release in Ontario by the vaccine regulatory arm of Agriculture Canada. One of their concerns is the vaccine establishing itself in wild animal populations and since there are related viruses (raccoon pox) potentially existing in Ontario, the blood sample taken from live-trapped raccoons is tested for their presence and the extent of their distribution. This virus has been used with success in both Europe for fox rabies and in the US for raccoon rabies and has been found to be cost effective.

Cost effectiveness, ie: less expensive to vaccinate wildlife than deal with rabies in domestic animals and human contacts, is an important issue. In Ontario, the cost effectiveness of the fox rabies control program is about one to four, or better (one dollar to vaccinate foxes – four dollars to deal with rabies).

Ontario made the decision to control rabies in wildlife by a vaccination program in 1967 following a World Health Organization recommendation that this approach offered the greatest chances of success. Other approaches suggested and tried, such as eliminating the vector species, have either failed or been politically unacceptable.

Raccoons are just now beginning to become active hence a reminder again – don't touch, don't pet. A bite in a rabies endemic area brings in a number of wildlife and public health processes. Can the animal be captured and is there justification for vaccinating the individual? Should a bite occur, a thorough cleansing of the wound (soap and water) is a vitally important procedure.

1] Pasteur, L. *et al.* 1881. Compt. rend. Acad. sci. 92, 1259.
2] Smith, J.S. *et al.* 1986. J. Clin. Microbiol. 24, 573
3] Seidensticker, J. *et al.* 1988. Natl. Geog. Res. 4, 359.
4] Uhaa, L.J. *et al.* 1992. JAVMA. 201, 1873.

[Reprinted from *Blue Bill*, 1997, Vol. 44(1): 20-22]

Notes on Natural History: No. 396, December 13, 1967

Helen Quilliam

Birds of prey seem to come to our attention more in the winter than they do in the summer. At the latter season songbirds fill the woods with their songs, marshes have their quotas of water-loving birds and sparrows of many kinds, Bobolinks and Meadowlarks inhabit the fields. Birds of prey are in the minority and not much in evidence. We are aware of the tipping flight of the Marsh Hawk (Northern Harrier) on a warm summer's day as it quarters a field or a marsh but the quick passage through the woods of a Cooper's Hawk or Goshawk is likely to be missed altogether. Occasionally a Broad-winged Hawk goes flapping away from a tree in the woods or a Red-tailed Hawk makes a pass across an open field.

But in winter all is changed. Predators become more conspicuous as the numbers of other birds diminish. Also in the winter we are visited by one species of hawk and one of owls which are here in the summer, and both of which are found in open country where they are easy to see. Rough-legged Hawks perch conspicuously in tall trees along fencelines where there are wide open field on all sides. Snowy Owls are conspicuous as they perch on fenceposts, tops of bare trees, or on the ground. In summer it is difficult to see any owl because all except the Short-eared do their hunting at night.

These two predators are joined by a third from the north, but this ones takes the place of its summer cousin. The Loggerhead Shrike of summer gives place to the Northern Shrike of winter. Even the hawks that are year-round residents are more easily seen in winter because of lack of foliage. Red-tailed and Cooper's Hawks and Goshawks are all more easily spotted in winter. The last two are more common in winters when there are large flocks of finches roaming the countryside. In other words winter is an excellent time to become familiar with hawks. Any good field book will tell you how to distinguish them, and with a knowledge of which ones are now to be expected here, you have an excellent chance at making a good start on this interesting family.

These winter birds establish winter hunting grounds just as they stake out nesting territories in the summer. Not only must an individual hawk be assured of good hunting ground but he must also be assured that another species that takes the same prey is not going to be a serious competitor. Both Rough-legged Hawks and Snowy Owls for instance live to a great extent in the winter on Meadow Voles. If the supply is unlimited then they need not be so widely spaced but if the supply is rather low then each will need lots of room, or they may have to leave the area entirely and try another place altogether.

It is fairly rare to see encounters between these large birds but they do take place and are seen occasionally. Last week an observer watching a Snowy Owl sitting on a fencepost was interested to see that a Rough-legged Hawk dived at it. Although the hawk made three passes at it, the owl refused to move. The Roughleg flew off but soon returned accompanied by two more Roughlegs. Three hawks were too many for the owl to defy and it moved off leaving the hawks in possession of the territory.

In the winter of 1964-1965 when we mapped all the Snowy Owls on Wolfe Island week by week, we found that the hawks and owls had neatly divided the island between them. There were few places on it where both a hawk and an owl could be seen at the same time. Which species had been responsible for this division would be interesting to know but in the end it must be a mutual recognition that a population of Meadow Voles will not support more than a certain number of birds of prey.

The interaction of different species to each other is always interesting and the other day I watched three quite different species act out a little drama. A Northern Shrike chased a Red-winged Blackbird into a small tree and was manoeuvering to come closer to it. A shrike, although only a little larger than the redwing, could take it but any distraction would make that almost impossible. The shrike was distracted almost from the beginning. A Blue Jay came into the little tree and sat next to the redwing as though to protect it. We cannot give birds anthropomorphic qualities but it certainly appeared that the jay had come to the defence of the

blackbird.

Blue Jays will not be intimidated by a shrike. I have seen a shrike menace this large bird only for the jay to turn on it in an equally menacing fashion. The shrike soon gives up the game. Whatever the Blue Jay's intention it was clearly distracting the attention of the shrike from the redwing. The blackbird now escaped from the tree. The shrike of course immediately pursued but again the Blue Jay followed. Although I lost them to view in thick bushes the intervention of the Blue Jay must have been a factor in the redwing's survival. Within a short time it was back at the feeder and the Northern Shrike had gone off for easier prey.

Autumn Season, 1 August - 30 November 1999

Ron D. Weir

Once again, the autumn saw above average temperatures to the end of November and extremely low water levels in Lake Ontario, which appear to becoming the norm. Three latest ever departure dates resulted along with a good wader passage with high numbers of Baird's Sandpipers and Long-billed Dowitchers. Waterfowl numbers were again strong and the areas around Belle I., the Little Cataraqui Creek at Elevator Bay, and Prince Edward Point hosted many thousands. Songbird passage during August, September and October was steady with numerous heavy night flights over Kingston. Winter finches irrupted from the boreal forest and although some moved on through to the south, a few are lingering as winter approaches.

Rarities include Great Egret, Snowy Egret, Cattle Egret, Swainson's Hawk, Sandhill Crane, Purple Sandpiper, Little Gull, Black-legged Kittiwake, Tufted Titmouse, Yellow-breasted Chat, Nelson's Sharp-tailed Sparrow.

Latest Ever Departures

Long-billed Dowitcher	October 26 (1)	Amherst Island	RKE,KFE	1995 October 8
Eastern Wood Pewee	November 7 (1)	Prince Edward Point	KFN	1950 October 21
Traill's Flycatcher	November 7 (1)	Prince Edward Point	KFN	1966 October 8

Species Accounts:

Red-throated Loon - November 7 (1) PEPt, KFN

Horned Grebe - peak November 7 (85) PEPt, KFN.

Red-necked Grebe - August 23 to November 7 (19), peak November 7 (13) PEPt, KFN.

Great Egret - September 10 to 17 (one group of 6) near Kingston, S&AT *et al.*

Snowy Egret - September 10 (1) near Kingston, S&AT.

Cattle Egret - September 7 (1) Westport, NLB.

Green Heron - October 2 (1) Kingston, BAW, RDW, late.

Tundra Swan - peak November 23 (105), Wolfe Island, KFN.

Snow Goose - October 5 - November 14 (54) Wolfe Island, Prince Edward Point, KFN.

Northern Shoveler - peak November 7 (200) Kingston, KFN.

American Wigeon - peak November 7 (2000) Kingston, KFN.

Canvasback - peak November 14 (800) Wolfe Island, JHE, RDW.

Redhead - peak November 14 (500) Wolfe Island, JHE, RDW

Ring-necked Duck - peak November 7 (3200) Kingston, KFN.

Greater Scaup - peaks October 17 (25,000), November 14 (50,000) Wolfe Island, JHE, RDW

Oldsquaw - peak November 7 (75,200) PEPt, KFN.

Black Scoter - October 17 - November 7 (34 in all) PEPt, KFN.

Surf Scoter - October 7 - November 22 (14 in all) PEPt, KFN.

White-winged Scoter - peak November 7 (2200) PEPt, KFN.

Ruddy Duck - September 12 to November 24 (60) Kingston, KFN.

Turkey Vulture - peak October 18 (120) PEPt, RKE, KFE.

Bald Eagle - August 23 to November 16 (6) Kingston KFN.

Northern Goshawk - August 22 to November 16 (6) Prince Edward Point, KFN.

Swainson's Hawk - November 7 (1) Waupoos peninsula, *Prince Edward*, KFN

Golden Eagle - October 14 to November 16 (7 in all) Prince Edward Point, KFN.

Merlin - August 29 to November 17 (15 in all) Kingston area, KFN.

Peregrine Falcon - August 29 to November 6 (8 in all) Kingston area, KFN.

Sandhill Crane - October 21 (6) Prince Edward Point, RTS.

Black-bellied Plover - August 12 to October 30 (44) Kingston, KFN.

American Golden Plover - August 29 to October 10 (6 in all) Kingston, KFN, poor flight.

Semipalmated Plover - August 1 to October 6 (107 in all) Kingston, KFN.

Greater Yellowlegs - August 1 to November 14 (67 in all) Kingston, KFN.

Lesser Yellowlegs - August 1 to November 7 (208 in all) Kingston, KFN.

Solitary Sandpiper - August 8 to September 12 (6 in all) Kingston, KFN.

Whimbrel - August 17, September 21 (1) Amherst Island, BR, RKE.

Hudsonian Godwit - October 22 (2) Amherst Island, VPM, BR.

Red Knot - September 4 (1) Amherst Island, JHE, RDW, only one.

Sanderling - August 29 to November 7 (165) Kingston, KFN.

Western Sandpiper - September 21 (1), 25 (1), October 15 (1) Amherst Island, KFN.

White-rumped Sandpiper - September 21 to October 26 (13 in all) Kingston, KFN, another weak flight.

Baird's Sandpiper - August 1 to October 15 (26 in all) Kingston, KFN, another strong flight.

Pectoral Sandpiper - August 1 to November 7 (130 in all) Kingston, KFN.

Purple Sandpiper - November 7 (1) PEPt, RDW.

Stilt Sandpiper - September 21 to 25 (6 in all) Kingston, KFN.

Buff-breasted Sandpiper - September 21 (1), October 10 (1) Amherst Island, KFN

Short-billed Dowitcher - August 12 to October 20 (16 in all) Kingston, KFN.

Long-billed Dowitcher - September 4 to October 26 (10 in all) Kingston, KFN, strong flight.

Little Gull - September 5 to November 6 (4 in all) Kingston, KFN.

Glaucous Gull - October 17 (1 2nd year plumage) Wolfe Island, KFN.

Bonaparte's Gull - peaks November 7 (900) Kingston, KFN.

Black-legged Kittiwake - October 26 (1 immature) Amherst Island, RKE, KFE.

Red-bellied Woodpecker - August 25 to November 24 (1) near Gananoque, WH; October 1 to November 30 (2) Howe Island, SD.

Olive-sided Flycatcher - August 17 (1) Amherst Island, BR.

Eastern Phoebe - peak October 7 (50) Prince Edward Point, NQ, NB.

Tree Swallow - November 21 (3) Wolfe Island, KFN, last ones.

Tufted Titmouse - November 27 - 30 (1) Howe Island, SD.

Red-breasted Nuthatch - August 23 to November 8 (25) Kingston, KFN, weak flight.

Carolina Wren - August 29 (1) Amherst Island, KH, October 2 (1) Howe Island, SD.

Gray-cheeked Thrush - peak night flight September 8/9 (400) Kingston, RDW.

Swainson's Thrush - peak night flight September 8/9 (4500) Kingston, RDW.

American Pipit - peak September 25 (750) Amherst Island, KFN.

Bohemian Waxwing - November 7 (1) PEPt, KFN.

Orange-crowned Warbler - September 26 (1) Wolfe Island, VPM.

Yellow-breasted Chat - September 18 (1) Prince Edward Point, RTS.

Nelson's Sharp-tailed Sparrow - September 25 (1) Amherst Island, RDW.

Pine Grosbeak - November 7 (1), 16 (2) Kingston, KFN.

Purple Finch - August 25 to November 7 (48 in all) light flight, Kingston, KFN.

Red Crossbill - November 24 (15) Waupoos *Prince Edward*, J&J Miller.

White-winged Crossbill - November 6-7 (9) Kingston, KFN.

Common Redpoll - November 7 onwards, largest flock November 24 (43) Charleston Lake, NLB.

Pine Siskin - October 7 to November 30, heavy flight with flocks to 200 birds, Kingston, KFN.

Evening Grosbeak - October 30 to November 7 (16 in all) Kingston, KFN.

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