The Blue Bill

Quarterly Journal of the Kingston Field Naturalists

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2020/2021 Executive

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Due to the postponement of the Annual General Meeting, the new executive has yet to be confirmed. Individuals in parentheses are the ones anticipated to be in that position for 2020/2021, and will replace the individuals not in parentheses.

To contact any member of the executive or for general inquiries about the Kingston Field Naturalists, please send an email to **info@kingstonfieldnaturalists.org**.

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editor@thebluebill.ca

Submissions may be in any format. Equations should be in LaTeX. Please provide captions and credit information for photos.

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1 KFN Income Statement

KINGSTON FIELD NATURALISTS
INCOME STATEMENT
FOR THE YEAR ENDING MARCH 31, 2020

INCOME	
Book Auction	415.45
CFKA Grant	1,801.39
Donations - Habitat Preservation	3,214.60
Donations - General	3,103.19
Doantions - Queen's Scholarship	100.00
Grazing Income - Amherst Island	2,500.00
GST Rebate	770.15
Interest Income	2,165.02
May Dinner Meeting	4,150.00
Memberships Junior	720.00
Memberships Other	7,786.81
Other Income	2,650.20
Sales	55.00
TOTAL INCOME	**29,431.81**
EXPENSES	
Administration	957.98
Awards	265.55
Bank Charges	138.76
Bioblitz Expenses	118.07
Blue Bill	1,253.56
Conservation Committee	173.97
Donations Out	6,300.00
Insurance	2,125.44
Junior Naturalist Admin	1,147.34
May Dinner Meeting Expenses	3,879.80
Membership Expenses	1,350.29
Ontario Nature Regional Meetings	153.49
Paypal Charges	104.05
Property Expenses	12,647.06
Property Tax	4,089.88
Publicity	553.27
Queen's Scholarship	100.00
Rent Rooms Junior Naturalists	779.70
Rent Paid (Monthly Meetings)	770.00
Speakers Expenses	19.00
Subscriptions and Memberships	248.00
TOTAL EXPENSES	**37,175.21**
DEFICIT ON 2019/2020 OPERATIONS	**-7,743.40**

Kevin Bleeks Dianne Croteau

Figure 1: KFN Income Statement for the year ending March 31, 2020 (Larry McCurdy)

2 KFN Balance Sheet

KINGSTON FIELD NATURALISTS
BALANCE SHEET
FOR THE YEAR ENDING MARCH 31, 2020

ASSETS		
Bank Account	6,909.60	
Paypal Account	1,648.00	
BNS Corp. Tiered	5,485.76	
GIC - Can. West (2021)	20,000.00	
GIC - Home Trust (2020)	20,629.00	
GIC - Home Trust (2022)	17,214.00	
GIC - Home Trust (2023)	17,214.00	
TD Bank Coupon	1,485.36	
ScotiaMcLeod Account	1,012.19	
Equipment	13,677.82	
2008 Book Inventory	3,173.00	
Property (at cost)	260,800.00	
TOTAL ASSETS		**369,248.73**
LIABILITIES & EQUITY		
Habitat Preservation Fund	4,922.84	
Faith Avis Fund	550.83	
Life Membership Reserve	7,600.00	
Nan Yeomans Young Naturalists Fund	1,487.94	
Property Management Reserve	20,000.00	
ASUS Fund	634.71	
General Equity	334,052.41	
TOTAL LIABILITIES & EQUITY		**369,248.73 ****

** **NOTE**

Total Liabilities & Equity - March 31, 2019	376,992.13
Deficit on 2019/2020 Operations	-7,743.40
Total Liabilities & Equity - March 31, 2020	369,248.73

We have reviewed the bank statements together with the supporting documents. We find the above statements accurately reflect the financial position of the Kingston Field Naturalists for the year ended March 31, 2020.

Kevin Bleeks

Dianne Croteau

Figure 2: KFN Balance Sheet for the year ending March 31, 2020 (Larry McCurdy)

3 Spring Round-up 2020 June 12-14

by Erwin Batalla

The spring round-up for 2020 would have taken place from May 22 to May 24. Because of the COVID-19 pandemic, this event was cancelled. The conventional Bioblitz was also postponed but a three-day survey of the Kingston area was undertaken in its place from Friday June 12 to Sunday June 14. The bird portion of this event was essentially the same as the conventional Round-up. The results have been included in the Bioblitz report but are presented here in the recent Round-up format. Because this event took place two weeks later than usual, interesting observations emerged from the results.

All checklists were collected from eBird and were submitted by individual birders listed here: Andrea Kingsley, Baxter Naday, Benjamin Keefe, Bonnie Bailey, Brenda Leduc, Brian Barkley, Chris Grooms, Dan Cuddy, David Bree, David Howe, Emma Churchman, Erwin Batalla, Gaye Beckwith, Herve Tremblay, Ian Brown, James Thompson, Jane Revell, Janine Psutka, Janis Grant, Jean Jeffrey, Jenny Newton, John Cooke, John Licharson, Kathy Webb, Keith Gregoire, Ken Edwards, Kenneth Ross, Kit Knap, Kurt Hennige, Kyle Blaney, Kyle Ruttan, Lana Marion, Laura Williams, Linda Nuttall, Liz Green, Lynda Porszt-miron, Martin Roncetti, Matthew Duda, Matthew Scott, Maureen Carrier, Paul Jones, Paul Mackenzie, Paul Martin, Peter Waycik, Ralph Morgan, Richard Poort, Rick Beaudoin, Rob Pinilla, Rob Snetsinger, Robert Boucher, Sarah Gencarelli, Sharon David, Steve Charbonneau, Steve Coates, Taylor Broderick, Tim Hain, Todd Norris, Tom Wheatley, Una d'Elia and William Depew.

Cumulatively, 195 checklists at 113 locations were submitted from 60 eBird accounts. Paul Mackenzie and Paul Martin submitted 17 and 14 checklists respectively while James Thompson and Kenneth Ross had 10 and 9 respectively. A total of 152 bird species were recorded on the Canadian side of the 50 km circle centered on MacDonald Park.

The table below indicates the species that were located in the four counties: Leeds and Grenville (L&G, 52 checklists), Frontenac (F, 96 checklists), Lennox and Addington (L&A, 31 checklists) and Prince Edward (PE, 15 checklists). The presence of a species is indicated by an X but unusually large number of a species are shown occasionally, like the 3000 Double-crested Cormorants seen near Prince Edward Point. In addition to these, Sedge Wren, Henslow's Sparrow, Northern Parula and Prairie Warbler were recorded on the American side of the circle bringing the total up to 156 species.

When the Round-up is conducted on the penultimate weekend of May, the average tally is 200 species. To emphasize this difference, the table below shows all the species normally seen in May. In taxonomic order, we see first that waterfowl have moved to their nesting ground further north. Even American Black Duck was not located at this time. Shorebirds have also moved on but Wilson's Phalaropes remain on the Martin Edwards Reserve. Black Terns were missed but there are some nesting within the Kingston area. Herons, hawks, woodpeckers and flycatchers were well represented as well as vireos, corvids and swallows. The kinglets have moved north and are absent from this count. Wrens, mimics, thrushes, finches, sparrows and blackbirds were present and accounted for. However, several species of warblers were missed. The late migrants, like the Blackpoll Warbler, had already left our area by the middle of June. The time to nest is short and it is better not to linger in Kingston. Tennessee, Mourning, Cape May, Bay-breasted, Palm, Canada and Wilson's Warblers were not discovered.

Normally, birders would flock to Prince Edward County to record migrating species and possible vagrants but at this later time, they chose to scour the inland counties. Usually underbirded, Leeds and Grenville recorded more species than Lennox and Addington.

Were some species easier to find at a later time? Alder Flycatcher was not recorded in 2019 but sev-

eral were found this year. Sedge Wrens are another species that is easier to find in June although a single sighting in New York is hardly significant. Overall, this confirms that the best time to conduct a Spring Round-up of birds is the Victoria Day weekend in May. Thank you to all the participants.

Table 1: 2020 Spring Round-Up Bird Counts

Species	L & G	Frontenac	L & A	PE
Brant				
Canada Goose	x	x		x
Mute Swan	x	16	x	x
Trumpeter Swan	x			
Wood Duck	x	x		
Blue-winged Teal				
Northern Shoveler				
Gadwall		x	x	x
American Wigeon	1			
Mallard	26	x	x	x
American Black Duck				
Green-winged Teal				
Ring-necked Duck				
Greater Scaup				
Lesser Scaup				
Surf Scoter				
White-winged Scoter				
Long-tailed Duck				
Bufflehead				
Common Goldeneye				
Hooded Merganser		x		
Common Merganser				x
Red-breasted Merganser				
Ring-necked Pheasant			x	
Ruffed Grouse	x	x		
Wild Turkey	x	x	x	x
Pied-billed Grebe	x		x	
Rock Pigeon	x	x	x	
Mourning Dove	x	x	x	x
Yellow-billed Cuckoo	x	x		
Black-billed Cuckoo	x	x	x	
Common Nighthawk		x		

2020 Spring Round-Up Bird Counts

Species	L & G	Frontenac	L & A	PE
Eastern Whip-poor-will	x	x		
Chimney Swift	x	x		x
Ruby-throated Hummingbird	x	x	x	
Virginia Rail	x	x		
Sora		x		
Common Gallinule	x	x	x	
Sandhill Crane				x
Black-bellied Plover				
Semipalmated Plover				
Killdeer		x	x	
Upland Sandpiper		x	x	
Dunlin				
Least Sandpiper				
White-rumped Sandpiper				
Semipalmated Sandpiper				
Short-billed Dowitcher				
American Woodcock	x	x		
Wilson's Snipe	x	x	x	
Wilson's Phalarope			x	
Spotted Sandpiper	x	x	x	
Solitary Sandpiper				
Greater Yellowlegs				
Lesser Yellowlegs				
Bonaparte Gull				
Ring-billed Gull	x	140	x	x
Herring Gull	x	x	x	x
Great Black-backed Gull				
Caspian Tern	x	x	x	x
Black Tern				
Common Tern	x			
Common Loon	x	x	x	x
Double-crested Cormorant	x	x	x	3000
American Bittern		x	x	
Least Bittern	x			
Great Blue Heron	25	x	x	

2020 Spring Round-Up Bird Counts

Species	L & G	Frontenac	L & A	PE
Great Egret				6
Green Heron	x	x		
Black-crowned Night-heron		x		
Turkey Vulture	x	x	x	x
Osprey	x	x	x	x
Northern Harrier	x	x	x	
Sharp-shinned Hawk				
Cooper's Hawk	x	x		
Northern Goshawk		x		
Bald Eagle		x	x	
Red-shouldered Hawk	x	x		
Broad-winged Hawk	x	x		
Red-tailed Hawk	x	x	x	
Eastern Screech-owl		x		
Great-horned Owl	x			
Barred Owl	x	x		
Long-eared Owl				
Belted Kingfisher	x	x	x	x
Red-headed Woodpecker	x	x		
Yellow-bellied Sapsucker	x	x		
Red-bellied Woodpecker	x	x		
Downy Woodpecker	x	x	x	
Hairy Woodpecker	x	x	x	x
Pileated Woodpecker	x	x	x	
Northern Flicker	x	x	x	x
American Kestrel		x	x	
Merlin	x	x		x
Peregrine Falcon	5			
Olive-sided Flycatcher				
Eastern Wood-Pewee	x	x	x	x
Yellow-bellied Flycatcher				
Alder Flycatcher	x	x	x	
Willow Flycatcher	x	x	x	x
Least Flycatcher	x			
Eastern Phoebe	x	x	x	x

2020 Spring Round-Up Bird Counts

Species	L & G	Frontenac	L & A	PE
Great Crested Flycatcher	x	x	x	
Eastern Kingbird	x	x	x	x
Yellow-throated Vireo	x	x		
Blue-headed Vireo	x	x		
Philadelphia Vireo				
Warbling Vireo	x	x	x	x
Red-eyed Vireo	40	x	x	x
Loggerhead Shrike			x	
Blue Jay	x	x	x	x
American Crow	x	x	x	x
Common Raven	x	x	x	
Black-capped Chickadee	x	x	x	x
Tufted Titmouse				
Horned Lark		x		
Northern Rough-winged Swallow	x		x	x
Purple Martin		x	40	x
Tree Swallow	x	x	x	x
Bank Swallow	50	50	x	
Barn Swallow	x	x	x	x
Cliff Swallow		x	x	x
Golden-crowned Kinglet				
Ruby-crowned Kinglet				
Red-breasted Nuthatch	x	x	x	x
White-breasted Nuthatch	x	x	x	
Brown Creeper		x		
Blue-gray Gnatcatcher				x
House Wren	x	x	x	x
Winter Wren	x			
Marsh Wren	x	x	x	
Carolina wren		x		
European Starling	x	x	x	x
Gray Catbird	x	x	x	x
Brown Thrasher	x	x	x	x
Northern Mockingbird			x	
Eastern Bluebird	x	x	x	

2020 Spring Round-Up Bird Counts

Species	L & G	Frontenac	L & A	PE
Veery	x	x	x	
Swainson's Thrush				
Hermit Thrush	x	x		
Wood Thrush	x	x	x	x
American Robin	x	x	x	x
Cedar Waxwing	x	x	x	x
House Sparrow	x	x	x	
House Finch		x		
Purple Finch		6	x	
White-winged Crossbill		x		
Pine Siskin				
American Goldfinch	x	x	x	
Grasshopper Sparrow		x	x	
Chipping Sparrow	x	x	x	x
Clay-colored Sparrow		3	x	
Field Sparrow	x	x	x	x
Dark-eyed Junco			x	
White-crowned Sparrow				
White-throated Sparrow	x	x	x	
Vesper Sparrow				x
Savannah Sparrow	x	x	x	x
Song Sparrow	x	x	x	x
Lincoln's Sparrow				
Swamp Sparrow	x	x	x	x
Eastern Towhee	x	x	x	x
Bobolink	x	x	x	x
Eastern Meadowlark		x	x	x
Orchard Oriole			x	
Baltimore Oriole	x	x	x	x
Red-winged Blackbird	x	x	x	x
Brown-headed Cowbird	x	x	x	x
Rusty Blackbird				
Common Grackle	x	x	x	x
Ovenbird	x	x	x	
Louisiana Waterthrush		x		

2020 Spring Round-Up Bird Counts

Species	L & G	Frontenac	L & A	PE
Northern Waterthrush	x	x	x	
Golden-winged Warbler	x	x		
Blue-winged Warbler	x			
Black-and-white Warbler	x	x	x	
Tennessee Warbler				
Orange-crowned Warbler				
Nashville Warbler	x		x	
Mourning Warbler				
Common Yellowthroat	x	x	x	x
Hooded Warbler				
American Redstart	x	x	x	x
Cape May Warbler				
Cerulean Warbler	4	x		
Northern Parula				
Magnolia Warbler	x			
Bay-breasted Warbler				
Blackburnian Warbler		x		
Yellow Warbler	x	x	x	x
Chestnut-sided Warbler	x	x	x	
Blackpoll Warbler				
Black-throated Blue Warbler	x			
Palm Warbler				
Pine Warbler	x	x	x	x
Yellow-rumped Warbler	x	x		
Prairie Warbler				
Black-throated Green Warbler	x	x		
Canada Warbler				
Wilson's Warbler				
Scarlet Tanager	x	x	x	
Northern Cardinal	x	x	x	x
Rose-breasted Grosbeak	x	x	x	
Indigo Bunting	x	x	x	x
Region total	**116**	**127**	**99**	**63**

4 BioBlitz Report 2020

by Anne Robertson

The 2020 BioBlitz was different due to the COVID-19 pandemic. We did not hold a traditional BioBlitz at the planned location but hope to do this in 2021. Instead participants were invited to spend any time over a period of three days, Friday, Saturday and Sunday, June 12, 13 and 14 on their own, recording species anywhere in the Kingston circle (50 km from McDonald Park). A link to this circle was provided. Records were received on eBird, iNaturalist and by e-mail until 21 June. Submissions up to and after this date may be viewed on iNaturalist.

Figure 3: Eastern Towhee. (Kathy Webb)

This proved most successful and was enjoyed in a different way. Participants travelled to their favourite locations from Prince Edward Point to Westport to the Thousand Islands National Park and to their own property, and sent in their tallies within a week. Instead of guided hikes to learn new species many people took advantage of learning to use iNaturalist and getting photographs of unknown species identified that way.

Mark Read was instrumental in getting the iNaturalist records organised. Erwin Batalla took care of the eBird tally as well as all other vertebrates that were recorded. See separate article by Erwin for comparison with normal spring roundup results. Tallies for vascular plants were organised by Barry Robertson. Clearly cultivated species were not included in the tally but non-native introductions were allowed. VASCAN (Vascular Plants of Canada) was used for the accepted names of vascular plant species. A few species were not accepted because of incorrect identification. In most cases an identification to genus was accepted. For insects identification to family was sometimes included. Non-vascular plants and invertebrate tallies were organised by Anne Robertson.

iNaturalist recorded 2155 observations of 801 species by 87 users while eBird recorded 152 bird species with 195 checklists submitted from 113 locations by 61 accounts. Nine people submitted their lists by email.

The number of participants overlaps iNaturalist, eBird and emailed lists but it is estimated that about 100 people participated submitting anything from one to 288 species.

Figure 4: Bold jumping spider with iridescent fangs. (Shirley French)

152 bird species were recorded with some special finds. A whopping 114 species of moth were recorded but the number of invertebrates overall

was lower than expected. Almost half the species on the final tally are vascular plants. Experts helped raise our non-vascular plant tally and the fungi identified on iNaturalist really helped boost those species seen.

Figure 5: Chestnut coloured pondweed moth. (Bill Depew)

The final count for all vertebrates was 189 and for invertebrates was 251. Vascular plants totalled 458, Spore bearing plants totalled 63 and Fungi 38. These totals add up to a whopping 999 species. That is a very good tally. Well done everyone. The biodiversity of the Kingston circle is now better understood and the BioBlitz was very worthwhile.

Figure 6: Coral fungus. (Karen Prange)

There were a number of special and memorable sightings. Following are a few of them:

Well done and thank you to Jennifer Doubt and Linda Ley from the Museum of Nature who came down for one day of our BioBlitz. They recorded an outstanding list of 61 mosses and liverworts in the Frontenac Park/ Helen Quilliam Sanctuary area. A big excitement was finding the Fan Moss (*Forstroemia trichomitria*) in Frontenac Park. This moss was only seen historically (1828-1949) in Ontario and west Quebec. It was rediscovered in 2011 and now only five other extant populations are known in Ontario. The very low number of herbarium records may mean this moss is rare. Does it need special conservation measures? It is soon to be assessed by COSEWIC (Committee on the Status of Wildlife in Canada).

Peter Waycik and Sharon David paddled their kayaks into Landon Bay to look for a natural, in-the-wild, nest of a Peregrine Falcon. They located the nest and saw both adults and young. See photo.

Figure 7: Peregrine Falcon, Landon's Bay. (Peter Waycik)

Thom Snowman enjoyed listing the species on his own property a sentiment echoed by a number of other participants.

Gaye Beckwith went to look for a Gallinule on Sat-

urday before it had been submitted to eBird. Not only did he find 3 Gallinules but he also found 8-10 Green Herons. Way to go Gaye.

Figure 8: Blanding's turtle. (Peter Waycik)

Paul McKenzie admitted to being tired after a hard three days of listing species but he submitted 288 species to iNaturalist–the top submitter–and 239 of the total of 458 vascular plant species submitted. Also the greatest number of bird lists submitted (17). Well done Paul; you must surely be considered one of our best local all-round naturalists.

Figure 9: Snakewort. (*Conocephalum salebrosum*). (Janet Elliott)

Kathy Webb and Bill Depew missed out on learning from local experts at guided hikes but still tried to learn as much as they could through posting on iNaturalist. They had fun finding and identifying species they did not previously know. For Kathy and Bill their best finds were 4 Cerulean Warblers, a Least Bittern and many plants, fungi and insects that were new to them. They submitted the second highest number of species to iNaturalist–193.

Figure 10: Eastern ribbon snake. (Peter Waycik)

Janet Elliott enjoyed the BioBlitz as it allowed her to take the time to work out how to use iNaturalist. "Uploading a picture and getting instant suggestions for identification is really helpful," she said.

Seneca Snakeroot was a new species for David and Margo McMurray (see photo). They recorded 151 vascular plant species at Foley Mountain.

Figure 11: Seneca snakeroot. (Margo McMurray)

Many magnificent photos were submitted. A few are part of this article.

THANK YOU ALL FOR YOUR PARTICIPATION AND SUBMISSIONS. This was a most successful tally of the biodiversity of the Kingston area with a total of 999 species recorded during that weekend.

4.1 Vertebrates

LIST OF MAMMALS

SORICIDAE	**SHREWS**
Blarina brevicauda talpoides	Northern Short-tailed Shrew
VESPERTILIONIDAE	**BATS**
	Bat sp.
LEPORIDAE	**RABBITS AND HARES**
Sylvilagus floridanus mearnsii	Eastern Cottontail
SCIURIDAE	**SQUIRRELS**
Marmota monax rufescens	Groundhog
Sciurus carolinensis pennsyulvanicus	Eastern Gray Squirrel
Tamias striatus lysteri	Eastern Chipmunk
Tamiasciurus hudsonicus	American Red Squirrel
CASTORIDAE	**BEAVERS**
Castor canadensis	American Beaver
MURIDAE	**MICE, RATS AND VOLES**
Ondatra zibethicus zibethicus	Muskrat
ERETHIZONTIDAE	**PORCUPINES**
Erithozon dorsatum dorsatum	North American Porcupine
CANIDAE	**DOGS**
Canis latrans thamnos	Coyote
MUSTELIDAE	**WEASELS**
Mephitis mephitis nigra	Striped Skunk
Neovison vison	American Mink
PROCYONIDAE	**RACCOONS**
Procyon lotor lotor	Common Raccoon
CERVIDAE	**DEER**
Odocoileus viginianus borealis	White-tailed Deer

LIST OF BIRDS

ANATIDAE	**SWANS, GEESE, AND DUCKS**
Branta canadensis	Canada Goose
Cygnus olor	Mute Swan
Cygnus buccinator	Trumpeter Swan

continued ...

Vertebrates continued ...

Aix sponsa	Wood Duck
Mareca strepera	Gadwall
Mareca americana	American Wigeon
Anas platyrhynchos	Mallard
Lophodytes cucullatus	Hooded Merganser
Mergus merganser	Common Merganser
PHASIANIDAE	**TURKEYS AND GROUSES**
Phasianus colchicus	Ring-necked Pheasant
Bonasa umbellus	Ruffed Grouse
Meleagris gallopavo	Wild Turkey
PODICIPEDIDAE	**GREBES**
Podilymbus podiceps	Pied-billed Grebe
COLUMBIDAE	**DOVES**
Columba livia	Rock Pigeon
Zenaida macroura	Mourning Dove
CUCULIDAE	**CUCKOOS**
Coccyzus americanus	Yellow-billed Cuckoo
Coccyzus erythropthalmus	Black-billed Cuckoo
CAPRIMULGIDAE	**GOATSUCKERS**
Chordeiles minor	Common Nighthawk
Antrostomus vociferus	Whip-poor-will
APODIDAE	**SWIFTS**
Chaetura pelagica	Chimney Swift
TROCHILIDAE	**HUMMINGBIRDS**
Archilochus colubris	Ruby-throated Hummingbird
RALLIDAE	**RAILS, GALLINULES AND COOTS**
Rallus limicola	Virginia Rail
Porzana carolina	Sora
Gallinula galeata	Common Gallinule
GRUIDAE	**CRANES**
Antigone canadensis	Sandhill Crane
CHARADRIIDAE	**PLOVERS AND TURNSTONES**
Charadrius vociferous	Killdeer
SCOLOPACIDAE	**WOODCOCK, SNIPE, SANDPIPERS**
Bartramia longicauda	Upland Sandpiper

continued ...

Vertebrates continued ...

Scolopax minor	American Woodcock
Gallinago delicata	Wilson's Snipe
Phalaropus tricolor	Wilson's Phalarope
Actitis macularius	Spotted Sandpiper
LARIDAE	**GULLS AND TERNS**
Larus delawarensis	Ring-billed Gull
Larus argentatus	Herring Gull
Hydroprogne caspia	Caspian Tern
Sterna hirundo	Common Tern
GAVIIDAE	**LOONS**
Gavia immer	Common Loon
PHALACROCORACIDAE	**CORMORANTS**
Phalacrocorax auritus	Double-crested Cormorant
ARDEIDAE	**HERONS AND BITTERNS**
Botaurus lentiginosus	American Bittern
Ixobrychus exilis	Least Bittern
Ardea herodius	Great Blue Heron
Ardea alba	Great Egret
Butorides virescens	Green Heron
Nycticorax nycticorax	Black-crowned Night Heron
CATHARTIDAE	**VULTURES**
Cathartes aura	Turkey Vulture
ACCIPITRIDAE	**HAWKS AND EAGLES**
Pandion haliaetus	Osprey
Circus cyaneus	Northern Harrier
Accipiter cooperi	Cooper's Hawk
Accipiter gentilis	Goshawk
Haliaeetus leucocephalus	Bald Eagle
Buteo lineatus	Red-shouldered Hawk
Buteo platypterus	Broad-winged Hawk
Buteo jamaicensis	Red-tailed Hawk
STRIGIDAE	**OWLS**
Megascops asio	Eastern Screech-Owl
Bubo virginianus	Great Horned Owl
Strix varia	Barred Owl
ALCEDINIDAE	**KINGFISHERS**
Megaceryle alcyon	Belted Kingfisher

continued ...

Vertebrates continued ...

PICIDAE	**WOODPECKERS**
Sphyrapicus varius	Yellow-bellied Sapsucker
Melanerpes erythrocephalus	Red-headed Woodpecker
Melanerpes carolinus	Red-bellied Woodpecker
Dryobates pubescens	Downy Woodpecker
Dryobates villosus	Hairy Woodpecker
Dryocopus pileatus	Pileated Woodpecker
Colaptes auratus	Northern Flicker
FALCONIDAE	**FALCONS**
Falco sparvarius	American Kestrel
Falco columbarius	Merlin
Falco peregrinus	Peregrine Falcon
TYRANNIDAE	**FLYCATCHERS**
Contopus virens	Eastern Wood-Pewee
Empidonax alnorum	Alder Flycatcher
Empidonax traillii	Willow Flycatcher
Empidonax minimus	Least Flycatcher
Sayornis phoebe	Eastern Phoebe
Myiarchus crinitus	Great Crested Flycatcher
Tyrannus tyrannus	Eastern Kingbird
VIREONIDAE	**VIREOS**
Vireo flavifrons	Yellow-throated Vireo
Vireo solitarius	Blue-headed Vireo
Vireo gilvus	Warbling Vireo
Vireo olivaceus	Red-eyed Vireo
LANIDAE	**SHRIKES**
Lanius ludovicianus	Loggerhead Shrike
CORVIDAE	**JAYS AND CROWS**
Cyanocitta cristata	Blue Jay
Corvus brachyrhynchos	American Crow
Corvus corax	Common Raven
PARIDAE	**CHICKADEES AND ALLIES**
Poecile atricapillus	Black-capped Chickadee
ALAUDIDAE	**LARKS**
Eremophila alpestris	Horned Lark
HIRUNDINIDAE	**SWALLOWS**
Stelgidopteryx serripennis	Northern Rough-winged Swallow
Progne subis	Purple Martin

continued ...

Vertebrates continued ...

Tachycineta bicolor	Tree Swallow
Riparia riparia	Bank Swallow
Hirundo rustica	Barn Swallow
Petrochelidon pyrrhonota	Cliff Swallow
SITTIDAE	**NUTHATCHES**
Sitta canadensis	Red-breasted Nuthatch
Sitta carolinensis	White-breasted Nuthatch
CERTHIIDAE	**CREEPERS**
Certhia familiaris	Brown Creeper
SYLVIINAE	**KINGLETS and GNATCATCHERS**
Polioptila caerulea	Blue-gray Gnatcatcher
TROGLODYTIDAE	**WRENS**
Troglodytes aedon	House Wren
Troglodytes troglodytes	Winter Wren
Cistothorus palustris	Marsh Wren
Thryothorus ludovicianus	Carolina Wren
STURNIDAE	**STARLINGS**
Sturnus vulgaris	European Starling
MIMIDAE	**MIMICS**
Dumetella carolinensis	Gray Catbird
Toxostoma rufum	Brown Thrasher
Mimus polyglottis	Northern Mockingbird
TURDIDAE	**THRUSHES AND BLUEBIRDS**
Sialia sialis	Eastern Bluebird
Catharus fuscescens	Veery
Catharus guttatus	Hermit Thrush
Hylocichla mustelina	Wood Thrush
Turdus migratorius	American Robin
BOMBYCILLIDAE	**WAXWINGS**
Bombycilla cedrorum	Cedar Waxwing
PASSERIDAE	**OLD WORLD SPARROWS**
Passer domesticus	House Sparrow
FRINGILLIDAE	**FINCHES**
Haemorhous mexicanus	House Finch
Haemorhous purpureus	Purple Finch
Loxia leucoptera	White-winged Crossbill

continued ...

Vertebrates continued ...

Spinus tristis	American Goldfinch
EMBERIZIDAE	**SPARROWS AND BUNTINGS**
Ammodramus savannarum	Grasshopper Sparrow
Spizella passerina	Chipping Sparrow
Spizella pallida	Clay-coloured Sparrow
Spizella pusilla	Field Sparrow
Junco hyemalis	Dark-eyed Junco
Zonotrichia albicolis	White-throated Sparrow
Pooecetes graminius	Vesper Sparrow
Passerculus sandwichensis	Savannah Sparrow
Melospiza melodia	Song Sparrow
Melospiza georgiana	Swamp Sparrow
Pipilo erythropthalmus	Eastern Towhee
ICTERIDAE	**MEADOWLARKS AND BLACKBIRDS**
Dolichonyx oryzivorus	Bobolink
Sturnella magna	Eastern Meadowlark
Icterus spurius	Orchard Oriole
Icterus galbula	Baltimore Oriole
Agelaius phoeniceus	Red-winged Blackbird
Molothrus ater	Brown-headed Cowbird
Quiscalus quiscula	Common Grackle
PARULIDAE	**WOOD WARBLERS**
Seiurus aurocapilla	Ovenbird
Parkesia motacilla	Louisiana Waterthrush
Parkesia noveboracensis	Northern Waterthrush
Vermivora chrysoptera	Golden-winged Warbler
Vermivora pinus	Blue-winged Warbler
Mniotilta varia	Black-and-White Warbler
Leiothlypis ruficapilla	Nashville Warbler
Geothlypis trichas	Common Yellowthroat
Setophaga ruticilla	American Redstart
Setophaga cerulea	Cerulean Warbler
Setophaga magnolia	Magnolia Warbler
Setophaga fusca	Blackburnian Warbler
Setophaga petechia	Yellow Warbler
Setophaga pensylvanica	Chestnut-sided Warbler
Setophaga caerulescens	Black-throated Blue Warbler
Setophaga pinus	Pine Warbler
Setophaga coronata	Yellow-rumped Warbler
Setophaga virens	Black-throated Green Warbler
CARDINALIDAE	**CARDINALS AND ALLIES**
Piranga olivacea	Scarlet Tanager

continued ...

Vertebrates continued ...

Cardinalis cardinalis	Northern Cardinal
Pheucticus ludovicianus	Rose-breasted Grosbeak
Passerina cyanea	Indigo Bunting

LIST OF REPTILES AND AMPHIBIANS

CHELYDRIDAE	**SNAPPING TURTLES**
Chelydra serpentina	Common Snapping Turtle
EMYDIDAE	**POND AND MARSH TURTLES**
Chrysemys picta	Midland Painted Turtle
Emydoidea blandingii	Blanding's Turtle
Graptemys geographica	Northern Map Turtle
COLUBRIDAE	**TYPICAL SNAKES**
Pantherophis spiloides	Gray Ratsnake
Lampropeltis triangulum	Eastern Milksnake
Nerodia sipedon	Northern Watersnake
Storeria dekayi	Dekay's Brownsnake
Thamnophis saurita	Eastern Ribbon Snake
Thamnophis sirtalis	Common Garter Snake
SALAMANDRIDAE	**NEWTS**
Notophthalmus viridescens	Eastern Newt
AMBYSTOMATIDAE	**MOLE SALAMANDERS**
Ambystoma laterale	Blue-spotted Salamander
Ambystoma maculatum	Spotted Salamander
BUFONIDAE	**TOADS**
Anaxyrus americanus	American Toad
HYLIDAE	**TREEFROGS**
Hyla versicolor	Gray Tree Frog
RANIDAE	**TRUE FROGS**
Lithobates catesbeianus	American Bullfrog
Lithobates clamitans	Green Frog
Lithobates pipiens	Northern Leopard Frog
Lithobates sylvaticus	Wood Frog

LIST OF FISH

CENTRARCHIDAE	
Lepomis macrochirus	Bluegill
Micropterus dolomeiu	Smallmouth Bass

4.2 Invertebrates

INVERTEBRATES

INSECTA	**INSECTS**
Odonata	**Dragonflies and Damselflies**
Zygoptera	**Damselflies**
Coenagrion resolutum	Taiga Bluet
Enallagma annexum	Northern Bluet
Enallagma boreale	Boreal Bluet
Enallagma civile	Familiar Bluet
Enallagma signatum	Orange Bluet
Ischnura posita	Fragile Forktail
Ischnura verticalis	Eastern Forktail
Lestes eurinus	Amber-winged Spreadwing
Nehalennia irene	Sedge Sprite
Calopteryx maculata	Ebony Jewelwing
	Damselfly Nymph
Anisoptera	**Dragonflies**
	Dragonfly Nymph
Aeshnidae	**Darners**
Anax junius	Common Green Darner
Nasiaeschna pentacantha	Cyrano Darner
Corduliieae	**Emeralds**
Cordulia shurtleffii	American Emerald
*Dorocordulia libera**	Racket-tailed Emerald
Epitheca cynosura	Common Baskettail
Epitheca princeps	Prince Baskettail
Epitheca spinigera	Spiny Baskettail
Gomphidae	**Clubtails**
Arigomphus villosipes	Unicorn Clubtail
Gomphus lividus	Ashy Clubtail
Gomphus spicatus	Dusky Clubtail
Hagenius brevistylus	Dragonhunter
Libelluldeae	**Skimmers**
Celithemis elisa	Calico Pennant
Erythemis simplicicollis	Eastern Pondhawk
Ladona julia	Chalk-fronted Corporal
Leucorrhina frigida	Frosted Whiteface
Leucorrhinia intacta	Dot-tailed Whiteface

continued ...

Invertebrates continued ...

Leucorrhina proxima	Belted Whiteface
Libellula incesta	Slaty Skimmer
Libellula luctuosa	Widow Skimmer
Libellula pulchella	Twelve-spotted Skimmer
Libellula quadrimaculata	Four-spotted Skimmer
Pachydiplax longipennis	Blue Dasher
Plathemis lydia	Common Whitetail
Orthoptera	**Grasshoppers, Katydids and Crickets**
Chortophaga viridfasciata	N. Green-striped Grasshopper
Gryllus veletes	Spring Field Cricket
Melanoplus sp.	Spurthroated Grasshopper
Hemiptera	**True Bugs**
Cercopoidea family	Spittlebug
Entylia cariata	Keeled Treehopper
Lygus lineolaris	Tarnished Plant Bug
Podisus maculiventris	Spined Soldier Bug
Prisiphilus tessallatus	Woolly Alder Aphid
Zelus luridus	Pale Green Assasin Bug
Coleoptera	**Beetles and Weevils**
Analeptura lineola	Flower Longhorn
Cerambycidae family	Long-horned Beetle
Cercopidae sp.	Spittlebug sp.
Cicindela sexguttata	Six-spotted Tiger Beetle
Coccinella septempunctata	Seven-spotted Lady Beetle
Copris fricator	Dung beetle sp.
Cycloneda munda	Polished Lady Beetle
Dineutus sp.	Whirligig Beetle
Ellychnia corrusca	Winter Firefly
Ellychnia sp.	Duiurnal Firefly
Epicouta fabricii	Ashgray blister beetle
Gaurotes cyanipennis	Flower Longhorn
Harmonia axyridis	Multicoloured Asian Lady Beetle
Labidomera clivicollis	Milkweed Leaf Beetle
Plagiodera versicolora	Imported Willow Leaf Beetle
Podabrus rugosulus	Soldier Beetle
Polydrusus impressifrons	Pale green Weevil
Rhaxonycha carolina	Carolina cantharid
Lepidoptera	**Butterflies, Moths and Skippers**
Aglais milberti	Milbert's Tortoiseshell
Ancyloxypha numitor	Least Skipper
Boloria selene	Silver-bordered Fritillary
Carterocephalus palaemon	Arctic Skipper

continued ...

Invertebrates continued ...

Celastrina lucia	Spring Azure
	Northern Spring Azure
Coenonympha tullia	Common Ringlet
Colias philodice	Clouded Sulphur
Cupido comyntas	Eastern Tailed Blue
Erynnis baptisidae	Wild Indigo Duskywing
Erynnis icelus	Dreamy Duskywing
Erynnes juvenalis	Juvenal's Duskywing
Epargyreus clarus	Silver-spotted Skipper
Glaucopsyche lygdamus coup	Silvery Blue
Hesperia sassacus	Indian Skipper
Limentis archippus	Viceroy (cocoon)
Liminites artemis	White Admiral/Red-spotted Purple
Megisto cymela	Little Wood-satyr
Nymphalis antiopa	Mourning Cloak
Papilio canadensis	Canadian Tiger Swallowtail
Papilio cresphontes	Giant Swallowtail
Papilio polyxenes asterous	Black Swallowtail
Phyciodes cocyta	Northern Crescent
Pieris oleracea	Mustard White
Pieris rapae	Cabbage White
Poanes hobomok	Hobomok Skipper
Polygonia interrogatonis	Question Mark
Polites mystic	Long Dash Skipper
Polites themistocles	Tawny-edged Skipper
Thorybes pylades	Northern Cloudywing
Vanessa cardui	Painted Lady

Moths arranged by Hodges number

Argyresthia alternatella 2435	Juniper Seed Moth
Olethreutes bipartina prob 2848	
Olethreutes bipartitan 2848	Divided Olethreutes Moth
Epiblema scudderiana 3186	Goldenrod Gall Moth
Clepsis melaleucanus 3686	Black-patched Clepsis
Amorbia humerosana 3748	White-lined Leafroller Moth
Paraponyx badiusalis 4761	Chestnut-marked Pondweed Moth
Anania funebris 4958	White-spotted Sable
Sitochroa chortalis 4987	Dimorphic Sitochroa Moth
Palpita magniferalis 5226	Splendid Palpita Snout Moth
Cranbus laqueatellus 5378	Eastern Grass-veneer Moth
Pediasia trisecta 5413	Sod Webworm Moth
Peoria approximella 6053	Carmine Snoutmoth
Thyrisa maculata 6076	Spotted Thyris Moth
Macaria pinustrobata 6347	White Pine Angle
Aethalura intertexta 6570	Four-barred Gray
Anavitrinella pampinaria 6590	Common Grey

continued ...

Invertebrates continued ...

Melanolophia canadaria 6620	Canadian Melanolophia Moth
Eufidonia notataria 6638	Powder Moth
Pero morrisonaria 6755	Morrison's Pero Moth
Xanthotype urticaria 6740	False Crocus Geometer
Pero honestaria 6753	Honest Pero Moth
Pero morrisonaria 6755	Morrison's Pero Moth
Campaea perlata 6796	Pale Beauty
Cepphis armataria 6835	Scallop Moth
Probole americana 6838	Friendly Probole Moth
Besma endropiaria 6884	Straw Besma Moth
Lambdina fiscellaria 6888	Hemlock Looper Moth
Tetracis crocallata 6963	Yellow Slant-line
Tetracis cachexiata 6964	White Slant-line
Eutrapela clemataria 6966	Curve-toothed Geometer Moth
Nematocampa resistaria 7010	Horned Spanworm Moth
Dysstroma hersiliata 7189	Orange-barred Carpet
Mesoleuca ruficillata 7307	White-ribboned Carpet
Xanthorhoe iduata 7371	White Eulithis Moth
Epirrhoe alternata 7394	White-banded Toothed Carpet
Euphyia intermediata 7399	Sharp-angled Carpet Moth
Hydrelia inornata 7422	Unadorned Carpet Moth
Tricodezia albovittata 7430	White-striped Black
Phyllodesma ameicana 7687	Lappet Moth
Malacasoma disstria 7698	Forest Tent Caterpillar Moth (larva)
Malacasoma americanum 7701	Eastern tent Caterpillar Moth
Eacles imperialis 7704	Imperial Moth
Dryocampa rubicunda 7715	Rosy Maple Moth
Anisota virginiensis 7743	Pink-striped Oakworm Moth
Automeris io 7746	Io Moth
Callosamia promethea 7764	Promethea Silkmoth
Hyalophora cecropia 7767	Cecropia Moth
Ceratomia undulosa 7787	Waved Sphinx
Sphinx poecila 7810.1	Northern Apple Sphinx
Deidamia inscriptum 7871	Lettered Sphinx
Hyles gallii 7893	Bedstraw Hawkmoth
Datana contrata 7906	Contracted Datana
Nerice bidentata 7929	Double-toothed Prominent
Gluphisia septentrionis 7931	Common Gluphisia
Furcula borealis 7936	White Furcula Moth
Heterocampa guttivitta 7994	Saddled Prominent
Clemensia albata 8098	Little White Lichen Moth
Virbia aurantiaca 8121	Orange Virbia
Virbia immaculata 8123	Rusty Virbia
Pyrrharctica Isabella 8129	Isabella Tiger Moth
Spilosoma congrua 8134	Agreeable Tiger Moth
Spilosoma virginica 8137	Virginian Tiger Moth

continued ...

Invertebrates continued ...

Apantesis anna 8170	Anna Tiger Moth
Grammia virguncula 8175	Little Virgin Tiger Moth
Lophocampa caryae 8211	Hickory Tussock Moth
Ctenucha virginica 8262	Virginia Ctenucha
Cisseps fulvicollis 8267	Yellow-collared Scape Moth
Lymantria dispar 8318	Gypsy Moth
leucoma salcis 8319	White Satin Moth
Zanclognatha pedipilalis 8348	Grayish Zanclognatha Moth
Chytolita morbidalis 8355	Morbid Owlet
Macrochilo orciferalis 8360	Bronzy Owlet
Palthis angulalis 8397	Dark-spotted Palthis
Hypena baltimoralis 8442	Baltimore Snout
Hypena palparia 84444	Mottled Snout
Hypena scabra 8465	Green Cloverworm Moth
Pangrapta decoralis 8490	Decorated Owlet
Parallelia bistriaris 8727	Maple Looper Moth
Euclidia cuspidea 8731	Toothed Somberwing
Autographa precationis 8908	Common Looper Moth
Leuconycta diphtheroides 9065	Green Leuconycta
Leuconycta lepidula 9066	Marble-green Leuconycta
Ponometia erastrioides 9095	Smaller Bird-dropping Moth
Panthea furcilla 9182	Eastern Panthea Moth
Colocasia flavicornis 9184	Saddled Yellowhorn
Acronicta lobeliae 9238	Great Oak Dagger
Acronita clarescens 9246	Clear Dagger
Acronita insularis 9280	Henry's Marsh Moth
Photinus consimilis	Firefly
Acronita fallax 9281	Green Marvel
Eydryas unio 9299	Pearly Wood-nymph
Apamea unanimis 9362.2	Small Clouded Brindle
Apamea sordens 9364	Rustic Shoulder-knot
Bellura oblique 9525	Cattail Borer
Phlogophora iris 9546	Olive Angle Shades
Proxenus miranda 9647	Miranda Moth
Balsa tristrigella 9663	Three-lined Balsa Moth
Ogdoconta cinereola 9720	Common Pinkband
Eupsilia vinulenta 9933	Straight-toothed Sallow
Cucullia intermedia 10194	Dusky Hooded Owlet
Morrisonia latex 10291	Fluid Arches Moth
Melanchra adjuncta 10292	Hitched Arches
Melanchra picta 10293	Zebra Caterpillar Moth
Lacanobia atlantica 10297	Atlantic Arches Moth
Lacanobia subjuncta 10299	Speckled Cutrworm Moth
Lacinipolia renigera 10397	Bristly Cutworm Moth
Mythimna oxygala 10436	Lesser Wainscot
Mythimna unipunctata 10438	Armyworm Moth

continued ...

Invertebrates continued ...

Orthosia hibisci 10495	Speckled Green Fruitworm Moth
Orthodes majuscula 10585	Rustic Quaker
Ochropleura implecta 10891	Flame-shouldered Dart
Xestia c-nigrum 10942	Setaceous Hebrew Character
Xestia dolosa 10942.1	Greater Black-letter Dart
Noctua pronuba11003.1	Large Yellow Underwing Moth
Schinia lynx 11117	Lynx Flower Moth
Diptera	**True Flies**
Anopheles sp.	Mosquito sp.
Bombylius major	Greater Bee Fly
Chironomidae family	Midge
Chrysops sp.	Deer Fly
Eristalis sp.	Drone Fly
Epalpus signifer	Bristlefly sp.
Hemipenthes mono	Bee Fly sp.
Laphria flavicollis	Robber Fly
Limonia triocellata	Crane Fly sp.
Liriomyza arctii	Burdock Leaf Miner
Lucilia sericata	Common Greenbottle Fly
Rhagio mystaceus	Common Snipe Fly
Stomoxys calcitrans	Stable Fly
Tabanus calens	Horse Fly
Tipula furca	Crane Fly sp.
Toxomerus geminatus	Eastern Calligrapher
Hymenoptera	**Ants, Bees, Sawflies and Wasps**
Agapostemon virescens	Bicolored Striped-Sweat bee
Anthophila (epifamily/clade)	Bee sp.
Ammophila procera	Common Thread-waisted Wasp
Amphibolips quercusinanis	Larger Empty Oak Apple Wasp
Bombus imaptiens	Common Eastern Bumblebee
Callirhytis seminator	Wool Sower Gall Wasp
Camponotus pennsylvanicus	Eastern Black Carpenter Ant
Eumenes Fraternus	Fraternal Potter Wasp
Megarhysssa atrata	Black Giant Ichneumonid Wasp
Vespula sp.	Yellowjacket

OTHER INVERTEBRATES

Diplapoda	**Millipedes**
Narceus americanus	Millipede
Araneae	**Spiders**
Hydrachna sp.	Red Water Mite
Neriene radiata	Filmy Dome Spider

continued ...

Invertebrates continued ...	
Phalangium opilio	European Harvestman
Phidippus audax	Bold Jumping Spider
Salticus scenicus	Zebra Jumper
Acari	**Mites and Ticks**
Dermacentor variabilis	Dog Tick
Ixodes scapularis	Black-legged Tick
Oniscidea	**Wood Lice**
Oniscus asellus	Common Shiny Woodlouse
Gastropoda	**Snails**
Cepea nemoralis	Brown-lipped Snail
Cipangopaludina chinensis	Chinese Mystery Snail
Lymnaea sp.	Pond Snail
Viviparus georgiarus	Banded Mystery Snail
Arion subfuscus	Dusky Slug sp.
Bivalvia	**Clams, Mussels**
Pelecypoda species	Clam sp.
Pisidium ultramontanum	Pea Clam
Phylum Annelida	**Segmented Worms**
Lumbricus terrestris	Common Earthworm

4.3 Vascular Plants

LYCOPODIACEAE	**CLUBMOSS FAMILY**
Lycopodium digitatum	Crowfoot Clubmoss/Running Cedar
Lycopodium obscurum	Ground-pine/ Prickly Tree Clubmoss
EQUISETACEAE	**HORSETAIL FAMILY**
Equisetum arvense	Field (Common) Horsetail
Equisetum fluviatile	Water Horsetail
Equisetum hyemale	Common Scouring-rush
Equisetum palustre	Marsh Horsetail
OPHIOGLOSSACEAE	**ADDERS-TONGUE FAMILY**
Botrychium virginianum	Rattlesnake Fern
OSMUNDACEAE	**FLOWERING FERN FAMILY**
Osmunda cinnamomea	Cinnamon Fern
Osmunda regalis	Royal Fern

continued ...

Vascular Plants continued ...

ASPLENIACEAE	**SPLEENWORT FAMILY**
Asplenium platyneuron	Ebony Spleenwort
Deparia acrostichoides	Silvery Spleenwort
POLYPODIACEAE	**FERN FAMILY**
Adiantum pedatum	Maidenhair Fern
Asplenium platyneuron	Ebony Spleenwort
Asplenium trichomanes	Maidenhair Spleenwort
Athyrium angustum	Northern Lady Fern
Asplenium rhizophyllus	Walking Fern
Cystopteris bulbifera	Bulblet Fern
Cystopteris fragilis	Fragile Fern/ Brittle Bladderfern
Dryopteris carthusiana	Spinulose Wood Fern
Dryopteris intermedia	Evergreen / Intermediate Wood Fern
Dryopteris marginalis	Marginal Wood (Shield) Fern
Matteuccia struthiopteris	Ostrich Fern
Onoclea sensibilis	Sensitive Fern
Osmundastrum cinnamoneum	Cinnamon Fern
Polypodium virginianum	Rock (Common) Polypody
Polystichum acrostichoides	Christmas Fern
Pteridium aquilinum	Bracken Fern
Thelypteris noveboracensis	New York Fern
Thelypteris palustris	Marsh Fern
Woodsia ilvensis	Rusty Woodsia
PINACEAE	**PINE FAMILY**
Abies balsamea	Balsam Fir
Larix laricina	Tamarack (Larch)
Picea glauca	White Spruce
Picea mariana	Black Spruce
Picea abies	Norway Spruce
Pinus resinosa	Red Pine
Pinus strobus	White Pine
Tsuga canadensis	Eastern Hemlock
CUPRESSACEAE	**CYPRESS FAMILY**
Juniperus communis	Common Juniper
Juniperus virginiana	Eastern Red Cedar
Thuja occidentalis	Eastern White Cedar
TYPHACEAE	**CATTAIL FAMILY**
Typha angustifolia	Narrow-leaved Cattail
Typha latifolia	Broad-leaved Cattail
SPARGANIACEAE	**BUR-REED FAMILY**

continued ...

Vascular Plants continued ...

Sparganium eurycarpum	Large-fruited (Giant) Bur-reed
Sparganium sp.	a Bur-reed
POTAMOGETONACEAE	**PONDWEED FAMILY**
Potamogeton richardsonii	Richardson's Pondweed
ALISMATACEAE	**WATER-PLANTAIN FAMILY**
Alisma plantago-aquatica	Water Plantain
Sagittaria latifolia	Broad-leaved Arrowhead
HYDROCHARITACEAE	**FROG-BIT FAMILY**
Elodea canadensis	Canada Water-weed (Pondweed)
Hydrocharis morsus-ranae	European Frog-bit
GRAMINEAE	**GRASS FAMILY**
Agrostis gigantea	Redtop (Black Bentgrass)
Andropogon virginicus	Broomsedge Bluestem
Bromus inermis	Smooth/Awnless Brome
Cinna latifolia	Slender Wood Reedgrass
Dactylis glomerata	Orchard Grass
Deschampsia flexuosa	Crinkled Hairgrass
Oryzopsis asperifolia	White-grained Mountain-Rice
Schedonorus arundinaceus	Tall Fescue
Phalaris arundinacea	Reed Canary Grass
Phleum pratense	Common Timothy
Phragmites australis	Common Reed Grass
Poa annua	Annual Blue Grass
Poa pratensis	Kentucky Blue-Grass
CYPERACEAE	**SEDGE FAMILY**
Carex alopecoidea	Foxtail Sedge
Carex arctata	Drooping Woodland Sedge
Carex aquatilis	Water Sedge
Carex aurea	Golden Sedge
Carex blanda	Woodland Sedge
Carex cephalophora	Thin-leaved Sedge
Carex comosa	Bristly Sedge
Carex crinita	Fringed Sedge
Carex cristatella	Crested Sedge
Carex deweyana	Dewey's Sedge
Carex echinata	Star/Little Prickly Sedge
Carex foenea	Straw sedge
Carex formosa	Handsome Sedge
Carex gracillima	Graceful Sedge
Carex granularis	Limestone Meadow Sedge

continued ...

Vascular Plants continued ...

Carex interior	Inland Sedge
Carex intumescens	Bladder (Villose) Sedge
Carex lacustris	Lake Sedge
Carex leptalea	Bristle-stalked Sedge
Carex pallescens	Pale Sedge
Carex pellita	Woolly Sedge
Carex pensylvanica	Pennsylvania Sedge
Carex plantaginea	Plantain-leaved (Seersucker) Sedge
Carex platyphylla	Broad-leaved Sedge
Carex rosea	Rosy Sedge
Carex scoparia	Pointed Broomsedge
Carex sparaganioides	Bur-reed Sedge
Carex sprengelii	Longbeak Sedge
Carex spicata	Spiked Sedge
Carex stipata	Awl-fruited Sedge
Carex stricta	Tussock Sedge
Carex trisperma	Three-seed Sedge
Carex tuckermani	Tuckerman's Sedge
Carex vulpinoidea	Fox Sedge
Dulichium arundinaceum	Three-way Sedge
Eleocharis palustris	Common Spikerush
Schoenoplectus tabernaemontani	Soft-stem Bulrush
Scirpus atrovirens	Dark-green Bulrush
ARACEAE	**ARUM FAMILY**
Acorus calamus	Sweet Flag
Arisaema triphyllum	Jack-in-the -pulpit
Calla palustris	Water Arum
LEMNACEAE	**DUCKWEED FAMILY**
Lemna minor	Common Duckweed
Lemna trisulca	Star/Ivy-leaved Duckweed
Spirodela polyrhiza	Great Duckweed
Wolffia arrhiza	Spotless Watermeail
Wolffia sp.	Watermeal
PONTEDERIACEAE	**PICKEREL-WEED FAMILY**
Pontedaria cordata	Pickerel-weed
JUNCAEAE	**RUSH FAMILY**
Juncus articulatus	Jointed Rush
Juncus compressus	Flattened Rush
Juncus effusus	Soft (Common) Rush
ASPHODELACEAE	**ASPHODEL FAMILY**

continued ...

Vascular Plants continued ...

Hemerocallis lilioasphodelus	Yellow Daylily
LILIACEAE	**LILY FAMILY**
Allium schoenoprasum	Chives
Allium tricoccum	Wild Leek
Asparagus officinalis	Asparagus
Erythronium americanum	Trout-lily, Yellow
Lilium philadelphicum	Wood Lily
Maianthemuem canadense	Canada Mayflower
Maianthemum canadense	Canada Mayflower/Wild Lily-of-the-Valley
Maianthemum racemosum	False Soloman's Seal
Medeola virginiana	Indian Cucumber-root
Polygonatum biflorum	Smooth Solomon's Seal
Reynoutria japonica	Japanese Knotweed
Smilax herbacea	Carrion flower
Trillium erectum	Red Trillium
Trillium grandiflorum	White Trillium
Uvularia grandiflora	Large-flowered Bellwort
IRIDACEAE	**IRIS FAMILY**
Iris versicolor	Blue Flag
Iris pseudacorus	Yellow Iris
Sisyrinchium angustifolium	Blue-eyed Grass
Sisyrinchium montanum	Strict Blue-eyed Grass
ORCHIDACEAE	**ORCHID FAMILY**
Cypripedium parviflorum	Yellow Lady-Slipper
Epipactis helleborine	Broad-leaved Helleborine
SALICACEAE	**WILLOW FAMILY**
Populus alba	White Poplar
Populus balsamifera	Balsam Poplar
Populus deltoides	Eastern Cottonwood
Populus grandidentata	Large-toothed Aspen
Populus tremuloides	Trembling Aspen
Salix bebbiana	Bebb's (Beaked) Willow
Salix eriocephala	Heart-leaved Willow
Salix euxina	Crack Willow
Salix lucida	Shining Willow
Salix nigra	Black Willow
Salix petiolaris	Meadow (Slender) Willow
MYRICACEAE	**BAYBERRY FAMILY**
Myrica gale	Sweet Gale

continued ...

Vascular Plants continued ...

JUGLANDACEAE	**WALNUT FAMILY**
Carya cordiformis	Bitternut Hickory
Carya ovata	Shagbark Hickory
Juglans nigra	Black Walnut
BETULACEAE	**BIRCH FAMILY**
Alnus incana	Speckled/ Swamp Alder
Betula alleghaniensis	Yellow Birch
Betula papyrifera	Paper Birch/White Birch
Betula pendula	Silver Birch
Carpinus caroliniana	Blue Beech (American Hornbeam)
Corylus cornuta	Beaked Hazelnut
Ostrya virginiana	Hop-Hornbean
FAGACEAE	**BEECH FAMILY**
Fagus grandifolia	American Beech
Quercus alba	White Oak
Quercus bicolor	Swamp White Oak
Quercus macrocarpa	Bur Oak
Quercus muehlenbergii	Chinkapin Oak
Quercus rubra	Red Oak
ULMACEAE	**ELM FAMILY**
Ulmus rubra	Red (Slippery) Elm
Ulmus americana	White Elm
URTICACEAE	**NETTLE FAMILY**
Laportea canadensis	Wood Nettle
Urtica dioica	Stinging Nettle
SANTALACEAE	**SANDALWOOD FAMILY**
Comandra umbellata	Bastard-Toadflax
ARISTOLOGHIACEAE	**BIRTHWORT FAMILY**
Asarum canadense	Canada Wild Ginger
POLYGONACEAE	**BUCKWHEAT FAMILY**
Persicaria amphibium	Water Smartweed
Polygonum cilinode	Fringed Wild Buckwheat
Fallopia scandens	Climbing False Buckwheat
Rumex acetosella	Sheep Sorrel
Rumex crispus	Curled Dock
Rumex britannica	Great Water Dock
Rumex verticillatus	Swamp Dock

continued ...

Vascular Plants continued ...

CHENOPODIACEAE	**GOOSEFOOT FAMILY**
Chenopodium album	Common Lamb's-Quarters
CARYOPHYLLACEAE	**PINK FAMILY**
Arenaria laterifolia	Blunt-leaved (Grove) Sandwort
Arenaria serpyllifolia	Thyme-leaved Sandwort
Cerastium fontanum	Mouse-eared Chickweed
Moehringia lateriflora	Grove Sandwort
Sabulina michauxii	Rock Sandwort
Silene latifolia	White Campion
Silene vulgaris	Bladder Campion (Maiden's Tears)
Silene noctiflora	Night-flowering Catchfly
Stellaria longifolia	Long-leaved Stitchwort
Stellaria graminea	Lesser Stitchwort
CERATOPHYLLACEAE	**HORNWORT FAMILY**
Ceratophyllum demersum	Common Hornwort or Coontail
NYMPHAEACEAE	**WATER-LILY FAMILY**
Brasenia schreberi	Water-shield
Nuphar variegata	Variegated Pond-lily
Nymphaea odorata	Fragrant White Water-lily
RANUNCULACEAE	**CROWFOOT FAMILY**
Actaea pachypoda	White Baneberry
Actaea rubra	Red Baneberry
Anemone canadensis	Canada Anemone
Anemone cylindrica	Long-fruited Anemone (Thimbleweed)
Anemone virginiana	Tall Anemone (Thimbleweed)
Aquilegia canadensis	Columbine
Caltha palustris	Marsh-Marigold
Clematis occidentalis	Purple Clematis
Clematis virginiana	Virgin's-bower
Coptis trifolia	Goldthread
Hepatica acutiloba	Sharp-lobed Hepatica
Hepatica americana	Round-lobed Hepatica
Ranunculus abortivus	Kidney-leaved (Small-flowered) Buttercup
Ranunculus acris	Common (Tall) Buttercup
Ranunculus aquatilis	White Water Buttercup
Ranunculus flabellaris	Yellow Water-crowfoot
Ranunculus longiirostris	Eastern White Water-crowfoot
Ranunculus recurvatus	Hooked Buttercup (Crowfoot)
Ranunculus sceleratus	Cursed Buttercup
Thalictrum dioicum	Early Meadow-rue
Thalictrum pubescens	Tall Meadow-rue

continued ...

Vascular Plants continued ...

BERBERIDACEAE	**BARBERRY FAMILY**
Caulophyllum thalictroides	Blue Cohosh
Podophylum peltatum	Mayapple
MENISPERMACEAE	**MOONSEED FAMILY**
Menispermum canadense	Moonseed
PAPAVERACEAE	**POPPY FAMILY**
Sanguinaria canadensis	Bloodroot
FUMARIACEAE	**FUMITORY FAMILY**
Corydalis sempervirens	Pale Corydalis
Dicentra cucullaria	Dutchman's breeches
CRUCIFERAE	**MUSTARD FAMILY**
Alliaria petiolata	Garlic Mustard
Alyssum alyssoides	Yellow Alyssum
Barbarea vulgaris	Bitter Winter Cress (Yellow Rocket)
Borodinia laevigata	Smooth Rockcress
Capsella bursa-pastoris	Shepherd's-purse
Cardamine diphylla	Toothwort
Cardamine pensylvanica	Pennsylvania Bittercress
Erysimum cheiranthodes	Wormseed Mustard
Hesperis matronalis	Dame's rocket
Lepidium campestre	Field Peppergrass
Nasturtium officinale	Watercress
Sinapis arvensis	Wild Mustard
Thlaspi arvense	Field Penny-cress
CRASSULACEAE	**ORPINE FAMILY**
Sedum acre	Mossy Stonecrop
sedum sp.	A Stonecrop
SAXIFRAGACEAE	**SAXIFRAGE FAMILY**
Micranthes virginiensis	Virginia Saxifrage
Mitella diphylla	Bishop's-cap (Mitrewort)
Saxifraga virginiensis	Early Saxifrage
Tiarella cordifolia	Heartleaved Foam flower
GROSSULARAIACEAE	**GOOSEBERRY FAMILY**
Ribes americanum	American Black Currant
Ribes cynosbati	Prickly Gooseberry
Ribes sp.	A Currant

continued ...

Vascular Plants continued ...

HAMAMELIDACEAE	**WITCH HAZEL FAMILY**
Hamamelis virginiana	American Witch hazel
ROSACEAE	**ROSE FAMILY**
Agrimonia gryposepala	Agrimony
Amelanchier arborea	Downy Serviceberry
Amelanchier sanguinea	Round-leaved Serviceberry
Comarum palustre	Marsh Cinquefoil
Fragaria vesca	Wood Strawberry
Fragaria virginiana	Common (Wild) Strawberry
Geum allepicum	Yellow Avens
Geum canadense	White Avens
Malus pumila.	Domestic Apple
Aronia melanocarpa	Black Chokeberry
Potentilla argentea	Silvery Cinquefoil
Potentilla norvegica	Rough Cinquefoil
Potentilla recta	Sulphur Cinquefoil
Potentilla simplex	Common Cinquefoil
Prunus serotina	Black Cherry
Prunus virginiana	Choke Cherry
Rosa blanda	Smooth Wild Rose
Rubus alleghaniensis	Alleghany Blackberry
Rubus idaeus	Red Raspberry
Rubus hispidus	Swamp Dewberry
Rubus odoratus	Purple Flowering Raspberry
Rubus pensylvanicus	Pensylvania Blackberry
Rubus pubescens	Dwarf Raspberry
Rubus rosifolius	Rose-leaf Bramble
Sorbus americana	American Mountain-ash
Spiraea alba	Narrow-leaved Meadowsweet
Geum fragarioides/ Waldsteinia	Barren-Strawberry
FABACEAE	**BEAN FAMILY**
Amphicarpaea bracteata	American Hog-peanut
Apios americana	Ground Nut
Desmodium glutinosum	Pointed-leaved Tick-trefoil
Desmodium paniculatum	Panicled Tick-trefoil
Glycyrrhiza lepidota	Wild Licorice
Gleditsia triacanthoides var inermis	Honey Locust
Lotus corniculatus	Bird's-foot Trefoil
Medicago lupulina	Black Medic
Medicaga sativa	Alfalfa
Melilotus albas	White Sweet-clover
Melilotus officinalis	Yellow Sweet-clover
Meiliotus sp.	Sweet-clover

continued ...

Vascular Plants continued ...

Robinia pseudoacacia	Black Locust
Trifolium aureum	Hop-clover
Trifolium hybridum	Alsike Clover
Trifolium pratense	Red Clover
Trifolium repens	White Clover
Vicia cracca	Cow (Tufted) Vetch
Vicia sativa	Common Vetch
Vicia tetrasperma	Four-seed (Slender) Vetch
Vicia villosa	Hairy Vetch
GERANIACEAE	**GERANIUM FAMILY**
Geranium robertianum	Herb Robert
Geranium bicknelii	Bicknell's Crane's-bill
OXALIDACEAE	**WOOD-SORREL FAMILY**
Oxalis stricta	European Yellow Wood-sorrel
RUTACEAE	**RUE FAMILY**
Zanthoxylem americanum	Northern Prickly Ash
POLYGALACEAE	**MILKWORT FAMILY**
Polygala senega	Seneca Snakeroot
EUPHORBIACEAE	**SPURGE FAMILY**
Euphorbia cyparissias	Cypress Spurge
ANACARDIACEAE	**CASHEW FAMILY**
Rhus typhina	Staghorn Sumac
Toxicodendron radicans	Eastern Poison Ivy
AQUIFOLIACEAE	**HOLLY FAMILY**
Ilex verticillata	Winterberry
CELASTRACEAE	**STAFF-TREE FAMILY**
Celastrus scandens	Climbing Bittersweet
STAPHYLEACEAE	**BLADDERNUT FAMILY**
Staphylea trifolia	Bladdernut
ACERACEAE	**MAPLE FAMILY**
Acer ginnala	Amur Maple
Acer negundo	Manitoba Maple
Acer pensylvanicum	Striped Maple
Acer rubrum	Red Maple
Acer saccharinum	Silver Maple

continued ...

Vascular Plants continued ...

Acer saccharum	Sugar Maple
Acer spicatum	Mountain Maple
HIPPOCASTANACEAE	**HORSE CHESTNUT FAMILY**
Aesculus hippocastanum	Horse Chestnut
BALSAMINACEAE	**TOUCH-ME-NOT FAMILY**
Impatiens capensis	Spotted Jewel-weed
RHAMNACEAE	**BUCKTHORN FAMILY**
Ceanothus americanus	New-Jersey Tea
Rhamnus cathartica	European Buckthorn
Frangula alnus	Glossy Buckthorn
VITACEAE	**GRAPE FAMILY**
Parthenocissus inserta	Thicket Creeper
Parthenocissus quinquefolia	Virginia Creeper
Parthenocissus vitacea	Virginia Creeper
Vitis riparia	Riverbank Grape
TILIACEAE	**LINDEN FAMILY**
Tilia americana	Basswood
MALVACEAE	**MALLOW FAMILY**
Malva neglecta	Dwarf /Common Mallow
HYPERICACEAE	**ST.JOHN'S-WORT FAMILY**
Hypericum perforatum	Common St.John's-wort
VIOLACEAE	**VIOLET FAMILY**
Viola cucullata	Marsh Blue Violet
ELAEAGNACEAE	**OLEASTER FAMILY**
Shepherdia canadensis	Russet (Canada) Buffaloberry
LYTHRACEAE	**LOOSESTRIFE FAMILY**
Decodon verticillatus	Water-Willow/ Swamp Loosestrife
Lythrum salicaria	Purple Loosestrife
ONAGRACEAE	**EVENING-PRIMROSE FAMILY**
Circaea lutetiana	Enchanter's Nightshade
Oenothera pilosella	Meadow Evening Primrose
ARALIACEAE	**GINSENG FAMILY**
Aralia hispida	Bristly Sarsaparilla

continued ...

Vascular Plants continued ...

Aralia nudicaulis	Wild Sarsaparilla
Aralia racemosa	Spikenard
UMBELLIFERAE	**PARSLEY FAMILY**
Cicuta bulbifera	Bulb-bearing Water Hemlock
Cicuta maculata	Spotted Water (Poison) Hemlock
Daucus carota	Wild Carrot (Queen Anne's Lace)
Osmorrhiza claytoni	Hairy Sweet Cicely
Pastinaca sativa	Wild Parsnip
Sanicula marilandica	Black Snakeroot (Sanicle)
Sanicula odorata	Cluster Sanicle
Sium suave	Water Parsnip
CORNACEAE	**DOGWOOD FAMILY**
Cornus candensis	Bunchberry
Cornus racemosa	Grey Dogwood
Cornus rugosa	Round-leaved Dogwood
Cornus sericea	Red-osier Dogwood
ERICACEAE	**HEATH FAMILY**
Arctostaphylos uva-ursi	Bearberry
Chamaedaphne calyculata	Leatherleaf
Gaultheria procumbens	Wintergreen
Gaylussacia baccata	Huckleberry
Rhododendron groenlandicum	Labrador Tea
Pyrola elliptica	Shinleaf
Vaccinium angustifolium	Low-Bush Blueberry
Vaccinium corymbosum	High-Bush Blueberry
PRIMULACEAE	**PRIMROSE FAMILY**
Lysimachia borealis	Starflower
Lysimachia nummularia	Moneywort/ Creeping Jenny
Lysimachia thyrsiflora	Yellow (Tufted) Loosestrife
OLEACEAE	**OLIVE FAMILY**
Fraxinus americana	White Ash
Fraxinus nigra	Black Ash
Fraxinus pennsylvanica	Red (Green) Ash
Syringa vulgaris	Common Lilac
GENTIANACEAE	**GENTIAN FAMILY**
Menyanthes trifoliata	Bog Buckbean
APOCYNACEAE	**DOGBANE FAMILY**
Apocynum androsaemifolium	Spreading Dogbane

continued ...

Vascular Plants continued ...

Apocynum cannabinum	Indian Hemp
ASCLEPIDACEAE	**MILKWEED FAMILY**
Asclepias incarnata	Swamp Milkweed
Asclepias syriaca	Common Milkweed
Cynanchum nigrum	Black Swallow-wort
Vincetoxicum rossicum	European (Pale) Swallow-wort
CONVOLVULACEAE	**MORNING-GLORY FAMILY**
Convolvulus arvensis	Field Bindweed
POLEMONIACEAE	**PHLOX FAMILY**
Phlox divaricata	Blue Phlox
HYDROPHYLLACEAE	**WATERLEAF FAMILY**
Hydrophyllum virginianum	Viginia Waterleaf
BORAGINACEAE	**BORAGE FAMILY**
Echium vulgare	Viper's Bugloss (Blue-weed)
Lithospermum officinale	(European) Gromwell
LABIATAE	**MINT FAMILY**
Clinopodium vulgare	Wild Basil
Glechoma hederacea	Ground Ivy (Creeping Charlie)
Leonurus cardiaca	Motherwort
Lycopus americanus	American (Cut-leaved) Water-horehound
Lycopus europaeus	Bugleweed
Nepeta cataria	Catnip
Prunella vulgaris	Heal-all
Scutellaria parvula	Small Skullcap
SOLANAEAE	**NIGHTSHADE FAMILY**
Solanum dulcamara	Bittersweet (Climbing) Nightshade
SCROPHULARIACEAE	**FIGWORT FAMILY**
Chelone glabra	White Turtlehead
Pedicularis canadensis	Wood Betony/Early Wood Lousewort
Penstemon hirsutus	Hairy Beardtongue
Verbascum thapsus	Common Mullein
Veronica officinalis	Common Speedwell
Veronica scutellata	Marsh Speedwell
OROBANCHACEAE	**BROOM-RAPE FAMILY**
Epifagus virginiana	Beech-drops

continued ...

Vascular Plants continued ...

LENTIBULARIACEAE	**BLADDERWORT FAMILY**
Utricularia vulgaris	Common (Greater) Bladderwort
PHRYMACEAE	**LOPSEED FAMILY**
Phryma leptostachya	Lopseed
PLANTAGINACEAE	**PLANTAIN FAMILY**
Plantago lanceolata	English Plantain
Plantago major	Broad-leaved (Common) Plantain
Plantago rugelii	Rugel's (Blackseed) Plantain
RUBIACEAE	**MADDER FAMILY**
Cephalanthus occientalis	Buttonbush
Galium aparine	Cleavers
Galium circaezans	Wild Licorice
Galium mollugo	Wild Madder
Galium palustre	Common Marsh Bedstraw
Galium triflorum	Fragrant Bedstraw
Mitchella repens	Partridge-berry
CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**
Diervilla lonicera	Northern Bush Honeysuckle
Lonicera dioica	Glaucous Honeysuckle
Lonicera tatarica	Tatarian Honeysuckle
Sambucus canadensis	Common Elderberry
Sambucus racemosa	Red-berried Elder
Viburnum acerifolium	Maple-leaved Viburnum
Viburnum lentago	Nannyberry
Viburnum opulus	Cranberry Viburnum (Guelder Rose)
Viburnum rafinesquianum	Downy Arrowwood
COMPOSITAE	**COMPOSITE FAMILY**
Achillea millefolium	Yarrow
Ambrosia artemisiifolia	Common Ragweed
Antennaria neglecta	Field Pussy-toes
Arctium minus	Common Burdock
Arctium lappa	Greater Burdock
Carduus acanthoides	Spiny Plumeless Thistle
Cichorium intybus	Chicory
Cirsium arvense	Canada Thistle
Cirsium discolor	Field Thistle
Cirsium vulgare	Bull Thistle
Doelleringia umbellatus	Flat-topped White Aster
Erigeron annuus	Annual Fleabane (Daisy Fleabane)
Erigeron philadelphicus	Philadelphia (Common) Fleabane

continued ...

Vascular Plants continued ...	
Erigeron strigosus	Rough (Lesser Daisy) Fleabane
Eurybia macrophyllus	Large-leaved Aster
Euthamia graminifolia	Grass-leaved Goldenrod
Eutrochium maculatum	Spotted Joe-pye-weed
Helianthus divaricatus	Woodland Sunflower
Hieracium aurantiacum	Orange Hawkweed
Pilosella caespitosa	Meadow Hawkweed
Hieracium pillosilloides	Smoothish Hawkweed
Inula helenium	Elecampane
Lactuca canadensis	Canada Lettuce (Wild Lettuce)
Leucanthemum vulgare	Ox-eye Daisy
Matricaria discoidea	Pineappleweed
Nabalus albus	(White-lettuce) White Rattlesnakeroot
Nabalus altissimus	Tall (White-Lettuce) Rattlesnakeroot
Pilosella aurantiacum	Orange Hawkweed
Pilosella officinarum	Mouse-ear Hawkweed
Pilosella piloselloides	Tall Hawkweed
Rudbeckia hirta	Black-eyed Susan
Senecio pauperculus	Balsam Ragwort
Solidago altissima	Tall Goldenrod
Solidago caesia	Blue-stemmed Goldenrod
Solidago canadensis	Canada Goldenrod
Solidago flexicaulis	Zigzag (Broad-leaved) Goldenrod
Solidago juncea	Early Goldenrod
Solidago patula	Rough-leaved Goldenrod
Sonchus arvensis	Perennial (Field) Sow-Thistle
Sonchus oleraceus	Common Sow-Thistle
Symphyotrichum novae-angliae	New-England Aster
Taraxacum officinale	Common Dandelion
Tragopogon dubius	Yellow Goat's-beard
Tragopogon pratensis	Meadow Goat's-beard
Tussilago farfara	Coltsfoot
Xanthium strumarium	Rough Coclebur

4.4 Spore-Bearing Plants

MOSSES	**MOSSES**
Abietinella abietina	Wiry fern moss
Anomodon attenuatus	Slender anomodon. Poodle moss
Anomodon rostratus	Long-beaked anomodon
Anomodon viticulosus	Tall anomodon
Atrichum altecristatum	Ridged smoothcap moss. Wavy starburst moss
Atrichum crispulum	Strongly crispate smoothcap moss. Crispy staburst moss
Aulacomnium heterostichum	Aulacomnium moss

continued ...

Spore-Bearing Plants continued ...

Bartramia pomiformis	Common apple moss
Bracythecium graminicolor	Bryhina moss
Brachythecium laetum	Bright ragged moss. Pleated foxtail moss
Bracythecium spp	
Bryhnia novae-angliae	New England mat moss. Bonsai moss
Bryum laevifilum	Syed's bryum
Bryum pseudotriquetrum	Common green bryum
Ceratodon purpureus	Purple moss
Climacium dendroides	Northern tree moss. Palm tree moss
Dicranum fulvum	Fine-leaved Broom moss. Boulder broom moss
Dicranum scoparium	Common broom moss. Windswept broom moss
Dicranum viride	Green broom moss. Brittle broom moss
Encalypta procera	Blunt extinguisher moss
Entodon seductrix	Cord glaze moss
Fontinalis antipyretica	Greater water moss.Keeled water moss
Forsstroemia trichomitria	Fan moss
Hedwigia ciliata	Ciliate Hedwig's moss. Medusa moss
Hygroamblystegium varium	Willow feather moss. Tangled thread moss
Hygroamblystegium varium forms	
Holocomium splendens	Stair-step moss
Hypnum sp. (cupressiforme?)	
Leucobrium glaucum	Pincushion Moss
Leucodon sciuroides	Squirrel-tail moss . Frizzy hook moss
Mnium lycopodioides	Ambiguous calcareous moss
Mnium sp.	
Neckera pennata	Shingle moss
Orthotrichum anomalum	Anomalous bristle moss
Plagiomnium ciliare	Toothed leafy moss. Sabre tooth moss
Plagimnium cuspidatum	Woodsy leafy moss. Baby tooth moss
Plagiomnium ellipticum	Marsh leafy moss
Plagiopus oederianus	Oeder's moss
Plagiothecium cavifolium	Round silk moss
Polytrichum sp.	Haircap moss
Pottiaceae sp.	
Pylasia selwynii	Selwyn's pylasia. Paintbrush moss
Rhizomnium punctatum	Dotted leafy moss
Rhodobryum ontariense	Rose moss
Rhynchostegium aquaticum	Aquatic long-beaked moss
Rhytidiadelphus triquetrus	Electrified cat's-tail moss. Pleated shaggy moss
Schistidium dupretii	Dupret's bloom moss
Sphagnum sp.	
Syntrichia ruralis	Talon moss
Tetraphis pellucida	Common four-toothed moss. Four-tooth moss
Thuidium delicatulum	Delicate fern moss
Thuidium recognitum	Hook-leaved fern moss. Kilt fern moss

continued ...

Spore-Bearing Plants continued ...

Ulota hutchinsiae	Hutchin's pincushion moss Rock tuft moss
LIVERWORTS	**LIVERWORTS**
Chiloscyphus profundus	Variable-leaved crestwort
Conocephulum salebrosum	Great Alligator-hide Liverwort
Frullania eboracensis	New York scalewort
Harpanthus drummondii	Drummond's creswort
Jamesoniella autumnalis	Autumn flapwort
Nowellia curvifolia	Wood-rust pincerwort
Porella pinnata	Pinnate scalewort
Porella platyphylla	Wall scalewort
Radula complanata	Flattened scalewort
LICHENS	**LICHENS**
Cladina rangiferina	Caribou Moss / Grey Lichen
Umbellicaria mammulata	Rock Tripe

4.5 Fungi

Agrocybe praecox	Spring Fieldcap Mushroom
Amanita rubescens	Blusher
Apiperdon pyriforme	Pear-shped Puffball
Claonia rangiferina	Gray Reindeer Lichen
Cerioporus varius	
Cerioporus squamosus	Dryad's Saddle
Cerrina unicolor	Mossy Maze Polypore
Cotylidia diaphana	
Crepidotus applanatus	
Crepidotus mollis	
Crepidotus variabilis	
Fomes fomentarius	Hoof Fungus
Fuligo septica	Dog Vomit Slime Mould
Ganoderma applanatum	Artist's Conk
Gerronema strombodes	Golden-gilled Gerronema
Gymnosporangium juniperi-virginiana	Cedar Apple Rust
Humidicutis marginata	Orange-gilled Waxy Cap
Hygrocybe flavescens	Golden Waxy Cap
Hygrocybe marginata	Yellow Waxy Cap
Hygrocybe sp.	
Hymenopellis furfuracea	
Kretzschmaria deusta	Carbon Cushion
Laetiporus sulphureus	Chicken-of-the- Woods
Lentinus brumalis	Winter Polypore
Lycogala epidendrum	Wolf's Milk
Marasmius rotula	Collared Parachute
Megacollybia rodmanii	Eastern American Platterful Mushroom

continued ...

Fungi continued ...	
Mycena galericulata	Common Bonnet
Mycena inclinata	Clustered Bonnet
Mycena leaiana	Orange Mycena
Neofavolus alveolaris	Hexagonal-Pored Polypore
Oxyporus populinus	Mossy Maple Polypore
Peziza sp.	
Peziza phyllagena	Common Brown Cup
Phellinus igniarius	
Phellinus robinae	Cracked-cap Polypore
Pholiotina rugosa	
Picipes badius	
Polyporus mori	
Polyporus squamosus	Dryad® Saddle
Polyporus varius	Blackfoot Polypore
Puccinia coronata	
Ramaria sp(?stricta)	A coral fungus
Pickenella fibula	Orange Moss Agaric
Sarcoscypha coccinea	Scarlet Cup
Schizophyllum commune	Common Split Gill
Scutellinia scutellata	Eyelash Cup
Stereum ostrea	False Turkey-Tail
Stereum striatum	Silky Parchment
Trametes versicolor	False Turkey Tail
Trametes sp.	(Bracket fungus)
Trichaptum biforme	Violet Toothed Polypore
Xeromphalina campanella	Pinewood Gingertail
Xerula furfuracea	
Xylaria longipes	
Xylaria polymorpha	Dead Man's Fingers
Ceratiomyxa fruticulosa	

Grackle

by Rick Bortolotti

grackle clack
scratch and
screech skwak squeak
kerkwack ratch black
sherack black
kerkweek! clack clack
black

5 Kingston Region Birds – Spring 2020 (Mar 1st – May 31st)

by Mark D. Read

The KFN reporting area is centred on MacDonald Park, Kingston and extends for a radial distance of 50 km. An interactive map showing the KFN circle is available on the website. If errors are noted or significant observations omitted, please contact me and I will update accordingly. We also encourage you to submit ***all*** sightings, so that a better understanding of our region's birdlife can be achieved. Members already using eBird can very easily share their sightings with the username 'Kingston FN'. Alternatively, please email or phone me directly with your sightings (markdread@gmail.com / 613-217-1246). Please note the total below includes the following 2 species that remain unconfirmed until accepted by the Rare Birds Committee: Western Meadowlark, 3rd May, Long Point Road, Prince Edward; Summer Tanager, 5th May, Amherst Island (Owl Woods); Summer Tanager, 13th-14th May Amherst Island (Stella); Summer Tanager, 15th May, Prince Edward Point; Summer Tanager, 17th May, Amherstview; Summer Tanager, 19th May, Prince Edward Point. It was not a big year for rarities but having 5 Summer Tanagers in the area is impressive.

In total, **242 species of bird** were recorded in our region during the reporting period, seven less than last year's corrected total of 249 (two species (Eared Grebe and Dickcissel) noted in Blue Bill Vol. 66 no. 3, p. 129 remain unconfirmed). All observations were obtained from eBird (ebird.org/canada/home) – 17.7% of which were shared with the KFN account. In total, 446 observers logged 7592 checklists, equating to 106 649 sightings, a surprising increase over last spring considering the travel restrictions around Covid-19. As usual, an impressive number of individual birds (755 200) were recorded, though many of these were, of course, the same birds seen on subsequent days. A huge thank you goes out to every observer, without whom our understanding of bird distribution would be far more limited. Unfortunately, only observers with sightings in the current report are noted below.

The spring of 2020 will be remembered for the arrival and impact of Covid-19. Although this did not affect the birds, closures and travel restrictions meant observers spent more time at home and the overall diversity of species seen was reduced. However, the number of checklists submitted to eBird in our area increased. Shorebird habitat (and diversity) was again in short supply due to high water levels in Lake Ontario. Here are the highlights of spring 2020:

Snow Goose: It was a better spring for this species with twice the records (30) compared to last year. The first individuals (2) were seen at Watertown, NY, on 4th March (LeE), with a comparatively low high count of 600 seen near Joyceville on 6th March (DCRB). A very late bird was seen on Howe Island on 12th May (PeW).

Greater White-fronted Goose: A single bird found on 4th March at Lower Brewers Lock remained into the 5th but was not subsequently seen (SED). Another bird was seen at Perch River WMA, NY, on 7th March (RiB), with a final observation from Taylor Road (near Marble Rock CA) on 25th March (GeP).

Brant: Dates for this species ranged from 14th May at Martin Edwards Reserve, Amherst Island (KSB) to 28th May near Codes Corner, Kingston (CTH). A high count of 1100 birds came from Amherstview on 17th May (NiB).

Cackling Goose: There were 12 reports this spring with a high count of just 3 on Wolfe Island on 7th March (EOB).

Mute Swan: This non-native and aggressive species continues to expand its population across the area. A high count of 169 came from the Rideau Canal near Joyceville on 15th May (JaH).

Trumpeter Swan: Birds were regular along the Rideau Canal throughout the period but decreased in numbers as the birds moved away to breed on smaller lakes in the area in April/May (KFN).

Tundra Swan: It was a relatively poor spring for

this species with just 26 records. A high count of 25 came from Kaiser Cross Road, Prince Edward, on 15th March (RKB, JoB).

Blue-winged Teal: The first record for the year was an exceptionally early bird that was seen near Tamworth on 9th March (KJH, VPM).

Canvasback: There were just 4 records this spring. A high count of 9 came from Marshland's CA, Kingston, on 17th March (DCRB).

Redhead: The last bird of the season was seen in Kingston's Inner Harbour on 14th May (JeN).

Black Scoter: There were three records this year, all from the Prince Edward Point area; a 'high' and last count of 2 birds was noted on 24th April (PaJ).

Barrow's Goldeneye: An adult male was noted at Point Peninsula, NY, on 14th March (GrL).

Ruddy Duck: There were just 8 reports this spring with a 'high' count of 2 from Marshland's CA, Kingston on 4th April (JET).

Ring-necked Pheasant: There were 25 records this spring from 2 main locations, Amherst Island and Napanee Limestone Plain IBA. Other records came from the Prince Edward Point area, and several locations in the US.

Red-necked Grebe: There were 8 records of this species this year with a high of 3 birds seen in the Prince Edward Point area on 10th April (PaJ).

American Coot: Unusually, there was just a single record of this species, seen at Balsam Grove, Kingston, on 7th April (MAJ).

Sandhill Crane: The increasing trend continues and it was another good spring for this species with 44 records received. The first birds of the year were seen on Clear Lake Road, Crosby, on 24th March (SLD, CTH). Seven birds were seen near Escott on 2nd April (RoB)

American Avocet: A single bird was found on 28th April at Cape Vincent, NY, and continued through to 4th May (BeH, NiL).

Whimbrel: Twenty birds were seen at Martin Edwards Reserve, Amherst Island, on 22nd May (JCG, VPM).

Ruddy Turnstone: There was just a single record of a single bird, at Martin Edwards Reserve, Amherst Island, on 31st May (SJC, KJH).

Pectoral Sandpiper: Birds were seen at Morton, Amherst Island, and Wilton Creek, where a high count of 3 birds was noted on 16th May (KeR).

Wilson's Phalarope: Other than a single bird seen in Westbrook on 24th May (JaR), all records came from Amherst Island, where this species is known to breed. The first birds (3) were seen on 1st May (MJP), with a high count of 15 noted on 20th May (AnE, RKFE).

Little Gull: There were 16 widespread records this year, though numbers were generally low. Six birds were seen in Sand Bay, Wolfe Island, on 24th April (MDR). Other major locations included Kaiser Cross Road and Amherst Island.

Lesser Black-backed Gull: There were 3 records; an adult at Lansdowne Dump on 14th March (SLD, CTH); another (or the same) adult at the same location on 13th April (JET); and a single bird at Kaiser Cross Road, Prince Edward, on 2nd May (RiS).

Black Tern: The first birds of the spring (2) were seen at Cape Vincent, NY, on 1st May (IrM). A high count of 63 birds came a site near Perch River WMA, NY, on 27th May (IrM).

Common Loon: The first bird of the season was seen at Robert Wehle State Park, NY, on 9th March (RoT).

American Bittern: The first bird of the year was heard at Big Sandy Bay, Wolfe Island, on 7th April (MDR).

Least Bittern: There were 23 records this spring with the first (3 birds) at Moscow Marsh on 6th May (KJH).

Black Vulture: A single bird was seen just north of Kingston on Bur Brook Road on 28th April (PRM). The increase in the number of sightings in the last couple of years means this species is (currently) no

longer reviewed by the Kingston Rare Bird Committee.

Osprey: The first arrival of the year was seen at Henderson, NY, on 28th March (LeE).

Golden Eagle: There were 5 records this spring from a number of locations; 1 at Elgin on 21st March (DCRB); 1 at Marble Rock CA on 22nd March (KJH); 1 at Landon Bay on 24th March (CTH); 1 at Dexter, NY, on 2nd April (MaS); and a late bird at Martin Edwards Reserve, Amherst Island, on 13th May (DCRB, EDB).

Northern Goshawk: A resident bird on private property near Verona was seen throughout the spring (TAN), with other records coming from the Napanee Limestone Plain IBA on 12th May (GeP) and Charleston Lake on 18th May (KJH).

Snowy Owl: It was a mediocre season/year for this species, with the majority of birds having departed by mid-March. A very late individual was seen at Martin Edwards Reserve, Amherst Island, on 28th May (EDB, KSB, KeR).

Long-eared Owl: A possibly injured bird was seen at Brewers Mills on 25th April (GaU).

Northern Saw-whet Owl: Singles were seen at Owl Woods on 14th March (EOB), and Napanee Limestone Plain IBA on 15th May (KJH).

Red-headed Woodpecker: There were 7 records this spring from a range of locations, with a high count of 2 from Frontenac Provincial Park on 8th March (CHB).

Gyrfalcon: An immature was photographed near Marble Rock CA on 25th March (GeP).

Peregrine Falcon: There were many records across the region this spring with breeding again noted at Kingston and the OPG station, near Bath.

Olive-sided Flycatcher: There were 8 records this spring. The first was seen on the very early date of 3rd May at Alexandria Bay, NY (RaL, RiB).

Yellow-bellied Flycatcher: There were 12 records this spring with a high of 3 in the Prince Edward Point area on 25th May (AnE, RKFE).

Loggerhead Shrike: The first bird of the year was seen at Napanee Limestone Plain IBA on 4th April (TMW).

Northern Shrike: The last bird of the season was seen on Amherst Island on 13th April (KJH).

Tufted Titmouse: There were a good number of records this spring (16). The majority came from locations along the St. Lawrence from Howe Island eastwards. Two birds were also seen on-and-off along Gananoque Lake Road, near Marble Rock CA (KFN).

Sedge Wren: A single bird was found at Moscow Marsh on 22nd May (anon), with 2 noted there on 30th (KeL).

Carolina Wren: There were just 10 records this spring from a number of different locations across the area, mainly east of Kingston.

Northern Mockingbird: There has been a definite upturn in the number of records this past year, with birds noted continuously in Kingston at both Portsmouth Olympic Harbour and Front Road near Lemoine Point, where 3 were seen on 3rd May (CHB, MAJ). Birds were also noted (as one-offs) at 9 other locations across the area.

Townsend Solitaire: A single bird was photographed at Robert G. Wehle SP, NY, on 12th March (StM).

Grey-cheeked Thrush: There were 7 spring records this year; the first at Sand Bay CA, Amherst Island, on 16th May (JoL, VPM) and the last at Marshlands CA, Kingston on 26th May (DCRB).

Evening Grosbeak: There were 3 records this spring: 1, Amherst Island, 5th May (JaS); 2, Marble Rock Rd, 7th & 12th May (BaO); and 2, Elmwood, 19th May (NiB).

Lapland Longspur: Four birds were seen on Marble Rock Rd on 18th April (BaO), and a single was noted at Martin Edwards Reserve, Amherst Island, on 16th May (MJP).

Henslow's Sparrow: Three birds returned to the

known breeding grounds of Chaumont Barrens, NY, on 21st May (GrD), with a high of 4 birds there on 24th May (SaT, LaC).

Spotted Towhee: This long-staying celebrity was last seen on 27th March (RiS). It may well have been present beyond this date but the area was closed due to Covid-19.

Orchard Oriole: It was another great season with 46 records, the first of which was a male in Napanee on 9th May (JaP).

Rusty Blackbird: The first bird of the season was seen at Prince Edward Point on 20th March (TiS); however, this individual may have been one of the overwintering birds at that location. A high count of 128 came from Perch River WMA, NY, on 1st May (IaD).

Louisiana Waterthrush: There was just one record this spring, from Opinicon Road on 5th May (BMDL).

Golden-winged and Blue-winged Warbler: It was another bumper year for this species pair with Golden-winged Warbler more common (86) and widespread than the Blue-winged Warbler (46 reports). The latter was mainly seen at locations south of, or just on, the shield.

Orange-crowned Warbler: The first of 13 records was seen at Button Bay, Wolfe Island, on 10th May (MDR).

Mourning Warbler: It was a slow year with just 8 reports, the first of which came from Big Sandy Bay, Wolfe Island, on 17th May (MDR).

Cerulean Warbler: It was an average season for this species with 25 records mainly from the usual locations of Frontenac Provincial Park and Opinicon Road. High counts of 4 each came from Frontenac on 19th May (DaD) and Opinicon Road on 27th May (JCG, JoL).

Prairie Warbler: It was a good year for this species in our area though the vast majority of records came from the traditional breeding areas of Chaumont Barrens. A male was present in the Prince Edward Point area on 14th-15th May (AnE, RKFE).

Canada Warbler: The first birds of the season (2) were seen at Big Sandy Bay, Wolfe Island, on 17th May (MDR).

Other species observed during the reporting period: Canada Goose, Wood Duck, Northern Shoveler, Gadwall, American Wigeon, Mallard, American Black Duck, Northern Pintail, Green-winged Teal, Ring-necked Duck, Greater Scaup, Lesser Scaup, Surf Scoter, White-winged Scoter, Long-tailed Duck, Bufflehead, Common Goldeneye, Hooded Merganser, Common Merganser, Red-breasted Merganser, Ruffed Grouse, Wild Turkey, Pied-billed Grebe, Horned Grebe, Rock Pigeon, Mourning Dove, Yellow-billed Cuckoo, Black-billed Cuckoo, Common Nighthawk, Eastern Whip-poor-will, Chimney Swift, Ruby-throated Hummingbird, Virginia Rail, Sora, Common Gallinule, Black-bellied Plover, Semipalmated Plover, Killdeer, Upland Sandpiper, Dunlin, Least Sandpiper, Semipalmated Sandpiper, American Woodcock, Wilson's Snipe, Spotted Sandpiper, Solitary Sandpiper, Greater Yellowlegs, Lesser Yellowlegs, Bonaparte's Gull, Ring-billed Gull, Herring Gull, Iceland Gull, Glaucous Gull, Great Black-backed Gull, Caspian Tern, Common Tern, Double-crested Cormorant, Great Blue Heron, Great Egret, Green Heron, Black-crowned Night-Heron, Turkey Vulture, Northern Harrier, Sharp-shinned Hawk, Cooper's Hawk, Bald Eagle, Red-shouldered Hawk, Broad-winged Hawk, Red-tailed Hawk, Rough-legged Hawk, Eastern Screech-Owl, Great Horned Owl, Barred Owl, Short-eared Owl, Belted Kingfisher, Yellow-bellied Sapsucker, Red-bellied Woodpecker, Downy Woodpecker, Hairy Woodpecker, Pileated Woodpecker, Northern Flicker, American Kestrel, Merlin, Eastern Wood-Pewee, Alder Flycatcher, Willow Flycatcher, Least Flycatcher, Eastern Phoebe, Great Crested Flycatcher, Eastern Kingbird, Yellow-throated Vireo, Blue-headed Vireo, Philadelphia Vireo, Warbling Vireo, Red-eyed Vireo, Blue Jay, American Crow, Common Raven, Black-capped Chickadee, Horned Lark, Northern Rough-winged Swallow, Purple Martin, Tree Swallow, Bank Swallow, Barn Swallow, Cliff Swallow, Golden-crowned Kinglet, Ruby-crowned Kinglet, Red-breasted Nuthatch, White-breasted Nuthatch, Brown Creeper, Blue-grey

Gnatcatcher, House Wren, Winter Wren, Marsh Wren, European Starling, Grey Catbird, Brown Thrasher, Eastern Bluebird, Veery, Swainson's Thrush, Hermit Thrush, Wood Thrush, American Robin, Cedar Waxwing, House Sparrow, American Pipit, House Finch, Purple Finch, Pine Siskin, American Goldfinch, Snow Bunting, Grasshopper Sparrow, Chipping Sparrow, Clay-coloured Sparrow, Field Sparrow, American Tree Sparrow, Fox Sparrow, Dark-eyed Junco, White-crowned Sparrow, White-throated Sparrow, Vesper Sparrow, Savannah Sparrow, Song Sparrow, Lincoln's Sparrow, Swamp Sparrow, Eastern Towhee, Bobolink, Eastern Meadowlark, Baltimore Oriole, Red-winged Blackbird, Brown-headed Cowbird, Common Grackle, Ovenbird, Northern Waterthrush, Black-and-white Warbler, Tennessee Warbler, Nashville Warbler, Common Yellowthroat, American Redstart, Cape May Warbler, Northern Parula, Magnolia Warbler, Bay-breasted Warbler, Blackburnian Warbler, Yellow Warbler, Chestnut-sided Warbler, Blackpoll Warbler, Black-throated Blue Warbler, Palm Warbler, Pine Warbler, Yellow-rumped Warbler, Black-throated Green Warbler, Wilson's Warbler, Scarlet Tanager, Northern Cardinal, Rose-breasted Grosbeak, Indigo Bunting.

Observers: Nick Bartok (NiB), Erwin D. Batalla (EDB), Eastern Ontario Birding (EOB), John Blaney (JoB), R. Kyle Blaney (RKB), Kevin S. Bleeks (KSB), Carolyn H. Bonta (CHB), Robert Burtch (RoB), Steve J. Coates (SJC), Dianne Croteau/Richard Brault (DCRB), Richard Brouse (RiB), Larry Chen (LaC), Sharon E. David (SED), Gregg Dashnau (GrD), Ian Davies (IaD), Stephanie L. Davison (SLD), Bruce M. Di Labio (BMDL), Dan Derbyshire (DaD), Andrew Edwards (AnE), R. Ken F. Edwards (RKFE), Lee Ellsworth (LeE), Janis C. Grant (JCG), Chris T. Heffernan (CTH), Kurt J. Hennige (KJH), Betty Hughes (BeH), Jack Hughes (JaH), Michael A. Johnson (MAJ), Paul Jones (PaJ), Nick Leone (NiL), Rachel Lewis (RaL), John Licharson (JoL), Kenneth Louttit (KeL), V. Paul Mackenzie (VPM), Paul R. Martin (PRM), Irene Mazzocchi (IrM), Steven Mix (StM), Kingston Field Naturalists (KFN), Jenny Newton (JeN), Todd A. Norris (TAN), Barbara O'Neill (BaO), Janine Psutka (JaP), Mark J. Patry (MJP), Gerard Phillips (GeP), Mark D. Read (MDR), Jane Revell (JaR), Ken Robinson (KeR), Tina Sawicki (TiS), Janet Scott (JaS), Marie Smith (MaS), Rick Szabo (RiS), James E. Thompson (JET), Sarah Toner (SaT), Rose Turner (RoT), Gary Ure (GaU), Peter Waycik (PeW), Tom M. Wheatley (TMW).

6 Articles

6.1 Ten bird species whose local status has changed

by Paul Mackenzie

An old adage says nothing is constant but change. This is a note about selected changes in our avifauna.

No active birder is likely to learn anything from this little piece, and whoever reads it will have their own suggestions for species that have changed. Despite having been taught the value of data in science I am skipping the numbers and using subjective observations. I confess to peeking at Ron Weir's book when writing this. At age 81 one tends to look back. That is all I am doing here. I will alternate the ups and downs in no meaningful order.

1. (DOWN) Henslow's Sparrows are no longer found in our area, except in New York state. They are only likely to be found by birders, since they utter "tse-lick" at low decibels at dawn and dusk from inconspicuous perches in weedy old fields. In the 1960s they could be found in many such fields surrounding Kingston. In May 1973 I found two in a field at the corner of Sir John A Macdonald and John Counter Boulevard which was beside the ALCAN Property. These fields were built on. Some fields on Amherst Island had Henslow's up to at least 1986. No longer.

2. (UP) Mute Swan was introduced into North

American city parks from Europe, from whence they escaped and became feral. There were none in the Kingston area until about 1963 and they were still uncommon here until this century. They spread east along Lake Ontario to breed in the marshes here. They are now common and although one cannot deny their beauty, they are aggressive toward other waterfowl. Of our three species of swans, only the Mute is non-migratory and breeds here.

3. (DOWN) Common Nighthawk. The call of the nighthawk was an expected sound over downtown Kingston at dusk when I arrived in the 1960s. When they disappeared from the city it was partly because gulls had increased around fast food outlets and learned to predate Nighthawk nests on the flat roofs about town. Some have recently been seen near the Invista Center, and they are present still in rural areas with rocky plateaus. In late August groups of 6 to 30 may be seen feeding over areas near Lake Ontario during their fall migration.

Figure 12: Common Nighthawk. 15 May 2018, PEPtBO. (Anthony Kaduck)

4. (UP) The Common Raven was a rare bird here. We think of species moving north due to global warming, but Ravens seem to have expanded their range southward from areas like Algonquin Park where we used to have to go to find them. My first sighting in our area was one seen soaring over Prince Edward Point on 9 Sept 1979 after a boat trip to Main Duck Island with Helen Quilliam, Ron Weir, and Mike Evans. They now nest quite commonly in our area on farms and even in the city. Unlike crows they can soar like raptors, showing the wedge shaped tail.

5. (DOWN) Evening Grosbeak was once a rather common winter visitor to bird feeders in our area with flocks of 20 to 60 birds not unusual. Like many winter finches their numbers would fluctuate from year to year depending on food supply. There were were 12 at Peter Good's feeder in Camden East on 22 Feb 1986 when Joel Ellis and I paid a visit. But since about 2000 many winters have passed without many being seen here, apart from Peter Waycik's feeders on Howe Island, and their core range seems to have moved north.

Figure 13: Evening Grosbeak at feeder on Howe Island, March 12, 2019. (Peter Waycik)

6. (UP) Wild Turkey. Historically this species was not native east of Toronto. For many years local birders made a winter visit to the 1000 Islands Bridge and Hill Island to see the only Wild Turkeys in our area. They had been introduced in 1960 and were fed by local residents. Releases elsewhere failed until the 1980s when MNR released them for hunting in many locations and since then they have spread and bred throughout our area. We once woke to see two on our bedroom deck. These days Wild Turkeys are not likely to be missed on a birding outing but I have yet to taste one.

7. (DOWN) Barn Swallows are aerial insectivores and aerial insectivores are declining throughout eastern North America. This is recent, in this century. When I arrived here

in the 1960s Barn Swallows nested in almost every barn and shed in the area. Historically they had increased as farms replaced forests. The decrease in flying insects is a major environmental concern and probably relates to the use of pesticides for monoculture crops. These attractive swallows are worldwide and are not rare yet but they will be if current trends continue.

Figure 14: Barn Swallow on Howe Island, May 28, 2020. (Peter Waycik)

8. (UP) Double-crested Cormorants eat fish. They were not here in large numbers in colonial days. They increased and then decreased greatly in the 1960s when DDT was used. After that was stopped they increased so much that humans complained and started measures to reduce them. From my place on the St. Lawrence River large flocks pass by. To me it indicates that there are still fish in our waters. Without doubt I have witnessed a major increase which I think has plateaued recently. Population explosions have their natural limits, as I hope our species is learning.

9. (DOWN) Loggerhead Shrike is a poster species locally for efforts to save species at risk. Art Bell knew of many locations for this bird which he found on each spring roundup. Now there are very few locations in our area. Nugent Road is the only breeding site that I know about. KFN has assisted efforts to protect and improve habitat at known sites. In addition there has been a captive breeding and release program in Ontario. Still the numbers of wild birds are very low.

10. (UP) The House Finch is a rather pleasant addition to our urban environment, with red on the male and a warbling song. It was a species of western North America that spread to Ontario after release of caged birds at Long Island NY. My first Kingston sighting was at Betty Gray's feeder on College Street on Oct 6, 1980 after 5 tries. It is now common though somewhat localized, and a frequent visitor to feeders.

6.2 Exploring the Backyard: Seasonal Highlights of the K&P Trail

by Carolyn Bonta

The past year has found me spending a fair amount of time along the K&P Trail, a recreational pathway stretching more than 60 km between downtown Kingston and the village of Sharbot Lake. Built on the footprint of the former Kingston to Pembroke railway line, the trail is wide, level, and without steep hills – absolutely perfect for running, cycling, and walking. And with the nearest access hardly 4 km from my house, this regional gem is pretty much in my backyard.

A long-distance runner, I moved my workouts to the K&P last fall to take advantage of its soft gravel surface, but also to immerse myself in a kaleidoscope of colour: yellow goldenrods and purple asters against a backdrop of flaming orange sumacs. Deep green hemlock groves contrasting with deciduous woods where the gravel trail is decorated in red, yellow, orange and brown leaves of all shapes. Creamy white giant puffball fungi line the path. A late-basking painted turtle's black shell shines beneath a deep blue sky from one of the adjacent ponds. My approach startles a tan-coloured coyote, and it darts off behind a large pile of straw bales.

As winter approaches, grey dogwoods lining the trail near Sydenham Road drop their deep bur-

gundy leaves to showcase small white berries atop scarlet red stems that persist well into January. When the snow becomes too deep for running, I switch to cross-country skiing the Burbrook to Unity Road stretch at night after work. The K&P is surprisingly devoid of animal tracks, and I have yet to hear an owl call. But the sky shines bright with stars on clear nights, as I glide silently under Orion's watch.

When spring arrived, I was grateful that the K&P Trail remained open through the COVID lockdown. My favourite local section of the K&P runs both sides of Jackson Mills Road: the flooded fields to the south attract ducks, shorebirds, and gallinules, while the wetlands north of Burbrook Road are great for herons – including a Great Egret whose white plumage stood out against the lime green sedges and caught my attention in early May. Baltimore Orioles, Cedar Waxwings, Indigo Buntings, and Gray Catbirds love the dense shrub thickets that line this stretch of trail, and warblers of many different species are abundant throughout.

It's also a thrill to venture farther and explore new sections of the trail, which I did in late May when my friend Todd and I set out by bicycle for Sharbot Lake. Along the way, we helped snakes and turtles off the trail. Young painted turtles have anti-freeze proteins that prevent their cells from bursting under sub-zero temperatures, and thus can overwinter in the nest and emerge in spring. We stopped frequently to admire Golden-winged Warblers and listen for Least Flycatchers. Poking at a dead star-nosed mole, I was unable to find its eyes. Despite living in complete darkness underground, moles do still carry the optic nerve given by their ancestors, but now rely almost entirely on their highly-developed sense of touch to "see" their world.

Having purchased a woodlot near the town of Verona this summer, I now frequently cycle the K&P to camp overnight on the property. On my first evening ride, I miscalculated how long it would take me to get there, and found myself still on the trail as darkness fell. Despite being early August, several fireflies lit up the woods around me and I could only imagine what sort of light show might have greeted me in late June! Returning to Kingston the next morning, I paused to admire a patch of bulblet fern growing below a damp limestone cut near Harrowsmith. Stunning for their long, vibrant green fronds, this fern reproduces both by spore and by bulblet. Unique among ferns, these bulblets drop off to germinate into another plant nearby.

I'm now becoming quite familiar with the K&P Trail between Sydenham Road in Kingston and Godfrey Road in South Frontenac, but still have much to look forward to: what is the cucumber-shaped vine along the path near McIvor Road? How navigable is the length of Millhaven Creek and could I one day paddle under the K&P? Might I cross paths with a black bear near the Verona dump? After all, the best way to enjoy and appreciate nature is to keep exploring.

Figure 15: Colony of bulblet fern beneath a rock cut. (Carolyn Bonta)

Figure 16: Bulblets on a bulblet fern. (Carolyn Bonta)

6.3 Wildlife Photography Tips #5–Post-Processing

by Anthony Kaduck

Figure 17: Dusky Antbird – Basic image. (Anthony Kaduck)

Figure 18: Dusky Antbird – Processed image. (Anthony Kaduck)

In my previous post I explained what happens in a digital camera – how a batch of photons is converted into a digital file. This post will cover how to use that file to create an image which can be displayed electronically or printed.

This activity is called Post-processing, because the initial processing of the image is done by software within the camera.

For wildlife photography, I believe the aim of post-processing is to produce a final image that replicates what you saw as closely as possible. And by "what you saw" I mean what you saw with your eyes through your binoculars, and not what the camera thinks you saw. Modern cameras are extremely capable, but their capabilities are vastly inferior to those of the eye, especially the eye aided by precision optics. Occasionally the camera will manage to capture an image exactly the way you wanted it, but most of the time, especially in wildlife photography, the raw material produced by the camera will need some help.

Post-Processing and "Truth"

The first thing to understand is that post-processing is not cheating. I mention this because if you visit photography sites on social media you will discover that there are a lot of people who think that "the camera doesn't lie"; and that any alteration made to an image amounts to a form of deception.

I believe this stems from a confusion between "photoshopping" and post-processing. It is true that Photoshop can be used for deceptive purposes. Editing the groom and his family out of wedding photographs after a divorce is a more common practice than you might hope, and in principle not very different from the Soviet practice of airbrushing comrades out of a photo after they had been liquidated. But most wildlife photographers are not interested in deception. They simply want to produce the best possible image from the raw material that the camera provides.

For the first 150 years or so after the camera was invented, photographers had to process their own images. Great photographers such as Ansell Adams and Yousuf Karsh spent hours in the darkroom making adjustments to the exposure to produce the print they wanted. Amateur photographers either set up their own darkrooms or trusted labs to the produce their images.

During the 1960s colour film became the norm, but the equipment used to produce prints was large, expensive, and complex to operate. Because they could no longer develop their own prints, amateur photographers were left out of the process, with all

decisions being made by the algorithms that controlled the equipment. By the time the first digital cameras became available in the early 1990s, people had become accustomed to the idea that developing images was some sort of sacred art that the amateur should not mess with.

Fortunately, in the digital era the control of processing is now back in your hands. If you are content to let the software in your camera make all the creative decisions for you, then you won't need to do post-processing .If, however, you want to control the process, this article will give you some tips on how to use this power effectively.

I intend to discuss concepts rather than provide a detailed "how-to", because the methods and terminology will be specific to the software you use.

Software for Post-processing

The available options for post-processing include:

- Adobe Lightroom. Since its introduction in 2007 this has become the product most often used by professional and advanced amateur photographers. Unfortunately you can no longer buy it as a stand-alone product – you have to lock into Adobe's overpriced subscription model.
- Camera Manufacturers' Proprietary Software. The major camera brands provide free software to their users. These products are often very good at post-processing, but they lack Lightroom's ability to tag and track images.
- Adobe Photoshop. This is the software to use if you really want to get into deception. If you want to show a Snowy Owl on a tropical beach Photoshop can do it. But for less evil uses it is a very complicated and user-unfriendly tool that lacks Lightroom's ability to import, organize and export images.
- Others. A number of lesser-known products are available. Most are free software; most are aimed at people who want to get images quickly up on social media rather than at people who want to produce great images.
- Plug-ins. Various products are available that do specific post-processing tasks such as sharpening better than comprehensive programs like Lightroom. They are generally referred to as plug-ins because they can (sometimes) be incorporated directly into your main post-processing software.

The choice is up to you. As with many things in photography, if you commit to learning how to get the best out of your software you will be farther ahead than if you shift between multiple solutions searching for the perfect choice.

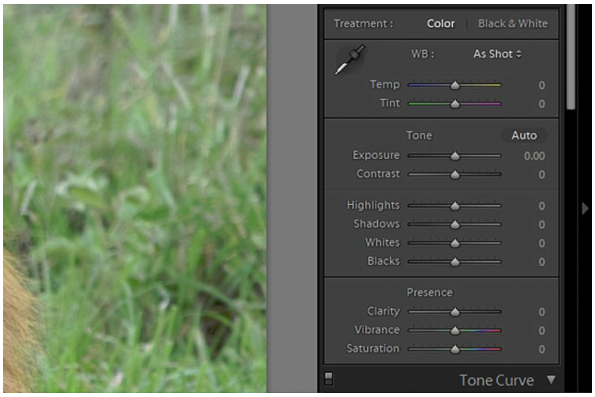

Figure 19: Lightroom Control Panel. (Anthony Kaduck)

Caveats

Before we start, there are a few key things to be aware of:

- You can't fix focus. No amount of processing will make an out-of-focus image look good.
- Ditto for blown highlights. As noted in the first post in this series, with white subjects in bright sunlight you are better off underexposing and making the correction in post-processing.
- As I mentioned in the previous post, if your images are captured in RAW format you can experiment with as many adjustments as you want: none of the changes you make will damage or alter the original image file.

Post-processing – An Illustrated Example

This image is of a Prairie Warbler that Paul Mackenzie and I found north of Kingston this year. The bird had been flitting around in the bright sunlight so I was set up for that shot, but suddenly it hopped down to a nearby branch. It was now close enough for a good image but the branch was in the shade. I snapped off a quick shot before it beetled off but not surprisingly the image was somewhat underexposed.

Figure 20: Prairie Warbler. (Anthony Kaduck)

I would like to walk you through the post-processing of this image, discussing the concepts as we go. If you would like to see the accompanying images in larger format they will be posted on my website: anthonykaduck.ca.

Colour Space. After importing the image into Lightroom the first correction I made was to change the colour space. Colour space is essentially a mathematical model for describing colours. By default Lightroom renders your images in Adobe RGB colour space, regardless of how you have set up your camera. The of impact of this change is that the colours in the image become desaturated, so my first step is to change the colour space back to Nikon Standard.

Figure 21: Imported to Lightroom and colour space changed to Nikon Standard. (Anthony Kaduck)

Lens Correction. No camera lens is perfect. Every lens model incorporates design choices, and those choices result in predictable optical imperfections. The lens correction module reads which model of lens you are using from the image metadata, then accounts for known issues such as distortion and perspective correction by adjusting the image. Most of the time the change is subtle, but I like to make this correction a part of my routine so that I don't forget it later on.

Figure 22: Lens correction applied. (Anthony Kaduck)

Initial Crop. Cropping is the method of removing unneeded parts of the image so you can zero in on the subject matter. For bird photography in particular this is often necessary because birds are routinely farther away than you want them to be. If you hand-hold your camera, as I do, cropping is also needed to account for the fact that you may not always be able to swing a heavy lens into position and centre it exactly on your quarry in the

brief moment before it absconds. I like to do an initial crop at this stage so I can focus on making the adjustments to the key part of the image. In this case I was happy with the initial crop so I left it as is.

Figure 23: Initial (final) crop. (Anthony Kaduck)

Tip. For wildlife I generally find that it's a good idea to leave some extra space in front of the creature so that it looks like it has room to move. An image that is off-centre is also often more aesthetically pleasing. However if you want to post the image to EBird or iNaturalist a tight crop centred on the species is desirable.

Initial Exposure Adjustment. At this point I will take a first cut at adjusting the exposure. My aim is to get it approximately right prior to making further changes.

Tip. Exposure adjustment is usually done by moving a slider. Because the changes are non-destructive, I often move the slider around quite a bit just to see how it affects the image. This is not only true for exposure: with the other common adjustments (contrast, highlights, shadows, black and white balance etc) it's useful to be able to be able to make big changes with the slider as it shows you the range of possible adjustments.

Figure 24: Initial exposure adjustment. (Anthony Kaduck)

Black/White Sliders. Because this image needed a fair amount of exposure adjustment, I found that after making the change the black markings on the face of the bird looked a bit washed out compared to how the bird actually looked in the field. So I made a small adjustment to the black slider to bring back a darker line. In principle I could have used the Contrast slider to achieve the same result but I find that if I use excess Contrast it gives the image a slightly fake look so I tend to stay away from that tool.

Figure 25: Black balance adjusted. (Anthony Kaduck)

Final Exposure. Having made a few changes, I then fine-tuned the exposure. For reference the final exposure was 2.13 stops wider than the original. I like a slightly dark image; but see the last

photo in this post for an alternative.

Figure 26: Final exposure. (Anthony Kaduck)

Sharpening. Digital images always come out of the camera with a bit of softness. You can pre-set extra sharpening in the camera, but since sharpening is another change that can look fake if overdone, I prefer to sharpen the image during post processing. While Lightroom has a decent sharpening module, this is an area where a purpose-built plug-in can provide better results. The final step in preparing this image was to send it through a sharpening module – in this case Topaz DeNoise AI. The change is barely visible at this size format but would provide a crisper look if I decided to print the image at large scale (8x10 or larger).

Figure 27: Sharpened. (Anthony Kaduck)

Additional Capabilities

Post-processing software has several additional capabilities you should learn how to use, though I did not need to use them for this image.

Shadows. One of the advantages of the RAW format is that it gathers information on all areas of the image, even those in shadow which JPEG might ignore or gloss over. You can use the shadows slider to bring up the light in areas that are shadowed. This can lead to a fake look if overused, but a bit of shadow adjustment will often help in revealing parts of the subject that did not show well in the original form. I tried playing with the Shadow slider on this image but concluded that it didn't add anything useful.

Highlights. The Highlights slider is the opposite of Shadows: it can be used to enhance or tone down the bright parts of the image. Again, I didn't find that an adjustment helped with this image.

Spot Removal. Your camera sensor is a dust magnet. If, despite all your efforts it has attracted any flecks of dust they will show up as spots on the image. These are usually only visible against a light background such as the sky. The Spot Removal function can help fix this issue. In this case any spots that are present are not visible so I did not need to perform spot removal.

Straightening. If your image includes a horizontal line (such as the horizon) it will look better if that line is truly horizontal in your final image. Your software will give you the ability to tweak the "horizontalness" appropriately. Again, a boon to those of us who hand-hold heavy lenses.

De-Noising. As mentioned in the last installment, images captured at low light are prone to noise. This is caused by stray photons messing up the work of the sensor, and shows up as grainy areas and odd colour blotches in the image. De-noising is best handled by dedicated plug-ins. In my opinion the best option available at the moment is De-Noise AI by Topaz Labs.

Modules to Use with Care

Post-processing software also allows you to adjust the saturation and luminance of colours. This

can sometimes be beneficial in fixing colours that were washed out, for example by bright tropical sunlight. But beware!: colour adjustments are the fastest way to generate a fake-looking, over-processed image. So use this function only if you need it, and use it judiciously. I would recommend you stay away from the global Saturation and Vibrance sliders. The sliders for individual colours are less likely to lead you down the road to perdition.

One Final Note

If I were going to print this image I would be happy with the copy shown above. However if I wanted to share it on social media I would bump up the exposure a bit more. I find that brighter images look better on a monitor or a mobile device. The image below is the same as the final version but the exposure has been increased by an additional 0.6 stops.

Figure 28: Exposure adjusted for posting online. (Anthony Kaduck)

7 Clipped Classics

Excerpts from past issues of The Blue Bill

Edited by Alexandra Simmons

From 60 years ago...

[In the September 1960 (Vol. 7 No. 3) issue of The Blue Bill, the Summer Birds report states that "Least Bitterns must have been fairly numerous at the 401 highway marsh, for several club members found dead or injured ones on the highway. The birds apparently rise only high enough from the marsh to enable them to cross the raised road, and so are flying so low that they are victims of the fast traffic." One of them received some interesting treatment, described in an article about injured birds that appeared in the following article.]

Injured Birds by Nancy Ellis (The Blue Bill Vol. 7 No. 4 December 1960)

Last July I was presented with an injured male Least Bittern, victim of an automobile. These are very fierce birds with a formidable neck and beak for striking, and an injured one had no cause for feeling kindly toward anyone. He refused all food and water for the first day but the next morning was so weakened that I could handle him easily. I started him on whiskey and water in an eye-dropper poked into the side of his bill. This he took greedily, and he rallied to the extent that I was encouraged. I decided to try to see where he was hurt. I took him to some good friends at the Kingston Veterinary Clinic to be x-rayed. The x-ray turned out beautifully and showed no broken bones. I then started feeding him Puss'n'Boots cat food. He gulped this quite well and would even open his beak a little for it. However, the next morning he was dead and on doing a post-mortem, I found he had been so badly crushed inside that my limited knowledge could not have helped him at all.

My next injured visitor was of a somewhat different size. Late in September I found myself trying to get a female Ruby-throated Hummingbird air-borne. She seemed to have tail-assembly trouble, and to a bird as tiny as Midget, one feather missing can make a lot of difference. Her diet was

honey and water mixed. She would put her long tongue in, which is forked at the end, and draw up a tremendous amount of the mixture per day for such a tiny bird. I also fed her strained baby beef, hoping to compensate in her diet for the insects she was not getting. Midget was not fond of this and I had to dip it in honey first to make her take any. She was always getting her wings or tail stuck in the honey and after she could fly around the cage this would ground her most effectively.

No matter what I gave her in the way of water in various vessels, she would not bathe. This I found most unusual, as any other birds I have had love their morning bath. So in Midget's case I had to hold her gently under the tap and sprinkle water on her and then pat her dry with Kleenex. She did not seem to mind being handled and was never nervous in the cage when people came to see her. I got her flying quite well and the "bzz bzz" of her wings was a treat to hear.

Midget was with me for over a month, and when she took off I felt quite a loss but do hope she ended her journey safely, and what a story she would have to tell.

[At the time, the Blue Bill editor, Helen Quilliam, explained: Clifford Greenewalt in his "Hummingbirds" tells us that, "They bathe at least once daily, more frequently when the weather is hot and dry. They must, however, take their plunge on the wing and cannot, as other birds do, sit peacefully in the water and ruffle their wings. Sometimes they dive into pools of clear water, sometimes they flutter on small-leaved trees and shrubs wet with rain or dew."]

Grumman

by Rick Bortolotti

All aluminum and steely cold in early spring

lines
sweet a surprise
though,
in the water

Good for breaking thin ice
to see deer browsing by black spruce
and white hawk returns another year

Untitled

by Rick Bortolotti

Where have I been all these thousands of years
only now to watch fireflies by the pond

8 KFN Outings

8.1 Ramble to Fort Henry (September 1, 2020)

by Jane Revell

Figure 29: Wild indigo duskywing near Fort Henry. (Katherine Webb)

At 9:30 in the morning 10 eager ramblers gathered at the Fort Henry parking lot for our first ramble in many months. It was a fairly mild day with a strong wind. The birds that we saw were 200 Canada Geese, 1 Mourning Dove, 40 Ring-billed Gulls, 8 Herring Gulls, 2 Caspian Terns, 35 Double-crested Cormorants, 2 Turkey Vultures, 1 Bald Eagle, 2 Red-tailed Hawks, 2 Northern Flickers, 1 Blue Jay, 5 crows, 2 Black-capped Chickadees, 1 Grey Catbird, 2 Brown Thrashers, 2 American Goldfinches, 5 Song Sparrows and 1 Northern Cardinal.

We saw a wide variety of plants and some of us enjoyed apples from the apple trees. The plants that we saw included invasive, alien and common species. The two invasive species were inevitable Black Swallowwort and Buckthorn (*Rhamnus cathartica* – don't eat the berries!). There were many alien species in this habitat. We saw Dame's Rocket gone to seed with its mature siliquas, Creeping Bellflower, White Sweet Clover and Ox-eye Daisy amongst others. The Black Knapweed in its "rayed" form was looking very pretty. Many common plant species that we saw included White Avens (with bur-like seed heads), White Clover (with triangular markings on each leaflet), Bitter-sweet Nightshade (with ripe red berries – slightly poisonous), Bird's Foot Trefoil (with bird-claw like seed pods) and Common Ragweed (wind pollinated, small light pollen grains) beside Goldenrod (insect pollinated with heavy sticky pollen). Rose hips, known for their vitamin C content were shining red. A highlight was Common Tansy with its stunning yellow button-like flowers in flat heads and with scented fern-like leaves. We looked too at the dying male flowers of the Staghorn Sumac, their pollinating job done, beside the red fruits on the female plants.

Other species noticed were several butterflies including Monarch, Clouded Sulphur and a Wild Indigo Duskywing. We also saw a looper moth – a type of grass moth. Other insects included a convergent lady beetle (the kind they sell in gardening stores), and we heard many male crickets chirping. We saw Leopard Frogs which are often found away from water in meadows in summer. We also came upon a recently killed short-tailed shrew and observed this small mammal with pointed nose, tiny eyes and wonderfully soft fur.

Figure 30: Recently deceased short-tailed shrew near Fort Henry. (Jane Revell)

A very worthwhile outing for a couple of hours.

9 Reader Contributions

Figure 31: Flock of Whimbrels at Martin Edwards in May. (Janis Grant)

Figure 32: Barn Swallows finally occupying a purpose built structure at Prince Edward Point. (Janis Grant)

Figure 33: Allegheny Vine *Adlumia fungosa* Gananoque. (Paul Mackenzie)

Figure 34: Lyre-tipped Spreadwing *Lestes unguiculatus*, Gravel pit, Amherst Island. (Paul Mackenzie)

Figure 35: Wandering Glider, Amherst gravel pit. (Paul Mackenzie)

Figure 36: Yellow Ladies Slippers. (Paul Mackenzie)

Kingston Field Naturalists

Objectives

The Kingston Field Naturalists (KFN) is an active, local club of over 500 members interested in a wide variety of natural history. The objectives of the club are:

- to acquire, record and disseminate knowledge of natural history;
- to stimulate public interest in nature and in the protection and preservation of wildlife and natural habitats; and
- to acquire, receive and hold lands for the purpose of preserving their natural flora and fauna, and to encourage and assist other organizations and individuals to do likewise.

Nature Reserves

The KFN owns properties that are designated as nature reserves.

Helen Quilliam Sanctuary at Otter Lake: A 217 hectare (536 acre) property of mixed forest located in the Canadian Shield in the Township of South Frontenac accessible to members through a trail system..

Martin Edwards Nature Reserve: A 100 hectare (247 acre) property of fields and marshland located on the southeast shore of Amherst Island.

The Sylvester-Gallagher Nature Reserve: An 80 acre (32.4 hectare) parcel of forest and grassland, adjacent to the Martin Edward Reserve.

Conservation and Education

The KFN actively supports conservation efforts. Issues such as park creation, wildlife and habitat protection, and environmental welfare are of on-going concern. The club also makes natural history resources and knowledge available to the community through education programs which include field courses, talks, awards and a loan library.

Be a Contributor!

This edition of The Blue Bill could have contained your article, anecdote, fantastic photo, nature sketch, report, puzzle, quiz, conundrum, cartoon, or other contribution.

(If it did, many thanks!)

Email The Blue Bill (editor@thebluebill.ca) for more information.

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