The Blue Bill

Quarterly Journal of the Kingston Field Naturalists

ISSN 0382-5655

Volume 66, No. 4 December 2019

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The Blue Bill is the quarterly journal (published March, June, September and December) of the **Kingston Field Naturalists**, P.O. Box 831, Kingston ON, K7L 4X6, Canada.

kingstonfieldnaturalists.org

Send submissions to the editor by the 5th of the month of publication (i.e. the 5th of March, June, September, or December) to

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1 President's Preliminaries

The Mystery of "Junk" Wildlife

by Anthony Kaduck

A large population of Emerald Shiner minnows migrates through the Niagara Gorge in December, seeking the warmer waters of Lake Erie. This concentration of tasty treats attracts a large number of predators, including Steelhead, Brown and Lake Trout, Pickerel and Muskellunge. It also forms a buffet for vast swarms of gulls, and when stormy weather drives birds in off the lake it is often possible to pick out rare and exotic gulls lurking amongst hordes. And swarms of birds attract swarms of birders.

The first weekend in December 2019 was cool, with high winds and freezing rain in the forecast. Sensible people were staying indoors, but fifty or sixty hardy birders descended on Niagara Falls to take part in the Ontario Field Ornithologists' annual Gull Weekend. There were gull lectures, gull quizzes, an advanced gull identification workshop, and of course, lots and lots of gulls.

Figure 1: Adult breeding Ring-billed Gull, Ottawa March 2018. (Anthony Kaduck)

Over restorative beverages one night the conversation turned to the subject of gulls and their bad reputation. One American visitor recounted how a customs agent had heaped scorn on the idea of anyone wanting to look at "s***hawks." Staff at the hotel and restaurants we visited seemed completely mystified about our interest in "seagulls." Moreover this prejudice is not limited to civilians: many birders are ambivalent at best about gulls, and devote little effort to learning the finer points of gull identification.

Figure 2: First winter American Herring Gull, Barrie, October 2018. (Anthony Kaduck)

It is a curious phenomenon. From an objective standpoint gulls seem to have everything birders appreciate. They are elegant birds, strong and graceful in flight. In our area we have two species that are common, another two that can be seen on migration or in the winter, four more that can be seen with a little bit of effort, and every year a few legitimately rare gulls show up in Ontario. True, identification of sub-adult gulls is challenging and requires study, but it is no more difficult than mastering shorebirds or non-breeding warblers.

And yet gulls, along with starlings, crows, house sparrows and feral pigeons, get lumped into the "junk birds" category. Like their counterparts the Cabbage White butterfly, the Eastern Grey Squirrel, Common Carp and Wild Mustard, even among keen naturalists they are more tolerated than loved. Perhaps they are too common. Perhaps we judge gulls harshly for their penchant for feasting on the food scraps we discard in parking lots and landfill sites. Perhaps we prefer our birds to be shy and retiring. Either way I think we are doing these birds a disservice.

So if you are looking for a project to get you out of the house this winter, why not take some time to study our local gulls? Pick one species and get to know its basic stages as it grows from a first winter juvenile to a breeding adult. You will improve your birding skills and also perhaps develop a better appreciation for these "junk" birds.

2 Kingston Region Birds – Summer 2019 (Jun 1st – July 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 species that remain unconfirmed until accepted by the Rare Birds Committee: **Black-bellied Whistling Duck, 17th June, Clayton, NY; Cattle Egret 6th – 12th June, Pittsburgh; Glossy Ibis, 2nd June, Amherst Island**.

In total, **195 species of bird** were recorded in our region during the reporting period, five down on last year's summer total of 200 but matching that of 2017. All observations were obtained from eBird (eBird.ca) – 18.21% of which were shared with the KFN account – a declining statistic. In total, 323 observers logged 2202 checklists, equating to 34,484 sightings, a significant increase over last spring. As usual, an impressive number of individual birds (137, 374) 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 summer of 2019 was fairly normal weatherwise but Lake Ontario again experienced record-breaking high waters. The delayed spring also ran over into June with a number of late/lingering shorebirds and warblers adding to the summer tally. Here are the highlights of summer 2019:

Brant: The last large flock (100 birds) of this late-migrating species was seen from the Amherst Island ferry on 2nd June (SLC). A single bird was seen on the Kingston waterfront on 6th June (JCG).

Mute Swan: This widespread invasive species is common across the region. Fifty birds (including young) were seen on the lower Rideau Canal south of Washburn on 9th July (DaB).

Trumpeter Swan: Regular summer sightings came from across the area with breeding birds noted at several locations on the shield (KFN).

Blue-winged Teal: It was a better year for this species with 25 records compared to last year's 10. Records were widespread though Amherst Island and Perch River WMA, NY, had numerous sightings.

Canvasback: There was an unusual summer record of three birds seen on the south shore of Amherst Island on 6th June (JoP).

Common Goldeneye: Five birds were seen at Martin Edwards Reserve, Amherst Island, on 2nd June (SLC).

Yellow-billed & Black-billed Cuckoo: Even though this wasn't a big year for Eastern and Forest Tent Caterpillars (upon which they feed), both species were seen in higher numbers than usual. There were 86 records of Yellow-billed Cuckoo and 102 records of Black-billed Cuckoo (KFN).

Sandhill Crane: There were just 8 records this summer, most from the Canoe Lake Road area

(KFN).

Black-bellied Plover: Five birds were still being seen at Martin Edwards Reserve, Amherst Island on 2nd June (SLC, VPM), with the last being seen on 5th Line, Wolfe Island, on 4th June (MDR).

Semipalmated Plover: A number of birds were still being seen into early June with a high count of 8 at Martin Edwards Reserve, Amherst Island, on 2nd (VPM). The first returning bird was seen in Cataraqui Bay, Kingston, on 27th July (JoL).

Dunlin: Birds were still being seen at Martin Edwards Reserve, Amherst Island through to 5th (1 injured bird – KSB), with a high count of 60 on 2nd (SLC, VPM).

White-rumped Sandpiper: A single bird in full breeding plumage was seen at Martin Edwards Reserve, Amherst Island, on 16th June (KJH et al.).

Wilson's Phalarope: All 17 records came from Martin Edwards Reserve, Amherst Island, where a high count of 6 was made on 16th June (ShJ).

Black Tern: Fifty six records were received from a number of locations but the high count this year came from Perch River WMA, NY, where 50 were seen on 1st June (StG).

Least Bittern: It was a great season for this species with 31 records from across the region. A high tally of 4 birds at Moscow Marsh was recorded on 23rd June (JPR et al.).

Great Egret: This increasing species was recorded on 31 occasions over the summer with a high count of 7 recorded at Martin Edwards Reserve, Amherst Island, on 28th June (KJH).

Northern Goshawk: Just two summer reports, of birds at Sand Lake on 9th June (StK) and at Frontenac Provincial Park on 16th June (SeJ).

Eastern Screech-Owl: There were 3 summer records this year, from Brewers Mills on 7th June (WTD, KAW); Clayton, NY, on 8th June (SKe); and Dog Lake, Milburn, on 16th June (ZaW).

Red-headed Woodpecker: There were 3 summer records from Frontenac Provincial Park (18th June – DaD; 22nd and 26th June – SeJ), with other birds seen at Gananoque (8th June – JET), Lower Beverly Lake (13th June – MVAB, DAS), and Opinicon Road (19th June – SeJ).

Peregrine Falcon: There were 27 records this summer, the majority from Kingston and OPG, Bath, where both breeding pairs are known to have bred (KFN).

Olive-sided Flycatcher: There were 3 sightings this summer: 1, Lyndhurst, 2nd June (DaR); 1, Perch River WMA, 4th June (RiB); 1, Opinicon Road, 24th June (SeJ).

Philadelphia Vireo: Two birds were seen at Millen Bay, NY, on 2nd June (DaM).

Loggerhead Shrike: All sightings came from the known breeding location of Napanee Plain IBA (KFN), where breeding was confirmed.

Tufted Titmouse: There was just the single record this year, from Westcott Beach State Park, NY, on 1st June (SeM).

Horned Lark: Three birds were noted: 1 Long Point Road, Prince Edward, 12th June (KeH); 1, 4th Line, Wolfe Island, 17th June (MDR); 1, Brewers Mills, 2nd July (GaU).

Blue-gray Gnatcatcher: It was a good summer for this species with 5 records: 2 birds were seen at Lansdowne on 9th June (ZeM); 1, Opinicon Road, 17th June (SeJ); 1, Hamilton Lake, Bedford Mills, on 20th June (PRM); 1, near Verona, 20th June (ScP); and 1, Sand Beach Wetlands, Amherst Island, 10th July (ShJ).

Sedge Wren: There were 7 records this summer, most from Perch River WMA in Jefferson County, NY. Ontario records included 1 at Marble Rock CA on 21st June (anon), and 2, possibly 3, birds near Godfrey on 1st July (TAN).

Carolina Wren: Four birds were seen; 1 at Ravensview on 4th and 22nd June (VPM); 1 at Prince Edward Point on 19th July (CaB); and 1 at Bedford Mills on 31st July (MEC).

Northern Mockingbird: Three summer records

this year: 1, Amherst Island, 6th June (WTD, KAW); 1, Kingston, 20th June (LaM); 1, Outlet, 5th July (DaF).

Gray-cheeked Thrush: a single bird was seen at Big Sandy Bay, Wolfe Island, on 4th June (MDR).

Swainson's Thrush: Birds were noted at Gould Lake on 1st June (JaD) and Frontenac Provincial Park on 22nd June (SeJ).

Evening Grosbeak: a female was seen on Bur Brook Road, north of Kingston, on 4th June (PRM).

Pine Siskin: A lingering bird was seen near Murvale on 1st June (CJG).

Henslow's Sparrow: There were 5 records this summer, all from the known breeding locations of Chaumont Barrens Preserve and Perch River WMA, NY.

Orchard Oriole: There were 18 reports this summer compared to the 4 of last year with the islands having the majority of records (KFN).

Louisiana Waterthrush: Reports were received from Sangster Lake on 1st June (RKFE, AnE), and Canoe Lake Road on 7th June (BNC).

Mourning Warbler: Two birds were noted during the summer period; 1, Bedford Mills, 1st June (MEC), and 1, Lower Beverley Lake, 7th June (MVAB, DAS).

Cape May Warbler: One bird was seen on Amherst Island on the late date of 13th June (ShJ).

Cerulean Warbler: It was a great year for this declining species with 37 records received, most from Frontenac Provincial Park and the Opinicon Road area (KFN).

Northern Parula: Records include singles on Canoe Lake Road, 4th June (KJH); Perth Road Village, 10th June (KAW); and Verona, 13th June (TAN).

Bay-breasted Warbler: A single bird was heard at Landon bay, Gananoque, on 8th June (LaM).

Prairie Warbler: All records came from the vicinity of Chaumont Barrens Preserve, NY.

Canada Warbler: One bird was seen near Verona on 8th June (TAN), with another near Jones Falls on 16th June (MaG).

Other species observed during the reporting period: Canada Goose, Wood Duck, Northern Shoveler, Gadwall, American Wigeon, Mallard, American Black Duck, Green-winged Teal, Ring-necked Duck, Lesser Scaup, Hooded Merganser, Common Merganser, Red-breasted Merganser, Ring-necked Pheasant, Ruffed Grouse, Wild Turkey, Pied-billed Grebe, Rock Pigeon, Mourning Dove, Common Nighthawk, Eastern Whip-poor-will, Chimney Swift, Ruby-throated Hummingbird, Virginia Rail, Sora, Common Gallinule, Killdeer, Upland Sandpiper, 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, Great Black-backed Gull, Caspian Tern, Common Tern, Common Loon, Double-crested Cormorant, American Bittern, Great Blue Heron, Green Heron, Black-crowned Night-Heron, Turkey Vulture, Osprey, Northern Harrier, Sharp-shinned Hawk, Cooper's Hawk, Bald Eagle, Red-shouldered Hawk, Broad-winged Hawk, Red-tailed Hawk, Great Horned Owl, Barred 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, Warbling Vireo, Red-eyed Vireo, Blue Jay, American Crow, Common Raven, Black-capped Chickadee, Northern Rough-winged Swallow, Purple Martin, Tree Swallow, Bank Swallow, Barn Swallow, Cliff Swallow, Golden-crowned Kinglet, Red-breasted Nuthatch, White-breasted Nuthatch, Brown Creeper, House Wren, Winter Wren, Marsh Wren, European Starling, Gray Catbird, Brown Thrasher, Eastern Bluebird, Veery, Hermit Thrush, Wood Thrush, American Robin, Cedar Waxwing, House Sparrow, House Finch, Purple Finch, American Goldfinch, Grasshopper Sparrow, Chipping Sparrow, Clay-coloured Sparrow, Field Sparrow, Dark-eyed Junco, White-

throated Sparrow, Vesper Sparrow, Savannah Sparrow, Song Sparrow, Swamp Sparrow, Eastern Towhee, Bobolink, Eastern Meadowlark, Baltimore Oriole, Red-winged Blackbird, Brown-headed Cowbird, Common Grackle, Ovenbird, Northern Waterthrush, Golden-winged Warbler, Blue-winged Warbler, Black-and-white Warbler, Tennessee Warbler, Nashville Warbler, Common Yellowthroat, American Redstart, Magnolia Warbler, Blackburnian Warbler, Yellow Warbler, Chestnut-sided Warbler, Blackpoll Warbler, Black-throated Blue Warbler, Pine Warbler, Yellow-rumped Warbler, Black-throated Green Warbler, Scarlet Tanager, Northern Cardinal, Rose-breasted Grosbeak, Indigo Bunting.

Observers: Kevin S. Bleeks (KSB), Camille Bock (CaB), Richard Brouse (RiB), Mike V.A. Burrell (MVAB), David Britton (DaB), Barbara N. Charlton (BNC), Mark E. Chojnacki (MEC), Steve L. Coates (SLC), James Darling (JaD), William T. Depew (WTD), Dan Derbyshire (DaD), Andrew Edwards (AnE), R. Ken F. Edwards (RKFE), Dawn Fiegen (DaF), Mark Gawn (MaG), Janis C. Grant (JCG), Chris J. Grooms (CJG), Stephen Guy (StG), Kevin Hannah (KeH), Chris T. Heffernan (CTH), Kurt J. Hennige (KJH), Sherri Jensen (ShJ), Sean Jenniskens (SeJ), Stefan Karkuff (StK), Steve Kelling (SKe), Nick Leone (NiL), John Licharson (JoL), V. Paul Mackenzie (VPM), Lana Marion (LaM), Paul R. Martin (PRM), Daniel Miller (DaM), Sean Minnick (SeM), Zebedee Muller (ZeM), Kingston Field Naturalists (KFN), Todd A. Norris (TAN), Scott Peterson (ScP), Josh Pickering (JoP), Mark D. Read (MDR), Daniel Riley (DaR), Jon P Ruddy (JPR), Donald A. Sutherland (DAS), James E. Thompson (JET), Kathy A. Webb (KAW), Zach Wile (ZaW).

3 Fall Round-up – November 1 to 3, 2019

by Erwin Batalla

The format for the 54th KFN Fall Round-up was the same as last year, with the focus on obtaining a better picture of the birds in the whole study area in early November. Birds were recorded between noon Friday November 1 and noon Sunday November 3.

A few larger teams covered big areas in the Kingston 50 km circle. The largest group consisted of Gaye Beckwith with Richard Brault and Dianne Croteau, Gary Hillaby, Ken Ross and Mike Evans. Paul Mackenzie was with Janis Grant, Jane Revell and Kathy Innes while Kurt Hennige and Jim Thompson were sometimes joined by Chris Grooms and Kevin Bleeks. Ken Robinson birded with Kevin Bleeks, Kathy Webb with William Depew, Chris Heffernan with Stephanie Davison, Sharon David with Peter Waycik, Erwin Batalla with Alexandra Simmons, Mark Chojnacki with Linda Nuttall, Chris Grooms with Dale Kristensen. On Saturday, Janet Scott oversaw the Amherst island IBA waterfowl survey with 12 birders including Paul's group, Nick Bartok, Peter Good, Bonnie Livingstone and others mentioned above. On Sunday, Mark Read, Anthony Kaduck and Steve Coates carried out the Wolfe Island IBA waterfowl survey. Contributions also came from: Bonnie Bailey, Ken Edwards, Chantal Imbeault, Michelle Martin, Paul Martin, Jennie Newton, Todd Norris, Martin Roncetti, Frances Tackaberry and Tom Wheatley.

Figure 3: Mike Evans, Ken Ross, Gary Hillaby, and Gaye Beckwith in Sydenham. (Richard Brault)

Kurt's group tallied rarities one-by-one: a Golden Eagle on Friday, a Purple Finch, a Palm Warbler,

a Vesper sparrow and a Snow goose on Saturday and a Black-crowned Night-Heron and a Peregrine Falcon on Sunday. Paul's group found a Wilson Snipe, a Winter Wren and two Carolina Wrens. On Wolfe Island, Mark's group recorded twenty American Pipits, a Red-throated Loon and a Lapland Longspur. Gaye's group observed two Belted Kingfishers and a lingering Eastern Phoebe. Steve Coates spotted a Pied-billed Grebe and six Wood Ducks. Ken and Kevin found a Brown-headed Cowbird, Mark and Linda several Trumpeter Swans, Sharon eleven Brants, Peter and Erwin a Rough-legged Hawk, Bonnie an American Kestrel and Nick a White-crowned Sparrow.

Figure 4: Snow Goose. (Kurt Hennige)

Figure 5: Vesper Sparrow. (Kurt Hennige)

Travelling south is an imperative for birds and for some people at this time of year. Eastern Bluebirds were migrating on Sunday and Ken observed 200 of these at Prince Edward Point. Todd Norris walked ten kilometers at Frontenac Park to observe four Red-headed Woodpeckers. On another walk, his dog flushed an American Woodcock. Kathy Webb and William Depew scoured Leeds and Grenville to locate 32 Pectoral Sandpipers and returned home to hear two Great-horned Owls. South of the border, a Bohemian Waxwing (Gerald Smith), 5 Black Scoters and a Sandhill Crane (Steve Kelling) and a Lesser Black-backed Gull and a Blue-winged Teal (Jeff Bolsinger) were recorded.

On Sunday, Mike Farrell, Peter Good, Kurt Hennige and Jane Revell went on the field trip to the Lennox Generating Station. They observed a Peregrine Falcon sitting in the nest box. Hopefully, the falcons will raise another brood of four chicks this year.

Common Redpoll, Evening Grosbeak and Pine Siskin were not reported this year. They are forecasted to be scarce this winter.

Figure 6: Downy Woodpecker. (Gaye Beckwith)

Sixty participants took part and a total of 118 species were observed near the 45-year average of 120. No new species were added to the cumulative list. The table below shows the highest number of each species reported in a single checklist (eBird) for the four counties: Leeds

and Grenville (L&G, 23 checklists), Frontenac (F, 103 checklists), Lennox and Addington (L&A, 38 checklists), Prince Edward (PE, 14 checklists). The tallies of the highest count for the three islands near Kingston (Howe, Wolfe and Amherst) are also shown.

Table 1: Fall Round-up 2019 Species List

Species	L & G	F	L & A	P E	Howe	Wolfe	Amherst
Snow Goose			1				
Brant		150	1		11		1
Canada Goose	500	2300	520	35	75	2300	150
Mute Swan	56	35	65	2	16	33	20
Trumpeter Swan	2	12	6				6
Tundra Swan		52	75			52	75
Wood Duck		6					
Blue-winged Teal							
Northern Shoveler		21	22				
Gadwall	23	15	85	1	3	6	40
American Wigeon	16	75	120			40	3
Mallard	9	130	66	21	2	130	66
American Black Duck	3	55	3	7		55	
Northern Pintail		7	52			3	4
Green-winged Teal		25	35			1	35
Redhead		1200	2	20		2600	
Ring-necked Duck		120	1			1	
Greater Scaup	1	750	65	1052		750	
Lesser Scaup		85				80	
Surf Scoter		2	3	2			3
White-winged Scoter		3	2	31		3	2
Black Scoter							
Long-tailed Duck		45	32	46	45	1	32
Bufflehead	2	112	52	10	112	33	25
Common Goldeneye	1	80	5		4	25	5
Hooded Merganser	8	17	7		2	7	7
Common Merganser		200	400	33	32	3	400
Red-breasted Merganser		25	886	44	25	13	886
Ruddy Duck		11	5			5	
Ruffed Grouse	1	1	1	4	2		

Table 1: continued ...

Table 1: Fall Round-up 2019 Species List

Species	L & G	F	L & A	P E	Howe	Wolfe	Amherst
Wild Turkey	1	4	9	8	1		
Pied-billed Grebe			1				
Horned Grebe			5	48			5
Red-necked Grebe		1		1		1	
Rock Pigeon	7	4	6			4	
Mourning Dove	1	10	26	4	2		12
American Coot		5	1			3	
Sandhill Crane		1				1	
Dunlin			12	30			12
Pectoral Sandpiper	32						
American Woodcock		1					
Wilson's Snipe			1				1
Greater Yellowlegs		2	1				
Bonaparte's Gull	2	8	38	21		8	29
Ring-billed Gull	8	500	65	4	2	250	65
Herring Gull	2	12	78	12	4	12	78
Lesser Black-backed Gull							
Great Black-backed Gull		6	2	2		6	2
Red-throated Loon		1		1		1	
Common Loon	2	37	97	125	8	3	97
Double-crested Cormorant	37	150	9	150	4	150	9
Great Blue Heron	1	4	2	1	1	1	1
Black-crowned Night-Heron		1					
Turkey Vulture		1	1	35			
Golden Eagle			1	1			1
Northern Harrier	1	1	1	1		1	1
Sharp-shinned Hawk		1		1			
Cooper's Hawk		1	1	1			1
Bald Eagle		2	2	3		2	2
Red-shouldered Hawk				38			
Red-tailed Hawk	1	1	1	85	1	1	1
Rough-legged Hawk			1				1
Great Horned Owl		2					

Table 1: continued ...

Table 1: Fall Round-up 2019 Species List

Species	L & G	F	L & A	P E	Howe	Wolfe	Amherst
Barred Owl		1			1		
Belted Kingfisher		2		1			
Red-headed Woodpecker		4					
Red-bellied Woodpecker	1	3	1	1			
Downy Woodpecker	5	5	2	1	1	1	
Hairy Woodpecker	2	2	1		2		
Pileated Woodpecker	2	3			2		
Northern Flicker	2	1	1	1	1		1
American Kestrel			1				1
Merlin		1	1			1	1
Peregrine Falcon			1				
Eastern Phoebe		2					
Northern Shrike		2	1		2		1
Blue Jay	12	19	20	40	19	4	20
American Crow	8	34	10	10	24	4	10
Common Raven	4	3	11	4	3		11
Black-capped Chickadee	40	49	5	10	10	1	5
Golden-crowned Kinglet	10	13	4	16	5	1	4
Ruby-crowned Kinglet		2		8	2		
Red-breasted Nuthatch		2	4	1			
White-breasted Nuthatch	4	9	2	1	7	1	2
Brown Creeper	1	3		1	3		
Winter Wren		2		1			
Carolina Wren		2					
European Starling	60	300	1000	92	45	8	1000
Eastern Bluebird	2	4	5	200			
Hermit Thrush	1	3	1	1			1
American Robin	32	42	26	450	15	5	26
Bohemian Waxwing							
Cedar Waxwing	1	35	8	100	3		
House Sparrow	6	6	24			2	24
American Pipit		20				20	
House Finch	2	3	2		1		

Table 1: continued ...

Table 1: Fall Round-up 2019 Species List

Species	L & G	F	L & A	P E	Howe	Wolfe	Amherst
Purple Finch				1			
American Goldfinch	13	20	1	6	20		1
Lapland Longspur		1				1	
Snow Bunting	40	13	75	42		4	75
Chipping Sparrow		5	1	7			1
American Tree Sparrow		3	3				3
Fox Sparrow		14	3		4		1
Dark-eyed Junco	8	20	30	25	7		30
White-crowned Sparrow		2					
White-throated Sparrow	8	15	9	2	15		9
Vesper Sparrow			1				
Song Sparrow	3	9	3	2	1	3	1
Swamp Sparrow	1	2			2		
Eastern Towhee				2			
Eastern Meadowlark		2	1				1
Red-winged Blackbird	150	1000	300	105	1000	20	300
Brown-headed Cowbird		2					
Rusty Blackbird	6	35		1	2		
Common Grackle		1		200	1		
Palm Warbler				1			
Yellow-rumped Warbler		1	6	16			
Northern Cardinal	5	5	3	2	3	1	1
Total species	**52**	**99**	**84**	**68**	**48**	**52**	**60**
Total Checklists	**23**	**103**	**38**	**14**			

4 Odonata List & Yearly Sightings 2019

by Al Quinsey

With an early start to winter last year and record high water levels this spring, the aquatic ecosystems in which larval dragonflies develop was somewhat abnormal in 2019. In general, three factors control the speed at which a larval Odonate develops; temperature, photoperiod, and availability of suitable prey. With an early winter it is likely that the aquatic nymphs in our area had their growth slowed or were forced into an early diapause (suspended development due to environmental circumstances). Which requires them to spend more time growing underwater in the spring to make up for the lost development time in the fall. This was likely the case for this year's

springtime species as we observed a delayed start to the Odonate flight season, with the first observations occurring towards the end of May, a few weeks later than in previous years.

Figure 7: Horned Clubtail. (Peter Waycik)

Figure 8: Lilypad Clubtail. (Peter Waycik)

However, apart from the late emergence of spring species, 2019 was an average year in terms of diversity of observations with 72 species being recorded in the Kingston area. Notable species include the Azure Bluet, Cyrano Darner, Horned Clubtail, Lilypad Clubtail, Swamp Darner, Twin-spotted Spiketail, and Unicorn Clubtail.

This list was compiled by combining sightings from KFN members with observations submitted to iNaturalist. iNaturalist was particularly helpful this year with over 100 users submitting 867 observations of 61 species of dragonflies and damselflies in the Kingston area.

Figure 9: Unicorn Clubtail. (Paul Mackenzie)

Table 2: Odonata First and Last Sightings for 2019

Common Name	Latin Name	First/Last Date	First/Last Location
Dot-tailed Whiteface	*Leuchorrhinia intacta*	21 May 2019	Cataraqui Trail, McGillivray Rd.
		04 Aug 2019	Seburns Creek, Howe Island
Common Green Darner	*Anax junius*	21 May 2019	Cataraqui Trail, McGillivray Rd.
		05 Oct 2019	Prince Edward Point
Racket-tailed Emerald	*Dorocordulia libera*	21 May 2019	Cataraqui Trail, McGillivray Rd.
		13 Jul 2019	Fourth Lake Rd.
Chalk-fronted Corporal	*Ladona julia*	21 May 2019	Cataraqui Trail, McGillivray Rd.
		06 Jul 2019	Birch Lake, Frontenac Park
Springtime Darner	*Basiaeshna janata*	21 May 2019	Camden East Alvar
		23 Jun 2019	Lower Side Rd. Howe Island

Table 2: continued ...

Table 2: Odonata First and Last Sightings for 2019

Common Name	Latin Name	First/Last Date	First/Last Location
Beaverpond Baskettail	*Epithica canis*	21 May 2019	Cataraqui Trail, McGillivray Rd.
		12 Jun 2019	Summers Rd. Elgin
Hudsonian Whiteface	*Leucorrhinia hudsonica*	21 May 2019	Cataraqui Trail, McGillivray Rd.
		21 May 2019	Cataraqui Trail, McGillivray Rd.
Spiny Baskettail	*Epitheca spinigera*	22 May 2019	Opinicon Rd.
		22 May 2019	Opinicon Rd.
Aurora Damsel	*Chromagrion conditum*	24 May 2019	Gould Lake
		31 May 2019	Wintergreen Studios
Dusky Clubtail	*Phanogomphus spicatus*	29 May 2019	Frontenac Provincial Park
		29 May 2019	Frontenac Provincial Park
Eastern Forktail	*Ischnura verticalis*	30 May 2019	Chaffey's Lock
		29 Aug 2019	Belle Park
American Emerald	*Cordulia shurtleffii*	31 May 2019	Wintergreen Studios
		31 May 2019	Wintergreen Studios
Frosted Whiteface	*Leuchorrhinia frigida*	08 Jun 2019	Mountain Rd. east of Ballahack Rd.
		29 Jul 2019	First Depot Lake
Twelve-spotted Skimmer	*Libellula pulchella*	09 Jun 2019	Second Lake Rd. By dam
		25 Aug 2019	Sand Hill Rd.
Ebony Jewelwing	*Calopteryx maculata*	09 Jun 2019	Echo Lake Rd.
		09 Aug 2019	Lake Opinicon
Black Saddlebags	*Tramata lacerata*	09 Jun 2019	Amherstview Sewage Lagoons
		02 Sep 2019	Little Cataraqui Creek Conservation Area
Four-spotted Skimmer	*Libellula quadramaculata*	09 Jun 2019	Moscow Marsh, Moscow Rd.
		04 Jul 2019	Gould Lake
Taiga Bluet	*Coenagrion resolutum*	09 Jun 2019	Moscow Marsh on Moscow Rd.
		01 Jul 2019	Morrison Point Rd.
Twin-spotted Spiketail	*Cordulegaster maculata*	09 Jun 2019	Echo Lake Rd.
		09 Jun 2019	Echo Lake Rd.
Familiar Bluet	*Enallagma civile*	09 Jun 2019	Amherstview Sewage Lagoons
		09 Jun 2019	Amherstview Sewage Lagoons
Lilypad Clubtail	*Arigomphus furcifer*	11 Jun 2019	Thousand Islands National Park
		09 Jul 2019	Gananoque River by 401

Table 2: continued ...

Table 2: Odonata First and Last Sightings for 2019

Common Name	Latin Name	First/Last Date	First/Last Location
Boreal Bluet	*Enallagma boreale*	13 Jun 2019	BioBlitz OPG Plant Bath Rd.
		13 Jun 2019	BioBlitz OPG Plant Bath Rd.
Common Whitetail	*Plathemis lydia*	15 Jun 2019	Hwy 2, Abby Dawn Rd
		09 Aug 2019	Lake Opinicon
Slender Spreadwing	*Lestes rectangularis*	15 Jun 2019	Lennox Generating Station
		17 Sep 2019	Kingston Mills
Sedge sprite	*Nehalennia irene*	15 Jun 2019	Lennox Generating Station
		08 Jul 2019	Little Cataraqui Creek Conservation Area
Elegant Spreadwing	*Lestes inaequalis*	15 Jun 2019	Townline Rd.
		15 Jun 2019	Townline Rd.
Widow Skimmer	*Libellula luctuosa*	17 Jun 2019	Opinicon Rd.
		03 Sep 2019	Davis Lake
Fragile Forktail	*Ischnura posita*	17 Jun 2019	Charleston Lake
		29 Aug 2019	Belle Park
Stream Cruiser	*Didymops transversa*	17 Jun 2019	Charleston Lake
		17 Jun 2019	Charleston Lake
Calico Pennant	*Celitemis elisa*	21 Jun 2019	Sand Hill Rd.
		16 Aug 2019	Buck Lake, Frontenac Park
Prince Baskettail	*Epithica princeps*	21 Jun 2019	Wilson Dr. Gananoque
		29 Aug 2019	Belle Park
Blue Dasher	*Pachydiplax longipennis*	22 Jun 2019	Wilson Dr. Gananoque
		03 Sep 2019	Davis Lake
Orange Bluet	*Enallagma signatum*	22 Jun 2019	Carol's Pond, Dalton Ave
		14 Jul 2019	Gananoque River, Ann St.
Elfin Skimmer	*Nannothemis bella*	22 Jun 2019	Chaffey's Lock
		13 Jul 2019	Fourth Lake Rd.
Common Baskettail	*Epithica cynosura*	22 Jun 2019	Wilson Dr. Gananoque
		01 Jul 2019	Depot Lake Conservation Area
Slaty Skimmer	*Libellula incesta*	23 Jun 2019	Glassy Lake
		21 Aug 2019	Little John Lake
Canada Darner	*Aeshna canadensis*	23 Jun 2019	Lower Side Rd. Howe Island
		24 Sep 2019	Big Sandy Bay

Table 2: continued ...

Table 2: Odonata First and Last Sightings for 2019

Common Name	Latin Name	First/Last Date	First/Last Location
Eastern Amberwing	*Perithemis tenera*	26 Jun 2019	Sand Hill Rd.
		29 Aug 2019	Belle Park
Eastern Pondhawk	*Erythemis simplicicollis*	27 Jun 2019	Little Cataraqui Creek Conservation Area
		18 Sep 2019	Gananoque Waterfront Trail
Halloween Pennant	*Celitemis eponina*	27 Jun 2019	Hwy 6, Hwy 14
		15 Sep 2019	Prince Edward Point
Emerald Spreadwing	*Lestes dryas*	28 Jun 2019	Prince Edward Point
		13 Jul 2019	Echo Lake Rd.
Dragonhunter	*Hagenius brevistylus*	29 Jun 2019	Charleston Lake
		09 Aug 2019	Lake Opinicon
Lancet Clubtail	*Phanogomphus exilis*	30 Jun 2019	Frontenac Provincial Park
		01 Jul 2019	Echo Lake Rd.
White-faced Meadowhawk	*Sympetrum obtrusum*	01 Jul 2019	Depot Lake Conservation Area
		03 Sep 2019	Davis Lake
Black-shouldered Spinyleg	*Drogogomphus spinosus*	01 Jul 2019	Gould Lake
		16 Aug 2019	Buck Lake, Frontenac Park
Marsh Bluet	*Enallagma ebrium*	01 Jul 2019	Echo Lake Rd.
		13 Jul 2019	Second Lake Rd. and Fourth Lake Rd.
Cyrano Darner	*Nasiaeschna pentacantha*	01 Jul 2019	Depot Lake Conservation Area
		01 Jul 2019	Depot Lake Conservation Area
Swamp Spreadwing	*Lestes vigilax*	02 Jul 2019	Cataraqui Trail, Opinicon Rd.
		03 Sep 2019	Davis Lake
Powdered Dancer	*Argia moesta*	06 Jul 2019	Queen's University Biological Station
		09 Aug 2019	Lake Opinicon
Tule Bluet	*Enellagma carunculatum*	06 Jul 2019	Queen's University Biological Station
		03 Sep 2019	Howe Island Ferry Rd.
Variable Dancer	*Argia fumipennis*	08 Jul 2019	Menzel Centennial Provincial Nature Reserve
		18 Sep 2019	Gananoque Waterfront Trail
Stream Bluet	*Enellagma exlusans*	08 Jul 2019	Salmon River, County Rd 14
		03 Sep 2019	Kingston Mills
Band-winged Meadowhawk	*Sympetrum semicinctum*	08 Jul 2019	Menzel Centennial Provincial Nature Reserve
		03 Sep 2019	Pine Point Ave

Table 2: continued ...

Table 2: Odonata First and Last Sightings for 2019

Common Name	Latin Name	First/Last Date	First/Last Location
Unicorn Clubtail	*Arigomphus villosipes*	08 Jul 2019	Daley Rd.
		09 Jul 2019	Gananoque river
Rainbow Bluet	*Enellagma antennatum*	08 Jul 2019	Salmon River, County Rd 12
		08 Jul 2019	Salmon River, County Rd 12
Hagen's Bluet	*Enallagma hageni*	08 Jul 2019	Salmon River, County Rd 15
		08 Jul 2019	Salmon River, County Rd 15
Eastern Least Clubtail	*Stylogomphus albistylus*	08 Jul 2019	Kingsford Conservation Area
		08 Jul 2019	Kingsford Conservation Area
Brush Tipped Emerald	*Somatochlora walshii*	08 Jul 2019	Menzel Centennial Provincial Nature Reserve
		08 Jul 2019	Menzel Centennial Provincial Nature Reserve
Williamson's Emerald	*Somatochlora williamsoni*	08 Jul 2019	Menzel Centennial Provincial Nature Reserve
		08 Jul 2019	Menzel Centennial Provincial Nature Reserve
River Jewelwing	*Calopteryx aequabilis*	08 Jul 2019	Kingsford Conservation Area
		08 Jul 2019	Kingsford Conservation Area
Skimming Bluet	*Enallagma geminatum*	09 Jul 2019	Gananoquie River
		14 Jul 2019	Gananoque River, Ann St.
Horned Clubtail	*Arigomphus cornutus*	13 Jul 2019	Echo Lake Rd.
		13 Jul 2019	Echo Lake Rd.
Black-tipped Darner	*Aeshna tuberculifera*	24 Jul 2019	Sand Hill Rd.
		22 Sep 2019	Marble Rock Conservation Area
Lance-tipped Darner	*Aeshna constricta*	27 Jul 2019	Sand Hill Rd.
		09 Sep 2019	Thousand Islands National Park
Swamp Darner	*Epiaeschna heros*	01 Aug 2019	Napanee River, Centre St.
		01 Aug 2019	Napanee River, Centre St.
Vesper Bluet	*Enallagma vesperum*	04 Aug 2019	Charleston Lake
		12 Aug 2019	Button Bay Road
Autumn Meadowhawk	*Sympetrum vicinum*	08 Aug 2019	Charleston Lake
		06 Nov 2019	Little Cataraqui Creek Conservation Area
Spotted Spreadwing	*Lestes congener*	19 Aug 2019	Lower Side Rd. Howe Island
		19 Aug 2019	Lower Side Rd. Howe Island
Azure Bluet	*Enallagma aspersum*	26 Aug 2019	Rd. 1 Hayburn
		22 Sep 2019	Marble Rock Conservation Area

Table 2: continued ...

Table 2: Odonata First and Last Sightings for 2019

Common Name	Latin Name	First/Last Date	First/Last Location
Shadow Darner	*Aeshna umbrosa*	02 Sep 2019	Burbrook Rd. Trail
		08 Oct 2019	Thousand Islands National Park
Fawn Darner	*Boyeria vinosa*	03 Sep 2019	Kingston Mills
		03 Sep 2019	Kingston Mills
Lake Darner	*Aeshna eremita*	05 Sep 2019	Little Cataraqui Creek Conservation Area
		05 Sep 2019	Little Cataraqui Creek Conservation Area

Contributors: Bruce Ripley, Carol Seymour, John Poland, Peter Waycik, Kathy Webb, Bill Depew, Al Quinsey, and over 100 iNaturalist users.

5 Kingston Butterfly Summary for 2019

by John Poland

So what did 2019 bring for the butterfly enthusiasts in Kingston? First I should mention that Spring was very late by about 3-4 weeks. The late Spring meant that our early butterflies were much later than usual and it was only by the first or second week of July that normal first appearance dates were resumed. Late season southern migrants coming from the States were few and far between even as far south as Point Pelee National Park.

Figure 10: Juniper Hairstreak. (John Poland)

The surprise of the year was the appearance of 4 snout butterflies in my garden. There is an expression used among lepidopterists "plant them and they will come." I planted a hackberry tree in the centre of my garden about 6 years ago and this July, four American Snout butterflies visited it and stayed for about 3 weeks laying eggs on the leaf tips. Eggs also appeared on two hackberry trees at the Lakeside community garden about 330 meters away by Center 70. I posted the sighting on the Google Groups Butterflies of Ontario site and then heard from Xi Wang who works at Queen's University to say that he had found eggs on the 3 Hackberry trees that grow between Queen's and KGH. He collected eggs and bred three of them to maturity. American Snouts are very rarely seen in the Kingston area.

Figure 11: American Snout. (Bruce Ripley)

There were several species normally seen which were not reported this year. Bog Copper and Chryxus Arctic are only known at two sites and neither was visited at the right time. We searched but could not find a Harvester this year and we missed the Indian Skipper. Monarchs were plentiful in 2019.

There were over 900 butterfly sightings reported this year in the Kingston area on iNaturalist by over 130 observers; many observers reported just one or two species. The reason I am able to report this is because of the Natural History of the Kingston Study Area project on iNaturalist that collects observations (not just butterflies) within the 50 km radius around Kingston. Filtering the results allows us to see all of the Butterfly Sightings in the Kingston Study Area for 2019.

The table below uses this data plus that from others who do not yet use iNaturalist to report their sightings. Over the past decade the number of butterflies observed in the Kingston 50 km area was normally between 74-79 except for 2016 and 2018 when 85 and 84 respectively were reported. This year 78 were sighted. The Kingston checklist on the KFN website lists 96 butterflies. No new butterflies were added this year.

Figure 12: Striped Hairstreak. (John Poland)

Table 3: Reported Butterfly Sightings for 2019

Butterfly	First Date	Last Date	Overwintering Stage
Black Swallowtail	12 June	20 September	chrysalis
Giant Swallowtail	7 June	18 October	chrysalis
Canadian Tiger Swallowtail	1 June	28 June	chrysalis
Eastern Tiger Swallowtail[1]	2 July	22 August	chrysalis
Mustard White	22 May	20 August	chrysalis
West Virginia White	6 May	1 June	chrysalis
Cabbage White	6 May	28 October	chrysalis
Olympia Marble	20 May	20 May	chrysalis
Clouded Sulphur	11 June	28 October	chrysalis
Orange Sulphur	26 August	28 October	migratory
American Copper	23 June	10 September	unknown
Bronze Copper	18 June	29 September	egg
Coral Hairstreak	4 August	4 August	egg
Acadian Hairstreak	11 July	3 August	egg
Banded Hairstreak	7 July	25 July	egg

Table 3: continued ...

[1]Hybrid of Canadian and Eastern Tiger Swallowtails

Table 3: Reported Butterfly Sightings for 2019

Butterfly	First Date	Last Date	Overwintering Stage
Hickory Hairstreak	7 July	25 July	egg
Striped Hairstreak	12 July	25 July	egg
Hoary Elfin	25 May	25 May	chrysalis
Henry's Elfin	6 May	20 May	chrysalis
Eastern Pine Elfin	7 May	9 June	chrysalis
Juniper Hairstreak	31 May	1 September	chrysalis
Gray Hairstreak	25 July	25 July	chrysalis
Eastern Tailed Blue	26 May	20 September	caterpillar fully grown
Northern Spring Azure[2]	6 May	31 May	chrysalis
Summer Azure[y]	23 June	21 July	chrysalis
Silvery Blue	27 May	1 July	chrysalis
American Snout	4 July	22 July	migratory
Great Spangled Fritillary	8 July	13 September	caterpillar newly hatched
Aphrodite Fritillary	12 August	22 August	caterpillar first instar
Silver Bordered Fritillary	8 June	8 June	caterpillar half grown
Meadow Fritillary	8 June	25 August	caterpillar
Harris Checkerspot	1 July	1 July	caterpillar
Northern Crescent	15 June	14 September	caterpillar
Pearl Crescent	14 June	3 September	caterpillar
Baltimore Checkerspot	1 July	2 August	caterpillar
Question Mark	20 July	25 September	migratory
Eastern Comma	5 May	21 October	butterfly
Gray Comma	6 May	15 September	butterfly
Common Buckeye	18 August	18 August	migratory
Mourning Cloak	29 March	11 September	butterfly
Compton Tortoiseshell	18 April	21 October	butterfly
Milbert's Tortoiseshell	9 July	19 October	butterfly
American Lady	6 May	26 October	migratory
Painted Lady	25 June	28 October	migratory
Red Admiral	13 April	28 October	migratory
White Admiral	23 June	20 September	caterpillar partly grown
Viceroy	16 June	29 September	caterpillar half grown

Table 3: continued ...

[2]The Azures have recently been renamed and will be the subject of an article in a future Blue Bill

Table 3: Reported Butterfly Sightings for 2019

Butterfly	First Date	Last Date	Overwintering Stage
Monarch	26 May	28 October	migratory
Hackberry Emperor	8 July	8 July	caterpillar mature
Northern Pearly Eye	2 July	6 August	caterpillar
Eyed Brown	1 July	18 August	caterpillar half grown
Appalachian Brown	2 July	17 July	caterpillar half grown
Little Wood Satyr	16 June	29 July	caterpillar
Common Ringlet	9 June	14 September	caterpillar
Common Wood Nymph	15 July	9 September	caterpillar newly hatched
Silver Spotted Skipper	2 July	2 August	chrysalis
Northern Cloudywing	8 June	16 July	caterpillar mature
Dreamy Duskywing	31 May	31 May	caterpillar mature
Juvenal's Duskywing	27 May	2 July	caterpillar mature
Columbine Duskywing	6 May	8 August	caterpillar mature
Wild Indigo Duskywing	31 August	5 September	caterpillar mature
Arctic Skipper	8 June	8 June	caterpillar mature
Least Skipper	28 June	23 September	caterpillar mature
European Skipper	29 June	25 July	egg
Leonard's Skipper	22 August	5 September	caterpillar early instar
Peck's Skipper	7 July	18 August	caterpillar partly grown
Tawny Edged Skipper	8 June	1 September	chrysalis
Crossline Skipper	15 July	25 July	caterpillar mature
Long Dash	23 June	21July	caterpillar partly grown
Northern Broken Dash	7 July	8 August	caterpillar
Little Glassywing	7 July	25 July	caterpillar
Delaware Skipper	13 July	15 July	caterpillar or chrysalis
Hobomok Skipper	8 June	15 July	caterpillar
Broad Winged Skipper	29 July	22 August	caterpillar
Two Spotted Skipper	25 July	28 June	caterpillar
Dion Skipper	15 July	15 July	caterpillar partly grown
Dun Skipper	11 July	1 September	caterpillar
Common Roadside Skipper	30 May	31 May	caterpillar

Contributors: Gaye Beckwith, David Edwards, John Hall, Paul McKenzie, John Poland, Bruce Ripley, Dan Schulze, Carol Seymour, Xi Wang, Peter Waycik, Kathy Webb & Bill Depew.

6 Articles

6.1 Wildlife Photography Tips #2

Freezing the Action – Shutter Speed and Shutter Priority Mode

by Anthony Kaduck

One of the major challenges of wildlife photography (and sports photography for that matter) is the need to choose a sufficiently fast shutter speed. Like all photographers we need to balance available light, depth of field, metering modes and focus points, but unlike, say, landscape or portrait photographers our subject matter tends to move quickly in unpredictable ways.

If our camera's shutter speed is fast enough we will be able to "freeze" the action of fast-moving subjects and get a crisp image. So in principle the solution is to always use a fast shutter speed. And there are some circumstances where this approach will work. But much more often we will be engaged in a balancing act, adjusting variables such as shutter speed, aperture, and film speed (ISO) to get a correct exposure.

The Basics of Exposure

Figure 13

In very simple terms the image your camera produces is governed by the amount of light that falls on the sensor. A correctly exposed wildlife image will show the creature or plant in natural light with no areas that are too dark (underexposed) or too bright (overexposed), and will be crisp with no motion-induced blurring. Figure 13 shows an American Pipit, and to my eye the exposure is good – all detail is visible and the bird's foot is frozen in mid-stride.

Exposure is controlled by three settings: aperture (the amount of light that the lens allows to reach the sensor); shutter speed (the length of time that the sensor is exposed to the light); and film speed or ISO (the sensitivity of the sensor).[3]

Each of these variables has implications that the photographer needs to understand:

Shutter Speed – As noted above, the primary way to get a crisp exposure of a moving animal (or a plant blowing in the wind) is to use a fast shutter speed. The downside of fast shutter speeds is that less light reaches your camera's sensor. Shutter speed is expressed in fractions of a second. Each step up in shutter speed (e.g. from 1/250 to 1/500) halves the amount of light available. So except in very bright, sunny conditions faster shutter speeds can lead to underexposed images. To an extent you may be able to fix underexposure in post-processing, but artificially adjusting the exposure by more than a small amount adversely affects the quality of the image.

Figure 14

For stationary subjects you can use a slower than

[3] Almost all cameras now are digital and do not use film, but the term film speed is still widely used to describe this function.

normal shutter speed and hope for the best, but typically the creature will move just as you snap the shutter. Figure 14 is a Coatimundi seen just after dawn. I had to use a slow shutter speed and a high film speed to get the shot. If you look closely you will see that the face is slightly blurry as it moves its head to the side.

So if shutter speed isn't the whole solution, what else can you do to increase your chances of getting a crisp image?

Aperture – Wide apertures allow more light in, so in the low-light conditions we are often dealing with a wide aperture seems like a good choice. The more light that passes through the lens, the faster your shutter speed can be. But as you might guess there are no easy solutions here. First, telephoto lenses capable of wide apertures are ruinously expensive. For example the Nikon NIKKOR 300MM f2.8G ED lens, a favourite of professional wildlife photographers, will set you back a cool $6899.99 plus HST. So most of us will be using lenses with narrower apertures, and thus will have less light to play with.

Figure 15

Moreover, the wider the aperture, the shallower the depth of field. For the wildlife photographer, this creates a problem: the image may be correctly exposed but parts of the creature are not in focus. Figure 15, a Pearl Crescent, is correctly exposed but even at f7.1, a middle of the range aperture, the depth of field is shallow enough that the wing closest to the viewer is not in focus. The tails of birds can also fall prey to depth of field issues. In Figure 16 the tail of the Canada Jay is a bit soft-edged, as it was beyond the optimal depth of field.

Figure 16

Film Speed (ISO) – Before the advent of digital cameras, photographers adjusted for low-light or fast-moving subjects by using faster film. So instead of ISO 64 or 100 film they might switch in a roll of ISO 200. This involved a big trade-off in image quality, as faster films producing grainer images. ISO 400 was about the maximum usable speed.

Now we have digital cameras capable of ISO equivalents of up to 51,000 so is the problem solved? Yes and no. Good quality digital cameras can produce very good images at higher ISO ratings, but only to a point. Just as fast film was prone to graininess, digital camera sensors can generate "noise" at higher speeds.

If you are interested in learning more about digital noise I recommend "What is Noise in Photography" on the Photography Life site.

With my camera I can get excellent images at ISO 800, and very good ones up to ISO 1000. Speeds faster than that can work reasonably well depending on what you want the image for. Figure 14, for example, was shot at ISO 2000. The image is reasonably crisp and good enough for a record shot, but if you look above and to the right of the creature's haunches you will see that the image becomes fuzzy ("noisy") with some random colour blobs.

So what does it all mean? Simply that there is no

single recipe for achieving crisp, properly exposed images of wildlife. While we are in the field we have to make continuous judgements about shutter speed, aperture and film speed to enable us to get the images we want.

Shutter Priority Mode

If you spend too much time thinking about these variables you may end up missing some of the action you went out to photograph. So most wildlife photographers use their camera's mode system to automate part of this work.

All DSLRs and most bridge cameras have four basic operating modes: Manual, Shutter Priority, Aperture Priority and Program. I want to explain Shutter Priority mode here because I think it is the most useful option for wildlife photographers.

Your camera will have an easily accessible way of selecting this mode – most often by a rotating dial on the upper right side (Figure 17). For most DSLRs, rotating the dial to S puts you in shutter priority mode. Eccentrically, Canon and Pentax call it "Tv" for time value, but the effect is the same.

Figure 17

When you are operating in this mode, you can select the film speed and shutter speed you desire and the camera will automatically adjust the aperture within its limits to ensure a correct exposure. If there is not enough light to get a correct exposure at maximum aperture the camera will warn you somehow, often by inactivating the shutter release. Check your manual to see how your own camera works and what adjustments you can make.

You can actually go a step further and automate your choice of film speed as well. Somewhere in the menu system of your camera there will be an option to select "auto ISO." This is a tempting option for wildlife photography, as it minimizes the chance of a missed shot. However beware of the fact that cameras left to their own devices tend to bump up the film speed to fairly high levels, so if you use this function check your manual to see if you can set an upper limit on auto ISO.

Recommended Shutter Speeds

So the final piece of the shutter speed puzzle is: how fast is fast enough?

In principle, unless forced to by low light I would recommend a minimum shutter speed of 1/500 for wildlife. Birds and mammals, even if they appear stationary, are often flicking their ears or looking around, so it's best to err on the safe side. I did a quick check of the wildlife photos I am most proud of and almost all were shot at 1/500 or 1/640. There are exceptions, such as the Chestnut-naped Antpitta at Figure 18 (1/100 at f5.6) but I was fortunate that the bird held still for a moment.

Figure 18

For frogs, turtles, and perched butterflies and odonates you can often get by with a slower speed, as they can sit still for lengthy periods. But the Snapping Turtle at Figure 19 was being aggressive so I needed 1/500 to freeze her.

Figure 19

Special Cases

Birds in Flight

Figure 20

Figure 21

There is a simple rule of thumb here: the fastest shutter speed you can manage is the one to choose. But you can cheat to some extent based on the type of bird and its activity. The Trumpeter Swan has fairly slow wingbeats, so in Figure 20 even 1/250 was enough to get a crisp image. But the gliding Red-tailed Hawk in Figure 21 was shot in bright daylight so I was able to go to 1/3200 and ensure that the image was crisp.

By the way, don't even think about trying to photograph butterflies in flight. They make birds look steady and predictable.

Hummingbirds

Hummingbird wingbeats are so fast that it is difficult to get a crisp image even in optimal light. Shutter speeds of at least 1/3200 will be needed. And because their wings move in strange ways to allow them to hover, even if you do get a crisp image it will often look rather odd. So unless you can find a perched bird, I find the best approach is to intentionally allow a bit of blur in the wings, which gives the impression of movement. The Western Emerald in Figure 22 was shot at 1/320 while hovering.

Figure 22

So that's the bluffers' guide to shutter speed. if you have mastered the basic operation of your camera and want to dip your toe into more advanced options why not try experimenting with shutter priority?

6.2 Great Bear Rainforest Adventure (August 17 -24, 2019)

Aboard *The Island Roamer*

by Janis Grant

This summer my husband and I explored the British Columbia Great Bear Rain Forest. It is the largest remaining tract of unspoiled temperate rainforest remaining in the world. The obvious way to do this was by boat and, being sailors, we chose to take a cruise on a 68 foot ketch, *The Island Roamer*.

The eight day voyage was a one-way trip through British Columbia's inland passage from Prince Rupert to Bella Bella. We were promised wildlife and spectacular scenery ranging from the towering Coast Mountains with waterfalls cascading thousands of feet, large coastal islands including Pitt, Campania and Princess Royal and smaller low lying islands bordering Hecate Strait. We should have realized right away that they were serious about the rain when they sent us a list of required clothing including rain pants & coat, rubber boots, long underwear, toque and winter gloves. I wore all of it almost the entire trip. It rained every day!

When we arrived on the ship we found that it was particularly suited to the trip. Accommodation was comfortable for the 9 passengers and 4 crew on board. Our Captain, Randy Burke, has a Kingston connection in that we knew his father, Stanley Burke, who lived on Amherst Island for many years. Other crew included an Able Bodied Seaman, Naturalist and Cook. Alan and I had a private cabin with shared bathroom (and hot shower). The inside lounge was large and comfortable with an extensive natural history library, a well-equipped galley and large covered seating area on deck for wildlife viewing. Two zodiaks were available for shore trips and kayaks for individual use. Bonnie, our cook, was amazing and produced the best food I've had anywhere. Emily, our Naturalist, really knew her stuff and kept us engaged and fascinated throughout the trip.

Our very first bird viewing site past Prince Rupert was Holland Rock. There I picked up the first of several lifers – a Pigeon Guillemot. A breeding colony of Black Legged Kittiwakes was on the rock, the only ones we saw. Other lifers for me along the way were Pelagic Cormorant, Rhinocerus Auklet (numerous), Marbeled Murrelet, Red Necked Phalarope, Black Turnstone and Chestnut Backed Chickadee.

There were hundreds of Bald Eagles, Steller's Jays, Black (Pacific) Turnstone and many Bonaparte and Mew Gulls. Our last day, we were treated to a pair of Sandhill Cranes feeding on the shore.

Figure 23: One Bald Eagle Among Thousands. (Janis Grant)

Mammal viewing was spectacular! Humpback Whales were particularly abundant and engaged in breeching, flipper slapping and bubble-net feeding throughout the voyage. We were able to drop a hydrophone and listen to their haunting calls. We may have seen as many as 30 individuals. In Arthur Passage, on our first day out, we were treated to 10 Pacific White-sided Dolphins. They swam up to and under the boat giving us lots of opportunities to take photos. At the end of Grenville

Channel, we spotted the unlikely sight of a deer swimming all the way across the channel at Yolk Point. We spotted our first of five Finn Whales the same day just outside Cameron Cove where we anchored for the night.

Figure 24: Pacific White-sided Dolphin. (Janis Grant)

August 19 we took a tranquil zodiac exploration into Cameron Cove in hopes of finding bears. There were none there but when we returned to Island Rover two Black Bear cubs entertained us on the shore. After lunch, we took a zodiac trip to see the sea lion haul-out off Ashdown Island. We counted approximately 300 Steller Sea Lions on the rock and swimming around our zodiac.

Figure 25: Looking for Bears. (Janis Grant)

We left our sheltered anchorage August 20 after an overnight wind storm and cruised the Gribbell Island shoreline where we found a SPIRIT BEAR! Needless to say this caused great excitement and much picture taking. That afternoon, we headed to Bishop Bay to relax in the hot springs. On the way, we were joined by some bow riding Dal's Porpoises.

Figure 26: Spirit Bear. (Janis Grant)

August 21 after viewing more Dal's Porpoises and Humpback Whales we landed at Butedale, an abandoned saw mill, to take on water and walk in the dense rain forest. Back at the boat, we enjoyed the antics of a family of River Otters on the dock. The sun came out in the afternoon! We explored Khutze Inlet hoping for bears, without luck. The next morning, however, we returned and found a healthy young male grizzly bear foraging for salmon carcasses on the river bank. The next morning, during a pre-breakfast trip into Mussel estuary we saw 2 more grizzlies, one swimming, as we stood watching in the pouring rain. This time, I missed the picture in the interest of protecting my camera – but what a wonderful sight!

Figure 27: Salmon Eaters. (Janis Grant)

Throughout the trip, we went ashore numerous times to explore beaches, forest trails, salmon streams and beautiful Pacific Coast habitat. We

also visited local villages and enjoyed the Klemtu Big House, native art. We got so close to a waterfall at one point that we were able to wash the boat's decks.

August 24, with 360 nautical miles under our keel, we finally reached Bella Bella where we said our goodbyes to captain, crew and fellow guests. We were sad to leave all of them and the spectacular beauty of the Pacific Rainforest. It was an outstanding nature experience!

Figure 28: Bubble feeding, Bishop's Bay. (Janis Grant)

6.3 Exploring the Backyard

Shared Discoveries and Discoveries Shared

by Carolyn Bonta

My research investigates changing plant communities in central northern Canada, and this summer was spent at the Northwest Territories—Nunavut border, within the tundra biome. This treeless landscape underlain by permafrost supports a diversity of life forms so incredibly adapted to a cold, dry climate with a short growing season and limited nutrients. Every encounter with a new species draws my curiosity as I ponder what aspects of morphology, physiology, and behaviour support its persistence on the tundra. And a naturalist like myself enjoys nothing better than having occasional company with whom to explore the surrounding environment.

While staging temporarily at the Tundra Ecosystem Research Station, I crossed paths with a like-minded soul named Meghan. We connected instantaneously over a shared fascination with tundra vegetation communities, pondering the impacts of increasing air surface temperatures and shifting precipitation patterns from climate change. But we also found common ground in a broader interest in nature in general: a love of exploring new areas, but also in taking the time to notice new things in familiar places. Imagine my excitement when I found out that Meghan was moving to Kingston to further pursue her research – and that she would be living in my neighbourhood!

Returning to Kingston in August, I found water levels to be higher in Little Cataraqui Creek than I have ever seen them in late summer. Thus, when Meghan arrived from Saskatchewan in September, I figured the best way to start showing her around was to paddle the creek. We spent a beautiful afternoon poking around the section between Bath Road, Meadowbrook subdivision, and under the culvert at Princess Street toward John Counter Boulevard. Meghan was thrilled to closely approach a Great Blue Heron and to glimpse a Painted Turtle – species that we Kingstonians take for granted, but that aren't so common in the Prairies. The highlight for me was flushing a Black-crowned Night Heron, a species I hadn't previously seen in this section of the creek.

Since then, Meghan and I have wandered Marshlands Conservation Area and adjacent lands, with me pointing out my most interesting discoveries and favourite spaces: the small parkette where delicious Giant Puffballs emerge every fall. A young Tulip Tree growing amidst an overgrown hedgerow, whose presence came to my attention via a single leaf on a nearby street last December – presumably planted, but by whom, when and why? My marsh monitoring sites and how bird species and frog abundance have changed over the past 20 years. A small wooded area where Great-horned Owls used to nest, and where I have re-

cently begun seeing these majestic owls again. An enormous tree – a poplar, I suspect – that sadly came down in a storm last fall. My survey route for the Kingston Christmas Bird Count. Where I access the creek in winter to skate, ski, and snowshoe. The stand of cattails where Least Bitterns are found. Remnants of an old boardwalk from decades back when the trail system at Marshlands extended out beyond what is now the Ambassador Hotel...

My list could go on, especially because it isn't finished yet.

6.4 A Look below the Surface of a Lake

Seasonal Survival of Daphnia

by Shirley French

Figure 29

First of all, what are *Daphnia* you may ask? They are a large zooplankter, but a small crustacean (1.5-2.7 mm, adult size, figure 29). Despite their small size, they are a keystone species in most lakes where they occur. What that means is that they can impact an entire ecosystem (a lake) because they are such efficient grazers (their favourite food is microscopic algae, the phytoplankton). As the largest herbivore it means they can have "top down" control of the phytoplankton (unless the fish are controlling the *Daphnia*; figure 30). "Bottom up" control would be where the algae are controlled by the availability of nutrients in the lake. The growth or crop of phytoplankton is one indicator of a lakes nutrient loading, (terms for low, medium, and high nutrients are; oligotrophic, mesotrophic or eutrophic lakes). My study lake, Round Lake on Queens University Biology Station (QUBS) lands, is considered oligotrophic, perhaps it is borderline mesotrophic in springtime. In other words, the *Daphnia* are going to have a limited food supply with changing seasons in Round Lake.

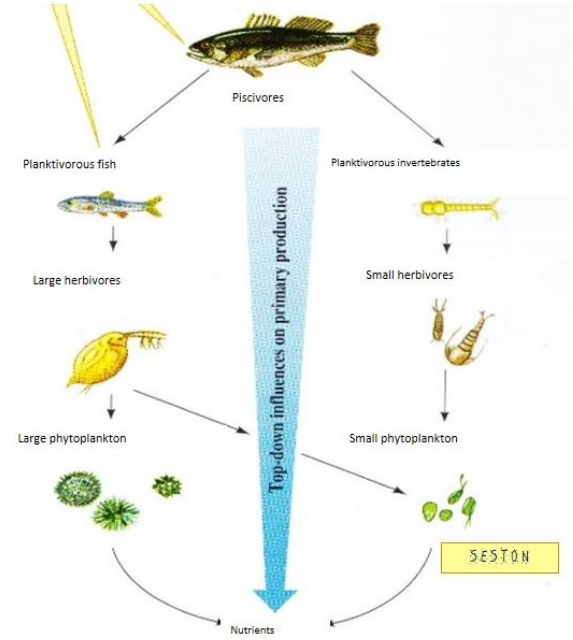

Figure 30

When I first started to look at *Daphnia* as a lab technician in Dr. Bill Nelson's lab (QU), my role was to assist an undergraduate student to collect data in the field and help with Bill's lab experiments. I quickly got wrapped up in the questions that emerged as I helped a student with her experiment

in Round Lake. Why were some of the *Daphnia* turning red? They are typically pale and translucent to help avoid detection by fish predators (figure 31). Why did I find a purple sulfur bacterial bloom in summer? These bacteria are characteristic of rare lakes but this hadn't been reported as such. There was one paleolimnology study that included Round Lake but there were still many unknowns from an ecological perspective.

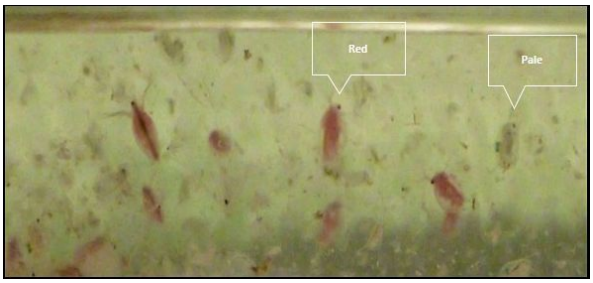

Figure 31

That winter (9 years ago) I got my son, Linden, to come with me to Round Lake in February so that I could determine if the lake had turned-over (stirred up from top to bottom); that would help me define the type of lake that we were dealing with. In the study of lakes an important time of the year can be in the spring and fall when dense cool waters sink and turn-over the water column (pure water is densest at 4°C). As cool waters sink in the fall (for example) they mix with nutrient-rich water, from the bottom of the lake back up to the surface depths, and shallow oxygenated waters get carried down to the bottom depths.

From that winter sampling it was clear that Round Lake was a meromictic lake. That meant that in the 30 meter lake basin, as the dense water circulated down (in the fall or spring) it was stopped at a depth of $\approx$ 20 meters and did not mix any further. The water below that depth was slightly warmer (4.5°C), denser (from an abundance of minerals and salts), low in oxygen, and had a thriving (anaerobic; low oxygen dependant) bacterial community. And so my preoccupation with the life history of *Daphnia pulicaria* in Round Lake began.

The underlying question in evolutionary ecology is often, are there stressors in the environment driving selection within a species or between species? In Round Lake we had diminishing food resources as a function of season (a stressor), low oxygen bottom waters (a stressor), and signs of a trade-off. The trade-off I am referring to is: giving up pale translucency to become red with protein rich hemoglobin (a process that takes $\approx$ 3 weeks if they expose themselves to low oxygen on a regular schedule). The redness would make them more visible to predators but more tolerant of low oxygen (figure 31) and presumably make it easier, physiologically, to graze in the low oxygen depths. It has been recent research efforts that have demonstrated the importance of eating bacteria in *Daphnia* and also that bacteria are NOT as good a 'quality' of food as algae. My time series study on *Daphnia* was an attempt to show how the bacterial community and detritus (collectively called seston) could play an important role in the survival of *Daphnia* in Round Lake.

A bit about *Daphnia* biology is informative here. One useful characteristic about *Daphnia* is the ease that you can peer into their little bodies with a dissecting microscope. You can see their heart beating, the number of babies in their brood chamber (occasionally you will witness a live birth), or you can even see what they have 'likely' been eating (figure 32). In *Daphnia* that have been feeding on algae their gastro-intestinal (GI) tract looks green or yellowish-green, whereas, *Daphnia* fed purple sulfur bacteria have a GI tract that looks reddish-brown.

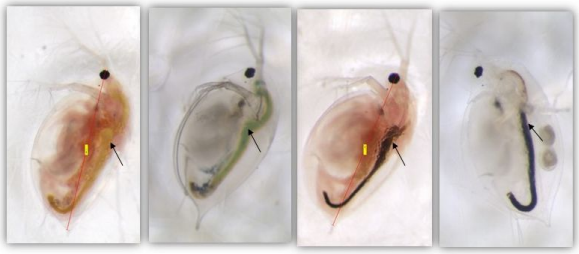

Figure 32

In warm lab conditions of $\geq$ 20°C the lifespan of *Daphnia* is on average only 2 months. However, in Round Lake they spend at least half their time in cool waters (5-15°C) through the warmer seasons and down to 3-4°C in winter. Their lifespan

is therefore thought to be substantially longer by many months. Over one day in summer, they can be in 5-7°C deep water in the daytime and then migrate to shallower, warmer depths ($\geq$ 20°C) at night to feed on algae. This diel vertical migration (DVM) pattern begins in the summer to avoid visual fish predators (*Daphnia* can detect fish via chemicals in water). In one day it is the equivalent of a 2 meter tall person walking 10 km at dawn to a field where they collect and eat food but then have to return 10 km at dusk (yes, they may snack along the way). This daily migration pattern starts in early June, presumably when their fish predators become abundant and are hunting prey. This migration pattern (DVM) no longer occurs in October when the new cohort of adults comes into the population, but it is still strong in September. In the winter you can find them at deep or shallower depths, wherever their food search may take them.

Figure 33

The number of offspring in a female's brood chamber (figure 33) can be used as a measure of their feeding success. Reproductive output is a common metric in ecology. Most of the offspring produced by *Daphnia pulicaria* are going to be daughter clones but they do have a period of sexual reproduction. In early May, when food supply starts to decline, and daylength is long (previously studied environmental triggers), some *Daphnia pulicaria* females produce males. The resulting sexual reproduction concludes with a 'resting' egg pack (of 2 eggs) that is shed during the mother's next moult. These resting eggs are so numerous that they look like someone has released pepper grains into the lake. This is the way in which a bird such as a Loon can pick up the resting eggs in their feathers or on their feet and carry them off to another lake.

The goals of my study were to look at the importance of depth choice with respect to available food and determine, 1) when and why red *Daphnia* appeared in the population, and 2) if *Daphnia* were able to overwinter successfully. As one might expect *Daphnia* begin to flourish in the spring (figure 33). The maximum egg production in 2015 occurred in April followed by a peak in the abundance of adults in late May (the young produced in April would grow to adulthood by May). These adults were almost all pale *Daphnia* (<10% were reds) which was a reflection of where they were spending their time feeding, that is, at shallow well oxygenated depths (above 10 meters). By June they showed typical DVM patterns, migrating to deeper depths in the day and moving back up to shallower depths at dusk. During the day, the *Daphnia* could encounter higher food concentrations at depth.

More effort is needed to graze in summer when there are low amounts of phytoplankton, but if they can go the "extra mile", (in this case, extra meters) they can fill up on bacteria and detritus. To more efficiently exploit the low oxygen zone some *Daphnia* expend the energy to make hemoglobin. My measurements of carbon, in the algae, bacteria, or detritus, filtered from discreet water depths, was 2 to 10 times greater in the low oxygen seston zone, than in the sunlit phytoplankton zone. Of the two groups of adults, it is the reds that were found to have a deeper migration behavior, day or night (researched by Queen's student Ariel Gittens). When pale *Daphnia* were forced to have deeper migration patterns (using enclosures) and reds were forced to have shallower migrations, the fitness of the pales suffered, compared to the red *Daphnia* (researched by Queen's student Adam Meyer). In late summer and into the fall, 2014, I found that egg production was also higher in the red group compared to the pale group (figure 34). This suggested that the fall offspring, new young pales, were destined to be the group working to

survive through the winter season. If necessary, when they became adults they could up-regulate hemoglobin like their mothers. The fall generation were mostly born from mother's spending more time foraging on seston in the low oxygen zone than the pale adults (>50% of adult population were reds in figure 34). On the other hand, juveniles are inclined to seek out phytoplankton from the shallower depths. Perhaps the tendency of the mothers to feed more on seston leaves more algae for their young.

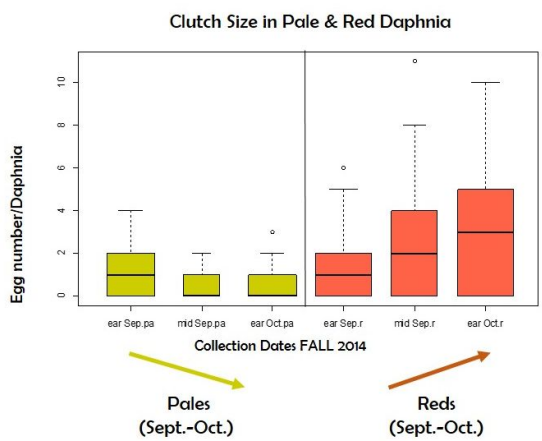

Figure 34

Just as the Wildebeest of the Serengeti migrate to the Mara River in search of greener grass during the dry season; *Daphnia* in Round Lake need to migrate to deeper depths during late summer and fall because of the limited amount of algae. The seston associated with the low oxygen depths in this meromictic lake system, is an essential part of the life history of this species. In the summer, daily migrations to avoid fish happens to be coincident with the low levels of phytoplankton in the upper water layers, but in this lake environment, they have a rich supply of seston at or below $\approx$ 15 meters. By up-regulating hemoglobin, adult *Daphnia* can more effectively exploit the low oxygen (high carbon) zone to feed on seston. They can still graze on the phytoplankton when it is available. Higher reproduction (cloning) in the fall, among the red females, demonstrates that they had a feeding advantage over the pale adult group in the autumn. This is thought to directly affect the overwintering population by providing a second high peak in the adult population in October, before the onset of winter, when they all suffer higher mortality. Strong selective pressures on *Daphnia pulicaria* are suspected so further work is being done on the metabolic enzymes in pales and reds in Round Lake, compared to this species in three other Ontario lakes (Queen's student Kurtis Westbury).

As Charles Darwin expressed "Here he [the naturalists] suffers a pleasant nuisance in not being able to walk one hundred yards without being fairly tied to the spot by some new and wondrous creature." I'm afraid that is what has happened to me in this project, as many of you in the KFN can probably relate to.

7 KFN Outings

7.1 Amherst Island Ramble (August 20, 2019)

by Erwin Batalla

Four members (Erwin Batalla, Gary Hillaby, Ken Ross and Alexandra Simmons) met at the parking lot of the Gardiners Plaza and carpooled to the Amherst Island ferry terminal in Milhaven. There, we met with another three members (Maureen Addis-Martin, Jackie Bartnik and Jane Revell). After an uneventful ferry ride, we arrived on the island and were joined by Chris Orr, a new member. We proceeded to the Martin Edwards Reserve where we were immediately greeted by a Water Snake. The weather was sunny and calm and the temperature was near 20°C.

Thistle, goldenrod, yarrow, stinging nettle, evening primrose and milkweed were abundant along the "path" but we plodded through surrounded by Monarch butterflies and a few skippers. There were still a few straggling Purple Martin near their summer houses. We noted that

the high water level in the past two years has reshaped the shoreline, creating a natural dike that traps some water inland. After passing the solar panel shed and a couple of Hawthorn bushes, we observed two Whimbrels flying by, a rare sight. A Bald Eagle and a few Barn Swallows were more expected observations. We were happy not to see Wild Parsnip and Dog-strangling Vine where they had thrived two years ago. After trampling down a path to the berm, we discovered that the ponds' water level was fairly low and no shorebirds were observed. The willows have grown substantially and their roots help to stabilize the dike.

On the return trip to our car, we met Rosemary Bradley. She joined us and we took our cars 500 m north and walked into the Sylvester-Gallagher Nature Reserve to have our lunch. While sitting in the grass, we saw a Cooper's Hawk and heard a Common Raven. We noticed many saplings of White Pine surrounding the mature trees. The forest appears to sustain itself.

After lunch, we drove to the parkette at Lane's End on the south shore of the island. On the way, we noticed a Great Blue Heron who stood motionless along the shore. Chris was delighted to get a very good look at this prehistoric-looking species. The lake was relatively calm but still high. A lone Killdeer was patrolling the beach. We returned to the mainland on the 2 pm ferry.

7.2 Rambling at Rose-Marie Burke's Lakeside Refuge (September 3, 2019)

by William Depew

Attendees: Anne Robertson (leader), Rose-Marie Burke (host), Jackie Bartnik, Erwin Batalla, Rosemary Bradley, Bill Depew, Janet Elliott, Gary Hillaby, Paul Mackenzie, Jane Revell, Ken Ross, Maureen Martin, Karen Stinson, Peter Waycik, Kathy Webb.

Figure 35: Bluish Green Frog. (Kathy Webb)

Fifteen keen ramblers, led by Anne Robertson and host Rose-Marie Burke, took advantage of a wonderful opportunity to explore the natural beauty of Davis Lake at Lakesun Camp. On this most pleasant of mornings (temp 18-21°C; wind 3km/h E), following Rose-Marie's introduction to the camp and the immediate geography, we were treated to first hand views of a young American Toad and a shy Spotted Salamander both of which she had apprehended earlier. Another noteworthy amphibian discovered soon after we arrived was a blue morph Green Frog. Interestingly, Rose-Marie said that a lot of blue morph Green Frogs had been seen in the area over the years, either with a bit of blue or almost entirely blue.

Figure 36: Spotted Salamander. (Kathy Webb)

The layout of the camp allowed us to "fan out" about the buildings, over the lawns and fields, into the woods and along the reed-bedecked shoreline

in search of the usual suspects and unexpected surprises. A close encounter with a small cadre of bees, disturbed by our foray on a makeshift trail into the woods, provided additional and, fortunately, injury-free excitement. After a morning of exploration we assembled next to a sandy beach to refuel lakeside. Our "safari" concluded with a short trek through the woods surrounding the camp with Rose-Marie pointing out several interesting botanicals. Notwithstanding Anne's daunting task of keeping the group quasi-organized, as the lists following show, we enjoyed a most successful outing.

Figure 37: Northern Watersnake. (Kathy Webb)

The recorded species of interest included a mammal – a mink, a painted turtle, 2 snakes, 7 amphibians, 25 Lepidoptera, 10 dragonflies/damselflies, 1 fungus – orange jelly spot, Ramshorn snails, 1 fish, 24 birds, and at least 56 plants. The highlights included numerous moths awaiting the warming of the sun on building walls, a Pickerel Frog (found by Maureen), a blue morph Green Frog (Maureen, Rose-Marie), Northern Watersnakes (Kathy), 3 Spotted Salamanders (Rose-Marie), several Giant Swallow-tailed Butterflies, a Leonard's Skipper (Paul), a Common Green Darner (Peter), the mink (Gary), a Giant Swallow-tailed Butterfly caterpillar (Gary), a Smeared Dagger Moth caterpillar (Gary), an IO Moth caterpillar (Maureen, Jackie), a Gray Tree Frog (Bill), a Yellow-throated Vireo (Erwin, Paul), Ladies' Tresses (Anne), Rose Campion (Bill), Bladder and Hop Sedges (Paul), Silverrod (Rose-Marie), a Brown Bullhead fingerling (Rose-Marie) and a Common Loon with one juvenile in tow.

Many thanks to Rose-Marie for sharing her excellent retreat with us and to Anne for helping to expand our knowledge of the natural world.

Figure 38: Smeared Dagger Moth caterpillar. (Kathy Webb)

Figure 39: Crocus Geometer Moth. (Bill Depew)

Species list:

Mammals: American Mink

Amphibians: Spotted Salamander, American Toad, Green Frog, Gray Treefrog, Pickerel Frog, Northern Leopard Frog, American Bullfrog

Reptiles: Garter Snake, Northern Watersnake, Painted Turtle

Mollusks: Ramshorn snails

Fish: Brown Bullhead fingerling

Odonates: Common Green Darner, Black-tipped Darner, Widow Skimmer, Blue Dasher, Autumn Meadowhawk, White-faced Meadowhawk, Variable Dancer, Slender Spreadwing, Swamp Spreadwing, Variable Dancer.

Moths and butterflies: Leonard's Skipper, Least Skipper, Eastern Tailed Blue, Giant Swallowtail butterflies and caterpillar, Io moth caterpillar, Pale Beauty moth, Yellow-collared Scape moth, Smeared Dagger moth caterpillar, Milkweed Tussock moth caterpillar, Isabella Tiger moth caterpillar (Woolly Bear caterpillar), Black and Yellow Lichen moth, Banded Tussock moth, False Hemlock Looper moth, Drab Brown Wave moth, Zigzag Herpetogramma moth, Rose Hooktip moth, Hemlock Looper moth, Habilis Underwing moth, Crocus Geometer moth, Chestnut-marked Pondweed moth, Yellow-Gray Underwing moth, Great Oak Dagger moth, Yellow-spotted Renia moth, Brown Bark Carpet Moth, Monarch butterflies, caterpillar and chrysalis.

Other insects: Oblong-winged Katydid, Jagged Ambush Bug, Oleander Aphid, Swamp Milkweed Beetle, Two-striped Grasshopper, Milkweed Leaf Beetle, Acanthocephala Terminalis, Fraternal Potter Wasp.

Plants: Late Goldenrod, Blue-stemmed Goldenrod, Silverrod, Yellow Foxtail, Common Ragweed, Bladder Campion, Red Clover, Helleborine, False Solomon's Seal, Deptford Pink, Common Milkweed, Swamp Milkweed, Marginal Wood Fern, Sensitive Fern, Royal Fern, Maidenhair Fern, Trillium sp, Fraser's Marsh St. John's-wort, Side-flowering Skullcap, Queen Anne's Lace, Boneset, Tearthumb, Ladies' Tresses, Bulb-bearing Water Hemlock, Blue Flag, Dodder, Climbing False Buckwheat, Thimble weed, Mullein, False Nettle, Royal Fern, Water Willow, Hog Peanut, Herb Robert, Virginia Creeper, Striped Maple, Partridgeberry, Pickerelweed, Swamp Loosestrife, Marsh Bellflower, Rose Campion, Prickly Ash, Prickly Gooseberry, Cranberry Viburnum, Black Huckleberry, Early Meadow-rue, Black-eyed Susan, Nodding Beggarticks, Buttonbush, Bur-reed, Bottlebrush Grass, Cyperus Sedge, Triangular Sedge, Hop Sedge, Bladder Sedge, Fringed (hanging) Sedge.

Fungi: Orange Jelly Spot

Birds: Common Loon, Great Blue Heron, Turkey Vulture, Downy Woodpecker, Hairy Woodpecker, Eastern Phoebe, Great Crested Flycatcher, Yellow-throated Vireo, Red-eyed Vireo, Blue Jay, American Crow, Common Raven, Black-capped Chickadee, White-breasted Nuthatch, American Robin, American Goldfinch, Ovenbird, Common Yellowthroat, Magnolia Warbler, Blackburnian Warbler, Chestnut-sided Warbler, Black-throated Green Warbler, Pine Warbler, Scarlet Tanager.

7.3 Teen Canoe Trip on Little Long Lake (September 14, 2019)

by Nicholas Lowe

Seven Kingston Teen Naturalists met for a canoe trip on September 14. It was very windy with an average of 20°C and partly cloudy. We stopped to investigate some lily pads (Water shield, Yellow, and White). We also saw Turkey Vultures, Great Blue Herons, a Common Loon, a Belted Kingfisher, a Blue Jay and Ravens.

We had lunch on an amazing island and found some crayfish and a Pandora Sphinx caterpillar. We also saw two flowers: White Turtlehead and Blue Closed Gentian.

On the way back it was much easier to paddle because the wind was behind us. On the way back we caught two frogs and noticed a foam on the surface of the water and talked about what it was (Langmuir spirals) and how it formed. Then after a few more minutes of paddling we were back at the docks at about 2:30 to load the canoes and write in our field note books.

A big thanks to Lee Ann and Don Connolly for letting us unload and load our canoes on their docks.

It was a very fun day for everyone.

7.4 Field Trip to Helen Quilliam Sanctuary Photos (September 15, 2019)

Figure 40: Gray Ratsnake. (Peter Waycik)

Figure 41: Hickory Tussock Moth caterpillar. (Peter Waycik)

Figure 42: Eastern Giant Swallowtail caterpillar. (Peter Waycik)

Figure 43: Polyphemus Moth caterpillar. (Peter Waycik)

Figure 44: Most likely a Common Thread-waisted Wasp. (Peter Waycik)

7.5 Kingston Mills Ramble (September 17, 2019)

by Peter Waycik

Sixteen participants met at the Kingston Mills Locks parking lot on September 17. The weather was clear and sunny and ranged from 20 to 24 degrees Celsius.

The ramble started off with a large dead Leopard Frog along the edge of Kingston Mills Road which we examined and left in the same spot for retrieval on the way back.

The first part of the ramble was along the 800 m westerly earth embankment dam. This dam holds back the water of Colonel By Lake along with a 120 m stone arch dam and weir and a 600 m easterly earth embankment dam. Along the dam, we observed opportunistic plants such as Goldenrod, Wild Parsnip and *Phragmites* taking hold.

Near the end of the westerly earth embankment dam, the ramble proceeded onto the Edenwood Park trails. These trails are semi-private intended for the use of the residents in the area, however, Anne has many connections and knows someone who lives in the area.

Figure 45: Woolly Alder Aphids. (Peter Waycik)

Gary who seems quite able to find interesting life among otherwise confusing foliage drew everyone's attention to several groups of Woolly Alder Aphids, some with more advanced wool spinning abilities than others. Mary kept track of the many turtle eggs caches that were now empty having hatched their brood into the waters around Kingston Mills. The birders were excited to follow a flock of approximately eight Palm Warblers whose vertical tail wagging made them easy to identify. They seemed to enjoy staying ahead but were otherwise not overly bothered by the presence of a group of humans. Janis recorded our bird sightings and ended up with a list of 34 species that included a Common Gallinule, Savannah Sparrows, a Cape May Warbler and the aforementioned Palm Warblers. Some ramblers were distracted several times by Painted Lady butterflies that seemed keen on the thistle and other flowering plants along the earthen dam.

Figure 46: Painted Lady butterfly among the thistles. (Peter Waycik)

The return journey followed the original route in reverse. Thanks to Janet Elliott for the following lists:

Insects: Aphids, Painted Lady, Ladybug nymph, Ladybug adults, Monarch caterpillar and butterflies, Wooly Aphids, Cricket, Grasshoppers, Banded Tussock Moth caterpillar, Large Milkweed Bug nymphs.

Trees: Eastern White Cedar, Balsam Fir, American Elm, Basswood, Tamarack, White Pine, Sugar Maple, Red Maple, Manitoba Maple, Ash sp., Mossy Cap Oak, White Oak, Red Oak, Willow sp. (several), Apple, Cottonwood (*Populus deltoides*), Alder.

Shrubs: Highbush Cranberry (big clusters of

red berries), Nannyberry (broad stem on leaf), Grey Dogwood (mix colours to get grey), Red-osier Dogwood, Prickly Ash, Buckthorn, Staghorn Sumac, Poison Ivy, Virginia Creeper, Thicket Creeper (*Parthenocissus vitaceae*), Wild Grape, Dog-strangling Vine, Red Raspberry.

Plants: Mossy Stonecrop (introduced, *Sedum* sp.), Cinqfoil sp., Ragweed, Common Mullein, Viper's Bugloss, Common Dandelion, Black Medick (Pea family, Spike on centre leaf), Birdsfoot Trefoil (Pea family), Red Clover, White Sweet Clover, Chicory, Bladder Campion, Queen Anne's Lace, Bittersweet Nightshade, Jewelweed, Beggar Tick (or Stick-tight *Bidens frondosa*), Goat's Beard (Johnny-go-to-bed-at-noon) , Bull thistle, Canada thistle, Prickly Lettuce, Pale Smartweed (*Polygonum* sp.), Lady's Thumb (*Polygonum* sp.), Bindweed (like Morning glory also *Polygonum*), Wild Parsnip, Common Milkweed (No Swamp Milkweed), Cress sp., Goldenrod sp., Evening Primrose, Blue-stemmed Goldenrod, Common strawberry, Dodder, Catnip, Yellow Toadflax (Butter and eggs), Field Pepper-grass (small ovate capsule on short stalk), Willowherb (related to fireweed, pink flowers, hairy seed capsules), Ox-eye Daisy, Common Cattail, Narrow-leaved Cattail, Nettle or Wild Mint, Slender White Aster, Hog peanut, Burdock, Elecampane, Vetch, Dock sp., Coltsfoot, *Phragmites*, Water Lily probably white, European frog's-bit (introduced, floating, one inch leaf), Horsetail sp., Algae bloom (Phytoplankton), Sensitive Fern.

Invasives: No Garlic Mustard seen, A few patches of Dog-strangling Vine, widespread Wild Parsnip away from the berm, European Frog's-bit, Large patch of healthy *Phragmites*.

7.6 Helen Quilliam Sanctuary Ramble (October 1, 2019)

by Gary Hillaby

A small but enthusiastic group headed to Helen Quilliam Sanctuary in northwest Frontenac. Early threatening skies were probably the reason for our small number but by mid-morning the overcast skies greatly improved. Originally, the property was called the Otter Lake Sanctuary and in June 1995 it was renamed after Helen Quilliam for her years of outstanding service with KFN. Over the years, the sanctuary has grown to 500 acres and within its borders there are rocky outcrops, both deciduous and coniferous forests as well as wetland areas. The land is a showcase of what the Canadian Shield has to offer. The property is owned, used and maintained by the Kingston Field Naturalists.

Our observations were diverse: Great Blue Heron, Turkey Vultures, Belted Kingfisher, Downy Woodpecker, Pileated Woodpecker, Northern Flicker, several Blue Jays, American Crow, Common Raven, Black-capped Chickadee, White-breasted Nuthatch, American Robin and an American Goldfinch. Chipmunks were very busy preparing for winter and Painted Ladies and Monarch butterflies were spotted fluttering around. A Gray Ratsnake was observed catching some rays near the beaver dam we had to cross and we also saw five Common Garter Snakes throughout the outing.

Figure 47: Gray Ratsnake. (Anne Robertson)

Anne was with the group and pointed out several botanical species as well: Orange Bittersweet, Yellow Birch, Flattop White Aster, Caribou Moss, Maidenhair Fern, Winterberry Holly, Indian Cucumber Root, Leafy Jelly Fungus, Round-

lobed Hepatica, Mullein, Horse Weed Pile Wort, Hairy Cap Moss, Striped Maple, Virginia Creeper, Cockscomb Coral Fungi, Red Stem Goldenrod and Dead Man Fingers Fungus. There was also examples of British Soldiers, Fairy Cup and Dog Eared Lichen all in close proximity. There were Hickory Tussock Moth caterpillars observed and Anne pointed out a swarm of American Oil Beetles.

Figure 48: Anne's thumb with an Oil Beetle. (Gary Hillaby)

Our group stopped to have lunch near one of the multiple beaver ponds on the property. While eating, we noticed Northern Leopard Frogs, Watershield, Yellow Pond Lilies, Wool Rush, Swamp Loosestrife and Steeple Bush. Meadowhawks were performing a reproductive ritual of laying eggs into the water. After lunch we made our way out of the Sanctuary. We observed Bitternut Hickory, Common Prickly-ash, American Beech, Beech Drops, Herb Robert, and False Solomon Seal before we made it back to our vehicles. On our way back to Kingston we stopped to assist a Snapping Turtle crossing the road . The good deed was accomplished and all our appendages were still intact.

Our thanks for the great day and to Anne Robertson for always showing us the beauty in nature.

Trails covered were Rideau Trail to Porcupine Trail then north to the Roland Beschel Trail and on north to the Greenwood Track. We also walked the Betty Hughes Trail.

7.7 Field Trip to Prince Edward Point (October 5, 2019)

by Carolyn Bonta

Figure 49: KFN Members at the new banding station. (Gaye Beckwith)

Under blue, sunny skies on Saturday, October 5, eighteen KFN members joined co-leaders Michael Johnson and Carolyn Bonta to bird Prince Edward Point. Stopping at Traverse Woods, we encountered a flurry of activity as numerous kinglets, warblers (mostly Yellow-rumped, but also one Palm and some Black-throated Green), and vireos (Blue-headed and one Red-eyed) flitted among the trees. By contrast, the woods at Prince Edward Point were surprisingly quiet, apart from several large flocks of Blue Jays. Along a stroll to the lighthouse, some participants were treated to a close-

up look at a Black-crowned Night Heron. The highlight of the day was a strong migration of Sharp-shinned Hawks, with over a dozen being counted soaring low overhead. Our group noticed approximately 30 species of bird on the National Wildlife Area property and at Prince Edward Point.

Despite a quiet morning for birds, there was a fair amount of activity at the Bird Observatory. One volunteer invited us to accompany him on a net check, and we watched Head Bander Matt Isles extract a sparrow for banding. Outside the newly-constructed banding lab, the Kingston Field Naturalists were warmly welcomed by PEPtBO President Peter Fuller, who explained how the new building offers an effective work space that allows banders to offer public outreach without compromising the safety of the birds: Large windows (appropriately decaled to prevent bird colllisions) allow the public to watch the banding process; rear windows offer a safe release area for birds; a covered overhang protects visitors during inclement weather and embeds appropriate lighting for observing night-time owl banding; and the overall design of the building seals up for safety in the off-season and easy cleaning in spring. As we learned of these features, volunteer banders would intermittently interrupt Mr. Fuller to show off birds in hand: Golden-crowned vs. Ruby-crowned Kinglets, an inconspicuous Brown Creeper, or screamingly vocal Blue-headed Vireos.

Departing PEPtBO, we stopped again at Traverse Woods for lunch. Some participants returned home on the 1 pm ferry, while others enjoyed an ice cream lunch before squeezing onto the 2 pm ferry to return to Kingston.

Figure 50: Nashville Warbler about to be banded. (Gaye Beckwith)

7.8 Ramble to the Property of Ed Fletcher (October 15, 2019)

by Ken Ross

Figure 51: Tree huggers. (Janis Grant)

October 15, a clear, crisp and cloudless Autumn morning, found 13 KFN ramblers exploring the woods on Ed and Heather Fletcher's land north of Sydenham. Their property surrounds most of the circumference of Bulls Eye Lake which has one cottage located on it. One of our goals was to find as many plants as possible that were flowering at this time of the year. Anne Robertson brought a twig with yellow flowers from a native witch hazel that she has growing in her garden. Janet Elliott made an excellent list of 80 species seen on this ramble (below).

As we walked along a small creek flowing from the lake, we found liverworts growing but not blooming, near the moist stream edge. This same area

had many different types of mushrooms emerging from moist detritus, and from dead and live trees. Among the most interesting was the lobster fungus, which has a bright red colour similar to cooked lobster and a mildly fishy odour. It is peculiar in that it parasitizes other fungi.

We did find a Blue-spotted Salamander and a Red-backed Salamander hiding under bits of rotting wood.

The avifauna was not numerous but we did identify the following species: 13 Canada Geese, 1 Great Blue Heron, 1 Northern Flicker, 4 Blue Jays, 1 White-breasted Nuthatch, 3 Common Ravens, 5 Black-capped Chickadees, 2 Hermit Thrushes (guttatus group), and 3 Common Grackles.

It is always enjoyable learning about the many species and their interactions in our environment. We are very grateful to Ed and Heather for granting us the privilege to explore their property.

Figure 52: *Phlebia coccineofulva* was one of the many fungi found on the ramble. (Janet Elliott)

Species List (excluding birds) by Janet Elliott

Vertebrates

Eastern Chipmunk
Grey squirrel
Mouse (speedy!)
Turtle eggshells
Eastern Red-backed Salamander
Blue-spotted Salamander
Leopard Frog

Invertebrates

Bag worm (moth) (*Psyche casta*)
Woolly bear caterpillar (Isabella Tiger Moth)
Tent caterpillar egg case
Autumn Meadowhawk

Vascular Plants

Largetooth Aspen
American Beech
Blue Beech aka Ironwood
Yellow Birch (?)
White Birch
White Ash
White Cedar
White Elm (?)
White Oak
Red Oak
Black Cherry
Hemlock
Sugar Maple
Basswood
Prickly Ash
Buckthorn
Nannyberry (winged petiole, pointed buds, buds of flowers swollen)
Wild Grape
Staghorn Sumac
Gray Dogwood
Canada Holly aka Winterberry
Poison Ivy
Maple-leaved Viburnum
Partridgeberry
Dog-strangling Vine
Wild raspberry
Arrow-leaved Aster (leaves with winged stalks)
Purple-stemmed Aster
Heart-leaved Aster
Panicled Aster
Beechdrops
Blue-stemmed Goldenrod

Heal-all
Wild Basil
Deptford Pink
Wool Rush
Oxeye daisy
Dolls eyes (= Baneberry)
Yarrow
Coltsfoot
Hog peanut
Water cress
Bittersweet
Spikenard
Common Milkweed
Vetch sp.
European Gromwell aka European Stoneseed (*Lithospermum officinale*)
Queen Anne's Lace
Common Mullein
Burdock
Smartweed sp.
Wild Iris aka Blue Flag
Common Dandelion
Red clover
Plantain sp.
Early Meadow Rue
Canada Anemone (lower leaves stalkless)
False Solomon's seal
Common Cattail
Field Horsetail
Sensitive Fern
Maidenhair Fern
Christmas Fern

Non Vascular

Snake Liverwort (*Conocephallum conicum*)

Fungi

Gem-Studded Puffball
Lobster Mushroom (parasitic on Milk Mushrooms)
Coral fungus sp.
Coral fungus sp.

7.9 Teen Trip to the Millen Property (October 19, 2019)

by Abel Corbett

Figure 53: Before the clean-up. (Thom Snowman)

With Connor, Amelie, Abel and Damon, the Teens went to clean up the new site owned by the Land Conservancy for Kingston, Frontenac, Lennox & Addington, the Millen property. The temperature was 15°C. When we got to the site we met Thom Snowman who had the truck for transporting the garbage, and we picked up a lot of garbage–rusty metal and glass–filling the truck. Then we got our lunches from the car and hiked to a big rock overlooking the pond to eat. We saw a Turkey Vulture here. On the trail after lunch we saw: Caribou Moss on a rock, a large glacial erratic (estimated to be 18.5 tons) and a rock with white stripes of quartz. We went over a creek and later ate a plant that tasted like mint–Wintergreen. After that we headed back and then looked at a Phoebe nest above the door of the cabin. Then we all went to Damon's house for a snack of hot chocolate, brownies and scones.

Figure 54: After the clean-up. (Thom Snowman)

7.10 Parrott's Bay Ramble (November 5, 2019)

by Erwin Batalla

Figure 55: Tundra Swans in Parrott's Bay (Peter Waycik)

At the meeting place in the Gardiners Town Centre, the weather did not seem very conducive to a walk at Parrott's bay. But Nature smiled on the 11 participants and there was no rain for the next 3 hours. Anne, Erwin, Gary, Jackie, Ken, Lena, Louise, Mary, Maureen, Mike and Peter gathered at the northern parking lot. We proceeded along trail 5 following the northeast shore of the bay. A few ducks were in the bay but the highlight was a group of 60 Tundra Swans which included one juvenile bird. We were careful not to disturb them and they provided amazing looks. We discussed 25 species of plants, some of them still flowering like Herb-Robert, Arrow-leaved Aster, Viper's Bugloss, Deptford Pink and Canada Thistle. One plant of the parasitic Beechdrops was observed. A late Leopard Frog and a cohort of Grey Squirrels were seen. A little further along, we came upon a feeding flock of birds that included Yellow-rumped Warblers with some Kinglets. There were several clusters of Ferns and a patch of Horsetail. White and Red Cedar, Black Cherry, American Beech, White Spruce, White Pine, Eastern Hemlock and Balsam Fir were the common trees.

7.11 Mostly Mammals (November 8-9, 2019)

Teen Trip to Elbow Lake Environmental Education Centre

by Anne Robertson

Five Teens (Abel, Connor, Damon, Nick and William) signed up for a Mostly Mammals workshop overnight at Elbow Lake. We focussed on mammal species of Eastern Ontario. On Friday (November 8) we looked at Mammal skulls and bones and on Saturday Mammal Tracks and signs including scats and finally fur/hair.

We had two (heated!) cabins and the Pavilion so were very comfortable for our stay. A light snow was falling later that night and everything was totally calm and quiet. A winter wonderland.

We began by piecing together a White-tailed Deer skeleton as an introduction to mammal bones. We then focussed on skulls of local mammals with the help, stories and insights of Dale Kristensen who had joined us.

Figure 56: Examining mammal skulls (L to R) Dale, Connor, Nick, Abel. (Anne Robertson)

Later we were joined by Mike Johnson and we walked to the beach and tried howling for wolves/coyotes. We also checked out a new beaver lodge and a bat box and looked at the moon (waxing) and some constellations.

Figure 57: Measuring animal tracks. (Mike Johnson)

Teens were up early and rang the bell for breakfast. (Everyone took their own non cooking food. Boy can those Teens consume a lot of hot chocolate!). They slept well in the heated cabins and were appreciative of the luxury! After breakfast we had a session on Mammal tracks (tracks and track patterns), feeding signs including scats, and mammal homes. Examples of feet were examined. We went for a walk for an hour or so, round the Nature Trail and found Otter, Deer and Mouse tracks in the snow. Mike left us and Shirley French joined us. We set up slides of various mammal hairs which we had imprinted in plastic and as detectives tried to determine which mammal species' hair under the microscope. (Each Teen had a different unknown species).

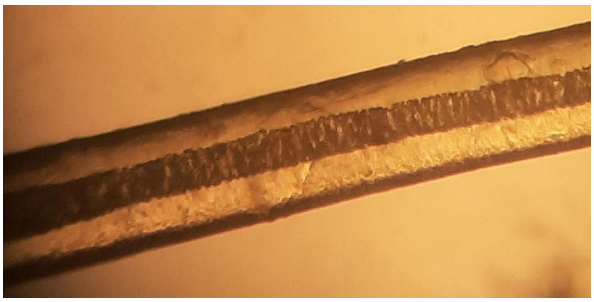

Figure 58: Black Bear hair under microscope. (Shirley French)

After lunch we examined a variety of mammal pelts and mounts and did a test/game of recognising several species' fur. Our conclusion was marking off, on a species list of Mammals of Eastern Ontario, all the things we had seen for the different species. Out of 52 species we had something for 34 species either skull or feet or track or scat or fur or full mount or any combination of these.

A quick tidy up with lots of cooperation before we left at 2:30 pm. A most successful and enjoyed event for our November meeting. Thank you all for making it fun and educational.

Figure 59: Teen workshop hike at Elbow Lake. (Mike Johnson)

7.12 Frink Centre Ramble (November 19, 2019)

by Maureen Martin

Figure 60: Some of the ramble participants. (Nancy Spencer)

It was a calm, partially overcast day as eight KFN members arrived at this Quinte Conservation area, north of Belleville. The trails were icy where the snow from the previous week had been walked on.

It was a surprise to see a large area covered in snow fleas, and as we walked on, a spider, seed bug and over a half dozen moths. More open areas along the trail revealed such shrubs as Red-osier Dogwood, Grey Dogwood and Highbush Cranberry... with Wild Cucumber climbing among them. The forest was rich in its diversity... with Eastern Hemlock, Red and White Cedar, White Spruce, Black Cherry, Eastern Hop-hornbeam, Blue-beech, White Pine, White and Red Oak, Aspen, Yellow Birch and Bur Oak... all homes for a few Red Squirrels.

Along the forest floor Partridge Berry, Marginal Wood Fern, and fruiting bodies of Ostrich and Sensitive Fern poked through the snow. Many bracket fungi, including Artist's Conk, were seen on trees and stumps, as well as Orange Jelly Spot. A lichen, Old Man's Beard, that hung from the branches, gave the forest a more southern look.

The trail wrapped around the bottom of a steep, obloid hill, known as a drumlin... a large mound of sediment left behind by glacial retreat. Approximately mid way, we hiked to the top of the drumlin, about seventy feet high, and down the other side, leading us to a very wet forested area, dominated by Red and Silver Maple. A sugar shack nearby indicated the likely presence of Sugar Maples as well.

This beautiful forest trail soon led us to an open marsh area surrounded by Black Spruce. A long board walk took us through the marsh, where, surprisingly, Pussy Willows were in bud. Remnants of Blue Flag Iris flowers were seen among the Bulrushes, with some Purple Loosestrife. Native Clematis could be seen in the distance. Beside the boardwalk were two beaver lodges. One beaver swam around while the other did not seem to care that we were there... just continuing to eat branches that it had gathered beside the lodge.

It was a great day for November, 4°Celsius and dry. This is a fabulous forest. We hiked 5.5 km in total. Our bird count was low... seven species in total: Golden-crowned Kinglet, White-breasted Nuthatch, Black-capped Chickadee, Blue Jay, Mourning Dove, Pileated Woodpecker and Canada Geese. Could this be a sign of a harsh winter to come?

Figure 61: Bruce Spanworm moths were active on the trail. (Bill Depew)

7.13 Ramble to Little Cataraqui Creek (December 3, 2019)

by Jackie Bartnik

It was a magnificent day for a Ramble with fresh snow from the weekend and wonderful sunshine. Twelve staunch naturalists came out and enjoyed the -10°C weather with hardly any wind. By noon it had warmed up to -3°C and the sun was making the snow sparkle.

We started the ramble by admiring the ice crystals on the grasses and reeds in the marsh and viewing the antique and modern versions of the trail map. The trail runs along the west side of the Little Cataraqui Creek north of Malabar Drive and heads in a NNE direction. The Residents of the surrounding subdivision had luckily filled up their bird feeders so the birds were out in droves, however, the natural landscape and abundance of wild food were certainly contributing to the numbers. The birds made a joyful symphony of sound and seemed to be also enjoying the sunshine. We observed a flock of about 50 House Finches as well as a few Dark-eyed Juncos, Goldfinches, American Robins, Northern Cardinals, and a Hairy Woodpecker. A magnificent Red-tailed Hawk posed in a tree by the Creek cautious to return to its fresh rabbit kill in the middle of the trail until we had passed.

Figure 62: Some of the approximately 50 House Finches among the Riverbank Grape. (Peter Waycik)

Along the trail, we noted Goldenrod, Aster, Purple Loosestrife, Gray and Red Osier Dogwood, Nannyberry, Blue Spruce, European White Poplar, Dog-strangling Vine, Wild Parsnip, and several grasses. Anne invited us to eat the fly larva that was living in a Goldenrod gall but this delicacy was declined by all. The trail continued under Centennial Drive and eventually ended before the railroad tracks on the south side of Taylor Kidd Blvd. It is there we enjoyed the sweet and juicy fruit of the Riverbank Grape (*Vitis riparia*) that is at its best after the first frost.

At this point, we followed a trail along a tributary of the Little Cataraqui Creek. As we entered the forest, a beautiful Pileated Woodpecker flew ahead of us being quite vocal. A short while later, the same woodpecker was tapping away on a long dead tree unperturbed by our close proximity. As we walked through the woods, we also noticed several vines, Sensitive Fern and an unknown fern. Samples were taken of the unknown fern to identify later. Several large Black Cherry trees and a very large Red Oak tree were observed. The tributary was filled with healthy green Watercress at this point in the trail and fungi of various types were noted in the shelter of the forest.

Figure 63: Watercress in a tributary of the Little Cataraqui Creek. (Peter Waycik)

The return journey followed the same route back and was rather faster paced than the forward journey. The remains of the rabbit kill were decidedly smaller; the assumption being that the hawk had returned to finish the meal. Following the ramble, we enjoyed a meal together as is traditional after the last ramble of the year.

8 Clipped Classics

Excerpts from past issues of The Blue Bill

From 60 years ago ...

From an article entitled, "A Praying Mantis Lays its Eggs," by Deirdre Webb from the December, 1959 Blue Bill. The note and photo were not part of the original article.

[Note: *This article refers to the Chinese Mantis which like the European Mantis was introduced into Canada. The Chinese Mantis can be twice as long as the European Mantis (bugguide.net).*]

Figure 64: Chinese Mantis egg case. (iNaturalist)

How many of you have been puzzled by light brown cocoon-like structures you find so close to the ground on dead branches and fallen trees? I had often come across them myself, but had not given them much thought until, in the fall of 1957, I chanced to discover their origin.

A bright sun and warm southerly wind combined to make October 15 almost hot. The few remaining aster blossoms were humming with bees, while pale sulphur butterflies fluttered about from flower to flower. Other insects were also active, and, on turning over a wooden stake which had been leaning against the woodshed, I discovered a female praying mantis (*Paratenodera sinensis*) laying her eggs. Despite my close examination, she continued undisturbed, giving me an excellent opportunity to observe her actions. When I came along, the egg case was about one-third complete. Each egg, or perhaps several, was laid in an individual "compartment" surrounded on all sides, and thus attached to the others, by a foamy white material produced by the praying mantis and expelled from the tip of her abdomen. This material quickly dried into a hard brownish protective casing. Two incurved claws at the end of the abdomen may have helped to guide the shape of the eggcase, although I could not be certain about this. About 20 minutes later, her supply of eggs exhausted, the mantis finished the case and moved off. The completed "cocoon", about $1\frac{1}{2}''$ long and $\frac{1}{2}''$ wide, was almost perfectly symmetrical, tapered at both ends and rising to a height of about $\frac{3}{4}''$ in the centre. This convex surface assists in the shedding of moisture, while the large surface area, in comparison with relatively small volume and density, facilitates the absorption of heat when the eggs are ready to hatch.

These eggs, about 200 of which are laid in the fall, lie dormant over the winter, with the young not hatching until late April or May. All the eggs in a case hatch simultaneously. The young mantids, tiny replicas of the adults, though wingless, spread out in all directions quickly, for at this stage they are cannibalistic and the slow are promptly eaten by their siblings. The survivors immediately begin their predatory existence by capturing other insects, and lead a more or less solitary life, except during the mating season.

Mantids belong to a large order of insects, the Orthoptera, which includes such familiar members as grasshoppers, crickets, katydids, walking sticks, and cockroaches. Fossil records show that this

order was well established by the Carboniferous period, some 280 million years ago. Thus these insects are relatively primitive, and their life cycle constitutes what is known as incomplete metamorphosis: a gradual change from egg to adult through a number of nymphal stages with no quiescent, or pupal stage occurring.

The realization that I had been fortunate enough to observe an action which was instinctive to the mantis a million years before the first tiny mammals made their appearance gave me a sense of the space of time which was almost impossible to grasp. I think it is this that contributes so much to the fascination of insect study.

9 Reader Contributions

9.1 Poetry

Love

by Meg Bredon

Olive brown with speckled breast

The hermit thrush was still warm

When lifted from the gravel shoulder

I held it on the walk home

Hoping to feel its tiny heart beat against my palm

But her half open eyes were gently closing

And she was gone

9.2 Photos

Share your best photos with the Blue Bill and you too can be a published photographer.

Figure 65: Northern Flicker, Barriefield 2019-10-06. (John Licharson)

Figure 66: Sharp-shinned Hawk, Amherstview Sewage Ponds 2019-10-05. (John Licharson)

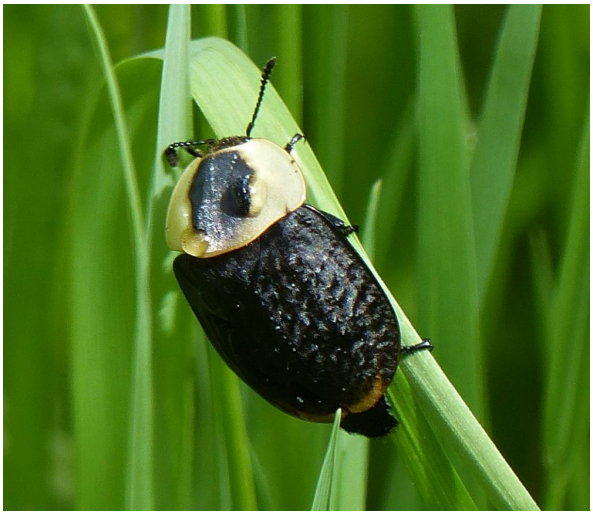

Figure 67: Dung Beetle, Colebrook. (Paul Mackenzie)

Figure 68: Eight-spotted Forester, Colebrook. (Paul Mackenzie)

Figure 69: Thyme-leaved Speedwell sp., Colebrook. (Paul Mackenzie)

Figure 70: Grass Veneer sp., Colebrook. (Paul Mackenzie)

Figure 71: Horse Gentian, Colebrook. (Paul Mackenzie)

Figure 72: Long-beaked Sedge, Colebrook. (Paul Mackenzie)

Figure 73: Goat's Beard, Kingston Mills, 2019-09-17. (Janet Elliott)

Figure 74: Slender Ladies Tresses from the Burke property ramble. (Paul Mackenzie)

Figure 75: Ragwort Stem Borer Moth, 2019-10-01 Howe Island. (Peter Waycik)

Figure 76: Pale Smartweed, Kingston Mills, 2019-09-17. (Janet Elliott)

Figure 77: Slender Spreadwing from the Burke property ramble. (Paul Mackenzie)

Figure 78: Unsated Sallow, 2019-09-17 Howe Island. (Peter Waycik)

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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