

*2019 PECFN BIOBLITZ
NCC Hudgin-Rose Property*

Prince Edward County



20-21 July, 2019 S.M. McKay-Kuja et al.

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Front cover: Brook Stickleback (*Culea inconstans* Kirtland 1840) in the Ash Swamp at the south end of the Hudgin-Rose Property of the Nature Conservancy of Canada where many were found during the Bioblitz. Photo by P.M. Catling on 2 August 2019.

Back cover: Some people always make it a happy day. The venerable Terry Sprague recalls the time a Cuckoo (Black-billed) attacked him when he mimicked the call just across the road (2014 BioBlitz report, p. 3). Some say it was because he mimicked the call so well that the enraged bird thought he was a rival cuckoo. Photo by Allen Kuja.

2019 PECFN BIOBLITZ at the Hudgin-Rose Property of the Nature Conservancy of Canada, Prince Edward County, Ontario

McKay-Kuja, S.M., D. Beadle, E. Bednarczuk, D. Bree, M. Christie, J. Foster, P. Fuller, S. Kranzl, A. Leavens, T. Mason, R. Schwarz, T. Sprague, L. Stanfield, K. Thomas and A. Tracey

On behalf of the Prince Edward County Field Naturalists and sponsors



Table of Contents

INTRODUCTION	5
ACKNOWLEDGEMENTS	10
PARTICIPANTS	13
RESULTS	13
Vascular Plants.....	15
Invertebrates.....	27
Damselflies and Dragonflies.....	27
Butterflies.....	28
Moths	29
Aquatic Invertebrates	33
Other Insects and Relatives.....	35
Spiders and their Allies.....	36
Vertebrates	39
Fish.....	39
Reptiles and Amphibians	39
Birds.....	41
Mammals.....	44
APPENDICES (observations before and after the BioBlitz)	45

N.B. Photographs of organisms in this report were taken at the study site during the BioBlitz unless otherwise indicated. Any errors or omissions in the report are solely the responsibility of the first author.

INTRODUCTION

On July 20-21, 2019 the Prince Edward County Field Naturalists (PECFN) sponsored their sixth annual PEC BioBlitz in association with the Prince Edward Point Bird Observatory, Nature Conservancy Canada, Hastings-Prince Edward Land Trust, and Nature Canada at the Hudgin-Rose Property on the east side of Ostrander Point Road.

A BioBlitz is a snapshot in time of the biota (plants and animals) observed over a 24 hour period. The prime objective was to conduct a biological survey including both experts and non-experts, to document the flora and fauna of this area from noon on Saturday (20th) to noon on Sunday (21st) and give members of the community an opportunity to investigate and discover for themselves the natural values of the study area.

As usual, both independent studies and walks led by experts were part of our BioBlitz protocol. Each participant was provided with a “package” with maps and sheets to list the species they observed. Registration opened on Saturday at 11 AM. A set of reference books and a dissecting microscope were located at Base Camp for identification of aquatic organisms primarily, but were also available for any identifications required.

The Base Camp, with Registration tent, was located near the cabin at 191 Ostrander Point Rd. situated on the east side of the road, approximately one km south of Babylon Rd.

Saturday was especially hot and blustery providing plenty of perspiration to attract the numerous sweat bees encountered. The broad boughs of the open grown Bur Oak near the cabin allowed a welcome respite from the blistering sun. Unfortunately, there was rain and lightening during the night on Saturday which curtailed the moth survey to a shorter interval than would have been optimal but many species were attracted to the lamps before the equipment had to be put away. Sunday was also sunny and windy but much less humid and therefore more pleasant.

LOCATION: Lying within the Prince Edward County South Shore Important Bird and Biodiversity area, the Hudgin-Rose property is bordered by Babylon Rd. on the north and Ostrander Point Rd on the west. This narrow (ca. 300 m wide) property, comprising 31 ha (76 acres) has its southern boundary as the eastward jog of Ostrander Point Rd. Privately owned land forms its eastern boundary (see Figure 1). Approx. 50 km from Belleville, and 20 km from Picton, the property is centred on 43.9082, -76.9892 (at Base Camp near the historic cabin). These lands comprise Part of Lot 4, Concession West of Long Point, Ward of South Marysburgh, PEC. The land on the west side of Ostrander Point Rd. is the boundary of the 324 ha (800 acre) Ostrander Point Crown Land Block, owned and managed by the Ministry of Natural Resources and Forestry.

The Site: History: The property was farmed since the 1860s by the Hudgin family and the cabin was built by Moses Hudgin around 1865. Several generations of Hudgins grew up here and some members of the family even vacationed here during the 1960s, until it was bought by Ben and Lillian Rose in 1967. The Roses took excellent care of the property and their stewardship



Figure 1. Map of the study area, outlined in yellow, showing Base Camp near the Cabin (blue circle) and the two trails prepared for the BioBlitz (red) by NCC staff.

led to the heritage designation for the historic log home. It was recommended by the PEC Heritage Advisory Board on Dec. 16, 2010 and was designated by By-law 2793 on Feb. 8, 2011. The commemorative plaque was added later that year.

In 2018, NCC acquired the property from Ben Rose. On a rainy May 28, 2019 there was a celebration at the property announcing that the Nature Conservancy of Canada (NCC) and its partners were officially conserving 31 hectares (76 acres) of this Hudgin-Rose property on the south shore of Prince Edward County. Appropriate music for this event was arranged for by Ben Rose who gave a speech explaining that he and his wife had initially thought about having a music camp here but when they discovered how much it would cost to have hydro put in they decided to keep it as a summer holiday place. Hudgin descendants, Ben and his daughter and many nature enthusiasts were in attendance despite the wet weather. Representatives from local, provincial and federal government either came or sent congratulatory letters.

Farming here was always difficult because the habitat is alvar – thin soil over limestone – which results in poor drainage when there is a lot of water (spring and fall can be extremely wet) and lack of water retention in the soil when there is no rain (in summer the soil conditions are extraordinarily dry). Most of the original forest was cut by early settlers to build homes, barns and clear land for crops or cattle grazing. By the 1860s most of the forest had been removed so commercial fishing and farming became more important as a livelihood. Beldon’s Atlas (1878) shows the log house on its original 100 acres which ended at the lake allowing Moses to fish and sail as well as farm. These were the usual economic realities of the day for an area of unfertile land. The house still sits in its original location close to and facing Ostrander Point Rd.



Figure 2. Agneta Sand (left) and Sheena Kennedy (right) setting up Registration Table.



Figure 3. Participants gathering for a field survey. Near centre, in green shirt is eminent moth expert, David Beadle, attending his third South Shore (PEC) BioBlitz.

Previous studies:

Each June, since 2014, Peter Fuller and Mike Burge have conducted night surveys (26 points) along County Rd. 13, Babylon Rd. and Army Reserve Rd. (including a survey point at Babylon Rd. and Ostrander Point Rd.) for Whip-poor-wills (available in PEPtBO Annual Reports).

A vascular plant survey of the Crown Land Block on the west side of Ostrander Point Rd. was conducted and published in 2014 by P.M. Catling et al.

On August 9-10, 2014, an Ostrander Point Crown Land BioBlitz was conducted as the first annual event organized by PECFN. On the evening of Sat. Aug. 9, during the BioBlitz, a number of Whip-poor-wills were observed flying across the road between the Rose property and the Crown Land Block by both those on a bird walk lead by Ted Cheskey and those involved with a moth study on the west side of Ostrander Point Rd. south of the Hudgin- Rose cabin.

In addition, from March 2019 and at several times through the year, PECFN members visited the property to provide a more complete assessment of the site. Additional groups e.g. lichens, mosses, snails etc. were recorded outside the BioBlitz time frame. These findings appear in the Appendices of this BioBlitz report.

Habitats: From the north of the property at Babylon Road moving south the vegetation communities that have been documented are: (1) alvar shrub rock barren (with Tufted Hairgrass and open meadow with ephemeral ponds); (2) Red Cedar alvar woodland; (3) alvar shrub rock barren; (4) Red Cedar alvar woodland; (5) Ash – Poplar – Oak savanna; (6) alvar shrub rock barren; (7) Bur Oak – Shagbark Hickory Forest; (8) Common Juniper Shrub Alvar; (9) Ash – Elm wetland; (10) old homestead with grass-dominated meadow and surrounding thickets; (11) Red Cedar alvar woodland; (12) Deciduous shrub thickets with Prickly Ash to east; (13) Ash Swamp with dogwood thickets. These communities were recorded as follow: 1 to 4 = NE, 5 to 9 = NC, 10 = C (cabin area), 11 to 12 = SC, 13 = SW).



Figure 4. Presiding over the aquatic identification table are Anne Dumbrille (left) and Les Stanfield (right).



Figure 5. Amy Bodman (left) and Peter Fuller (right) confirming the identity of a butterfly.

ACKNOWLEDGEMENTS: Appreciation is extended to everyone who helped and took part in the event. First and foremost, we thank our excellent leaders - Ewa Bednarczuk, David Beadle, David Bree, John Foster, Peter Fuller, Terry Sprague, Les Stanfield, Katie Thomas and Amanda Tracey - for volunteering their time and expertise to provide enjoyable, educational programs, either walks or demonstrations, during the BioBlitz, thus contributing to the success of the event. Les Stanfield, Matt Christie and Abigail Leavens did an amazing and enthusiastic job donning their hip waders and surveying the aquatic habitats in the swamp at the south end of the property for plants, invertebrates and vertebrates.

David Bree again kindly lent us his moth equipment for monitoring a study near Base Camp on Saturday night. David Beadle's moth equipment was set up east of Base Camp. We thank Gerry Jenkison for bringing her gas-powered generator, again this year, to power David's light source for the night's moth survey.

As well as leading an evening bird walk, Peter Fuller spent the rest of the BioBlitz working independently, or with Amy Bodman, investigating almost the entire property for birds, insects, plants and anything that crossed their paths; John Foster, also, worked both independently and as a leader for a plant foray but also performed an important service documenting flora and fauna with photos on both days. Joanne Dewey kept excellent notes for David Bree's insect walk

Bioblitz 2019

STORY AND PHOTOS: RAMESH POORAN

Focus on newly acquired Hudgin-Rose property

The sixth annual bioblitz took place at the Hudgin-Rose property on Os-trander Point Road over a 24-hour period this weekend. Starting at noon on Saturday and continuing to noon on Sunday, several teams of people led by subject matter experts took an inventory of plants, insects, aquatic species, amphibians and birds that live in and around the property. The Hudgin-Rose land tract was recently acquired by Nature Conservancy Canada (NCC) as part of its mandate to protect land all across Canada. Since 1962, the organization has reserved over 2.8 million acres for protection, with about 200,000 acres in Ontario. This year NCC partnered with the Prince Edward County Field Naturalists (PECFN) to perform the bioblitz. "This is really a great opportunity for the community to come together and learn about biodiversity, and from the NCC's perspective we're actually in the process of creating a baseline inventory, so these data will feed directly into that for us," said Amanda Tracey, a biologist with NCC. "This property is special because it's part of the eastern Lake Ontario coastal area and it's one of the last large pieces of undeveloped Lake Ontario coastline that's left."

This year's bioblitz started with a butterfly and dragonfly identification walk led by David Bree, a senior park naturalist at



Five-year-old Willamena Poho gets a close look at a coyote skull.

Presqu'île Provincial Park. This was followed by a reptiles and ecology walk led by Micaiah McIntosh, an intern with NCC. She pointed out the plants and environment favoured by Blanding's turtles and identified some potential nesting sites. Stream ecologist Les Stanfield identified a couple of wetland areas, to which he returned on Sunday morning to perform a more thorough species inventory. The bioblitz continued through the evening with observations of bird species, including the endangered whippoorwill, and a night-time moth survey. Heavy rain during the night shortened the duration of the study, but even so dozens of species were collected and identified.

CONTINUED ON PAGE 16

Figure 6. A young BioBlitz participant shows a Coyote skull which was discovered by Allen Kuja during the BioBlitz. Although no coyotes were seen during the BioBlitz this fine skull is an indicator of their presence in the area. The BioBlitz provided education and enjoyment as well as biological data to make informed management decisions. This article about the BioBlitz made the front page of The Times, a widely read newspaper in Prince Edward County.

and her own observations. Tom Mason and Richard Schwarz were busy throughout the event, searching for and recording insects. They placed petri dishes, as pitfall traps at strategic locations overnight and checked them Sunday morning. John Foster, Peter Fuller, Allen Kuja and Tom Mason are thanked for their excellent photography, as well as Paul Catling and Brenda Kostiuk.

We are very grateful for the hard work of Tegan Porter and Micailah McIntosh (NCC summer interns) under the direction of Amanda Tracey, (Eastern Regional NCC Biologist), who on a very hot and humid July 3, prepared two trails through the swamp north of the cabin and the red cedar savanna beyond, as well as through the wetland at the north end of the property. Without their efforts, access to these areas would have been much more difficult for BioBlitz participants.

The participation of the BioBlitz committee (Peter, Amy, Sheena, Cheryl, Gerry, Lorie and Sheila) and other club members is gratefully acknowledged and most appreciated. Peter Fuller, representing PEPtBO, prepared our poster, organized information on the BioBlitz for the PEPtBO website, prepared maps and information for participants and was helpful throughout the planning process as were the other members of the Committee. Terry Sprague graciously advertised our event on his website. Amy Bodman is particularly thanked for her help publicizing the event on a local radio station. We appreciate Cheryl Anderson looking after rental of the portable toilets and allowing us to borrow tents, microscopes and signs from PEPtBO as well as delivering them to the site. Dick Bird kindly allowed us to borrow the BioBlitz signs he constructed to be placed at strategic locations to direct the public to the event. A special thank you to Lorie Brown who as usual was our “go to” person for tents, lemonade, cups, etc. – anything that was needed, she could make materialize. Her energy seems boundless as she puts up and takes down mammoth tents and provides essential equipment. Sheena Kennedy kindly lent us her BBQ for Sunday lunch.

Many thanks for the help on Saturday morning of Cheryl, Borys Holowacz, Lorie, Pat and Eric Peterson, Paula and Bill Peel, Helen and Reg Findlay for so efficiently erecting tents. We appreciate the use of tables from Peter, Lorie, Amy, Cheryl and PECFN for their use at the Registration Area and at Base Camp (aquatic study, dinner and lunch). Sheena Kennedy, Agneta Sand and Myrna Wood were outstanding registrars and ambassadors for the club throughout the event at the Registration Tent. A huge thank you is extended to Gerry Jenkison for again so capably looking after food for the Saturday dinner and Sunday BBQ: Gerry’s curry was delicious, as was Myrna Wood’s chili. All the food was excellent and we appreciate everyone’s contributions to our meals, including salads and wonderful desserts. Allen Kuja and Borys Holowacz expertly barbecued lunch on Sunday. Lorie Brown provided a plastic mug for each participant’s use during the two days for the water and lemonade that she also provided. She took the mugs home for cleaning, ready for use at our general meetings. We appreciate her environmental conscientiousness and all her hard work in making the event so successful. The clean-up crew of Borys, Cheryl, Lorie, Myrna, John Foster, Dave Beadle, Katie, Peter Fuller and Allen Kuja did a remarkably efficient job, and are thanked for their contribution,

Finally, Ramesh Pooran provided excellent photos and an informative article in The Times newspaper on July 24, 2019 (Vol 26, No. 30: 1, 15-16. www.wellingtontimes.com) describing the BioBlitz.

Participants:

Cheryl Anderson	Donna Hayes	Creston Ricker
David Beadle	Borys Holowacz	Agneta Sand
Ewa Bednarczuk	Rob Jardine	Marjorie Seguin
Amy Bodman	Bert Jenkins	Wendy Shaw
David Bree	Gerry Jenkison	Doug Smith
Patrick Brophy	Sheena Kennedy	Terry Sprague
Lorie Brown	Kathy Kirkland	Les Stanfield
Matthew Christie	Allen Kuja	Katie Thomas
Elizabeth Cowan	Sheila Kuja	Sarah Walmsley
Joanne Dewey	Abigail Leavens	Tom Wheatley
Anne Dumbrille	Stephen Larratt-Smith	Candace Wilkins
Greg Forbes	William Larratt-Smith	Myrna Wood
John Foster	Michailah McIntosh	Cecile Yarrow
Peter Fuller	Jakob Mueller	Ariane
Janine Gedmin	Ramesh Pooran	
Kari Gunson	Tegan Porter	

Visitors to the county who came to the BioBlitz from the U.S. were from Florida and California. Ontario participants were mainly from the county or the Belleville area but others came from Scarborough, Oshawa, Toronto, Kingston and Ottawa.

RESULTS:

SUMMARY REPORT – The number of species recorded during the BioBlitz was 611+, including Vascular Plants – 310, Damselflies – 5, Dragonflies – 13, Butterflies – 24, Moths – 137, Terrestrial Snails – 2, Aquatic invertebrates – from 13 families, Spiders and allies - 30, Other Insects – 21, Fish – 1, Reptiles – 3. Amphibians – 7, Birds - 54, Mammals – 6.

NOTEWORTHY RECORDS:

Threatened Species

Highly significant were the observations of two species with Threatened Status (in Ontario or by COSEWIC): the Blanding's Turtle and the Whip-poor-will. An American Bittern, a species of special concern, was also observed. The Blanding's Turtles of which five were seen, were crossing Ostrander Point Rd. from the Hudgin-Rose property to the Crown Block (between 8 AM Saturday and the end of the BioBlitz). The fact that the turtles were all seen crossing the road again highlights how vulnerable this species is to vehicular traffic. Cars are a real threat to the Blanding's Turtle since wherever there is a road, it is bound to be crossed by them, especially near wetland habitats. See the Appendix for a note on a previous turtle fatality nearby.

It is only conjecture, but it is quite possible that the turtles observed had nested on the Hudgin-Rose property and were returning to the Crown Land Block where there is open water throughout the summer in the southeast marsh close to the shoreline. Conditions had been quite wet throughout the south shore this spring which would indicate that a later nesting period than usual would occur – and thus account for the turtle’s presence here.

An unexpected and exciting discovery was a family of Whip-poor-wills who exploded from their nest on the ground in front of Peter Fuller, taking off in all directions. It was as much a surprise for them as it was for Peter who was quick to video the incident. On Saturday evening we were serenaded by a number of Whip-poor-wills before most of us escaped from the myriad of mosquitoes who were feasting on us. We did have time to admire the many fireflies in the field east of the cabin and along the edge of the wet woods before we left for the night.

Aquatic Study: During the aquatic survey, the presence of the Brook Stickleback, a minnow indicating running water flowing through the swamp, was an exciting discovery. The huge Predaceous Diving Beetle that was brought back to Base Camp for the participants to see was soon put into solitary confinement after he consumed the colourful Gray Tree Frog tadpole that had been present in the large jar with him.

Plants: Finding the two patches of beautiful Butterfly Milkweed in full bloom was exciting. The bright orange flowers, like those of other Milkweeds, produce copious nectar to attract butterflies and other insects. A Goldenrod Crab Spider was already waiting on a Common Milkweed to capture a Juniper Hairstreak, showing how the web of life continues, even on a BioBlitz. Although no plant Species at Risk were found, an array of interesting species were present including many species characteristic of alvars such as Bluets, False Pennyroyal, and Hairy Beard’s-tongue, as well as Craw’s and other Sedges; the rare Limestone Hedge Hyssop was seen along the edge of the road beside the swamp at the south end of the property.

Moths: Of the 137 moths recorded, no less than 108 were new for the cumulative PEC list! If one looks at it from that perspective, the moth survey, although shorter in duration due to weather conditions, was a great success! The total number compares favourably with the 168 species observed last year at the Charwell Point BioBlitz, which continued for the whole night. There were some highlights this year that David noted: a nice male Robin’s Carpenterworm Moth with orange hindwings; at least 3 Imperial Moths; one female Promethea Moth; the Azalea Sphinx, which is normally scarce, has been more common this year and the presence of the Narrow-winged Borer, which is a scarce moth and always a good find. As a point of interest, 103 species were reported in the Ostrander Point BioBlitz, conducted in August 2014, perhaps a half km south of the cabin on the east side of Ostrander Point Rd. in the Bur Oak Savanna there.

Dragonflies and Damselflies: Many large dragonflies were seen throughout the day over the open field east of the cabin. The blustery winds on Saturday kept the smaller dragonflies and damselflies low, either in the grass or protected in the swamps.

Butterflies: The general paucity of butterflies, aside from the number of Wood Nymphs, was not expected and thus considered a poor year for them but the Juniper Hairstreak was relatively abundant. It was encouraging to see that Monarch butterflies were more common than usual.

SPECIES OBSERVED

VASCULAR PLANTS

Table 1. Vascular plants seen during the Hudgin-Rose BioBlitz. The list is in approximate classical taxonomic order beginning with ferns and fern allies, proceeding through gymnosperms through monocotyledons then dicotyledons, concluding with the Asteraceae. The family, genus, species and common names are taken from the most recent VASCAN database (www.vascan).

ONOCLEACEAE – SENSITIVE FERN FAMILY

Onoclea sensibilis, Sensitive Fern - swamp

DRYOPTERIDACEAE – WOOD FERN FAMILY

Dryopteris carthusiana, Spinulose Wood Fern - east of house, in shade of Bur Oak

CUPRESSACEAE – CYPRESS FAMILY

Juniperus communis, Ground Juniper – common in dry areas

Juniperus virginiana, Eastern Red Cedar – abundant throughout

Thuja occidentalis, Eastern White Cedar – infrequent south of cabin

TYPHACEAE – CATTAIL FAMILY

Typha latifolia, Broad-leaved Cattail – swamp

POTAMOGETONACEAE – PONDWEED FAMILY

Potamogeton crispus, Curly-leaved Pondweed – submerged in swamp

ALISMATACEAE – WATER PLANTAIN FAMILY

Alisma subcordatum, Southern Water Plantain – edge of swamp, south roadside

HYDROCHARITACEAE – FROG’S-BIT FAMILY

Hydrocharis morsus-ranae, European Frog-bit - swamp

POACEAE – GRASS FAMILY

Alopecurus pratensis, Meadow Foxtail

Bromus inermis ssp. *inermis*, Awnless Brome

Calamagrostis canadensis, Canada Blue-joint

Dactylis glomerata, Orchard Grass

Danthonia spicata, Poverty Oatgrass

Deschampsia cespitosa ssp. *cespitosa*, Tufted Hairgrass – frequent in NE even in ditch

Dichanthelium implicatum, Slender-stemmed Panicgrass – dry open areas N and S of cabin

Elymus virginicus var. *virginicus*, Virginia Wild Rye – meadow east of cabin

Festuca rubra, Red Fescue

Glyceria striata var. *stricta*, Fowl Manna-grass – swamp and wet woods north of cabin

Panicum capillare, Old Witch Panicgrass

Panicum flexile, Wiry Panicgrass
Panicum philadelphicum, Philadelphia Panicgrass
Phalaris arundinacea, Reed Canary Grass
Phleum pratense, Meadow Timothy - common
Poa compressa, Canada Bluegrass – common in openings north of cabin
Poa pratensis ssp. *pratensis*, Kentucky Bluegrass
Setaria glauca, Yellow Foxtail - roadside
Setaria viride, Green Foxtail - roadside
Sporobolus vaginiflorus, Sheathed Dropseed – locally abundant in NE wetland

CYPERACEAE- SEDGE FAMILY

Carex aquatilis, Water Sedge
Carex aurea, Golden-fruited Sedge – uncommon, north and south of cabin
Carex bebbii, Bebb's Sedge
Carex blanda, Woodland Sedge – in open red cedar woods
Carex crawei, Craue's Sedge – patches in open woods
Carex eburnea, Bristle-leaved Sedge – uncommon in open red cedar woods, north of cabin
Carex formosa, Handsome Sedge
Carex interior, Inland Sedge - uncommon in swamp and wet woods north of cabin
Carex ormostachya, Necklace Spike Sedge – uncommon in swamp and wet woods north of C
Carex pellita, Woolly Sedge
Carex radiata, Eastern Star Sedge – semi-open areas north of cabin
Carex tribuloides, Blunt Broom Sedge - swamp
Carex umbellata, Umbellate Sedge – small clumps in dry areas
Carex vulpinoidea, Fox Sedge – ditches along road, north and south of cabin and swamp
Eleocharis compressa, Flat-stemmed Spikerush – depressions around red cedar openings
Eleocharis palustris, Common Spikerush - swamp
Scirpus atrovirens, Dark-green Bulrush – swamp roadside

JUNCACEAE – RUSH FAMILY

Juncus articulatus, Jointed Rush – swamp, roadside
Juncus bufonius, Toad Rush – swamp, roadside
Juncus canadensis, Canada Rush - swamp
Juncus dudleyi, Dudley's Rush – swamp, roadside

XANTHORRHOEACEAE – GRASS TREE FAMILY

Hemerocallis fulva, Orange Daylily – cultivated clump by house

ASPARAGACEAE – ASPARAGUS FAMILY

Convallaria majalis, European Lily of the Valley – planted in garden near cabin
Maianthemum stellatum, Star-flowered False Solomon's Seal – infrequent south/north of cabin
Polygonatum biflorum, Giant Solomon's Seal - one patch under hickory, north of cabin

IRIDACEAE – IRIS FAMILY

Iris versicolor, Wild Blue Iris – swamp, a few plants seen
Sisyrinchium montanum, Blue-eyed Grass – infrequent in openings, north/south of cabin

ORCHIDACEAE – ORCHID FAMILY

Epipactis helleborine, Broad-leaved Helleborine – a few plants in wet woods north of cabin

SALICACEAE – WILLOW FAMILY

Populus deltoides ssp. *deltoides*, Eastern Cottonwood – along road at N end, smaller trees

Populus tremuloides, Trembling Aspen – eastern property line, E of 5th pole from Babylon Rd.

Salix amygdaloides, Peach-leaved Willow – along road north of swamp

Salix cordifolia, Heart-leaved Willow

Salix petiolaris, Meadow Willow

JUGLANDACEAE – WALNUT FAMILY

Carya ovata, Shag-bark Hickory – about 10 trees, north of cabin



Figure 7. Eastern Hop Hornbeam with hop-like fruit. Photo by Peter Fuller.

BETULACEAE – BIRCH FAMILY

Ostrya virginiana, Eastern Hop-hornbeam – frequent in moist areas, many mature trees

FAGACEAE – BEECH FAMILY

Quercus macrocarpa, Mossy-cup Oak – large trees and many seedlings, throughout

ULMACEAE – ELM FAMILY

Ulmus americana, White Elm – frequent, small trees or seedlings

POLYGONACEAE – KNOTWEED FAMILY

Fallopia scandens, Climbing False Buckwheat

Persicaria amphibia, Water Smartweed - swamp

Rumex crispus, Curly Dock – ditches and wet areas along road

CARYOPHYLLACEAE – PINK FAMILY

Arenaria serpyllifolia, Thyme-leaf Sandwort

Cerastium arvense ssp. *arvense*, Field Mouse-ear Chickweed

Dianthus armeria, Deptford Pink – 4 plants south of cabin

Stellaria longifolia, Longleaf Stitchwort

RANUNCULACEAE - BUTTERCUP FAMILY

Anemone canadensis, Canada Anemone – along road near swamp

Anemone cylindrica, Long-headed Anemone – frequent, north and south of cabin

Aquilegia canadensis, Wild Columbine – one plant along road south of cabin

Ranunculus acris, Tall Buttercup

BERBERIDACEAE – BARBERRY FAMILY

Podophyllum peltatum, May-apple – large patch under hickory, north of cabin

BRASSICACEAE – MUSTARD FAMILY

Alliaria petiolata, Garlic Mustard

Capsella bursa-pastoris, Common Shepherd's Purse

Lepidium campestre, Field Pepper-grass

GROSSULARIACEAE – GOOSEBERRY FAMILY

Ribes cynosbati, Prickly Gooseberry

Ribes hirtellum, Swamp Gooseberry – 1 clump south of cabin

Ribes rubrum, European Red Currant

ROSACEAE – ROSE FAMILY

Amelanchier alnifolia var. *compacta*, Compact Serviceberry – one clump south of cabin

Amelanchier sanguinea var. *sanguinea*, Shadbush – one clump north of cabin

Fragaria vesca, European Wood Strawberry

Fragaria virginiana, Virginia Strawberry – everywhere

Malus pumila, Common Apple – one large tree east of meadow beyond cabin



Figure 8. Compact Serviceberry with fruit. Photo by Peter Fuller.

Physocarpus americana, Ninebark – a few shrubs, SE side of swamp
Potentilla anserina, Silverweed
Potentilla recta, Sulphur Cinquefoil
Prunus serotina, Black Cherry – one large tree along road in NE
Prunus virginiana, Choke Cherry – north and south of cabin, mostly less than 2 m tall
Rosa blanda, Smooth Rose – frequent
Rosa palustris, Swamp rose – a few plants in swamp
Rubus idaeus ssp. *idaeus*, Common Red Raspberry
Rubus occidentalis, Black Raspberry - three or four places south of cabin
Spiraea alba, Narrow-leaved Meadow-sweet – wet areas in NE, along road near swamp

FABACEAE – PEA OR BEAN FAMILY

Amphicarpaea bracteata, American Hog-peanut
Lathyrus palustris, Marsh Vetchling – one plant blooming along road in swamp
Lotus corniculatus, Bird's-foot Trefoil
Medicago lupulina, Black Medic
Medicago sativa, Alfalfa
Melilotus albus, White Sweet-clover
Melilotus altissimus, Tall Yellow Sweet-clover
Melilotus officinalis, Yellow Sweet-clover
Robinia pseudoacacia, Black Locust – large tree along road south of cabin
Trifolium hybridum, Alsike Cover
Trifolium pratense, Red Clover
Trifolium repens, White Clover
Vicia cracca, Tufted Vetch - roadside

OXALIDACEAE – WOOD SORREL FAMILY

Oxalis stricta, European Wood-sorrel

GERANIACEAE – GERANIUM FAMILY

Geranium robertianum, Herb-Robert – woods near cabin

RUTACEAE – RUE FAMILY

Zanthoxylum americanum, Northern Prickly Ash – everywhere except swamp

EUPHORBIACEAE – SPURGE FAMILY

Chamaesyce maculata, Spotted Spurge – roadside near swamp

ANACARDIACEAE – CASHEW FAMILY

Rhus aromatica, Fragrant Sumac- everywhere except swamp
Rhus typhina, Staghorn Sumac - roadside
Toxicodendron radicans ssp. *negundo*, Poison Ivy

CELASATRACEAE – STAFF-TREE FAMILY

Celastrus scandens, Climbing Bittersweet – two locations north of cabin, small plants

SAPINDACEAE – SOAPBERRY FAMILY

Acer ×*freemanii*, Freeman's Maple

Acer negundo, Box Elder

Acer rubrum, Red Maple - swamp

Acer saccharinum, Silver Maple - swamp

Acer saccharum var. *saccharum*, Sugar Maple

BALSAMINACEAE – TOUCH-MET-NOT FAMILY

Impatiens capensis, Spotted Jewelweed – wet areas



Figure 9. The native Alder-leaved Buckthorn. Photo by Peter Fuller.

RHAMNACEAE – BUCKTHORN FAMILY

Endotropis alnifolia, Alder-leaved Buckthorn - east of cabin and one clump in NE

Rhamnus cathartica, Buckthorn – throughout but not abundant

VITACEAE – GRAPE FAMILY

Parthenocissus vitacea, Virginia Creeper

Vitis riparia, Riverbank Grape

TILIACEAE – LINDEN FAMILY

Tilia americana, American Basswood – moist areas north of cabin and near swamp

CLUSIACEAE – ST. JOHN’S-WORT FAMILY

Hypericum punctatum, Common St. John's-wort – throughout in open areas



Figure 10. Canada Buffalo-berry. Photo by Peter Fuller.

ELAEAGNACEAE – OLEASTER FAMILY

Shepherdia canadensis, Canada Buffalo-berry – sporadic throughout area north of cabin

VIOLACEAE – VIOLET FAMILY

Viola sororia, Woolly Blue Violet – infrequent in wet woods north of cabin

HALORAGACEAE – WATER MILLFOIL FAMILY

Myriophyllum spicatum, Eurasian Water-millfoil - swamp

LYTHRACEAE – LOOSETRIFE FAMILY

Lythrum salicaria, Purple Loosestrife – 5 clumps in ditches along road

ONAGRACEAE – EVENING PRIMROSE FAMILY

Circaea canadensis, Broad-leaved Enchanter's Nightshade – locally abundant in wet woods

Ludwigia palustris, Marsh Seedbox – roadside near swamp

Oenothera biennis, Common Evening-primrose

APIACEAE – CARROT FAMILY

Daucus carota, Wild Carrot – along road and in openings, north and south of cabin

Taenidia integerrima, Yellow Pimpernel – one patch in wet woods under mature trees

CORNACEAE – DOGWOOD FAMILY

Cornus amomum, Silky Dogwood – common

Cornus foemina, Stiff Dogwood - common

Cornus sericea, Red-osier Dogwood – edges of swamp



Figure 11. Fringed Yellow Loosestrife. Photo by Peter Fuller.

PRIMULACEAE – PRIMROSE FAMILY

Lysimachia ciliata, Fringed Yellow Loosestrife – 10-20 plants along road in swamp

OLEACEAE – OLIVE FAMILY

Fraxinus americana, White Ash

Fraxinus nigra, Black Ash – uncommon in wet woods north of cabin and in swamp

Fraxinus pennsylvanica, Green Ash – common in wet areas throughout

Syringa vulgaris, Common Lilac – 1 clump west of cabin, probably planted

APOCYNACEAE – DOGBANE FAMILY

Apocynum androsaemifolium, Spreading Dogbane – a patch south of cabin

Apocynum cannabinum, Clasping-leaf Dogbane – very common

ASCLEPIADACEAE – MILKWEED FAMILY

Asclepias incarnata, Swamp Milkweed – 100+ plants in NE, occasional in most moist areas

Asclepias syriaca, Common Milkweed – common in mesic to dry areas

Asclepias tuberosa, Butterfly Milkweed – one patch south-east of cabin, another north of cabin

Vincetoxicum nigrum, Black Swallowwort – two plants seen

CONVOLVULACEAE – MORNING-GLORY FAMILY

Convolvulus arvensis, Field Bindweed – field east of cabin

BORAGINACEAE – BORAGE FAMILY

Echium vulgare, Common Viper's-bugloss – infrequent in openings north and south of cabin

VERBENACEAE – VERVAIN FAMILY

Verbena simplex, Narrow-leaved Vervain – infrequent in openings north of cabin

LAMIACEAE – MINT FAMILY

Clinopodium vulgare, Field Basil – woods and edges north and south of cabin

Leonurus cardiaca, Common Motherwort – clump west of house

Lycopus americanus, American Waterhorehound - frequent in NE and wet woods N of cabin

Lycopus uniflorus, Northern Bugleweed

Mentha arvensis, Corn Mint – ditches along road south of cabin

Monarda fistulosa, Wild Bergamot – abundant north and south of cabin

Nepeta cataria, Catnip - roadsides

Prunella vulgaris ssp. *vulgaris*, Heal-all - common

Trichostema brachiatum, Fluxweed (False Pennyroyal)

SOLANACEAE – NIGHTSHADE FAMILY

Solanum dulcamara, Climbing Nightshade

SCROPHULARIACEAE – FIGWORT FAMILY

Verbascum thapsus, Great Mullein



*Common
Milkweed*



*Swamp
Milkweed*



*Butterfly
Milkweed*

Figure 12. Three species of Milkweed discovered. Top is Common Milkweed, photo by John Foster; Middle is Swamp Milkweed, photo by John Foster; Bottom; Butterfly Milkweed photo by Peter Fuller.

LENTIBULARIACEAE – BLADDERWORT FAMILY

Utricularia sp., Bladderwort - swamp

PLANTAGINACEAE – PLANTAIN FAMILY

Gratiola quartermaniae, Limestone Hedge-hyssop – clay by edge of swamp at south west

Penstemon hirsutus, Hairy Beardtongue – common in open areas north and south of cabin

Plantago lanceolata, English Plantain - roadside

Plantago major, Nipple-seed Plantain - roadside

CAMPANULACEAE – HAREBELL FAMILY

Lobelia kalmii, Kalm's Lobelia – about 10 plants north of cabin

RUBIACEAE – MADDER FAMILY

Galium boreale, Northern Bedstraw – wet woods north of cabin and in wet edges along road

Galium mollugo, Great Hedge Bedstraw – north of cabin

Houstonia longifolia, Long-leaved Bluets – common in open areas north and south of cabin

ADOXACEAE – ELDERBERRY OR MOSCHATEL FAMILY

Sambucus canadensis, Common Elderberry – along road near swamp

Viburnum acerifolium, Maple-leaved Viburnum

Viburnum lentago, Nannyberry – uncommon in NE, also along road south of cabin

Viburnum rafinesquianum, Downy Arrowwood – uncommon, north and south of cabin in shade



CAPRIFOLIACEAE – HONEYSUCKLE FAMILY

Lonicera dioica, Mountain Honeysuckle – 3-4 places north of cabin

Lonicera tatarica, Tartarian Honeysuckle – 3-4 places in wet woods north of cabin

Triosteum aurantiacum, Orange-fruit Horse-gentian – about 10 small patches N and S of cabin

Figure 13. Mountain Honeysuckle with fruit in a terminal perfoliate leaf. Photo by Peter Fuller.

DIPSACACEAE – TEASEL FAMILY

Dipsacus fullonum, Fuller's Teasel – roadside ditches north and south of cabin

ASTERACEAE – ASTER FAMILY

Achillea millefolium var. *millefolium*, Common Yarrow - roadsides

Ambrosia artemisiifolia, Annual Ragweed - roadsides

Antennaria neglecta, Field Pussytoes – large patch north of cabin, 100+ vegetative plants

Arctium lappa, Great Burdock

Bidens frondosa, Devil's Beggarticks – ditches south of cabin toward swamp

Cichorium intybus, Wild Chicory – roadside and infrequent in openings north and south of cabin

Cirsium vulgare, Bull Thistle – in meadow east of cabin

Conyza canadensis, Fleabane

Erigeron philadelphicus, Philadelphia Fleabane – mainly in roadside ditches

Erigeron strigosus, Daisy Fleabane – mainly in roadside ditches

Eupatorium perfoliatum, Common Boneset – common in NE but plants are small

Helianthus divaricatus, Woodland Sunflower – frequent, edge of openings, north of cabin

Inula helenium, Elecampane

Lactuca canadensis, Tall White Lettuce – infrequent in swamp and wet woods north of cabin

Leucanthemum vulgare, Ox-eye Daisy

Packera paupercula, Balsam Groundsel – uncommon, a few plants in NE

Pilosella piloselloides ssp. *praealta*, King Devil Hawkweed – abundant in openings N of cabin

Solidago canadensis var. *canadensis*, Canada Goldenrod

Solidago nemoralis var. *nemoralis*, Gray Goldenrod – common, openings and edges N/S cabin

Sonchus oleraceus, Common Sowthistle

Symphyotrichum cordifolia, Heart-leaved Aster

Symphyotrichum lateriflorum, Calico Aster

Symphyotrichum lanceolatum ssp. *lanceolatum*, Panicked Aster

Symphyotrichum novae-angliae, New England Aster

Symphyotrichum pilosum var. *pilosum*, Old Field Aster

Symphyotrichum urophyllum, Arrow-leaved Aster

Taraxacum officinale, Dandelion

Tragopogon pratensis, Meadow Goat's-beard



Figure 14. Lance-tipped Darner, a large dragonfly, about 7 cm long. Photo by Peter Fuller.



Figure 15. Emerald Spreadwing (left) and Blue Dasher (right). Photos by Peter Fuller.

Table 2. **Damselflies and Dragonflies** (Odonata) observed during the Hudgin-Rose BioBlitz, July 20-21, 2019 by D. Bree, J. Dewey, P. Fuller, T. Mason, D. Beadle and J. Foster.

Scientific Name	Common Name	Family	Notes
ZYGOPTERA			
DAMSELFLIES			
<i>Enallagma ebrium</i>	Marsh Bluet	COENAGRIONIDAE	many, NC, SC, a few in NE
<i>Ishnura verticalis</i>	Eastern Forktail	COENAGRIONIDAE	
<i>Lestes dryas</i>	Emerald Spreadwing	LESTERIDAE	3, SW
<i>Lestes unguiculatus</i>	Lyre-tipped Spreadwing	LESTERIDAE	
<i>Lestes vigilax</i>	Swamp Spreadwing	LESTERIDAE	
ANISOPTERA			
DRAGONFLIES			
<i>Aeshna constricta</i>	Lance-tipped Darner	AESHNIDAE	10+ NC; roosting early in AM
<i>Anax junius</i>	Common Green Darner	AESHNIDAE	1,C
<i>Epitheca cynosura</i>	Common Baskettail	CORDULIIDAE	
<i>Epitheca princeps</i>	Prince Baskettail	CORDULIIDAE	6,C, 6 roosting NC in AM
<i>Celithemis elisa</i>	Calico Pennant	LIBELLULIDAE	2, C
<i>Celithemis eponina</i>	Halloween Pennant	LIBELLULIDAE	8,C,NC
<i>Erythemis simplicicollis</i>	Eastern Pondhawk	LIBELLULIDAE	2, SC
<i>Libellula luctuosa</i>	Widow Skimmer	LIBELLULIDAE	
<i>Libellula pulchella</i>	Twelve-spotted Skimmer	LIBELLULIDAE	many, C & Rd.
<i>Pachydiplax longipennis</i>	Blue Dasher	LIBELLULIDAE	1, NE

<i>Plathemis lydia</i>	Common Whitetail	LIBELLULIDAE	2, SW
<i>Sympetrum obtusum</i>	White-faced Meadowhawk	LIBELLULIDAE	hundreds, everywhere
<i>Tramea lacerata</i>	Black Saddlebags	LIBELLULIDAE	

Table 3. **Butterflies** (Lepidoptera) identified during Hudgin-Rose BioBlitz by D. Bree, T. Mason, J. Dewey, P. Fuller, D. Beadle, J. Foster and M. Christie. Numbers are recorded when reported. C=cabin; SC=south of cabin; NC=north of cabin; Rd.=along road; NE=north end.

Scientific Name	Common Name	Family	Notes
<i>Papilio glaucus glaucus</i>	Eastern Tiger Swallowtail	PAPILIONIDAE	(1,Rd.)
<i>Papilio polyxenes</i>	Black Swallowtail	PAPILIONIDAE	
<i>Callophrys gryneus</i>	Juniper Hairstreak	LYCAENIDAE	8, SC
<i>Celastrina neglecta</i>	Summer Azure	LYCAENIDAE	
<i>Everes comyntas</i>	Eastern Tailed Blue	LYCAENIDAE	10, Rd. at mud
<i>Cercyonis pegala</i>	Common Wood-nymph	NYMPHALIDAE	20+, all habitats
<i>Danaus plexippus</i>	Monarch	NYMPHALIDAE	many everywhere
<i>Lethe appalachia</i>	Appalachian Brown	NYMPHALIDAE	
<i>Lethe eurydice</i>	Eyed Brown	NYMPHALIDAE	3, SC
<i>Limenitis archippus</i>	Viceroy	NYMPHALIDAE	
<i>Limenitis arthemis arthemis</i>	White Admiral	NYMPHALIDAE	
<i>Megisto cymela</i>	Little Wood Satyr	NYMPHALIDAE	2, NE
<i>Nymphalis antiopa</i>	Mourning Cloak	NYMPHALIDAE	
<i>Phyciodes cocyta</i>	Northern Crescent	NYMPHALIDAE	3,Rd;1,SC
<i>Polygonia interrogationis</i>	Question Mark	NYMPHALIDAE	3, Rd.
<i>Vanessa atalanta</i>	Red Admiral	NYMPHALIDAE	1, Rd
<i>Vanessa virginiensis</i>	American Lady	NYMPHALIDAE	1, NE
<i>Anatrytone logan logan</i>	Delaware Skipper	HESPERONIIDAE	
<i>Ancyloxypha numitor</i>	Least Skipper	HESPERONIIDAE	(4,Rd)
<i>Epargyreus clarus</i>	Silver-spotted Skipper	HESPERONIIDAE	(1,Rd)
<i>Euphyes vestris</i>	Dun Skipper	HESPERONIIDAE	many, all habitats
<i>Polites thermistocles</i>	Tawny-edged Skipper	HESPERONIIDAE	1, NC
<i>Thyelicus lineola</i>	European Skipper	HESPERONIIDAE	2, Rd.
<i>Wallengrenia egeremet</i>	Northern Broken-Dash	HESPERONIIDAE	1, NC



Figure 16. BioBlitz butterflies: Monarch caterpillar (upper left); Painted Lady (lower left) and Crab Spider with Juniper Hairstreak (right). Photos by Peter Fuller (left) and Tom Mason (right).

Table 4. **Moths** (Lepidoptera) observed overnight on July 20-21 BioBlitz compiled by David Beadle, with species identified by both Pohl number and Hodges number as references to the taxonomic order which are considered more accurate than family designations (Beadle & Leckie, 2012). The number of individuals seen is recorded in the right column.

Pohl Number	Hodges Number	Scientific Name	Common Name	20/21 July/19
30 0046	334	<i>Amydria effrentella</i>	Burrowing Webworm	1
33 0117	595	<i>Caloptilia bimaculatella</i>	Walnut Caloptilia	1
36 0083	2366	<i>Plutella xylostella</i>	Diamondback Moth	1
36 0211	2401	<i>Atteva aurea</i>	Ailanthus Webworm Moth	1
42 0041	1046	<i>Epicallima argenticinctella</i>	Orange-headed Epicallima	1
42 0401	1515	<i>Limnaecia phragmitella</i>	Shy Cosmet	1
42 0510	2281	<i>Dichomeris ligulella</i>	Palmerworm Moth	1
42 0529	2295	<i>Dichomeris flavocostella</i>	Cream-edged Dichomeris	1
42 0531	2310.1	<i>Dichomeris inversella</i>	Inversed Dichomeris	1

42 0554	2289	<i>Dichomeris ochripalpella</i>	Shining Dichomeris	1
42 0670	1761	<i>Aristotelia roseosuffusella</i>	Pink-washed Aristotelia	1
42 0786	1873	<i>Pseudotelphusa palliderosacella</i>		1
42 1647	1388	<i>Coleophora trifolii</i>	Large Clover Casebearer	1
42 1766	1162	<i>Blastobasis glandulella</i>	Acorn Moth	1
		<i>Geina</i> species		1
46 0138	6166	<i>Oidaematophorus mathewianus</i>	Mathew's Plume	1
62 0001	3501	<i>Acleris forsskaleana</i>	Maple Leftier	1
62 0016	3517	<i>Acleris subnivana</i>	Common Acleris	1
62 0248	3593	<i>Pandemis lamprosana</i>	Woodgrain Leafroller	1
62 0249	3594	<i>Pandemis limitata</i>	Three-lined Leafroller	1
62 0255	3597	<i>Argyrotaenia velutinana</i>	Red-banded Leafroller	2
62 0281	3622	<i>Argyrotaenia juglandana</i>	Hickory Leafroller	1
62 0300	3635	<i>Choristoneura rosaceana</i>	Oblique-banded Leafroller	1
62 0303	3638	<i>Choristoneura fumiferana</i>	Spruce Budworm	1
62 0360	3684	<i>Clepsis clemensiana</i>	Clemens' Clepsis	1
62 0364	3688	<i>Clepsis peritana</i>	Garden Tortrix	1
62 0417	3725	<i>Cenopis pettitana</i>	Maple-basswood Leafroller	1
62 0423	3716	<i>Cenopis diluticostana</i>	Spring Dead-leaf Roller Moth	1
62 0434	3743	<i>Platynota exasperatana</i>	Exasperating Platynota	2
62 0554	2785	<i>Olethreutes atrodentana</i>		2
62 0557	2788	<i>Olethreutes inornatana</i>	Inornate Olethreutes	1
62 0568	2800	<i>Olethreutes nigranum</i>	Variable Olethreutes	1
62 0588	2820	<i>Olethreutes malana</i>	Malana Leafroller	1
62 1383	3494	<i>Cydia latiferreana</i>	Filbertworm Moth	1
		<i>Gymnandrosoma</i>		
62 1385	3495	<i>punctidiscanum</i>	Dotted Gymnandrosoma	1
64 0029	2693	<i>Prionoxystus robiniae</i>	Robin's Carpenterworm	1
64 0095	2554	<i>Synanthedon acerni</i>	Maple Callus Borer	1
66 0012	4654	<i>Tortricidia flexuosa</i>	Abbreviated Button Slug Moth	2
66 0023	4665	<i>Lithacodes fasciola</i>	Yellow-shouldered Slug Moth	1
66 0025	4667	<i>Apoda y-inversum</i>	Yellow-collared Slug Moth	1
66 0027	4669	<i>Apoda biguttata</i>	Shagreened Slug Moth	2
66 0039	4681	<i>Isa textula</i>	Crowned Slug Moth	1
66 0051	4697	<i>Euclea delphinii</i>	Spiny Oak-Slug Moth	2
80 0048	5552	<i>Galasa nigrinodes</i>	Boxwood Leftier	1
80 0066	5571	<i>Condylolomia participalis</i>	Drab Condylolomia	1
80 0079	5517	<i>Aglossa caprealis</i>	Stored Grain Moth	1
80 0080	5518	<i>Aglossa cuprina</i>	Grease Moth	1
80 0094	5533	<i>Hypsopygia olinalis</i>	Yellow-fringed Hypsopygia	1
80 0133	5606	<i>Pococera asperatella</i>	Maple Webworm	2
80 0135	5608	<i>Pococera expandens</i>	Striped Oak Webworm	1
80 0169	5659	<i>Acrobasis palliolella</i>	Mantled Acrobasis	1

		<i>Acrobasis</i> species	1
80 0273	6032	<i>Eurythmia angulella</i>	1
80 0347	5787	<i>Meroptera pravela</i>	Lesser Aspen Webworm
80 0479	5926	<i>Canarsia ulmiarrosorella</i>	Elm Leaf-tier
80 0728	4754	<i>Elophila tinealis</i>	Black Duckweed Moth
80 0729	4755	<i>Elophila oblitalis</i>	Waterlily Leafcutter
80 0821	5464	<i>Urola nivalis</i>	Snowy Urola
80 0874	5419	<i>Microcrambus biguttellus</i>	Gold-stripe Grass-veneer
80 0875	5420	<i>Microcrambus elegans</i>	Elegant Grass-veneer
80 0887	5379	<i>Neodactria luteotellus</i>	Mottled Grass-veneer
80 0926	5391	<i>Chrysoteuchia topiarius</i>	Topiary Grass-veneer
80 0949	5361	<i>Crambus albellus</i>	Small White Grass-veneer
80 0950	5362	<i>Crambus agitatellus</i>	Double-banded Grass-veneer
80 0982	4761	<i>Scoparia biplagiata</i>	Double-striped Scoparia
80 1177	5250	<i>Lygropia rivulalis</i>	Bog Lygropia
80 1197	5275	<i>Herpetogramma pertextalis</i>	Bold-feathered Grass
80 1254	5176	<i>Anageshna primordialis</i>	Yellow-spotted Webworm
80 1283	5117	<i>Loxostegopsis merrickalis</i>	Merrick's Crambid
80 1350	5143	<i>Diacme adiplaloides</i>	Darker Diacme
80 1434	4962	<i>Hahncappsia marculenta</i>	
87 0014	7698	<i>Malacosoma disstria</i>	Forest Tent Caterpillar Moth
87 0017	7701	<i>Malacosoma americana</i>	Eastern Tent Caterpillar Moth
89 0012	7704	<i>Eacles imperialis</i>	Imperial Moth
89 0070	7757	<i>Antheraea polyphemus</i>	Polyphemus Moth
89 0079	7764	<i>Callosamia promethea</i>	Promethea Moth
89 0103	7787	<i>Ceratomia undulosa</i>	Waved Sphinx
89 0145	7825	<i>Paonias myops</i>	Small-eyed Sphinx
89 0207	7885	<i>Darapsa myron</i>	Virginia Creeper Sphinx
89 0208	7886	<i>Darapsa pholus</i>	Azalea Sphinx
91 0055	7218	<i>Thera contractata</i>	Early Juniper Carpet
91 0260	7416	<i>Orthonama centrostrigaria</i>	Bent-line Carpet
91 0286	7440	<i>Eubathe mendica</i>	The Beggar
91 0567	7159	<i>Scopula limboundata</i>	Large Lace Border
91 0578	7169	<i>Scopula inductata</i>	Soft-lined Wave
91 0590	7180	<i>Leptostales ferruginaria</i>	Light-ribboned Wave
91 0683	6270	<i>Protitame virginalis</i>	Virgin Moth
91 0712	6292	<i>Macaria exauspicata</i>	Speckled Granite
91 0735	6273	<i>Macaria pustularia</i>	Lesser Maple Spanworm
91 1016	6597	<i>Ectropis cerpuscularia</i>	Small Engrailed
91 1145	6720	<i>Lytrosis unitaria</i>	Common Lytrosis
91 1154	6729	<i>Euchlaena johnsonaria</i>	Johnson's Euchlaena
91 1413	6965	<i>Eugonobapta nivosaria</i>	Snowy Geometer
91 1432	6982	<i>Prochoerodes lineola</i>	Large Maple Spanworm

93 0033	7902	<i>Datana ministra</i>	Yellow-necked Caterpillar Moth	1
93 0035	7904	<i>Datana drexelii</i>	Drexell's Datana	1
93 0067	7975	<i>Macrurocampa marthesia</i>	Mottled Prominent	1
93 0205	8090	<i>Hypoprepia fucosa</i>	Painted Lichen Moth	2
93 0244	8197	<i>Grammia virgo</i>	Virgin Tiger Moth	1
93 0316	8137	<i>Spilosoma virginica</i>	Virginian Tiger Moth	1
93 0332	8156	<i>Phragmatobia fuliginosa</i>	Ruby Tiger Moth	1
93 0335	8129	<i>Pyrrharctia isabella</i>	Isabella Tiger	2
93 0360	8203	<i>Halysidota tessellaris</i>	Banded Tussock Moth	10
93 0404	8230	<i>Cycnia tenera</i>	Delicate Cycnia	1
93 0435	8262	<i>Ctenucha virginica</i>	Virginia Ctenucha	1
93 0469	8322	<i>Idia americalis</i>	American Idia	1
93 0487	8838	<i>Phalaenophana pyramusalis</i>	Dark-banded Owlet	1
93 0489	8340	<i>Zanclognatha lituralis</i>	Lettered Fan-foot	1
93 0492	8342	<i>Zanclognatha laevigata</i>	Variable Fan-foot	1
93 0496	8349	<i>Zanclognatha protumnusalis</i>	Complex Fan-foot	1
93 0512	8362	<i>Phalaenostola metonalis</i>	Pale Phalaenostola	1
93 0514	8364	<i>Phalaenostola larentioides</i>	Black-banded Owlet	2
93 0520	8370	<i>Bleptina caradrinalis</i>	Bent-winged Owlet	1
93 0539	8387	<i>Renia sobrialis</i>	Sober Renia	1
93 0561	8441	<i>Hypena manalis</i>	Flowing-line Snout	1
93 0588	8465	<i>Hypena scabra</i>	Green Cloverworm Moth	3
93 0729	9037	<i>Hyperstrontia pervertens</i>	Dotted Graylet	2
93 0924	8739	<i>Caenurgina erechtea</i>	Forage Looper Moth	1
93 1060	9818	<i>Amolita fessa</i>	Feeble Grass Moth	1
93 1191	8908	<i>Autographa precationis</i>	Common Looper	1
93 1234	8924	<i>Anagrapha falcifera</i>	Celery Looper	1
93 1289	9046	<i>Deltote bellicula</i>	Bog Glyph	2
93 1290	9047	<i>Protodeltote muscosa</i>	Large Mossy Glyph	1
93 1295	9049	<i>Maliattha synochitis</i>	Black-dotted Glyph	1
93 1467	9249	<i>Acronicta increta</i>	Small Oak Dagger	1
93 1966	9301	<i>Eudryas grata</i>	Beautiful Wood Nymph	2
93 2026	9065	<i>Leuconycta diptheroides</i>	Green Leuconycta	2
93 2319	9333	<i>Apamea lignicolor</i>	Wood-colored Apamea	2
93 2377	9402	<i>Oligia chlorostigma</i>	Yellow-spotted Brocade	2
93 2378	9404	<i>Oligia modica</i>	Black-banded Brocade	1
93 2425	9443	<i>Photodes defecta</i>	Narrow-winged Borer	1
93 2947	10447	<i>Leucania commoides</i>	Comma Wainscot	10
93 3128	10578	<i>Pseudorthodes vecors</i>	Small Brown Quaker	1
93 3136	10585	<i>Orthodes majuscula</i>	Rustic Quaker	1
93 3528	10663	<i>Agrotis ipsilon</i>	Dark Swordgrass	2
93 3569	11008	<i>Euretagrotis perattenta</i>	Two-spot Dart	1



Figure 17. Polyphemus Moth with wingspan of 15 cm. Photo by Peter Fuller.

Table 5. **Aquatic invertebrates** identified by S. Kranzl (M.N.R.F.) from water samples taken from the swamp at the south end of the Hudgin-Rose property on July 21, 2019.

Order	Family	Life Stage	No.
Coleoptera	Dytiscidae	Adult - Predaceous Diving Beetle	3
Coleoptera	Hydrophilidae	Larva	1
Coleoptera	Noteridae	Adult – Water Beetle	1
Odonata (Anisoptera)	Coruliidae		2
Hemiptera	Belostomatidae		2
Hemiptera	Corixidae		9
Hemiptera	Notonectidae		1

Bivalvia	Sphaeriidae		42
Gastropoda	Bithyniidae		5
Gastropoda	Physidae		17
Gastropoda	Planorbidae		12
Diptera	Chironomid	Larva	47
Diptera	Oligochaeta		1
Diptera	Tipulidae		1



Figure 18. Giant Water Bug, 6 cm in length, showing its proboscis. It was found in the swamp at south end during a period of low water on 2 Aug. 2019. See additions to BioBlitz survey in Appendices. Photo by P.M. Catling.

Table 6. Additional Insects (Class Insecta) observed during the Hudgin-Rose BioBlitz, 20-21 July 2019

Scientific Name ORDER/Family	Family Name	Species Name	Common Name
COLEOPTERA	BEETLES		
Carabidae	Ground Beetles	<i>Cicindela sexguttata</i> <i>Tetraopes</i>	Emerald Tiger Beetle
Cerambycidae	Long-horn Beetles	<i>tetrophthalmus</i>	Red Milkweed Beetle
Cerambycidae	Long-horn Beetles	<i>Clytus ruricola</i>	Long-Horn Beetle
Cerambycidae	Long-horn Beetles	<i>Saperda tridentata</i>	Elm Borer
Chrysomelidae	Leaf Beetles	<i>Charidatella sexpunctata</i>	Golden Tortoise Beetle
Lampyridae	Fireflies		Fireflies
DERMAPTERA	EARWIGS		
Forficulidae	Earwigs	<i>Forficula auricularia</i>	European Earwig
DIPTERA	FLIES		
Asilidae	Robber Flies	<i>Laphria sacrorator</i>	Bee-like Robber Fly
Calliphoridae	Blow Flies	<i>Lucilia</i> sp.	Green Bottle Fly
Culicidae	Mosquitoes	<i>Culex</i> sp.	Mosquitoes
Muscidae	House Flies	<i>Musca domestica</i>	Housefly
Tabanidae	Horse & Deer Flies	<i>Hybomitra</i> sp.	Horsefly
Tabanidae	Horse & Deer Flies	<i>Tabanus atratus</i>	Black Horsefly
Cicadellidae	Leafhoppers	<i>Graphocephala coccinea</i>	Red-banded Leafhopper
Clastopteridae	Spittlebugs	<i>Clastophera proteus</i>	Dogwood Spittlebug
Pentatomidae	Stink Bugs	<i>Euschistus variolarius</i>	One-spotted Spittlebug
HYMENOPTERA	ANTS, BEES, WASPS		
Apidae	Bees	<i>Apis mellifera</i>	Honey Bee
Formicidae	Ants	<i>Monomorium minimum</i>	Little Black Ant
Halictidae	Sweat Bees		Sweat Bees
MANTODEA	MANTIDS		
Mantidae	Mantids	<i>Mantis religiosa</i>	European Praying Mantis
ORTHOPTERA			
Tettigioniidae	Bush Crickets		Katydid



Figure 19. The Elm Borer, a Long-horn Beetle. Photo by John Foster.

Table 7. **Spiders and their allies** (Class Arachnida) from the Hudgin-Rose BioBlitz, 20-21 July 2019, observed and identified by T. Mason and R. Schwarz.

<i>Scientific Name</i>	Common Name
ORDER - ARANEAE	SPIDERS
Family - Agelenidae	FUNNEL WEAVERS
<i>Agelenopsis pennsylvanica</i>	Pennsylvanica Grass Funnelweaver
Family - Anyphaenidae	GHOST SPIDERS
<i>Wulfila saltabundus</i>	Long-legged Ghost Spider
Family – Araneidae	ORB WEAVERS
<i>Argiope trifasciata (Trochosa terricola)</i>	Banded Garden Orbweaver
<i>Cyclosa conica</i>	Common Trashline Orbweaver
<i>Larinioides cornutus</i>	Furrow Orbweaver
<i>Mangora gibberosa</i>	Lined Orbweaver
<i>Neoscona arabesca</i>	Arabesque Orbweaver

Family – Clubionidae
Clubiona sp.

SAC SPIDERS
a Leaf Curling Sac Spider

Family – Gnaphosidae
cf. Zelotes sp.

STEALTHY GROUND SPIDERS
a Preening Ground Spider

Family – Linyphiidae
Frontinella communis

SHEET WEB SPIDERS
Bowl and Doily Sheetweaver

Family – Lycosidae
Pardosa distincta
Pardosa moesta
Pirata piraticus
Varacasa avara

WOLF SPIDERS
Pale Thin-legged Wolf Spider
Shiny Thin-legged Wolf Spider
Common Pirate Wolf Spider
Spurred Secretive Wolf Spider

Family Philodromidae
Thanatus vulgaris
Tibellus oblongus

RUNNING CRAB SPIDERS
European Running Crab Spider
Slender Running Crab Spider

Family Pholcidae
Pholcus sp.

CELLAR SPIDERS
a Cellar Spider

Family - Pisauridae
Dolomedes triton
Dolomedes tenebrosus

NURSERY WEB SPIDERS
Six-spotted Fishing Spider
Terrestrial Fishing Spider

Family - Salticidae
Pelegrina sp.
Phidippus clarus

JUMPING SPIDERS
a White-cheeked Jumping Spider
Striped Tufted Jumping Spider

Family – Tetragnathidae
Tetragnatha laboriosa

LONG-JAWED ORB WEAVERS
Silver Long-jawed Spider

Family – Theridiidae
Parasteatoda tabulata
Theridion frondeum

COBWEB WEAVER SPIDERS
Wandering House Cobweaver
Eastern Long-legged Cobweaver

Family – Thomisidae
Mecaphesa asperata
Missumessus oblonga
Misumena vatia

CRAB SPIDERS
Northern Flower Crab Spider
Pale Crab Spider
Goldenrod Crab Spider

Ozyptila americana
Xysticus alboniger

Heartland Leafletter Crab Spider
Contrasted Ground Crab Spider

ORDER OPILIONES
Family - Sclerosomatidae
Leiobunum vittatum

HARVESTMEN
HARVESTMEN
Eastern Harvestman



Figure 20. Terrestrial Fishing Spider with egg sac. Photo by Tom Mason.

VERTEBRATES:

Table 8. **Fish** species observed in the swamp at south end of Hudgin-Rose property on July 21. See front cover.

ORDER/Family	Common Name	Scientific Name
GASTEROSTEIFORMES	STICKLEBACKS, SEAHORSES AND RELATIVES	
Gasterosteidae	Stickleback and Tubesnout Family	
	Brook Stickleback	<i>Culaea inconstans</i>

Table 9. **Reptiles and Amphibians** observed during the Hudgin-Rose BioBlitz, July 20-21, 2019.

Scientific Name	Common Name	Family	Observations
CRYPTODIRA	TURTLES		
<i>Emydoidea blandingii</i>	Blanding's Turtle	Emydidae	5 - crossing Ostrander Pt. Rd
SQUAMATA	LIZARDS AND SNAKES		
<i>Lampropeltis triangulum</i>	Milk Snake	Colubridae	1 - discarded skin
<i>Thamnophis sirtalis sirtalis</i>	Eastern Garter Snake	Colubridae	3 - under wood near C
ANURA	FROG AND TOADS		
<i>Hyla versicolor</i>	Eastern Gray Tree Frog	Hylidae	Tadpole in swamp
<i>Pseudacris crucifer</i>	Spring Peeper	Hylidae	Swamp at south end
<i>Lithobates clamitans</i>	Green Frog	Ranidae	vocal
<i>Lithobates pipiens</i>	Northern Leopard Frog	Ranidae	swamps-SW, NC, ditches
<i>Lithobates sylvaticus</i>	Wood Frog	Ranidae	JFF

CAUDATA	SALAMANDERS		
<i>Ambystoma laterale</i> complex	Blue-spotted/Jefferson salamander complex	Ambystomatidae	3 (1 in field; 2 SW-nymphs)
URODELA	MUDPUPPIES		
<i>Necturus maculosis</i>	Common Mudpuppy	Proteidae	Swamp at south end



Figure 21. Leopard Frog in transition from tadpole to frog. It was found in the swamp at south end during a period of low water on 2 Aug. 2019. Adults were seen during the BioBlitz. Photo by P.M. Catling.

BIRDS

Table 10. List of birds seen during the Hudgin-Rose property BioBlitz, 20-21 July 2019. When a number observed was recorded it appears in the righthand column. Taxonomic order follows the AOU Checklist incorporating changes through the 59th supplement.

Common Name	Scientific Name	Family	No. observed
Mute Swan	<i>Cygnus olor</i>	Anatidae	5
Mallard	<i>Anas platyrhynchos</i>	Anatidae	
Mourning Dove	<i>Zenaida macroura</i>	Columbidae	
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Cuculidae	1
Eastern Whip-poor-will	<i>Antrostomus vociferous</i>	Caprimilgidae	family group on ground
Chimney Swift	<i>Chaetura pelagica</i>	Apodidae	1
Common Gallinule	<i>Gallinula galeata</i>	Rallidae	1
Killdeer	<i>Charadrius vociferous</i>	Charadriidae	
American Woodcock	<i>Scolopax minor</i>	Scolopacidae	1
Ring-billed Gull	<i>Larus delawarensis</i>	Laridae	1-flying over
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	Phalacrocoradidae	1-flying over
American Bittern	<i>Botaurus lentigenosis</i>	Ardeidae	1
Great Blue Heron	<i>Ardea herodias</i>	Ardeidae	1-flying over
Turkey Vulture	<i>Cathartes aura</i>	Cathartidae	1-flying over
Northern Harrier	<i>Circus hudsonius</i>	Pandionidae	1
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Accipitridae	1
Downy Woodpecker	<i>Picoides pubescens</i>	Picidae	2
Northern Flicker	<i>Colaptes auratus</i>	Picidae	2
Merlin	<i>Falco columbarius</i>	Falconidae	1
Eastern Phoebe	<i>Sayornis phoebe</i>	Tyanidae	
Great-crested Flycatcher	<i>Myiarchus crinitus</i>	Tyanidae	
Eastern Kingbird	<i>Tyrannus tyrannus</i>	Tyanidae	1
Red-eyed Vireo	<i>Vireo olivaceus</i>	Vireonidae	2
Blue Jay	<i>Cyanocitta cristata</i>	Corvidae	5
American Crow	<i>Corvus brachyrhynchus</i>	Corvidae	1
Common Raven	<i>Corvus corax</i>	Corvidae	
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	Hirundinidae	
Barn Swallow	<i>Hirundo rustica</i>	Hirundinidae	2
Black-capped Chickadee	<i>Poecile atricapillus</i>	Paridae	10
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Sittidae	
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Sittidae	1

House Wren	<i>Troglodytes aedon</i>	Troglodytidae	2
Veery	<i>Cartharus fuscescens</i>	Turdidae	1
American Robin	<i>Turdus migratorius</i>	Turdidae	5
Gray Catbird	<i>Dumetella carolinensis</i>	Mimidae	4
Brown Thrasher	<i>Toxostoma rufum</i>	Mimidae	2
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Bombycillidae	8
American Goldfinch	<i>Spinus tristis</i>	Fringillidae	2
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	Passerellidae	20?
Chipping Sparrow	<i>Spizella passerina</i>	Passerellidae	1
Field Sparrow	<i>Spizella pusilla</i>	Passerellidae	5
Song Sparrow	<i>Melospiza melodia</i>	Passerellidae	6
Swamp Sparrow	<i>Melospiza georgiana</i>	Passerellidae	1
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Passerellidae	
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Icteridae	5
Common Grackle	<i>Quiscalus quiscula</i>	Icteridae	100+ in evening
Ovenbird	<i>Seiurus aurocapilla</i>	Parulidae	3 (carrying food)
Black-and-white Warbler	<i>Mniotilta varia</i>	Parulidae	1
Common Yellowthroat	<i>Geothlypis trichas</i>	Parulidae	6
American Redstart	<i>Setophaga ruticilla</i>	Parulidae	
Yellow Warbler	<i>Setophaga petechia</i>	Parulidae	1
Northern Cardinal	<i>Cardinalis cardinalis</i>	Cardinalidae	2
Indigo Bunting	<i>Passerina cyanea</i>	Cardinalidae	

Figure 22 (next page) Whip-poor-will in plate 82 of Birds of America by John James Audubon (1827). This threatened species breeds on the south shore and a family was encountered on the day of the bioblitz.



Whip-poor-will.

MAMMALS

Table 11. List of Mammals observed (or evidence indicating their presence noted) at the Hudgin-Rose BioBlitz, 20-21 July, 2019.

<i>Scientific Name</i>	Common Name	Family	Observations
RODENTIA	RODENTS		
<i>Castor canadensis</i>	Beaver	Castoridae	Lodge, tree workings
<i>Tamias striatus</i>	Eastern Chipmunk	Sciuridae	1, H
<i>Tamiasciurus hudsonius</i>	Red Squirrel	Sciuridae	2, SC
CARNIVORA	CARNIVORANS		
<i>Canis latrans</i>	Coyote	Canidae	several calling Sat. night
<i>Procyon lotor</i>	Raccoon	Procyonidae	1 with 4 young
ARTIODACTYLA	EVEN-TOED UNGULATES		
<i>Odocoileus virginianus</i>	White-tailed Deer	Cervidae	tracks only



Figure 23. Coyote skull found by Allen Kuja indicating recent presence. Photo by Allen Kuja.

REFERENCES:

- Anderson, C. and S.M. McKay-Kuja. 2014. Ostrander Point BioBlitz. Prince Edward County Field Naturalists. 27 pp.
- Beadle, D and S. Leckie. 2012. Peterson Field Guide to Moths of Northeastern North America. Houghton Mifflin Publ. Co. 611 pp.
- Beldon, H. & Co. 1878. Hastings and Prince Edward Counties (Ontario Map Ref #28 and #29). *Illustrated historical atlas of the counties of Hastings and Prince Edward, Ont.* Toronto. McGill University, Rare Books Division, elf G1148.H5H3 1878
- Catling, P.M. 2014. A field guide to the butterflies of Prince Edward County and the surrounding region. Privately produced. 64 pp.
- Catling, P.M., S.M. McKay-Kuja, B. Kostiuk and A. Kuja. 2014. Preliminary annotated list of the vascular plants of Ostrander Point Crown Land Block. Available from the Prince Edward County Field Naturalists. 39 pp

APPENDICES

(1) LICHENS of the Hudgin-Rose Property, Prince Edward south shore, Ontario

by Troy McMullin

This note may be cited as: McMullin, T. 2020. LICHENS of the Hudgin-Rose Property, Prince Edward County south shore, Ontario. Appendix 1, pp. 45-47 *in* McKay-Kuja, S.M., D. Beadle, E. Bednarczuk, D. Bree, M. Christie, J. Foster, P. Fuller, S. Kranzl, A. Leavens, T. Mason, R. Schwarz, T. Sprague, L. Stanfield, K. Thomas and A. Tracey. 2020. 2019 PECFN BioBlitz at the Hudgin-Rose Property of the Nature Conservancy of Canada, Prince Edward County, Ontario. Prince Edward County Field Naturalists. 55 pp.

Lichens collected from the Hudgin-Rose property on May 1, 2019 and identified, as well, by Troy McMullin are listed with Ontario abundance rank for each species and the substrate on which they were growing. Specimens retained at Canadian Museum of Nature, Ottawa. Ontario abundance rank for that species is shown in first column (S5=abundant; S4=fairly common; S3=uncommon; SNR=No rank yet assigned). Wherever possible common names, from iNaturalist or NatureServe, have been listed.

Rank	Scientific Name	Substrate	Common Name
S5	<i>Flavoparmelia caperata</i>	Bark of Ash	Common Greenshield Lichen
S4?	<i>Physciella melanchra</i>	Bark of Red Cedar	Mealy Cryptic Shade Lichen
S4	<i>Opegrapha varia</i>	Bark of Oak	
S4S5	<i>Trapeliopsis flexuosa</i>	Wood of old fence rails	
S4?	<i>Physconia enteroxantha</i>	Bark of Ash	Yellow-edged Frost Lichen
SNR	<i>Chaenothecopsis perforata</i>	Resin of Staghorn Sumac	(not native? From China?)
S4	cf. <i>Staurothele drummondii</i>	Calcareous rock	Drummond's Rock Pimple Lich
S5	<i>Physconia detersa</i>	Wood of old fence rails	Bottlebrush Frost Lichen
S4	<i>Caloplaca microphyllina</i>	Wood of old fence rails	A firedot Lichen
S5	<i>Candelaria concolor</i>	Bark of Ash	Candleflame Lichen
S5	<i>Candelariella efflorescens</i>	Wood of old fence rails	Powdery Gold-speck Lichen
S5	<i>Cladonia fimbriata</i>	Bark of Ash, at base of tree	Trumpet Lichen
S5	<i>Cladonia macilenta</i> var. <i>bacillaris</i>	Wood of old fence rails	Brown Pin or Lipstick Lichen
S5	<i>Amandinea punctata</i>	Wood of old fence rails	Tiny Button Lichen
S5	<i>Cladonia magyarica</i>	On soil	Smooth Pixie-cup Lichen
S3	<i>Diploschistes muscorum</i> ssp. <i>muscorum</i>	Wood of old fence rails	Cowpie Lichen
S5	<i>Evernia mesomorpha</i>	Bark of Ash	Boreal Oakmoss Lichen
S5	<i>Flavopunctelia flaventior</i>	Bark of Ash	Speckled Greenshield Lichen
S4?	<i>Illosporiosis christiansenii</i>	Growing on Physcia lichen	
SNR	<i>Lecanora allophana</i> f. <i>sorediata</i>	Wood of old fence rails	
S5	<i>Lecanora symmicta</i>	Wood of old fence rails	Fused Rim Lichen
S5	<i>Parmelia sulcata</i>	Bark of Ash	Hammered Shield Lichen
S5	<i>Physcia adscendens</i>	Bark of Ash	Hooded Rosette Lichen
S5	<i>Physcia millegrana</i>	Bark of Ash	Mealy Rosette Lichen
S5	<i>Physcia stellaris</i>	Bark of Ash	Star Rosette Lichen
S5	<i>Punctelia rudecta</i>	Bark of Ash	Rough Speckled Shield Lichen

S5	<i>Xanthomendoza fallax</i>	Bark of Ash	Hooded Sunburst Lichen
S5	<i>Xanthomendoza hasseana</i>	Bark of Ash	Poplar Sunburst Lichen
S4	<i>Sphinctrina anglica</i>	On <i>Protoparmelia hypotremella</i>	
S4S5	<i>Protoparmelia hypotremella</i>	Wood of old fence rails	
S5	<i>Melanelixia subaurifera</i>	On Bark of Ash	Abraded Camouflage Lichen
S5	<i>Chrysothrix caesia</i>	Bark of Ash	Frosted Comma Lichen
S4	<i>Lecania naegelii</i>	Bark of Ash	
S5	<i>Phaeophyscia orbicularis</i>	Wood of old fence rails	Mealy Shadow Lichen



Figure 24. Hammered Shield Lichen (*Parmelia sulcata*). Photo by John Foster.

(2) MOSSES of the Hudgin-Rose Property, Prince Edward County south shore, Ontario

by Jennifer Doubt

This note may be cited as: Doubt, J. 2020. MOSSES of the Hudgin-Rose Property, Prince Edward County south shore, Ontario. Appendix 2, pp. 48-50 *in* McKay-Kuja, S.M., D. Beadle, E. Bednarczuk, D. Bree, M. Christie, J. Foster, P. Fuller, S. Kranzl, A. Leavens, T. Mason, R. Schwarz, T. Sprague, L. Stanfield, K. Thomas and A. Tracey. 2019. 2019 PECFN BioBlitz at the Hudgin-Rose Property of the Nature Conservancy of Canada, Prince Edward County, Ontario. Prince Edward County Field Naturalists. 55 pp.

Twenty-seven moss taxa and two liverworts are reported here. This is probably the first list of mosses for the south shore region of Prince Edward County. The group is important ecologically in terms of substantial biomass, providing structure for many other species in a great variety of habitats ranging from the wettest to the driest. The mosses are among the most commonly encountered plant groups, but one of the least understood by field biologists. Interest is growing and increasingly popular field guides have become available. Although there is no need to wait until we know all the mosses to protect the south shore, we will learn more about the extraordinary value of this natural area by investigating them more thoroughly.

List of bryophytes (mosses and liverworts) from Hudgin-Rose property. Specimens collected by P. Catling, B. Kostiuk, S.M. McKay-Kuja, and A. Kuja, and identified by Jennifer Doubt at the Canadian Museum of Nature, where vouchers will be publicly-accessible for the long term.

Mosses

Amblystegium serpens – on top of a partly submerged stump.

Anomodon attenuatus - at base of Burr Oak; in alvar woodland along path near cabin.

Aulacomnium palustre - on top of a partly submerged stump.

Barbula convoluta - on ground in open woods.

Brachythecium campestre - in alvar woodland along path near cabin.

Brachythecium falcatum - ground at base of dead tree north of swamp.

Brachythecium sp. - in swamp on Green Ash trunk above water line; ground at base of dead tree north of swamp; on ground below *Cornus racemosa*.

Bryum sp. - on ground in open woods; roadside ditch with *Trichostema brachiatum*; open area with *Nostoc* and *Sporobolus*.

Calliargon cordifolium - aquatic in water 2 dm deep.

Campyliadelphus chrysophyllus - on ground below *Cornus racemosa*; base of Red Cedar; open area with *Nostoc* and *Sporobolus*; in alvar woodland along path near cabin.

Ceratodon purpureus - on fallen wooden signpost.
Dicranum polysetum - in alvar woodland along path near cabin.
Drepanocladus aduncus - aquatic in water 2 dm deep; historic cabin site.
Entodon seductrix - at base of Burr Oak.
Fissidens adianthoides - on ground in open woods; open area with *Nostoc* and *Sporobolus*.
Hygroamblystegium varium - in swamp on Green Ash trunk above water line.
Orthotrichum pumilum - on bark of Green Ash.
Plagiomnium cuspidatum - In swamp on Green Ash trunk above water line; on top of a partly submerged stump; ground at base of dead tree north of swamp.
Platygyrium repens - at base of Burr Oak.
Pseudoleskeella nervosa – at base of Red Cedar.
Pylaisia cf. *intricata* - on bark of Green Ash.
Schistidium apocarpum - in alvar woodland along path near cabin.
Schistidium rivulare - on limestone rock beside road.
Syntrichia ruralis - on fallen wooden signpost.
Thuidium delicatulum - ground at base of dead tree north of swamp.
Thuidium recognitum - on ground below *Cornus racemosa*; on ground in open woods; in alvar woodland along path near cabin.
Tortella tortuosa – open gravelly alvar.

Liverworts

Frullania eboracensis - on bark of Green Ash
Lophocolea heterophylla - on top of a partly submerged stump.

Some helpful references:

Field guides

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Pope, R. 2016. Mosses, Liverworts and Hornworts: A Field Guide to the Common Bryophytes of the Northeast. Comstock Publishing Associates, Ithaca, New York.

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Faubert, J. 2013. Flore des bryophytes du Quebec-Labrador, Volume 2 : Mousses, première partie, Saint-Valérien, Québec.

Faubert, J. 2014. Flore des bryophytes du Québec-Labrador, Volume 3 : Mousses, seconde partie, Saint-Valérien, Québec.



Figure 25. Mosses (*Hygroamblystegium varium*, *Plagiomnium cuspidatum* and *Brachythecium* sp.) growing on base of an Ash in swamp. Photo by Brenda Kostiuk on 2 Jan. 2020.

(3) VASCULAR PLANTS

Additional vascular Plants noted at the Hudgin-Rose property in 2019 but not seen during the BioBlitz.

DRYOPTERIDACEAE – WOOD FERN FAMILY

Dryopteris marginalis, Marginal Wood Fern, spring

ASPARAGACEAE

Scilla siberica, Siberian Squill, 3 May

LILIACEAE

Erythronium americanum, Yellow Trout Lily, 3 May

IRIDACEAE – IRIS FAMILY

Iris pseudacorus, Yellow Flag, 3 May

POLYGONACEAE – KNOTWEED FAMILY

Persicaria hydropiperoides, False Water-pepper – swamp, 2 August

CARYOPHYLLACEAE

Moehringia lateriflora, Grove Sandwort, 10 June

RANUNCULACEAE – BUTTERCUP FAMILY

Thalictrum dioicum, Meadow Rue, 3 May

PAPAVERACEAE – POPPY FAMILY

Dicentra cucullaria, Dutchman’s Breeches, 3 May

Sanguinea canadensis, Bloodroot, 3 May

POLYGALACEAE

Polygala senega, Seneca Snakeroot - wet depressions by roadside, NC, 10 June

POLEMONIACEAE

Phlox divaricata, Wild Blue Phlox – edge of thickets, 10 June

CAPRIFOLIACEAE

Symphoricarpos albus, Thin-leaved Snowberry, 10 June

(4) SNAILS by Paul Catling

Table 4. Snails collected at the Hudgin-Rose property on Aug. 2, 2019 by P.M. Catling, B. Kostiuk, S.M. McKay-Kuja and A. Kuja. Identified by P.M.C. (* also seen during BioBlitz)

Scientific Name	Common Name	Number observed
<i>Cochlicopa lubrica</i> (Müller, 1774)	GLOSSY PILLAR	5

*<i>Anguispira alternata</i> (Say, 1817)	FLAMED TIGERSNAIL	6
<i>Euchemotrema fraternum</i> (Say, 1824)	UPLAND PILLSNAIL	5
<i>Vitrina angelicae</i> (Beck, 1837)	EASTERN GLASS-SNAIL	8
<i>Vitrina cf. pellucida</i> (Muller, 1774)	EURASIAN GLASS-SNAIL	2
<i>Vallonia costata</i> (Müller, 1774)	COSTATE VALLONIA	6
<i>Trochulus hispidus</i> (Linnaeus, 1758)	HAIRY HELLICID	2
<i>Mesomphix inornatus</i> (Say, 1821)	PLAIN BUTTON	2
<i>Zonitoides arboreus</i> (Say, 1817)	QUICK GLOSS (<i>Hyalina arboreus</i> , Say)	1
*<i>Neohelix albilabris</i> (Say, 1817)	WHITELIP	40 (in a sample of 15, 6 smaller shells had an open umbilicus and a parietal tooth)



Figure 26. Snail shell found on the Hudgin-Rose property after the bioblitz. Photo by P.M. Catling



Figure 27. Aquatic organisms found in the swamp at the south end of the property on 2 August 2019. The leech *Batrachobdella picta* (upper left); immature Blue-spotted Salamander (upper right); Water Scorpion (*Renatra* sp.) (lower left and right). Photos by P.M. Catling.

(5) INSECTS

Butterflies - Lepidoptera

Red Admiral – several seen on 3 May 2019 (but also seen during the BioBlitz).
Northern Azure (*Celastrina lucia*) – 10 June 2019

True Bugs – Hemiptera – found in flowing water near culvert in swamp

Giant Water Bug (*Lethocerus americanus*) - 2 Aug. 2019 – Family – Belostomatidae
Water Scorpion (*Renatra* sp.) – 2 Aug. – Family - Nepidae

Dragonflies – Odonata

Swamp Darner (*Epiaeschna heros*) – Adults and nymphs are seen in the south end swamp some years according to P.M. Catling. This dragonfly is not commonly encountered. It can even be found in the Hudgins-Rose Swamp when water drains leaving a thick carpet of moss (probably *Calliergon cordifolium* and *Drepanocladus aduncus*, see above) which can be peeled back to find the large black nymphs. This submersed moss carpet enables some moisture retention and the nymphs (of this species) can survive immobile in relatively dry conditions. To wake them up, just add water, but handle them with care. This amazing insect has undoubtedly declined due to loss of deciduous swamps.

(6) LEECHES by Paul Catling

Batrachobdella picta, a parasitic leech of frogs and turtles, was found in detritus in the ash swamp near flowing water on 2 Aug.

(7) REPTILE and AMPHIBIANS

Blanding's Turtle (*Emydoidea blandingii*) – May 3 - a dead Blanding's Turtle was found crushed at the edge of the flooded road south of the swamp on the eastward jog of Ostrander Point Road. It was probably killed by a car or truck driving through the deep puddle present at that time.

May 15 - a Blanding's Turtle was observed during a Spring Birding Festival walk to the property. It was in a puddle by the side of the road north of the cabin.

Amphibians:

Western Chorus Frog – *Pseudacris triseriata* – Hylidae - Apr. 12: heard calling in SW, NE wetland, and east of cabin (**but not observed during the BioBlitz**)

Spring Peeper – *Pseudacris crucifer* – Hylidae – Apr. 12: calling in SW and NE wetland

Wood Frog – *Lithobates sylvaticus* – Ranidae – Apr. 12: calling in SW and NE wetlands

(8) BIRDS

Birds observed on May 15 Spring Birding Walk but not seen or heard during the BioBlitz

Phasianidae	<i>Bonasa umbellus</i>	Ruffed Grouse
Scolopacidae	<i>Gallinago delicata</i>	Wilson's Snipe
Sturnidae	<i>Sturnus vulgaris</i>	European Starling
Passerellidae	<i>Zonotrichia leucophrys</i>	White-crowned Sparrow
Cardinalidae	<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak
Icteridae	<i>Dolichonyx oryzivorus</i>	Bobolink



Figure 28. Family of Ruffed Grouse (*Bonasa umbellus*). This species is seen on the Hudgin-Rose Property and breeds on the South Shore, but was not encountered during the 2019 BioBlitz. The illustration is a Currier and Ives postcard. Public domain photo.

