



Flora and Fauna of the Bonshaw Hills:
An Inventory of Flora and Fauna in Thirteen Sites in
the Trans-Canada Highway Re-alignment Area
New Haven to Bonshaw, PEI

A report to the
Bonshaw Hills Public Land Management Sub-committee
Charlottetown, Prince Edward Island
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Island Nature Trust

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Background

In 2012 and 2013 a portion of the Trans-Canada Highway between Bonshaw and New Haven, Prince Edward Island was re-aligned. The path of the highway was altered significantly from the former right-of-way, cutting through undeveloped woodland and fields, crossing streams, dividing private properties and altering existing drainage, landscape and vegetation. During the construction phase of this project, the Bonshaw Hills Public Lands Committee was formed by the PEI Department of Transportation and Infrastructure Renewal (PEI TIR) as a condition-of-approval for the re-alignment project. Both Provincial and private members made recommendations for conservation and protection of identified properties in the new highway corridor and beyond. This committee developed a report for the Minister of PEI TIR with public input. That report outlined a total of 20 recommendations, including eight recommendations and many parcel-specific recommendations for the conservation and protection of 18 properties owned by, or to be acquired by the Province of PEI in the general area of the re-alignment. One recommendation was for an expanded park concept with recreational trails for non-motorized use.

Following the acceptance of that document by the Province, a Bonshaw Hills Public Lands Management Sub-committee was formed to, among other tasks, develop management plans and implement the recommendations of the larger committee's report. An important part of any management plans is base-line inventories of plants and animals of the sites. This document reports on the results of a base-line inventory of plants (primarily vascular), and animals (primarily birds) found in 13 sites, including 20 properties with Parcel Identifiers (PIDs). The total acreage covered for the inventory was 767 acres of woodlands, fields and wetland habitats (Figure 1).

As with all land with any natural cover in Prince Edward Island, that land has been impacted by human use. Forest clearing or thinning has taken place over much of the province multiple times since the 1700s. The Bonshaw Hills area is no exception. However, with its high slopes and many streams and springs, some areas remain quite intact, where access and logging were difficult. However, it is clear from these surveys that exotic species have spread into some of the most intact areas, signs of thinning or highgrading appear in the most unlikely places, and irresponsible use of the lands by users of motorized vehicles is on the rise. Changes to the landscape and its habitats are on-going, making the protection of these lands as natural areas urgent and important.



Figure 1: Tributary in Parcel A

Introduction

Island Nature Trust was contracted by the Province of PEI to conduct this inventory. Diane Griffin, Dan McNeill and Fiep de Bie conducted the field work between early May and late August, 2014. Early surveys of birds were productive with both migratory species and nesting species found in many areas. Later surveys established more clearly which species were nesting in each site. Multiple visits to survey birds were made to most sites over the course of three months. Plant surveys were repeated in July and August at sites that had early surveys in May and June in order to make identification possible of late summer species such as some asters.

While it is impossible to cover every square meter in a one-season survey such as this, every effort was made to cover as much of each property as possible in a systematic way that would note all representative habitats and their species. Field surveyors walked hundreds of kilometers and spent over a thousand hours in the field.

The surveys conducted as a part of this project may be the only thorough surveys conducted in some areas, while others have been surveyed through Atlantic Canada Conservation Data Centre (ACCDC) and by Erskin for the *Flora of Prince Edward Island (1965)*.

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Hundreds of photographs were taken over the course of the project and are available for use in relation to the larger project. Some are included in this report.

Geographic Position System (GPS) points were collected for plant rarities where few individuals were found, but if populations were larger than 20 specimens and scattered over extensive areas, the sites were identified (Geographi Information System)GIS coordinates) through Google Maps. GPS points were also collected for rare or listed species of birds such as Canada Warbler (Species at Risk Act (SARA) listed as threatened) and Bobolink (Council on the Status of Endangered Wildlife in Canada (COSEWIC) listed as threatened). Rarities were given special consideration and will be important drivers in future management plans for each site.

The species lists indicate species richness in specific areas and will also help guide future management plans. Where species numbers are high and overlap with relatively undisturbed sites, special consideration should be given to preventing future disturbances. This will be particularly important in riparian zones, steep slopes and wetlands. Some rarities are noted as planted such as Red Pine (listed as S2 with Atlantic Canada Conservation Data Centre (ACDC)). Future management plans may include recommendations for planting of this or other rarities to bolster populations in these sites as a result of this survey.

Species numbers or richness may also be high in heavily disturbed areas, such as former farmland, homestead sites or roadsides, showing large numbers and proportions of alien or exotic species.

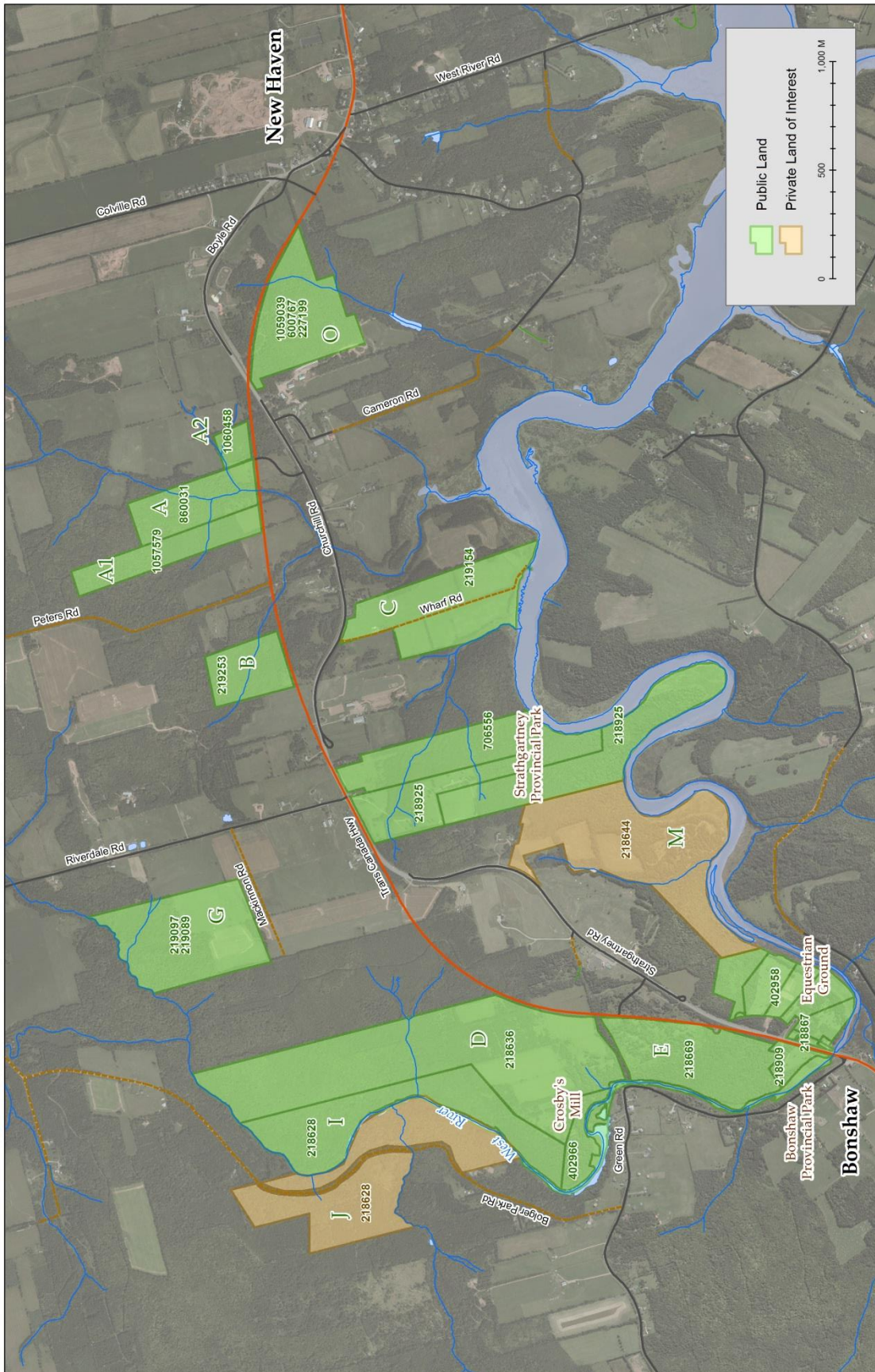
While these areas may be species rich, they are often replete with exotic weedy species common on the edges of open areas and in the margins of woodlands. These areas are better suited to recreational use where trails may be constructed, access is more straightforward and management to restore a more native and natural habitat is likely to be undertaken. Areas that have few exotic species but are rich woodland on high slopes or in riparian zones should not have trails constructed. Trail users introduce alien species, increase erosion on slopes and disturb wildlife (plant and animal) where the trails themselves can change animal behaviour and survival.

The area within this survey is one of the hilliest areas in Prince Edward Island. Slope plays a significant part in this survey and where it was a factor in species found, it is noted in the site descriptions. Less common species such as Eastern Hemlock were found in larger numbers and of much greater size/age in steeply sloped areas than less sloped areas where past tree harvests were carried out more easily and more often. See Figure 2.

This survey report represents a huge effort to discover and explore one of the only remaining largely wooded landscapes in central Queens County, PEI. The hundreds of species and multiple lists of plants and birds for each site will give future planners and managers great insight into a spectacularly beautiful area that is unique in the provincial landscape.

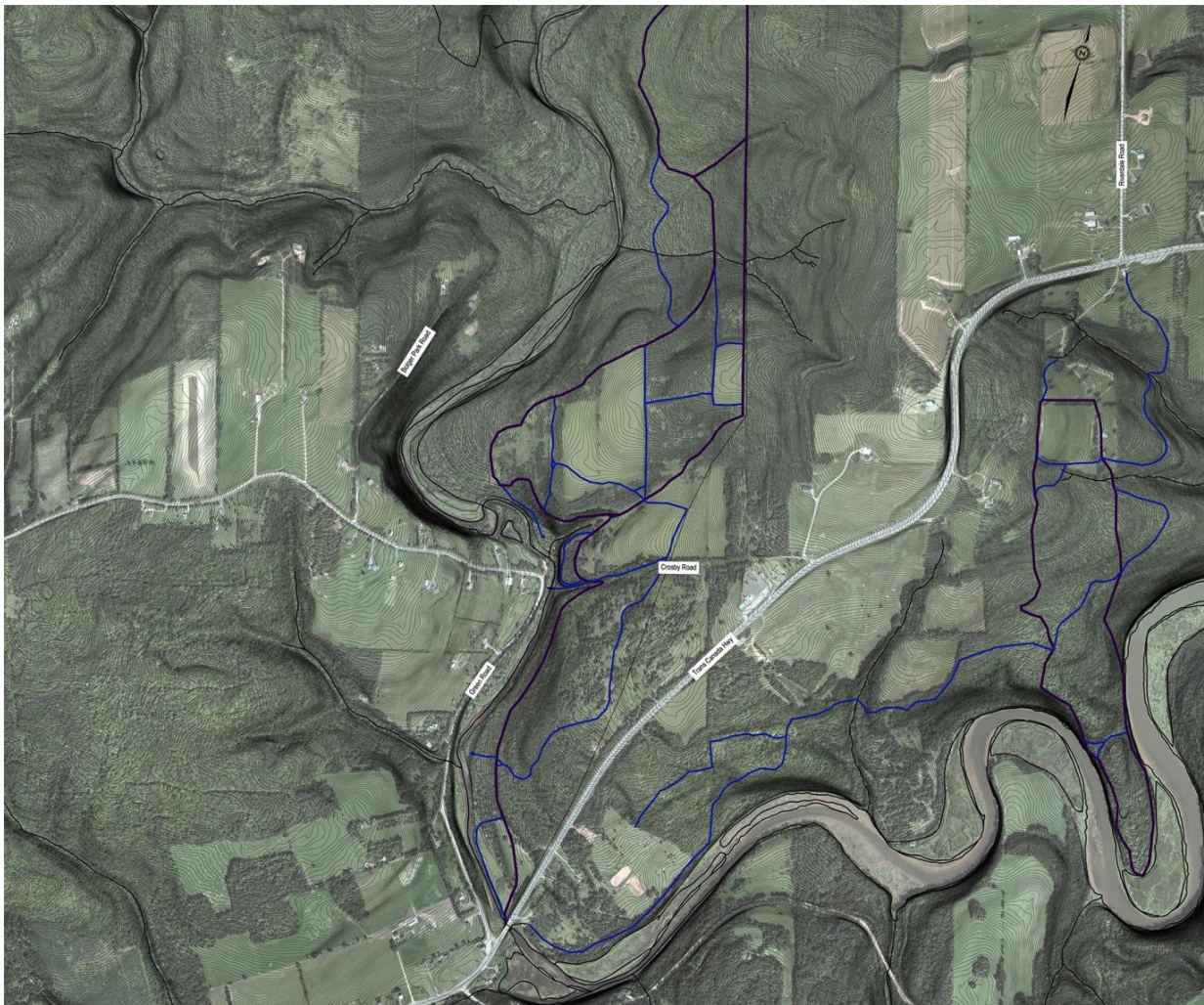
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Figure 2: Map of Sites Surveyed May to August 2014



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Figure 3: Topography and trails of a portion of the area inventoried showing extreme slopes and multiple existing trails.



Bio-Inventory Report Bonshaw Hills Properties

A total of 20 properties with PIDs were surveyed for plants and animals and these lists were consolidated into 13 area reports. The total surveyed area during this bio-inventory was approximately 767 acres. From May 21st to August 13th, 2014 all the properties were visited at least twice to determine the botanical species present and more frequently to determine bird species and to document their on-site status, i.e. C - common, O - occasional and I – infrequent for plants.

The nomenclature used for the plants follows NatureServe which is accessed through the Atlantic Canada Conservation Data Centre (ACCDC). Appendix A contains summaries for each area plus tables with plant species noted for each vegetation habitat type, incidental reports of animals other than birds and bird species observed.

Plant surveys were conducted by Diane Griffin and Dan McNeill, occasionally accompanied by a volunteer. Surveyors explored the areas on foot, navigating with Google Maps and paper maps of the areas showing property boundaries and terrain features. Habitat polygons were surveyed as individual units, without following a grid, but zig-zagging through the sites in order to observe as much of the site as possible. Species were recorded as observed and unidentified plants were collected and identified using *Roland's Flora of Nova Scotia*. Collected samples of fungus were identified using the *National Audubon Society Field Guide to North American Mushrooms*. All nomenclatures from these print sources were referenced with NatureServe and updated to ensure the correct modern names were recorded.

Avifauna surveys were conducted by Fiep de Bie from May 5 to August 15, 2014. Objectives were to identify avian species present/occurring within the project area and to determine whether there are breeding birds in the area. Surveys were mainly conducted in the early morning hours (starting half an hour before sunrise). One survey was conducted in the afternoon to check for soaring raptors (Area C). Surveys were conducted by walking transects with various stops at locations where birds were more prominent and where there was a good overview of the site. Flushing-bird surveys were also carried out to find breeding birds. Birds were either directly observed, heard or on one case recent sign of pileated woodpecker was included.

Rarity

The status was recorded for rarity of occurrence in Prince Edward Island for those plants assigned an S-rank from 1 to 3 by the Atlantic Canada Conservation Data Centre (ACDC). The definitions assigned to S-ranks are:

S1 means critically imperiled

S2 is imperiled

S3 is vulnerable

S4 is apparently secure

S5 is secure

Within the study area, there were 13 native plant species found that are ranked at S3 or below by the ACCDC and these are summarized in Table 1. GPS locations were recorded for S1 and S2 species. Locations were not recorded for S3 species as each was found in relative abundance in the areas they were discovered.

Table 1. Plants found in Bonshaw Hills inventory and ranked S1, S2 or S3 by ACCDC

<i>Species</i>	Common Name	ACCDC S-RANK	Location/Area
<i>Amelanchier laevis</i>	Allegheny Serviceberry (Smooth Serviceberry)	S3	Woodland edges in all areas - I&J, B, C, D, E, G, O, Equestrian, Crosby's Mill, Bonshaw Park
<i>Capnoides sempervirens</i>	Pale/Pink Corydalis (Rock Harlequin)	S2	O, (planted). N46 13 11.9 W063 18 25.5
<i>Epifagus americana</i>	Beech-drops	S3	I&J, C, Strathgartney, Equestrian (Scattered and associated with Beech trees)
<i>Erigeron philadelphicus</i>	Philadelphia Fleabane	S1	C, N46 12 56.3 W063 19 30.3
<i>Eurybia radula</i>	Low Rough Aster	S3	Scattered near water in I&J, A, O, Strathgartney
<i>Geum macrophyllum</i>	Largeleaf Avens	S2	Scattered near water in I&J, B, D, G, Equestrian, Crosby's Mill
<i>Glyceria borealis</i>	Small Floating Mannagrass	S2S3	In water in A, Strathgartney
<i>Habenaria blephariglottis</i> (Syn: <i>Platanthera</i>)	White-fringe Orchis (Ragged White-fringe Orchis)	S2	B, C

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<i>blephariglottis</i>)			
<i>Lactuca canadensis</i>	Wild Lettuce	S3?	I&J (N46 12 58.2 W063 21 23.4), A (N 46 13 15.1 W 063 19 02.9)
<i>Pinus resinosa</i>	Red Pine	S2	Planted at I&J, Bonshaw Park
<i>Thuja occidentalis</i>	Eastern White Cedar	S3S4	B (planted)
<i>Tsuga canadensis</i>	Eastern Hemlock	S3S4	On steep slopes in all areas. I&J, A, B, D, E, G, O Strathgartney, Equestrian, Crosby's Mill
<i>Ulmus americana</i>	American Elm	S3	O, I&J, Equestrian

Within each plant species list the abundance codes are listed as Common (C), Occasional (O) and Infrequent (I). These indicators refer to the abundance of the species within the area covered in that species list. This area may be an entire property, wetland or field, as indicated in the title of the table.

Human Impact

When the species list is large for most properties, it is heavily influenced by the amount of human activity that has occurred. Most areas exhibit specimens that have been planted in the past, as many areas studied include former house and farm properties, provincial parks and public walking trails.

An orchid, the Broad-leaved Helleborine (*Epipactis helleborine*), occurs at Strathgartney Park (2 plants found), in Area E (about 20 plants), Area D (15 plants) and Area O (9 plants). It is non-native, introduced from Europe, probably for medicinal purposes, but is highly toxic. It is relatively rare in PEI, but has been found in other locations such as a few plants in woodland in Richmond. The GPS locations are noted in the species lists for each area. Some consideration should be given as to whether these should be removed.

A number of properties contain garbage dumps, which include paint and fuel containers, and parts of old vehicles and farm equipment. These should be removed, especially in areas designed for public use such as near trails. Many sites also contain remnants of old fences and fence wire through the woodland areas. These fences need to be clearly flagged or removed to avoid injury to the public.

Fortunately, there are areas which are in a fairly high state of pristine quality. These include the mature woodland on areas A, B, D, E, I and J. When planning trails in these areas, careful consideration should be given to minimal intrusion for several reasons: Trails result in

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accidentally bringing in weedy species, thus negatively impacting native vegetation, and there are steep slopes which are prone to erosion.

There are other areas heavily impacted by ATV use which needs to be stopped as there is a lot of vegetation destruction and erosion occurring. It is also unsightly and takes away from the hiker's enjoyment of a nature site experience. The most impacted areas are A, A1 and G. Some areas already have existing trails which are popular with mountain bikers and hikers, including Strathgartney Park and the trail corridor leading west from the park and through the Equestrian Grounds. Other sites seem to have new and unauthorized activity, including high amounts of plastic and metallic flagging tape affixed to trees and litter that appeared in between site visits in areas A and A1. Areas I and J had a lesser amount of mountain bike trail activity. These issues need to be addressed immediately as part of the Bonshaw Park planning process.

Diversity

Some properties have mature woodlands which are relatively intact and contain mostly native species except at their edges where there was former habitation, agricultural or highway construction activity. All of these activities resulted in weedy or crop species becoming persistent.

Of special note, are the large Eastern Hemlock trees found on Areas A, A1, B, D, E, G, O, Crosby's Mill, I&J, M (the trail corridor between the Equestrian Grounds and Strathgartney Provincial Park), and the wooded area associated with the Equestrian Grounds.

Some species that we expected to find in large numbers were either present in low numbers or not at all. Low numbered species include Gold-thread, May Flower and Prince's Pine. No occurrences were noted for Tea-berry which is readily present in nearby St. Catherine's area. Dwarf Ginseng, One-flowered Shinleaf and Spring Beauty were not found, although there is suitable habitat.



Figure 4: Goldthread (*Coptis trifolia*) and Wild Lily-of-the-valley (*Maianthemum canadense*) found in area G

Animals

While concentrating on the plants, the botanical surveyors incidentally noted some of the animal species present, including birds, although a much more comprehensive list is presented in the report by Fiep de Bie who conducted the avian surveys within the study area:

Avian Prevalence and Breeding Bird Surveys

Objectives:

To identify avian species present/occurring within the project area and to determine whether there are breeding birds in the area. Surveys were mainly conducted in the early morning hours (starting half an hour before sunrise). One survey was conducted in the afternoon to check for soaring raptors (Parcel C).

Method used:

Walking transects with various stops at locations where birds were more prominent and where there was a good overview of the site. Flushing-birds surveys were also carried out for breeding birds.

Species Ranking:

S-rank denotes provincial status of birds by the Atlantic Canada Conservation Data Centre (ACDC). S-rank S5 indicates an abundant species breeding in the province and S4 refers to a fairly common species breeding in PEI. S-rank S3 refers to species breeding on PEI that are uncommon throughout its range in the province, S2 are species breeding on PEI that are provincially rare, and S1 are species breeding on PEI that are extremely rare in the province. The majority of the species detected during this spring/summer surveys were classified as S4 and/or S5 by the ACDC, with the exception of Bobolink (S3), Barn Swallow (S3), Red-tailed Hawk (S3), Rose-breasted Grosbeak (S3), Olive-sided Flycatcher (S3), Killdeer (S3), Brown-headed Cowbird (S3), Philadelphia Vireo (S1S2), Pileated Woodpecker (S1) and White-breasted Nuthatch (S1). S Ranks followed by "B" are species known to breed in PEI.

Field Checklist:

Seasonal frequency of birds in Prince Edward Island can be found in the "Field Checklist of Birds" (7th edition, 2003) produced by the Government of Prince Edward Island. Codes for seasonal frequency are (O) occasional; (R) rare; (H) hypothetical; (U) uncommon; (A) accidental; (IR) irregular; (FC) fairly common; (C) common; and (VC) very common. Seasonal frequency for spring and summer were noted for each species observed and are available in the data base from which the avifauna tables in this report are made. They are available on request. Most species found at the sites are very common (50 or more individuals per day observed), common (10-49 individuals per day) and fairly common (1-9 individuals per day).

Appendix A

Summary of Vascular Plants, Lower Plants, Fungi, Lichens and Fauna by Site

Areas A, A1, A2

The property consists of three PIDs, A1 is 1057579 (33.7 acres), A is 860031 (30.3 acres), and A2 is 1060458 (6.2 acres). This survey covers the areas north of the new highway section, a total area of 70.2 acres.

AREAS A, A1 AND A2 VASCULAR PLANTS

AREAS A, A1 WOODLAND AND RIPARIAN ZONE

Area A1 is a fully wooded area of mostly Balsam Fir and White Birch trees. It contains foot and bike paths throughout and is bisected by a tributary stream. Area A is a mix of Yellow Birch, Eastern Hemlock and maples woodland and more open areas. A stream runs through areas A, A1 and A2. The riparian zone is rich in wetland plants such as Swamp Jack-in-the-Pulpit, Small Enchanter's Nightshade and Ostrich Fern. A large culvert carries water under the new highway and empties into the stream in area A. The culvert site is the area chosen as a camp site by those who protested the construction of the highway. Areas A and A1 were surveyed on May 26 and August 1 2014, and area A2 was visited on June 20 and August 1. A total of 145 vascular plant species was recorded for the combined A areas.

TABLE 2: Vascular Plants Observed in Areas A and A1, Woodland and Riparian Zone

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer pensylvanicum</i>	Striped Maple	C
<i>Acer rubrum</i>	Red Maple	C
<i>Acer saccharum</i>	Sugar Maple	C
<i>Acer spicatum</i>	Mountain Maple	O, wetland
<i>Agrostus perennans</i>	Perennial Bentgrass	C
<i>Alnus incana</i>	Speckled Alder	C, wetland
<i>Amelanchier laevis var. nitida</i>	Allegheny Serviceberry (Smooth Serviceberry)	I, S3 , hedgerow, N46 13 16.1 W063 19 043.
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Arisaema triphyllum</i>	Swamp Jack-in-the-pulpit	O, wetland
<i>Betula allegheniensis</i>	Yellow Birch	C
<i>Betula papyrifera</i>	White Birch	O
<i>Callitriche palustris</i>	Vernal Water-starwort	C, wetland
<i>Carex deweyana</i>	Dewey Sedge (Short Scale Sedge)	O, wetland
<i>Carex gracillima</i>	Graceful Sedge	C
<i>Carex scabrata</i>	Rough Sedge	C, wetland
<i>Circaea alpina</i>	Small Enchanter's-nightshade	O, wetland

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<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	C
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	O
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C
<i>Cypripedium acaule</i>	Pink Lady's-slipper	I
<i>Dennstaedtia punctilobula</i>	Eastern Hay-scented Fern	C
<i>Dryopteris intermedia</i>	Evergreen Woodfern	C
<i>Epifagus americana</i>	Beech-drops	C, S3
<i>Epilobium ciliatum ssp.</i>	Hairy Willowherb	I, wetland
<i>Epilobium leptophyllum</i>	Linear-leaf Willowherb (Bog Willowherb)	O, wetland
<i>Fagus grandifolia</i>	American Beech	O
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	C, wetland
<i>Galium palustra</i>	Marsh Bedstraw	O, wetland
<i>Gymnocarpium dryopteris</i>	Northern Oak Fern	O
<i>Impatiens capensis</i>	Spotted Jewelweed (Orange Jewelweed) (Spotted Touch-me-not)	C, wetland
<i>Impatiens pallida</i>	Pale Jewelweed (Pale Touch-me-not)	O, wetland
<i>Lactuca canadensis</i>	Wild Lettuce	O, S3 , N46 13 15.1 W063 19 02.9 (on road edge)
<i>Linnaea borealis</i>	Twinflower	C
<i>Luzula multiflora ssp</i>	Woodrush	C
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Maianthemum racemosum</i>	Solomon's-plume	C
<i>Matteuccia struthiopteris</i>	Ostrich Fern	O, wetland
<i>Medeola virginiana</i>	Indian Cucumber Root	C
<i>Monotropa uniflora</i>	Indian-pipe	C
<i>Myosotis arvensis</i>	Rough Forget-me-not	O, wetland
<i>Myotosis laxa</i>	Small Forget-me-not	C, wetland
<i>Onoclea sensibilis</i>	Sensitive Fern	I, wetland
<i>Osmunda cinnamomea</i>	Cinnamon Fern	O
<i>Oxalis acetosella</i>	Common Woodsorrel	C
<i>Oxalis stricta</i>	Common Yellow Woodsorrel	C
<i>Phegopteris connectilis</i>	Northern Beechfern	O
<i>Picea glauca</i>	White Spruce	C
<i>Picea rubens</i>	Red Spruce	O
<i>Pinus strobus</i>	Eastern White Pine	O
<i>Populus grandidentata</i>	Large-toothed Aspen	O
<i>Populus tremuloides</i>	Trembling Aspen	C

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<i>Prenanthes trifoliolata</i>	Threeleaf Rattlesnake-root (Lion's Paw)	I
<i>Pteridium aquilinum</i>	Bracken Fern	O
<i>Pyrola americana</i> (<i>rotundifolia</i>)	American Wintergreen	O
<i>Ranunculus acris</i>	Tall Buttercup	C, wetland
<i>Ranunculus repens</i>	Creeping Buttercup	C
<i>Ribes glandulosum</i>	Skunk Currant	O, wetland
<i>Ribes lacustre</i>	Bristly Black Current	I
<i>Rorippa microphylla</i>	One-row Watercress	O, wetland
<i>Rubus pubescens</i>	Dwarf Red Raspberry	O, wetland
<i>Rumex orbiculatus</i>	Greater Water Dock	O, wetland
<i>Sambucus racemosa</i>	Red Elderberry	O
<i>Scirpus atrovirens</i>	Woolgrass Bulrush	C, wetland
<i>Scutellaria galericulata</i>	Hooded Skullcap (Marsh Skullcap)	I, wetland
<i>Solanum dulcamara</i>	Bittersweet Nightshade	O, wetland
<i>Sorbus americana</i>	American Mountain-ash	O
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	O
<i>Thalictrum pubescens</i>	Tall Meadowrue	O, wetland
<i>Thelypteris noveboracensis</i>	New York Fern	O
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Trillium cernuum</i>	Nodding Trillium	I
<i>Trillium undulatum</i>	Painted Trillium	C
<i>Tsuga canadensis</i>	Eastern Hemlock	O, S3S4 , large trees, A: N46 13 22.2 W063 19 11.9 A1: N46 13 16.0 W063 19 14.0
<i>Veronica americana</i>	American Speedwell (Brooklime)	O, wetland
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	O
<i>Viburnum nudum</i>	Wild Raisin	O
<i>Viola macloskeyi</i>	Small White Violet	C

AREA A2 OPEN AREA, WOODS EDGE AND ASSOCIATED RIPARIAN ZONE

A2 is a 6.2 acre site consisting mostly of an open area with many field and edge species. There is a plantation of White Spruce, most of which are about one metre high. The area is dominated by species of clover, Tufted Vetch and many other weedy species. The wetland species occur on the stream at the northern boundary of this parcel plus in wet spots adjacent to the highway right-of-way. These include Soft Rush and Reed Canarygrass. Species at the woods edge of parcels A and A1 are included here, as they are also generally field and edge plants.

Table 3: Vascular Plants Observed in Area A2 Open Area and Associated Riparian Zone
 Frequency Notes: C=Common, O=Occasional, I=Infrequent
 Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer rubrum</i>	Red Maple	C, planted
<i>Achillea millefolium</i>	Common Yarrow	C
<i>Alnus incana</i>	Speckled Alder	C, wetland
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	O
<i>Barbarea vulgaris</i>	Yellow Rocket	C
<i>Betula populifolia</i>	Gray Birch (Wire Birch)	I
<i>Calamagrostis canadensis</i>	Bluejoint Reedgrass	C, wetland
<i>Callitriche palustris</i>	Vernal Water-starwort	C, wetland
<i>Calystegia sepium</i>	Hedge False Bindweed (Wild Morning Glory)	C
<i>Carex pseudocyperus</i>	Cyperus-like Sedge	C, wetland
<i>Carex scabrata</i>	Rough Sedge	C, wetland
<i>Carex stipata</i>	Awl-fruit Sedge	O, wetland
<i>Chimerion angustifolium</i>	Fireweed	C
<i>Circaea alpina</i>	Small Enchanter's-nightshade	O, wetland
<i>Cirsium arvense</i>	Canada Thistle	C
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	O
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C
<i>Dactylis glomerata</i>	Orchard Grass	O
<i>Danthonia spicata</i>	Poverty Oat Grass	O
<i>Daucus carota</i>	Wild Carrot (Queen Anne's Lace)	C
<i>Doellingeria umbellata</i>	Flat-top White Aster	O
<i>Dryopteris intermedia</i>	Evergreen Woodfern	C
<i>Epilobium ciliatum ssp.</i>	Hairy Willowherb	O, wetland
<i>Equisetum arvense</i>	Field Horsetail	I
<i>Erechtites hieraciifolia</i>	Eastern Burnweed	O, S4
<i>Erigeron annuus</i>	Annual Fleabane	O, S1/exotic (as per

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		ACCDC)
<i>Erigeron strigosus</i>	Daisy Fleabane (Rough Fleabane)	O
<i>Eurybia radula</i>	Rough Aster (Low Rough Aster)	C, S3
<i>Euthamia graminifolia</i> var. <i>graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	O
<i>Filipendula ulmaria</i>	Queen-of-the-Meadow	C, wetland
<i>Fragaria virginiana</i>	Virginia Strawberry	O
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	O, wetland
<i>Galium palustra</i>	Marsh Bedstraw	C, wetland
<i>Glyceria borealis</i>	Small Floating Mannagrass	C, S2S3 , wetland
<i>Gymnocarpium dryopteris</i>	Northern Oak Fern	C
<i>Hieracium aurantiacum</i>	Orange Hawkweed (Devil's Paintbrush)	O
<i>Hieracium caespitosum</i>	Meadow Hawkweed	C
<i>Hieracium floribundum</i>	Pale Hawkweed (King Devil Hawkweed)	C
<i>Hieracium pilosella</i>	Mouse-ear Hawkweed	C
<i>Hypericum boreale</i>	Northern St. John's Wort	C
<i>Juncus effusus</i>	Soft Rush	C, wetland
<i>Kalmia angustifolia</i>	Sheep Laurel	C
<i>Lactuca canadensis</i>	Wild Lettuce	O, S3
<i>Lactuca hirsuta</i>	Hairy Wild Lettuce	C
<i>Leucanthemum vulgare</i>	Oxeye Daisy	C
<i>Lotus corniculatus</i>	Birdsfoot Trefoil	I
<i>Luzula multiflora</i> ssp	Woodrush	C
<i>Maianthemum racemosum</i>	Solomon's-plume	O
<i>Malus pumila</i>	Apple	O
<i>Medeola virginiana</i>	Indian Cucumber Root	O
<i>Melilotus officinalis</i>	Sweetclover	O
<i>Morella pensylvanica</i>	Northern Bayberry	I
<i>Myotis laxa</i>	Small Forget-me-not	C, wetland
<i>Oenothera biennis</i>	Common Evening-primrose	C
<i>Onoclea sensibilis</i>	Sensitive Fern	C, wetland
<i>Oxalis stricta</i>	Common Yellow Woodsorrel	C, wetland
<i>Panicum dichotomiflorum</i>	Fall Panic Grass	O
<i>Phalaris arundinacea</i>	Reed Canarygrass	C, wetland
<i>Phleum pratense</i>	Meadow Timothy	C
<i>Picea glauca</i>	White Spruce	C, some planted
<i>Pinus strobus</i>	Eastern White Pine	C, planted
<i>Plantago lanceolata</i>	English Plantain	C
<i>Plantago major</i>	Common Plantain	C

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<i>Poa palustris</i>	Fowl Bluegrass	O
<i>Poa pratensis</i>	Kentucky Bluegrass	O
<i>Populus tremuloides</i>	Trembling Aspen	C
<i>Potentilla recta</i>	Sulfur Cinquefoil	C
<i>Prenanthes trifoliolata</i>	Threelobed Rattlesnake-root (Lion's Paw)	I
<i>Prunella vulgaris</i>	Self-heal	O
<i>Prunus pensylvanica</i>	Pin Cherry	I
<i>Prunus virginiana</i>	Choke Cherry	I
<i>Pteridium aquilinum</i>	Bracken Fern	C
<i>Pyrola americana</i> (<i>rotundifolia</i>)	American Wintergreen	O
<i>Ranunculus acris</i>	Tall Buttercup	C, wetland
<i>Ranunculus repens</i>	Creeping Buttercup	C
<i>Rhamnus frangula</i>	Alder Buckthorn	I
<i>Rhynchospora alba</i>	Whitebeak Sedge	C
<i>Ribes glandulosum</i>	Skunk Currant	O
<i>Rorippa microphylla</i>	One-row Watercress	C, wetland
<i>Rosa virginiana</i>	Virginia Rose	I
<i>Rubus allegheniensis</i>	Allegheny Blackberry (Common Blackberry)	C
<i>Rubus idaeus</i>	Common Red Raspberry	C
<i>Rudbeckia hirta</i>	Black-eyed Susan	O
<i>Rumex crispus</i>	Curly Dock	C
<i>Rumex orbiculatus</i>	Greater Water Dock	O, wetland
<i>Sambucus racemosa</i>	Red Elderberry	O
<i>Scirpus atrovirens</i>	Woolgrass Bulrush	O, wetland
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	C
<i>Solidago gigantea</i>	Giant Goldenrod	C
<i>Solidago rugosa</i>	Roughleaf Goldenrod	C
<i>Solanum dulcamara</i>	Bittersweet Nightshade	O, wetland
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C
<i>Stellaria graminea</i>	Little Starwort	C
<i>Symphotrichum</i> <i>lateriflorum</i>	Starved Aster (Calico Aster)	C
<i>Symphotrichum novi-</i> <i>belgii</i>	New York Aster	C
<i>Taraxacum officinale</i>	Common Dandelion	C
<i>Thalictrum pubescens</i>	Tall Meadowrue	O, wetland
<i>Tragopogon dubius</i>	Meadow Goat's-beard	O

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<i>Trientalis borealis</i>	Northern Starflower	O
<i>Trifolium campestre</i>	Low Hop Clover	O
<i>Trifolium hybridum</i>	Alsike Clover	O
<i>Veronica americana</i>	American Speedwell (Brooklime)	O, wetland
<i>Veronica arvensis</i>	Field Speedwell	C
<i>Vicea cracca</i>	Tufted Vetch	C
<i>Vicia pulchella</i>	Sweet-clover Vetch	O

AREAS A, A1 AND A2 MOSSES, FUNGI AND LICHENS

Table 4: Fungi, Lichens and Non-vascular Plants Observed in Area A, A1, A2

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for non-vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Hylocomium splendens</i>	Stairstep Moss (Glittering Wood Moss)	C
<i>Lobaria pulmonaria</i>	Lung Lichen	C
<i>Lycoperdon Perlatum</i>	Common Puffball	C
<i>Marasmius Oreades</i>	Fairy Ring Mushroom	O
<i>Parmelia sp.</i>	Shield Lichen	C
<i>Russula emetica</i>	Emetic Russula	C
<i>Usnea sp.</i>	Old Man's Beard Lichen	C

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of fungi, lichens and non-vascular plants in this area.



Figure 5: Riparian zone in Parcel A

AREA A, A1, A2 FAUNA

Table 5: Avifauna Species Observed in Areas A, A1 and A2

Name	Common Name	Notes
<i>Accipiter striatus</i>	Sharp-shinned Hawk	
<i>Archilochus colubris</i>	Ruby-throated Hummingbird	
<i>Bombycilla cedrorum</i>	Cedar Waxwing	
<i>Bonasa umbellus</i>	Ruffed Grouse	Drumming
<i>Catharus fuscescens</i>	Veery	
<i>Catharus guttatus</i>	Hermit Thrush	
<i>Catharus ustulatus</i>	Swainson's Thrush	
<i>Certhia americana</i>	Brown Creeper	
<i>Colaptes auratus</i>	Northern Flicker	
<i>Contopus virens</i>	Eastern Wood-pewee	
<i>Corvus brachyrhynchos</i>	American Crow	Young begging
<i>Corvus corax</i>	Common Raven	
<i>Cyanocitta cristata</i>	Blue Jay	
<i>Dolichonyx oryzivorus</i>	Bobolink	S3 Threatened (COSEWIC)
<i>Empidonax minimus</i>	Least Flycatcher	
<i>Geothlypis philadelphia</i>	Mourning Warbler	Singing
<i>Geothlypis trichas</i>	Common Yellowthroat	
<i>Junco hyemalis</i>	Dark-eyed Junco	Alarm calls
<i>Megaceryle alcyon</i>	Belted Kingfisher	
<i>Melospiza melodia</i>	Song Sparrow	
<i>Mniotilta varia</i>	Black-and-white Warbler	
<i>Picoides villosus</i>	Hairy Woodpecker	Active nest
<i>Poecile atricapillus</i>	Black-capped Chickadee	Alarm calls
<i>Quiscalus quiscula</i>	Common Grackle	Alarm calls
<i>Regulus satrapa</i>	Golden-crowned Kinglet	
<i>Seivrus aurocapillus</i>	Ovenbird	
<i>Setophaga americana</i>	Northern Parula	
<i>Setophaga caerulescens</i>	Black-throated Blue Warbler	
<i>Setophaga coronata</i>	Yellow-rumped Warbler	
<i>Setophaga fusca</i>	Blackburnian Warbler	
<i>Setophaga magnolia</i>	Magnolia Warbler	
<i>Setophaga petechia</i>	Yellow Warbler	
<i>Setophaga ruticilla</i>	American Redstart	
<i>Setophaga virens</i>	Black-throated Green Warbler	
<i>Sitta canadensis</i>	Red-breasted Nuthatch	

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<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
<i>Spinus tristis</i>	American Goldfinch	
<i>Strix varia</i>	Barred Owl	
<i>Troglodytes hiemalis</i>	Winter Wren	
<i>Turdus migratorius</i>	American Robin	Egg shell
<i>Vireo olivaceus</i>	Red-eyed Vireo	
<i>Vireo solitarius</i>	Blue-headed Vireo	
<i>Zenaida macroura</i>	Mourning Dove	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	

AREAS A, A1 AND A2 ADDITIONAL FAUNA SPECIES OBSERVED

Table 6: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Areas A, A1 and A2

Name	Common Name	Notes
<i>Lepus americanus</i>	Snowshoe Hare	scat
<i>Lithobates sylvaticus</i>	Wood Frog	
<i>Microtus pennsylvanicus</i>	Meadow Vole	browse
<i>Tamias striatus</i>	Eastern Chipmunk	
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	middens, holes
<i>Tibicen sp. (canicularis?)</i>	(Dog-day?) Cicada	sound

Many sightings on this list are recorded from evidence of animals in the area, such as scat, tracks, middens and browse. A number of invertebrate species such as moths, butterflies, spiders and biting insects were noted but not identified.



Figure 6: Young stand of hardwood in area A

Area B

VASCULAR PLANTS

The area is a 22.7 acres portion of PID# 219253, located on the north side of and adjacent to the new highway and west of Peters Road. The majority of the area is wooded with few lightly used trails. A West River tributary crosses through the lot. The northeast corner of the property includes a small open area, formerly part of a privately owned field adjacent to Peters Road where trucks and trailers are being stored. The wooded area is dominated by Red Maple, White Birch and Eastern Hemlock trees, while the open edge is mostly weedy species such as various clovers and goldenrods. Species in parcel B are compiled in two lists, woodland and open area/edge. Area B was surveyed on two dates in 2014, June 20 and August 8. A total of 128 vascular species was recorded for this area.

AREA B WOODLAND

Table 7: Vascular Plants Observed for Area B Woodland

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer pensylvanicum</i>	Striped Maple	C
<i>Acer rubrum</i>	Red Maple	C
<i>Acer saccharum</i>	Sugar Maple	C
<i>Acer spicatum</i>	Mountain Maple	I
<i>Alnus incana</i>	Speckled Alder	C, wetland
<i>Anaphalis margaritacea</i>	Pearly Everlasting	O
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Betula allegheniensis</i>	Yellow Birch	C
<i>Betula papyrifera</i>	White Birch	C
<i>Cardamine pensylvanica</i>	Pennsylvania Bittercress	O, wetland
<i>Carex crawfordi</i>	Crawford's Sedge	O, wetland
<i>Carex gracillima</i>	Graceful Sedge	C
<i>Carex scabrata</i>	Rough Sedge	O, wetland
<i>Carex stipata</i>	Awl-fruit Sedge	O, wetland
<i>Carex trisperma</i>	Three-seeded Sedge	C, wetland
<i>Cerastium arvense</i>	Mouse-ear Chickweed	C
<i>Chimerion angustifolium</i>	Fireweed	O, woods edge
<i>Circaea alpina</i>	Small Enchanter's-nightshade	C, wetland
<i>Cirsium arvense</i>	Canada Thistle	C, woods edge
<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	I
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	O

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<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C
<i>Corylus cornuta</i>	Beaked Hazelnut	I
<i>Cypripedium acaule</i>	Pink Lady's-slipper	O
<i>Dactylis glomerata</i>	Orchard Grass	O
<i>Dichanthelium acuminatum</i>	Woolly Panic Grass	O, wetland
<i>Epilobium ciliatum ssp.</i>	Hairy Willowherb	O, wetland
<i>Epilobium leptophyllum</i>	Linear-leaf Willowherb (Bog Willowherb)	O, wetland
<i>Eurybia radula</i>	Rough Aster (Low Rough Aster)	O, S3 , wetland
<i>Fagus grandifolia</i>	American Beech	I, woods edge
<i>Fragaria virginiana</i>	Virginia Strawberry	C
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	C, wetland
<i>Galium mollugo</i>	Hedge Bedstraw (False Baby's Breath)	C, woods edge
<i>Galium palustre</i>	Marsh Bedstraw	C, wetland
<i>Geum allepicum</i>	Yellow Avens	C, wetland
<i>Geum laciniatum</i>	Rough Avens	O, wetland
<i>Geum macrophyllum</i>	Largeleaf Avens	O, wetland
<i>Juncus effusus</i>	Soft Rush	C, wetland
<i>Habenaria blephariglottis</i> (Syn: <i>Platanthera blephariglottis</i>)	White-fringe Orchis (Ragged White-fringe Orchis)	I, S2
<i>Linnaea borealis</i>	Twinflower	C
<i>Luzula multiflora ssp</i>	Woodrush	C
<i>Lycopodium obscurum</i>	Ground Pine	C
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Maianthemum racemosum</i>	Solomon's-plume	C
<i>Medicago sativa</i>	Alfalfa	O
<i>Monotropa uniflora</i>	Indian-pipe	O
<i>Oclemena acuminatus</i> (syn. <i>Aster acuminatus</i>)	Whorled Wood Aster	C
<i>Onoclea sensibilis</i>	Sensitive Fern	C, wetland
<i>Osmunda cinnamomea</i>	Cinnamon Fern	C, wetland
<i>Osmunda claytoniana</i>	Interrupted Fern	C
<i>Oxalis acetosella</i>	Common Woodsorrel	O
<i>Phegopteris connectilis</i>	Northern Beechfern	O
<i>Picea glauca</i>	White Spruce	C
<i>Polygonum sagittatum</i>	Arrowleaf Tearthumb	O, wetland

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<i>Populus tremuloides</i>	Trembling Aspen	C
<i>Prunus pennsylvanica</i>	Pin Cherry	O
<i>Pyrola americana</i> (<i>rotundifolia</i>)	American Wintergreen	O
<i>Ranunculus acris</i>	Tall Buttercup	C, wetland
<i>Ribes glandulosum</i>	Skunk Currant	C, wetland
<i>Ribes lacustre</i>	Bristly Black Current	O
<i>Ribes triste</i>	Wild Redcurrant	O
<i>Rosa virginiana</i>	Virginia Rose	C
<i>Rumex orbiculatus</i>	Greater Water Dock	O, wetland
<i>Salix discolor</i>	Pussy Willow	O
<i>Sambucus racemosa</i>	Red Elderberry	C
<i>Scirpus atrovirens</i>	Woolgrass Bulrush	O, wetland
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C
<i>Streptopus lanceolatus</i>	Rosy Twisted-stalk	C
<i>Symphotrichum</i> <i>puniceum</i>	Swamp Aster	O, wetland
<i>Taraxacum officinale</i>	Common Dandelion	O
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	C
<i>Thelypteris</i> <i>noveboracensis</i>	New York Fern	C
<i>Thuja occidentalis</i>	Eastern White Cedar	I, S3S4 , planted
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Trillium cernuum</i>	Nodding Trillium	O
<i>Trillium undulatum</i>	Painted Trillium	C
<i>Tsuga canadensis</i>	Eastern Hemlock	C, S3S4 , large
<i>Veronica americana</i>	American Speedwell (Brooklime)	C, wetland
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	C
<i>Viola cucullata</i>	Blue Violet	C

AREA B OPEN AREA AND WOODS EDGE

Table 8: Vascular Plants Observed in Area B, Open Area and Woods Edge

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Abies balsamea</i>	Balsam Fir	O
<i>Acer rubrum</i>	Red Maple	C, planted
<i>Achillea millefolium</i>	Common Yarrow	C
<i>Alnus incana</i>	Speckled Alder	C
<i>Amelanchier laevis</i>	Allegheny Serviceberry (Smooth Serviceberry)	C, S3 , woodland edge
<i>Betula papyrifera</i>	White Birch	C
<i>Calystegia sepium</i>	Hedge False Bindweed (Wild Morning Glory)	C
<i>Chimerion angustifolium</i>	Fireweed	C
<i>Cirsium arvense</i>	Canada Thistle	C
<i>Crataegus monogyna</i>	English Hawthorn	I
<i>Cypripedium acaule</i>	Pink Lady's-slipper	O
<i>Doellingeria umbellata</i>	Flat-top White Aster	O
<i>Elymus repens</i>	Couch Grass	O, wetland
<i>Equisetum arvense</i>	Field Horsetail	O
<i>Erigeron annuus</i>	Annual Fleabane	I, S1 /exotic (as per ACCDC)
<i>Erigeron strigosus</i>	Daisy Fleabane (Rough Fleabane)	O
<i>Euphrasia officinalis</i>	Eyebright	C
<i>Euthamia graminifolia</i> var. <i>graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	C
<i>Fragaria virginiana</i>	Virginia Strawberry	C
<i>Habenaria blephariglottis</i>	White-fringe Orchis (Ragged White-fringe Orchis)	I, S2
<i>Hieracium aurantiacum</i>	Orange Hawkweed (Devil's Paintbrush)	C
<i>Hieracium floribundum</i>	Pale Hawkweed (King Devil Hawkweed)	C
<i>Hieracium pilosella</i>	Mouse-ear Hawkweed	C
<i>Hypericum boreale</i>	Northern St. John's Wort	O
<i>Kalmia angustifolia</i>	Sheep Laurel	C
<i>Larix laricina</i>	American Larch	O, planted

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<i>Leucanthemum vulgare</i>	Oxeye Daisy	O
<i>Luzula multiflora ssp</i>	Woodrush	C
<i>Malus pumila</i>	Apple	O
<i>Morella pensylvanica</i>	Northern Bayberry	O
<i>Oenothera biennis</i>	Common Evening-primrose	O
<i>Oenothera perennis</i>	Small Sundrops	I
<i>Onoclea sensibilis</i>	Sensitive Fern	C
<i>Oxalis stricta</i>	Common Yellow Woodsorrel	O
<i>Picea glauca</i>	White Spruce	C
<i>Pinus strobus</i>	Eastern White Pine	C, planted
<i>Poa pratensis</i>	Kentucky Bluegrass	C
<i>Populus tremuloides</i>	Trembling Aspen	C
<i>Potentilla recta</i>	Sulfur Cinquefoil	C
<i>Prunella vulgaris</i>	Self-heal	C
<i>Prunus pensylvanica</i>	Pin Cherry	C
<i>Rhamnus frangula</i>	Alder Buckthorn	I
<i>Rosa virginiana</i>	Virginia Rose	C
<i>Rubus allegheniensis</i>	Allegheny Blackberry (Common Blackberry)	C
<i>Rubus idaeus</i>	Common Red Raspberry	C
<i>Rumex acetosella</i>	Sheep Sorrel	C
<i>Rumex crispus</i>	Curly Dock	O
<i>Salix discolor</i>	Pussy Willow	C
<i>Sambucus racemosa</i>	Red Elderberry	C
<i>Sisyrinchium montanum</i>	Strict Blue-eyed-grass	C
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	C
<i>Solidago gigantea</i>	Giant Goldenrod	C
<i>Solidago rugosa</i>	Roughleaf Goldenrod	C
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C
<i>Spiraea alba var. latifolia</i>	Northern White Meadowsweet	C
<i>Stellaria graminea</i>	Little Starwort	C
<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	C
<i>Symphyotrichum novi-belgii</i>	New York Aster	C
<i>Taraxacum officinale</i>	Common Dandelion	C
<i>Thuja occidentalis</i>	Eastern White Cedar	O, planted

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<i>Tragopogon dubius</i>	Meadow Goat's-beard	O
<i>Trifolium avens</i>	Rabbitsfoot Clover	C
<i>Trifolium hybridum</i>	Alsike Clover	C
<i>Trifolium pratense</i>	Red Clover	C
<i>Vicea cracca</i>	Tufted Vetch	C

AREA B MOSSES, FUNGI AND LICHENS

Table 9: Fungi, Lichens and Non-Vascular Species Observed in Area B

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for fungi, lichens and non-vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Chanterelle sp</i>	Chanterelle	O
<i>Hygrophorus coccineus</i>	Scarlet Waxy Cap	I
<i>Lobaria pulmonaria</i>	Lung Lichen	C
<i>Lycoperdon Perlatum</i>	Common Puffball	C
<i>Lycoperdon umbrinum</i>	Umber-brown Puffball	O
<i>Marasmius Oreades</i>	Fairy Ring Mushroom	O
<i>Parmelia sp.</i>	Shield Lichen	C
<i>Polytrichum sp. (commune or formosum)</i>	Hair-cap Moss	C
<i>Usnea sp.</i>	Old Man's Beard Lichen	C

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of of fungi, lichens and non-vascular plants in this area.

AREA B FAUNA

Table 10: Avifauna Species Observed in Area B

Name	Common Name	Notes
<i>Archilochus colubris</i>	Ruby-throated Hummingbird	
<i>Bonasa umbellus</i>	Ruffed Grouse	
<i>Catharus guttatus</i>	Hermit Thrush	
<i>Colaptes auratus</i>	Northern Flicker	
<i>Contopus virens</i>	Eastern Wood-pewee	
<i>Corvus brachyrynchos</i>	American Crow	
<i>Cyanocitta cristata</i>	Blue Jay	
<i>Dryocopus pileatus</i>	Pileated Woodpecker	S1 , fresh feeding sign only - in snag
<i>Empidonax minimus</i>	Least Flycatcher	
<i>Geothlypis philadelphia</i>	Mourning Warbler	
<i>Geothlypis trichas</i>	Common Yellowthroat	
<i>Junco hyemalis</i>	Dark-eyed Junco	
<i>Melospiza melodia</i>	Song Sparrow	
<i>Mniotilta varia</i>	Black-and-white Warbler	
<i>Picoides pubescens</i>	Downy Woodpecker	
<i>Picoides villosus</i>	Hairy Woodpecker	
<i>Poecile atricapillus</i>	Black-capped Chickadee	
<i>Quiscalus quiscula</i>	Common Grackle	
<i>Regulus satrapa</i>	Golden-crowned Kinglet	
<i>Seivrus aurocapillus</i>	Ovenbird	
<i>Setophaga americana</i>	Northern Parula	
<i>Setophaga coronata</i>	Yellow-rumped Warbler	
<i>Setophaga fusca</i>	Blackburnian Warbler	
<i>Setophaga magnolia</i>	Magnolia Warbler	
<i>Setophaga pensylvania</i>	Chestnut-sided Warbler	
<i>Setophaga ruticilla</i>	American Redstart	
<i>Setophaga virens</i>	Black-throated Green Warbler	
<i>Sitta canadensis</i>	Red-breasted Nuthatch	
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
<i>Spinus tristis</i>	American Goldfinch	
<i>Turdus migratorius</i>	American Robin	
<i>Vireo olivaceus</i>	Red-eyed Vireo	
<i>Vireo solitarius</i>	Blue-headed Vireo	
<i>Zenaida macroura</i>	Mourning Dove	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	

AREA B ADDITIONAL FAUNA SPECIES OBSERVED

Table 11: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Area B.

Name	Common Name	Notes
<i>Lithobates sylvaticus</i>	Wood Frog	
<i>Tamias striatus</i>	Eastern Chipmunk	
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	middens, holes
<i>Vulpes vulpes</i>	Red Fox	

A number of invertebrate species such as cicadas, moths, butterflies, spiders and biting insects were noted but not identified.



Figure 7: Cinnamon Fern (*Osmunda cinnamomea*) in Area B

Bonshaw Provincial Park

BONSHAW PARK VASCULAR PLANTS

The park is a day-use picnic site that consists of 6.3 acres. The majority of the site is mowed with a woodland buffer beside the West River. This buffer area adjacent to the highway right-of-way and bridge is unique in terms of species present, including species not found in other studied areas like Box Elder and Pineapple Weed. There have been plantings of native and non-native trees in the park, most notably the Red Oak, Apple and English Hawthorn trees. The river's edge contains wetland species such as Joe-pye Weed and Cow Parsnip. Bonshaw Park was surveyed on three dates: June 12, July 25, and August 13. A total of 103 vascular plant species was recorded for this area.

BONSHAW PARK AND WOODLAND

Table 12: Vascular Plants Observed in Bonshaw Provincial Park and Woodland
 Frequency Notes: C=Common, O=Occasional, I=Infrequent
 Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer negundo</i>	Box Elder (Manitoba Maple)	I, exotic
<i>Acer pensylvanicum</i>	Striped Maple	C
<i>Acer rubrum</i>	Red Maple	C
<i>Acer saccharum</i>	Sugar Maple	O
<i>Acer spicatum</i>	Mountain Maple	O
<i>Achillea millefolium</i>	Common Yarrow	C
<i>Alnus incana</i>	Speckled Alder	C, wetland
<i>Amelanchier laevis var nitida</i>	Allegheny Serviceberry	O, N46 11 52.0 W063 21 02.0
<i>Amelanchier laevis</i>	Allegheny Serviceberry (Smooth Serviceberry)	C, S3 , N46 11 52.0 W063 21 05.5
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Arctium minus</i>	Lesser Burdock	C
<i>Atriplex patula</i>	Halberd-leaf Orache	O, wetland
<i>Betula papyrifera</i>	White Birch	C
<i>Caltha palustris</i>	Marsh Marigold	C, wetland
<i>Cardamine pensylvanica</i>	Pennsylvania Bittercress	O, wetland
<i>Carex scabrata</i>	Rough Sedge	O, wetland
<i>Carex trisperma</i>	Three-seeded Sedge	C
<i>Chenopodium album</i>	White Goosefoot (Lamb's Quarters)	O

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<i>Chimerion angustifolium</i>	Fireweed	C
<i>Chimaphila umbellata</i>	Common Wintergreen (Princes' Pine)	C
<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	C
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	C
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C
<i>Cornus sericea</i>	Red Osier Dogwood	O
<i>Crataegus monogyna</i>	English Hawthorn	O, exotic
<i>Cypripedium acaule</i>	Pink Lady's-slipper	I
<i>Danthonia spicata</i>	Poverty Oat Grass	O
<i>Daucus carota</i>	Wild Carrot (Queen Anne's Lace)	C
<i>Doellingeria umbellata</i>	Flat-top White Aster	C
<i>Epilobium ciliatum ssp.</i>	Hairy Willowherb	I, wetland
<i>Equisetum sylvaticum</i>	Wood Horsetail	C
<i>Euphrasia officinalis</i>	Eyebright	C
<i>Euthamia graminifolia var. graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	C
<i>Eutrochium maculatum</i>	Spotted Joe-pye Weed	I, wetland
<i>Fagus grandifolia</i>	American Beech	C
<i>Filipendula ulmaria</i>	Queen-of-the-Meadow	C, wetland
<i>Fragaria virginiana</i>	Virginia Strawberry	C
<i>Galium palustra</i>	Marsh Bedstraw	C, wetland
<i>Gnaphalium uliginosum</i>	Marsh Cudweed (Low Cudweed)	O, exotic
<i>Gymnocarpium dryopteris</i>	Northern Oak Fern	C
<i>Heracleum maximum</i>	Cow Parsnip	C, wetland
<i>Hieracium aurantiacum</i>	Orange Hawkweed (Devil's Paintbrush)	C
<i>Hieracium floribundum</i>	Pale Hawkweed (King Devil Hawkweed)	C
<i>Hypericum boreale</i>	Northern St. John's Wort	O
<i>Impatiens capensis</i>	Spotted Jewelweed (Orange Jewelweed) (Spotted Touch-me-not)	C, wetland
<i>Juncus balticus</i>	Baltic Rush	O, wetland
<i>Kalmia angustifolia</i>	Sheep Laurel	C
<i>Lamna minor</i>	Duckweed	C, wetland
<i>Larix laricina</i>	American Larch	O
<i>Lathyrus palustris</i>	Vetchling Peavine (Wild Pea)	C, wetland
<i>Leersia oryzoides</i>	Rice Cutgrass	O
<i>Linnaea borealis</i>	Twinflower	C
<i>Lolium perenne</i>	Perennial Rye-Grass	O, wetland
<i>Lonicera canadensis</i>	Fly Honeysuckle	I

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<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Malus pumila</i>	Apple	C
<i>Matricaria discoidea</i>	Pineapple Weed	O
<i>Melilotus officinalis</i>	Sweetclover	C
<i>Morella pensylvanica</i>	Northern Bayberry	I
<i>Oclemena acuminatus</i> (syn. <i>Aster acuminatus</i>)	Whorled Wood Aster	O
<i>Oenothera biennis</i>	Common Evening-primrose	I
<i>Onoclea sensibilis</i>	Sensitive Fern	C, wetland
<i>Phalaris arundinacea</i>	Reed Canarygrass	C, wetland
<i>Phegopteris connectilis</i>	Northern Beechfern	C
<i>Picea glauca</i>	White Spruce	C
<i>Pinus resinosa</i>	Red Pine	I, S2, planted
<i>Plantago major</i>	Common Plantain	C
<i>Poa compressa</i>	Canada Bluegrass	O
<i>Polygonum lapathifolium</i>	Dock-leaf Smartleaf (Pale Smartleaf)	O, wetland
<i>Polygonum persicaria</i>	Spotted Lady's Thumb	O, wetland
<i>Populus tremuloides</i>	Trembling Aspen	C
<i>Potentilla recta</i>	Sulfur Cinquefoil	C
<i>Prunus pensylvanica</i>	Pin Cherry	C
<i>Pteridium aquilinum</i>	Bracken Fern	C
<i>Quercus rubra</i>	Northern Red Oak	C, planted
<i>Ranunculus repens</i>	Creeping Buttercup	C
<i>Ribes glandulosum</i>	Skunk Currant	C
<i>Ribes lacustre</i>	Bristly Black Current	O
<i>Ribes triste</i>	Wild Red Currant	C
<i>Rubus allegheniensis</i>	Allegheny Blackberry (Common Blackberry)	C
<i>Rubus idaeus</i>	Common Red Raspberry	C
<i>Rubus pubescens</i>	Dwarf Red Raspberry	O
<i>Rumex crispus</i>	Curly Dock	C
<i>Rumex orbiculatus</i>	Greater Water Dock	C, wetland
<i>Salix discolor</i>	Pussy Willow	I
<i>Sambucus racemosa</i>	Red Elderberry	C
<i>Schoenoplectus tabernaemontani</i>	Softstem Bulrush	O, wetland
<i>Sisyrinchium montanum</i>	Strict Blue-eyed-grass	O
<i>Solidago rugosa</i>	Roughleaf Goldenrod	C
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C

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<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	C
<i>Taraxacum officinale</i>	Common Dandelion	C
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	O
<i>Thalictrum pubescens</i>	Tall Meadowrue	C, wetland
<i>Thelypteris noveboracensis</i>	New York Fern	C
<i>Thymus praecox</i>	Creeping Thyme	O
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Trifolium pratense</i>	Red Clover	C
<i>Trillium undulatum</i>	Painted Trillium	I
<i>Typha latifolia</i>	Broadleaf Cattail	C, wetland
<i>Verbascum thaspus</i>	Common Mullein	I
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	C
<i>Vicea cracca</i>	Tufted Vetch	O

BONSHAW PARK MOSSES, FUNGI AND LICHENS

Table 13: Fungi, Lichens and Non-Vascular Species Observed in Bonshaw Provincial Park

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for fungi, lichens and non-vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Agaricus campestris</i>	Meadow Mushroom	O

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of of fungi, lichens and non-vascular plants in this area.



Figure 8: Baltic Rush (*Juncus balticus*) at Bonshaw Provincial Park

BONSHAW PARK FAUNA

Table 14: Avifauna Species Observed in Bonshaw Provincial Park

Name	Common Name	Notes
<i>Buteo jamaicensis</i>	Red-tailed Hawk	S3B
<i>Colaptes auratus</i>	Northern Flicker	
<i>Corvus brachythyngchos</i>	American Crow	Young in nest
<i>Cyanocitta cristata</i>	Blue Jay	
<i>Junco hyemalis</i>	Dark-eyed Junco	
<i>Megaceryle alcyon</i>	Belted Kingfisher	
<i>Melospiza melodia</i>	Song Sparrow	
<i>Pandion haliaetus</i>	Osprey	
<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak	S3B
<i>Picoides villosus</i>	Hairy Woodpecker	
<i>Poecile atricapillus</i>	Black-capped Chickadee	
<i>Regulus satrapa</i>	Golden-crowned Kinglet	
<i>Seivrus aurocapillus</i>	Ovenbird	
<i>Setophaga americana</i>	Northern Parula	
<i>Setophaga virens</i>	Black-throated Green Warbler	
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
<i>Spinus tristis</i>	American Goldfinch	
<i>Turdus migratorius</i>	American Robin	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	

BOBshaw PARK ADDITIONAL FAUNA SPECIES OBSERVED

Table 15: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Bonshaw Provincial Park.

Name	Common Name	Notes
<i>Lepus americanus</i>	Snowshoe Hare	scat
<i>Lithobates catesbeianus</i>	American Bullfrog	call
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	
<i>Tibicen sp. (canicularis?)</i>	(Dog-day?) Cicada	call

A number of invertebrate species such as cicadas, moths, butterflies, spiders and biting insects were noted but not identified.

Area C

AREA C VASCULAR PLANTS

The site is the southern portion of PID# 219154 and consists of 59.4 acres and is located south of the new highway. Its southern border is the West River which has an associated marshland and a spring. The majority of the area is farmed land and the fields are separated by hedgerows and a lane, referred to as the Wharf Road, which is bordered by trees and becoming overgrown. The fields are dominated by clover and fleabane species, while the hedgerows are mainly Balsam Fir and White Birch trees with weedy successional species. The yard of the abandoned house was also observed and had both native and planted ornamental species. There is some old abandoned farm machinery in the hedgerow west of the barn, and an old domestic dumping site in the wooded area above the marsh at the southern end of the farm. Area C was surveyed on May 27 and July 25, and again for sample collection near the house site on July 30. One hundred and twelve vascular species were recorded.

AREA C FIELD, HEDGEROW AND SPRING HOLE

Table 16: Vascular Plants Observed In Area C, Field, Hedgerow and Spring Hole

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer pensylvanicum</i>	Striped Maple	O
<i>Acer rubrum</i>	Red Maple	C
<i>Acer saccharum</i>	Sugar Maple	O
<i>Acer spicatum</i>	Mountain Maple	I
<i>Achillea millefolium</i>	Common Yarrow	C
<i>Actaea rubra</i>	Red Baneberry	I
<i>Aegopodium podagraria</i>	Bishop's Goutweed	O, yard
<i>Agrostus hyemalis</i>	Ticklegrass (Winter Bentgrass)	O
<i>Alnus incana</i>	Speckled Alder	O, higher edge of marsh
<i>Amelanchier laevis</i>	Allegheny Serviceberry (Smooth Serviceberry)	O, S3 , woodland edge and hedgerow
<i>Anaphalis margaritacea</i>	Pearly Everlasting	O
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Atriplex patula</i>	Halberd-leaf Orache	O, marsh
<i>Barbarea vulgaris</i>	Yellow Rocket	O
<i>Betula papyrifera</i>	White Birch	C
<i>Brachyelytrum erectum</i>	Bearded Shorthusk	C, ornamental, yard
<i>Carex brunnescens</i>	Brownish Sedge	C
<i>Chenopodium album</i>	White Goosefoot (Lamb's	O, marsh

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	Quarters)	
<i>Chimerion angustifolium</i>	Fireweed	C
<i>Cirsium arvense</i>	Canada Thistle	C
<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	O
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C
<i>Danthonia spicata</i>	Poverty Oat Grass	O
<i>Daucus carota</i>	Wild Carrot (Queen Anne's Lace)	O
<i>Dennstaedtia punctilobula</i>	Eastern Hay-scented Fern	O
<i>Dryopteris carthusiana</i>	Spinulose Shieldfern/Woodfern	O
<i>Elymus repens</i>	Couch Grass	O
<i>Epilobium ciliatum</i> ssp.	Hairy Willowherb	O, marsh
<i>Epilobium leptophyllum</i>	Linear-leaf Willowherb (Bog Willowherb)	C, marsh
<i>Equesetum arvense</i>	Field Horsetail	I
<i>Erigeron annuus</i>	Annual Fleabane	O, S1 /exotic, N46 12 56.3 W063 19 30.3
<i>Erigeron philadelphicus</i>	Philadelphia Fleabane	I, S1 . N46 12 56.3 W063 19 30.3
<i>Erigeron strigosus</i>	Daisy Fleabane (Rough Fleabane)	C
<i>Fagus grandifolia</i>	American Beech	I
<i>Filipendula ulmaria</i>	Queen-of-the-Meadow	C, marsh edge
<i>Fragaria virginiana</i>	Virginia Strawberry	C
<i>Frangula alnus</i>	Glossy Buckthorn	I
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	O, marsh
<i>Galium mollugo</i>	Hedge Bedstraw (False Baby's Breath)	C
<i>Geum allepicum</i>	Yellow Avens	O, marsh
<i>Geum laciniatum</i>	Rough Avens	C, marsh
<i>Glechoma hederacea</i>	Ground Ivy	C, ornamental, yard
<i>Gymnocarpium dryopteris</i>	Northern Oak Fern	O
<i>Habenaria blephariglottis</i>	White-fringe Orchis (Ragged White-fringe Orchis)	O, S2 , in hedgerow on west boundary
<i>Hemerocallis fulva</i>	Orange Daylily	O, yard
<i>Hesperis matronalis</i>	Dame's Rocket	I, ornamental
<i>Hieracium floribundum</i>	Pale Hawkweed (King Devil Hawkweed)	C
<i>Hieracium lachenalii</i>	Common Hawkweed (Yellow Hawkweed)	C
<i>Hierochloe odorata</i>	Vanilla Grass (Sweetgrass)	O, marsh
<i>Hypericum boreale</i>	Northern St. John's Wort	C
<i>Juglans cinerea</i>	Butternut	I, yard
<i>Lamprocapnos spectabilis</i>	Bleeding Heart Lily	C, ornamental, yard

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<i>Leontodon autumnalis</i>	Fall Dandelion	O
<i>Leucanthemum vulgare</i>	Oxeye Daisy	C
<i>Linnaea borealis</i>	Twinflower	O
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Malus pumila</i>	Apple	I
<i>Matricaria chamomilla</i>	Chamomile (German Mayweed)	C, yard
<i>Morella pensylvanica</i>	Northern Bayberry	O
<i>Oenothera biennis</i>	Common Evening-primrose	O
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	O
<i>Phalaris arundinacea</i>	Reed Canarygrass	O, marsh
<i>Phegopteris connectilis</i>	Northern Beechfern	I
<i>Picea glauca</i>	White Spruce	C
<i>Polygonum sagittatum</i>	Arrowleaf Tearthumb	O, marsh
<i>Populus tremuloides</i>	Trembling Aspen	O
<i>Potentilla recta</i>	Sulfur Cinquefoil	C
<i>Prunella vulgaris</i>	Self-heal	C
<i>Prunus pensylvanica</i>	Pin Cherry	C
<i>Prunus virginiana</i>	Choke Cherry	I
<i>Pteridium aquilinum</i>	Bracken Fern	O
<i>Pyrola elliptica</i>	Shinleaf	C
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Ribes glandulosum</i>	Skunk Currant	I
<i>Ribes hirtellum</i>	Smooth Gooseberry	I, planted, yard
<i>Ribes triste</i>	Wild Red Currant	I, planted, yard
<i>Rorippa microphylla</i>	One-row Watercress	O, common in spring hole
<i>Rosa multiflora</i>	Multiflora Rose	I
<i>Rosa pensylvanica</i>	Shining Rose	I
<i>Rosa virginiana</i>	Virginia Rose	C
<i>Rubus idaeus</i>	Common Red Raspberry	C, planted, yard
<i>Rumex crispus</i>	Curly Dock	O
<i>Salix discolor</i>	Pussy Willow	C
<i>Salix lucida</i>	Shining Willow	O
<i>Sambucus racemosa</i>	Red Elderberry	O
<i>Schoenoplectus tabernaemontani</i>	Softstem Bulrush	C, marsh
<i>Scirpus americana</i>	American Bulrush	O, marsh
<i>Scirpus atrovirens</i>	Woolgrass Bulrush	O, marsh
<i>Solanum dulcamara</i>	Bittersweet Nightshade	C
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	I

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<i>Solidago gigantea</i>	Giant Goldenrod	I
<i>Solidago rugosa</i>	Roughleaf Goldenrod	C
<i>Sonchus asper</i>	Spiny-leaf Sowthistle	O, yard
<i>Sorbus americana</i>	American Mountain-ash	O
<i>Stellaria graminea</i>	Little Starwort	C
<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	C
<i>Symphyotrichum cordifolium</i>	Heartleaf Aster	C
<i>Taraxacum officinale</i>	Common Dandelion	C
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Trifolium campestre</i>	Low Hop Clover	C
<i>Trillium cernuum</i>	Nodding Trillium	I
<i>Typha angustifolia</i>	Narrowleaf Cattail	I, marsh
<i>Ulmus americana</i>	American Elm	I, S3, planted, yard
<i>Vaccinium angustifolium</i>	Late Lowbush Blueberry	O
<i>Verbascum thaspus</i>	Common Mullein	I
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	I
<i>Viburnum opulus</i>	Highbush Cranberry	O
<i>Vicea cracca</i>	Tufted Vetch	C
<i>Viola arvensis</i>	Small Wild Pansy	I
<i>Viola cucullata</i>	Blue Violet	O
<i>Viola macloskeyi</i>	Small White Violet	C

AREA C MOSSES, FUNGI AND LICHENS

Table 17: Fungi, Lichens and Non-Vascular Plant Species Observed in Area C

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for fungi, lichens and non-vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Parmelia sp.</i>	Shield Lichen	C
<i>Hylocomium splendens</i>	Stairstep Moss (Glittering Wood Moss)	C
<i>Lobaria pulmonaria</i>	Lung Lichen	O

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of of fungi, lichens and non-vascular plants in this area.

AREA C FAUNA

Table 18: Avifauna Species Observed in Area C

Name	Common Name	Notes
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	Male and female
<i>Anas rubripes</i>	American Black Duck	
<i>Archilochus colubris</i>	Ruby-throated Hummingbird	
<i>Ardea herodias</i>	Great Blue Heron	
<i>Bombycilla cedrorum</i>	Cedar Waxwing	
<i>Bonasa umbellus</i>	Ruffed Grouse	Drumming
<i>Buteo jamaicensis</i>	Red-tailed Hawk	S3B
<i>Colaptes auratus</i>	Northern Flicker	
<i>Corvus brachyrynchos</i>	American Crow	
<i>Corvus corax</i>	Common Raven	
<i>Cyanocitta cristata</i>	Blue Jay	
<i>Dolichonyx oryzivorus</i>	Bobolink	Multiple sightings, up to 4 males, 6+ females and juveniles. Successful nesting S3 , Threatened (COSEWIC)
<i>Empidonax alnorum</i>	Alder Flycatcher	
<i>Geothlypis philadelphia</i>	Mourning Warbler	
<i>Geothlypis trichas</i>	Common Yellowthroat	
<i>Haemorhous purpureus</i>	Purple Finch	
<i>Haliaeetus leucocephalus</i>	Bald Eagle	
<i>Hirundo rustica</i>	Barn Swallow	S3B , Nest in barn north of fields, Threatened (COSEWIC)
<i>Junco hyemalis</i>	Dark-eyed Junco	
<i>Megaceryle alcyon</i>	Belted Kingfisher	
<i>Melospiza georgiana</i>	Swamp Sparrow	
<i>Melospiza melodia</i>	Song Sparrow	
<i>Mergus merganser</i>	Common Merganser	3 males 7 females
<i>Mniotilta varia</i>	Black-and-white Warbler	
<i>Pandion haliaetus</i>	Osprey	
<i>Passerculus sandwichensis</i>	Savannah Sparrow	
<i>Picoides villosus</i>	Hairy Woodpecker	Hairy or Downy
<i>Phalacrocorax auritus</i>	Double-crested Cormorant	
<i>Poecile atricapillus</i>	Black-capped Chickadee	
<i>Quiscalus quiscula</i>	Common Grackle	
<i>Regulus satrapa</i>	Golden-crowned Kinglet	
<i>Riparia riparia</i>	Bank Swallow	Male and female

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<i>Seivrus aurocapillus</i>	Ovenbird	
<i>Setophaga americana</i>	Northern Parula	
<i>Setophaga coronata</i>	Yellow-rumped Warbler	Hatch year
<i>Setophaga fusca</i>	Blackburnian Warbler	
<i>Setophaga magnolia</i>	Magnolia Warbler	
<i>Setophaga petechia</i>	Yellow Warbler	
<i>Setophaga ruticilla</i>	American Redstart	
<i>Setophaga virens</i>	Black-throated Green Warbler	
<i>Sitta canadensis</i>	Red-breasted Nuthatch	
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
<i>Spinus tristis</i>	American Goldfinch	
<i>Spizella passerina</i>	Chipping Sparrow	
<i>Sturnus vulgaris</i>	European Starling	
<i>Tachycineta bicolor</i>	Tree Swallow	
<i>Turdus migratorius</i>	American Robin	
<i>Vireo olivaceus</i>	Red-eyed Vireo	
<i>Zenaida macroura</i>	Mourning Dove	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	

ADDITIONAL FAUNA SPECIES OBSERVED

Table 19: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Area C

Name	Common Name	Notes
<i>Malacosoma americanum</i>	Eastern Tent Caterpillar	cocoons in trees
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	Observed, middens
<i>Vulpes vulpes</i>	Red Fox	Scat

A number of invertebrate species such as cicadas, moths, butterflies, spiders and biting insects were noted but not identified.



Figure 9: Barn Swallow (*Hirundo rustica*), listed with COSEWIC as Threatened, nest in building north of Area C. Photo: Sharon Clark

Crosby's Mill

CROSBY'S MILL VASCULAR PLANTS

The Crosby's Mill site (PID# 402966) consists of 13.8 ac. It contains a breeched earthen dam, former mill site, wetland and wooded areas connecting to area D and Area I. Dominant trees are Balsam Fir and various maple species, while Cow Parsnip, Ostrich Fern and various sedges dominate the wet areas. The land east of the West River contains mixed woodland with some large Eastern hemlock and White Birch. Crosby's Mill was surveyed on June 23 and June 30 2014 and a total of 115 species was recorded in this area.

CROSBY'S MILL WOODLAND AND MILL

Table 20: Vascular Plants Observed at Crosby's Mill, Woodland and Mill

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C, woodland
<i>Acer pensylvanicum</i>	Striped Maple	C, woodland
<i>Acer rubrum</i>	Red Maple	C, woodland
<i>Acer saccharum</i>	Sugar Maple	C, woodland
<i>Achillea millefolium</i>	Common Yarrow	C, dam site
<i>Alnus incana</i>	Speckled Alder	C
<i>Amelanchier laevis</i>	Allegheny Serviceberry (Smooth Serviceberry)	C, S3, wood edge
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C, woodland
<i>Arctium minus</i>	Lesser Burdock	I, dam site
<i>Argentina anserina</i>	Silverweed	I
<i>Arisaema triphyllum</i>	Swamp Jack-in-the-pulpit	O, wetland
<i>Barbarea vulgaris</i>	Yellow Rocket	O
<i>Betula allegheniensis</i>	Yellow Birch	C, woodland
<i>Betula papyrifera</i>	White Birch	C, woodland
<i>Calystegia sepium</i>	Hedge False Bindweed (Wild Morning Glory)	O
<i>Carex crawfordi</i>	Crawford's Sedge	I
<i>Carex gracillima</i>	Graceful Sedge	C, woodland
<i>Carex pseudocyperus</i>	Cyperus-like Sedge	O, wetland
<i>Carex trisperma</i>	Three-seeded Sedge	C, woodland
<i>Cerastium arvense</i>	Mouse-ear Chickweed	O, dam site
<i>Chelone glabra</i>	White Turtlehead	I, wetland
<i>Chenopodium album</i>	White Goosefoot (Lamb's Quarters)	I

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<i>Chimerion angustifolium</i>	Fireweed	O
<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	C, woodland
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	O, woodland
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C, woodland
<i>Cornus sericea</i>	Red Osier Dogwood	O, woodland
<i>Corylus cornuta</i>	Beaked Hazelnut	C, woodland
<i>Crataegus monogyna</i>	English Hawthorn	I
<i>Doellingeria umbellata</i>	Flat-top White Aster	O
<i>Dryopteris carthusiana</i>	Spinulose Shieldfern/Woodfern	C, wetland edge
<i>Dryopteris intermedia</i>	Evergreen Woodfern	C, woodland
<i>Dryopteris marginalis</i>	Marginal Woodfern	I, wetland edge
<i>Epilobium ciliatum</i> ssp.	Hairy Willowherb	I, wetland
<i>Epilobium leptophyllum</i>	Linear-leaf Willowherb (Bog Willowherb)	O, wetland
<i>Eurybia radula</i>	Rough Aster (Low Rough Aster)	S3 , wetland
<i>Euthamia graminifolia</i> var. <i>graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	C, open area
<i>Eutrochium maculatum</i>	Spotted Joe-pye Weed	O, wetland
<i>Fagus grandifolia</i>	American Beech	C, woodland
<i>Filipendula ulmaria</i>	Queen-of-the-Meadow	C, wetland
<i>Fragaria virginiana</i>	Virginia Strawberry	C
<i>Fraxinus excelsior</i>	European Ash	I, planted, dam site
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	C, wetland
<i>Galium asprellum</i>	Rough Bedstraw	O, wetland
<i>Galium palustra</i>	Marsh Bedstraw	C, wetland
<i>Geum laciniatum</i>	Rough Avens	O, wetland
<i>Geum macrophyllum</i>	Largeleaf Avens	O, wetland
<i>Gium rivale</i>	Purple Avens	C, wetland
<i>Glechoma hederacea</i>	Ground Ivy	O, exotic, dam site
<i>Gnaphalium uliginosum</i>	Marsh Cudweed (Low Cudweed)	I, exotic, dam site
<i>Heracleum maximum</i>	Cow Parsnip	C, wetland
<i>Hesperis matronalis</i>	Dame's Rocket	I, exotic, dam site
<i>Hieracium pilosella</i>	Mouse-ear Hawkweed	C, dam site
<i>Hieracium scabrum</i>	Rough Hawkweed	C, open area
<i>Hypericum boreale</i>	Northern St. John's Wort	I, dam site
<i>Impatiens capensis</i>	Spotted Jewelweed (Orange Jewelweed) (Spotted Touch-me-not)	C, wetland
<i>Larix laricina</i>	American Larch	C, wetland
<i>Lemna minor</i>	Duckweed	C, wetland
<i>Lonicera canadensis</i>	Fly Honeysuckle	I
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C, woodland

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<i>Maianthemum racemosum</i>	Solomon's-plume	C, woodland
<i>Malus pumila</i>	Apple	I
<i>Matteuccia struthiopteris</i>	Ostrich Fern	O, wetland
<i>Mitella nuda</i>	Naked Bishop's-cap (Miterwort)	O, wetland
<i>Myotis laxa</i>	Small Forget-me-not	C, wetland
<i>Oenothera biennis</i>	Common Evening-primrose	O, dam site
<i>Onoclea sensibilis</i>	Sensitive Fern	C, wetland
<i>Oxalis acetosella</i>	Common Woodsorrel	C, open area
<i>Oxalis stricta</i>	Common Yellow Woodsorell	C, woodland
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	I, near dam site
<i>Phalaris arundinacea</i>	Reed Canarygrass	C, wetland
<i>Phegopteris connectilis</i>	Northern Beechfern	C, woodland
<i>Phleum pratense</i>	Meadow Timothy	C, open area
<i>Picea glauca</i>	White Spruce	C, woodland
<i>Pinus strobus</i>	Eastern White Pine	C, woodland
<i>Plantago major</i>	Common Plantain	O, dam site
<i>Poa pratensis</i>	Kentucky Bluegrass	C, dam site
<i>Populus tremuloides</i>	Trembling Aspen	C, woodland
<i>Potentilla norvegica</i>	Norwegian Cinquefoil	O, dam site
<i>Potentilla recta</i>	Sulfur Cinquefoil	C, open area
<i>Prunus pensylvanica</i>	Pin Cherry	O
<i>Prunus virginiana</i>	Choke Cherry	C
<i>Pteridium aquilinum</i>	Bracken Fern	C, woodland
<i>Pyrola americana (rotundifolia)</i>	American Wintergreen	C, woodland
<i>Ranunculus acris</i>	Tall Buttercup	C, wetland
<i>Ribes triste</i>	Wild Red Currant	O, dam site
<i>Rosa rugosa</i>	Rugosa Rose (Japanese Rose)	I, near dam site
<i>Rubus allegheniensis</i>	Allegheny Blackberry (Common Blackberry)	O, open area
<i>Rubus idaeus</i>	Common Red Raspberry	C, open area
<i>Rubus pubescens</i>	Dwarf Red Raspberry	C, wetland
<i>Rumex acetosella</i>	Sheep Sorrel	O, dam site
<i>Rumex orbiculatus</i>	Greater Water Dock	C, wetland
<i>Salix discolor</i>	Pussy Willow	O, wood edge
<i>Sambucus racemosa</i>	Red Elderberry	C
<i>Solanum dulcamara</i>	Bittersweet Nightshade	O, dam site
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	C, dam site
<i>Solidago rugosa</i>	Roughleaf Goldenrod	C, open area

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<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C, wood edge
<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	O
<i>Symphyotrichum lanceolatum</i>	Lance-leaved Aster (Panicked Aster)	I
<i>Symphyotrichum puniceum</i>	Swamp Aster	O, wetland
<i>Taraxacum officinale</i>	Common Dandelion	C, dam site
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	C, woodland
<i>Thalictrum pubescens</i>	Tall Meadowrue	O, wetland
<i>Trientalis borealis</i>	Northern Starflower	C, woodland
<i>Trifolium pratense</i>	Red Clover	O, dam site
<i>Trifolium repens</i>	White Clover	O, dam site
<i>Trillium undulatum</i>	Painted Trillium	I, woodland
<i>Tsuga canadensis</i>	Eastern Hemlock	C, S3S4 , woodland
<i>Typha latifolia</i>	Broadleaf Cattail	C, wetland
<i>Ulmus americana</i>	American Elm	I, S3 , wetland
<i>Urtica dioica</i>	Stinging Nettle	C, wetland
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	C, woodland
<i>Viburnum opulus</i>	Highbush Cranberry	I
<i>Vicea cracca</i>	Tufted Vetch	C, open area



Figure 10: Dame's Rocket (*Hesperis matronalis*), an invasive plant, in Crosby's Mill area.

CROSBY’S MILL FAUNA

Avifauna were noted by Diane Griffin and Dan McNeill only and listed here. Birds in this site, noted by Fiep de Bie are included in sites D and I.

Table 21: Avifauna Species Observed at Crosby’s Mill

Name	Common Name
<i>Agelaius phoeniceus</i>	Red-winged Blackbird
<i>Corvus brachyrynchos</i>	American Crow
<i>Cyanocitta cristata</i>	Blue Jay
<i>Megaceryle alcyon</i>	Belted Kingfisher
<i>Poecile atricapillus</i>	Black-capped Chickadee
<i>Seivrus aurocapillus</i>	Ovenbird
<i>Zenaida macroura</i>	Mourning Dove
<i>Zonotrichia albicollis</i>	White-throated Sparrow

ADDITIONAL FAUNA SPECIES OBSERVED

Table 22: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Crosby’s Mill

Name	Common Name	Notes
<i>Tamiascuria hudsonicus</i>	Red Squirrel	middens

A number of invertebrate species such as cicadas, moths, butterflies, spiders and biting insects were noted but not identified, except for a single Viceroy Butterfly.



Figure 11: Stinging Nettle (*Urtica dioica*) and Spotted Jewelweed (Orange Jewelweed) (Spotted Touch-me-not), (*Impatiens capensis*) at Crosby’s Mill area

Area D

AREA D VASCULAR PLANTS

The investigated property is primarily woodland and consists of 156.1 acres on PID# 218636. A survey cut-line marks the western border. The southeast corner has evidence of former habitation as well as species planted for reclamation within the highway right-of-way. The land is bordered on the north by the West River, and a small tributary bisects the lot. To the south, the former Crosby Rd, now a spring and valley, marks the boundary between areas D and E. The southern portion of the property adjacent to area E and Crosby's Mill are mainly field and open area dominated by clovers, goldenrods and raspberry. There is evidence of fishing at the north edge. Steep slopes and high hummocks are frequent in the northern section of the property where there is little evidence of human disturbance. These wooded areas are mainly Yellow Birch, Eastern Hemlock, American Beech and various maple trees. Area D was surveyed on May 30, June 17, August 6 and August 13. A total of 154 vascular plant species was recorded for this area.

AREA D WOODLAND

Table 23: Vascular Plants Observed in Area D Woodland

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer pensylvanicum</i>	Striped Maple	C
<i>Acer rubrum</i>	Red Maple	C
<i>Acer saccharum</i>	Sugar Maple	C
<i>Acer spicatum</i>	Mountain Maple	C
<i>Actaea rubra</i>	Red Baneberry	I
<i>Alnus incana</i>	Speckled Alder	C, wetland
<i>Amelanchier laevis</i> var. <i>nitida</i>	Allegheny Serviceberry (Smooth Serviceberry)	O, S3 , N46 12 30.1 W063 20 57.5; N46 12 29.5 W063 21 00.6
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Arisaema triphyllum</i>	Swamp Jack-in-the-pulpit	C, wetland
<i>Betula allegheniensis</i>	Yellow Birch	C
<i>Betula papyrifera</i>	White Birch	C
<i>Betula populifolia</i>	Gray Birch (Wire Birch)	O
<i>Caltha palustris</i>	Marsh Marigold	O, wetland
<i>Cardamine pensylvanica</i>	Pennsylvania Bittercress	O, wetland
<i>Carex crawfordi</i>	Crawford's Sedge	C, wetland
<i>Carex gracillima</i>	Graceful Sedge	O
<i>Carex pseudocyperus</i>	Cyperus-like Sedge	O, wetland

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<i>Carex scabrata</i>	Rough Sedge	C
<i>Carex trisperma</i>	Three-seeded Sedge	O
<i>Chelone glabra</i>	White Turtlehead	O, wetland
<i>Chrysosplenium americanum</i>	American Golden Saxifrage	C, wetland
<i>Circaea alpina</i>	Small Enchanter's-nightshade	O, wetland
<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	C
<i>Coptis trifolia</i>	Goldthread	O
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	C
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C
<i>Cornus sericea</i>	Red Osier Dogwood	O
<i>Corylus cornuta</i>	Beaked Hazelnut	I
<i>Crataegus monogyna</i>	English Hawthorn	O, woods edge
<i>Cypripedium acaule</i>	Pink Lady's-slipper	O
<i>Dactylis glomerata</i>	Orchard Grass	O
<i>Danthonia spicata</i>	Poverty Oat Grass	O
<i>Dennstaedtia punctilobula</i>	Eastern Hay-scented Fern	O
<i>Dryopteris intermedia</i>	Evergreen Woodfern	O
<i>Epilobium ciliatum ssp.</i>	Hairy Willowherb (Northern Willowherb)	I, wetland
<i>Epilobium hirsutum</i>	Great Willowherb (Great Hairy Willowherb)	O, exotic, wetland
<i>Equisetum fluviatile</i>	Water Horsetail	C, wetland
<i>Equisetum sylvaticum</i>	Wood Horsetail	C
<i>Eurybia radula</i>	Rough Aster (Low Rough Aster)	C, S3 , wetland
<i>Fagus grandifolia</i>	American Beech	O
<i>Filipendula ulmaria</i>	Queen-of-the-Meadow	C, wetland
<i>Fraxinus americana</i>	White Ash	I
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	C, wetland
<i>Galium palustra</i>	Marsh Bedstraw	C, wetland
<i>Geum allepicum</i>	Yellow Avens	O, wetland
<i>Geum macrophyllum</i>	Largeleaf Avens	O, wetland
<i>Gymnocarpium dryopteris</i>	Northern Oak Fern	O
<i>Heracleum maximum</i>	Cow Parsnip	O, wetland
<i>Impatiens capensis</i>	Spotted Jewelweed (Orange Jewelweed) (Spotted Touch-me-not)	C, wetland
<i>Impatiens pallida</i>	Pale Jewelweed (Pale Touch-me-not)	O, wetland
<i>Kalmia angustifolia</i>	Sheep Laurel	C
<i>Larix laricina</i>	American Larch	O

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<i>Lathyrus palustris</i>	Vetchling Peavine (Wild Pea)	C, wetland
<i>Linnaea borealis</i>	Twinflower	C
<i>Lonicera canadensis</i>	Fly Honeysuckle	I
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Maianthemum racemosum</i>	Solomon's-plume	C
<i>Malus pumila</i>	Apple	O
<i>Matteuccia struthiopteris</i>	Ostrich Fern	I, wetland
<i>Monotropa uniflora</i>	Indian-pipe	C
<i>Morella pensylvanica</i>	Northern Bayberry	I
<i>Muhlenbergia uniflora</i>	Fall Dropseed Muhly (One- flower Fern)	O, wetland
<i>Myotosis laxa</i>	Small Forget-me-not	C, wetland
<i>Oclemena acuminatus</i> (syn. <i>Aster acuminatus</i>)	Whorled Wood Aster	O
<i>Onoclea sensibilis</i>	Sensitive Fern	C, wetland
<i>Osmunda cinnamomea</i>	Cinnamon Fern	C
<i>Osmunda claytoniana</i>	Interrupted Fern	C
<i>Oxalis acetosella</i>	Common Woodsorrel	C
<i>Oxalis stricta</i>	Common Yellow Woodsorrel	C
<i>Phegopteris connectilis</i>	Northern Beechfern	I
<i>Picea glauca</i>	White Spruce	C
<i>Pinus strobus</i>	Eastern White Pine	C
<i>Polygonum lapathifolium</i>	Dock-leaf Smartleaf (Pale Smartleaf)	O, wetland
<i>Populus grandidentata</i>	Large-toothed Aspen	O
<i>Populus tremuloides</i>	Trembling Aspen	O
<i>Prunus pensylvanica</i>	Pin Cherry	C, woods edge
<i>Prunus virginiana</i>	Choke Cherry	C, woods edge
<i>Pteridium aquilinum</i>	Bracken Fern	O
<i>Queercus rubra</i>	Northern Red Oak	O
<i>Ranunculus acris</i>	Tall Buttercup	C, wetlands
<i>Ranunculus repens</i>	Creeping Buttercup	C
<i>Ribes glandulosum</i>	Skunk Currant	C
<i>Ribes lacustre</i>	Bristly Black Current	C
<i>Ribes triste</i>	Wild Red Currant	C
<i>Rubus allegheniensis</i>	Allegheny Blackberry (Common Blackberry)	C
<i>Rubus pubescens</i>	Dwarf Red Raspberry	O, wetland
<i>Rumex orbiculatus</i>	Greater Water Dock	C, wetland
<i>Salix discolor</i>	Pussy Willow	O, woods edge

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<i>Sambucus racemosa</i>	Red Elderberry	O
<i>Scirpus atrovirens</i>	Woolgrass Bulrush	O, wetland
<i>Scutellaria galericulata</i>	Hooded Skullcap (Marsh Skullcap)	O, wetland
<i>Scutellaria lateriflora</i>	Mad-dog Skullcap	O, wetland
<i>Solanum dulcamara</i>	Bittersweet Nightshade	C, wetland
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C
<i>Streptopus lanceolatus</i>	Rosy Twisted-stalk	I
<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	C
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	C
<i>Thalictrum pubescens</i>	Tall Meadowrue	C, wetland
<i>Thelypteris noveboracensis</i>	New York Fern	O
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Trillium cernuum</i>	Nodding Trillium	C
<i>Trillium undulatum</i>	Painted Trillium	O
<i>Tsuga canadensis</i>	Eastern Hemlock	O, S3S4
<i>Typha latifolia</i>	Broadleaf Cattail	O, wetland
<i>Urtica dioica</i>	Stinging Nettle	O, wetland
<i>Vaccinium angustifolium</i>	Late Lowbush Blueberry	I
<i>Veronica americana</i>	American Speedwell (Brooklime)	C, wetland
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	C
<i>Viburnum opulus</i>	Highbush Cranberry	O
<i>Viola macloskeyi</i>	Small White Violet	C
<i>Viola stiata</i>	Striped Violet	O

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AREA D FIELD AND OPEN AREA

Table 24: Vascular Plants Observed in Area D Field and Open Areas

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Achillea millefolium</i>	Common Yarrow	C
<i>Barbarea vulgaris</i>	Yellow Rocket	I
<i>Chimerion angustifolium</i>	Fireweed	C
<i>Cirsium arvense</i>	Canada Thistle	O
<i>Cirsium vulgare</i>	Bull Thistle	I
<i>Elymus repens</i>	Couch Grass	O
<i>Equisetum arvense</i>	Field Horsetail	O
<i>Euthamia graminifolia</i> var. <i>graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	C
<i>Fragaria virginiana</i>	Virginia Strawberry	C
<i>Galium mollugo</i>	Hedge Bedstraw (False Baby's Breath)	C
<i>Hieracium aurantiacum</i>	Orange Hawkweed (Devil's Paintbrush)	C
<i>Hieracium pilosella</i>	Mouse-ear Hawkweed	C
<i>Hypericum boreale</i>	Northern St. John's Wort	O
<i>Leontodon autumnalis</i>	Fall Dandelion	O
<i>Leucanthemum vulgare</i>	Oxeye Daisy	C
<i>Oenothera biennis</i>	Common Evening-primrose	C
<i>Phleum pratense</i>	Meadow Timothy	C
<i>Plantago lanceolata</i>	English Plantain	C
<i>Plantago major</i>	Common Plantain	O
<i>Poa compressa</i>	Canada Bluegrass	C
<i>Potentilla recta</i>	Sulfur Cinquefoil	C
<i>Prunella vulgaris</i>	Self-heal	C
<i>Raphanus raphanistrum</i>	Wild Radish	O
<i>Rosa virginiana</i>	Virginia Rose	C
<i>Rubus idaeus</i>	Common Red Raspberry	C
<i>Rudbeckia hirta</i>	Black-eyed Susan	O
<i>Rumex crispus</i>	Curly Dock	C
<i>Senecio jacobaea</i>	Tansy Ragwort	O
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	C
<i>Solidago gigantea</i>	Giant Goldenrod	O

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<i>Solidago rugosa</i>	Roughleaf Goldenrod	C
<i>Spiraea alba var. latifolia</i>	Northern White Meadowsweet	O
<i>Stellaria graminea</i>	Little Starwort	C
<i>Symphotrichum novi-belgii</i>	New York Aster	O
<i>Taraxacum officinale</i>	Common Dandelion	C
<i>Tragopogon dubius</i>	Meadow Goat's-beard	O
<i>Trifolium avens</i>	Rabbitsfoot Clover	C
<i>Trifolium campestre</i>	Low Hop Clover	C
<i>Trifolium hybridum</i>	Alsike Clover	C
<i>Trifolium pratense</i>	Red Clover	C
<i>Veronica arvensis</i>	Field Speedwell	O
<i>Vicea cracca</i>	Tufted Vetch	C

AREA D MOSSES, FUNGI AND LICHENS

Table 25: Fungi, Lichens and Non-Vascular Plant Species Observed in Area D

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for fungi, lichens and non-vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Boletus sp.</i>	Bolete	O
<i>Collybia alkalivirens</i>	Little Brown Collybia	O
<i>Fomitopsis pinicola</i>	Red Belted Polypore	O
<i>Hygrophorus coccineus</i>	Scarlet Waxy Cap	O
<i>Hylocomium splendens</i>	Stairstep Moss (Glittering Wood Moss)	C
<i>Lobaria pulmonaria</i>	Lung Lichen	C
<i>Lycoperdon Perlatum</i>	Common Puffball	O
<i>Lycoperdon umbrinum</i>	Umber-brown Puffball	O
<i>Marasmius Oreades</i>	Fairy Ring Mushroom	O
<i>Parmelia sp.</i>	Shield Lichen	C
<i>Polytrichum sp. (commune or formosum)</i>	Hair-cap Moss	C
<i>Usnea sp.</i>	Old Man's Beard Lichen	C

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of of fungi, lichens and non-vascular plants in this area.

AREA D FAUNA

Table 26: Avifauna Species Observed in Area D

Name	Common Name	Notes
<i>Anas rubripes</i>	American Black Duck	
<i>Ardea herodias</i>	Great Blue Heron	
<i>Bombycilla cedrorum</i>	Cedar Waxwing	
<i>Bonasa umbellus</i>	Ruffed Grouse	Drumming
<i>Buteo jamaicensis</i>	Red-tailed Hawk	S3B
<i>Catharus guttatus</i>	Hermit Thrush	
<i>Catharus ustulatus</i>	Swainson's Thrush	
<i>Certhia americana</i>	Brown Creeper	
<i>Colaptes auratus</i>	Northern Flicker	
<i>Contopus virens</i>	Eastern Wood-pewee	
<i>Corvus brachyrynchos</i>	American Crow	
<i>Corvus corax</i>	Common Raven	
<i>Cyanocitta cristata</i>	Blue Jay	
<i>Empidonax minimus</i>	Least Flycatcher	
<i>Geothlypis philadelphia</i>	Mourning Warbler	
<i>Geothlypis trichas</i>	Common Yellowthroat	
<i>Haliaeetus leucocephalus</i>	Bald Eagle	
<i>Junco hyemalis</i>	Dark-eyed Junco	
<i>Megaceryle alcyon</i>	Belted Kingfisher	
<i>Melospiza melodia</i>	Song Sparrow	
<i>Mniotilta varia</i>	Black-and-white Warbler	
<i>Passerculus sandwichensis</i>	Savannah Sparrow	
<i>Picoides villosus</i>	Hairy Woodpecker	
<i>Poecile atricapillus</i>	Black-capped Chickadee	
<i>Poecile hudsonicus</i>	Boreal Chickadee	
<i>Regulus calendula</i>	Ruby-crowned Kinglet	
<i>Regulus satrapa</i>	Golden-crowned Kinglet	
<i>Seivrus aurocapillus</i>	Ovenbird	
<i>Setophaga americana</i>	Northern Parula	
<i>Setophaga caerulescens</i>	Black-throated Blue Warbler	
<i>Setophaga coronata</i>	Yellow-rumped Warbler	
<i>Setophaga fusca</i>	Blackburnian Warbler	
<i>Setophaga magnolia</i>	Magnolia Warbler	
<i>Setophaga pensylvanica</i>	Chestnut-sided Warbler	
<i>Setophaga petechia</i>	Yellow Warbler	
<i>Setophaga ruticilla</i>	American Redstart	
<i>Setophaga virens</i>	Black-throated Green Warbler	
<i>Sitta canadensis</i>	Red-breasted Nuthatch	

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<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
<i>Spinus tristis</i>	American Goldfinch	
<i>Strix varia</i>	Barred Owl	
<i>Sturnus vulgaris</i>	European Starling	
<i>Tachycineta bicolor</i>	Tree Swallow	
<i>Troglodytes hiemalis</i>	Winter Wren	
<i>Turdus migratorius</i>	American Robin	
<i>Vireo olivaceus</i>	Red-eyed Vireo	
<i>Vireo solitarius</i>	Blue-headed Vireo	
<i>Zenaida macroura</i>	Mourning Dove	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	

AREA D ADDITIONAL FAUNA SPECIES OBSERVED

Table 27: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Area D

Name	Common Name	Notes
<i>Lepus americanus</i>	Snowshoe Hare	
<i>Malacosoma americanum</i>	Eastern Tent Caterpillar	cocoons in trees
<i>Lithobates sylvaticus</i>	Wood Frog	
<i>Procyon lotor</i>	Raccoon	
<i>Tamias striatus</i>	Chipmunk	
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	
<i>Tibicen sp. (canicularis?)</i>	(Dog-day?) Cicada	
<i>Vulpes vulpes</i>	Red Fox	

A number of invertebrate species such as moths, butterflies, spiders and biting insects were noted but not identified.



Figure 12: Large Eastern Hemlock (*Tsuga canadensis*) in Area D

Area E

AREA E VASCULAR PLANTS

The area is PID# 218669 and consists of 53.7 acres of land between the West River and the new section of Trans-Canada Highway. It is bordered at the north end by a stream gully, formerly Crosby Rd, separating this area from area D. The area is mostly wooded with intersecting footpaths, leading from Bonshaw Provincial Park through area D. Various maples, American Beech and Balsam Fir trees dominate the woodland as well as Wild-Lily-of-the-Valley and Ground Hemlock. The highly toxic non-native orchid, Broad-leaved Helleborine, is present. About 30 plants are present, mainly on the slope between the main path and the river. The property includes the riparian zone to the west and north, open areas and the new highway right-of-way. This site was visited on June 12 and August 13. A total of 123 vascular plant species was recorded for area E.

AREA E WOODLAND

Table 28: Vascular Plants Observed in Area E Woodland

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer pensylvanicum</i>	Striped Maple	C
<i>Acer rubrum</i>	Red Maple	C
<i>Acer saccharum</i>	Sugar Maple	C
<i>Acer spicatum</i>	Mountain Maple	O
<i>Actaea rubra</i>	Red Baneberry	I
<i>Agrostus hyemalis</i>	Ticklegrass (Winter Bentgrass)	O
<i>Alnus incana</i>	Speckled Alder	C, wetland
<i>Amelanchier laevis</i>	Allegheny Serviceberry (Smooth Serviceberry)	C, S3 . N46 11 58.3 W063 21 05.8; N46 12 01.9 W063 21 10.3; N46 12 05.6 W063 21 09.3
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Arisaema triphyllum</i>	Swamp Jack-in-the-pulpit	C, wetland
<i>Betula allegheniensis</i>	Yellow Birch	O
<i>Betula papyrifera</i>	White Birch	C
<i>Betula populifolia</i>	Gray Birch (Wire Birch)	I
<i>Bidens cernua</i>	Nodding Bur-marigold	O, wetland
<i>Callitriche palustris</i>	Vernal Water-starwort	C, wetland
<i>Caltha palustris</i>	Marsh Marigold	O, wetland
<i>Cardamine pensylvanica</i>	Pennsylvania Bittercress	O, wetland
<i>Carex brunnescens</i>	Brownish Sedge	C

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<i>Carex scabrata</i>	Rough Sedge	O, wetland
<i>Carex trisperma</i>	Three-seeded Sedge	C
<i>Circaea alpina</i>	Small Enchanter's-nightshade	O, wetland
<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	C
<i>Coptis trifolia</i>	Goldthread	O
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	C
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C
<i>Cornus sericea</i>	Red Osier Dogwood	O
<i>Corylus cornuta</i>	Beaked Hazelnut	I
<i>Crataegus monogyna</i>	English Hawthorn	O
<i>Cypripedium acaule</i>	Pink Lady's-slipper	I
<i>Danthonia spicata</i>	Poverty Oat Grass	O
<i>Diervilla lonicera</i>	Northern Bush-honeysuckle	I
<i>Dryopteris intermedia</i>	Evergreen Woodfern	C
<i>Dryopteris marginalis</i>	Marginal Woodfern	O
<i>Epigaea repens</i>	Trailing Arbutus (Mayflower)	O
<i>Epilobium ciliatum ssp.</i>	Hairy Willowherb	O, wetland
<i>Epilobium leptophyllum</i>	Linear-leaf Willowherb (Bog Willowherb)	O, wetland
<i>Epipactis helleborine</i>	Broad-leaved Helleborine	O, exotic, ~20 plants. N46 12 13.8, W063 21 05.5
<i>Equisetum sylvaticum</i>	Wood Horsetail	C
<i>Eurybia radula</i>	Rough Aster (Low Rough Aster)	C, S3 , wetland
<i>Fagus grandifolia</i>	American Beech	C
<i>Filipendula ulmaria</i>	Queen-of-the-Meadow	C, wetland
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	O, wetland
<i>Galium palustra</i>	Marsh Bedstraw	C, wetland
<i>Gymnocarpium dryopteris</i>	Northern Oak Fern	C
<i>Heracleum maximum</i>	Cow Parsnip	O, wetland
<i>Impatiens capensis</i>	Spotted Jewelweed (Orange Jewelweed) (Spotted Touch-me-not)	O, wetland
<i>Kalmia angustifolia</i>	Sheep Laurel	O
<i>Lemna minor</i>	Duckweed	C, wetland
<i>Larix laricina</i>	American Larch	O
<i>Linnaea borealis</i>	Twinflower	C
<i>Lonicera canadensis</i>	Fly Honeysuckle	I
<i>Luzula multiflora ssp</i>	Woodrush	C
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Malus pumila</i>	Apple	O
<i>Medeola virginiana</i>	Indian Cucumber Root	O
<i>Oclemena acuminatus</i>	Whorled Wood Aster	O

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<i>(syn. Aster acuminatus)</i>		
<i>Onoclea sensibilis</i>	Sensitive Fern	C, wetland
<i>Osmunda cinnamomea</i>	Cinnamon Fern	C
<i>Oxalis acetosella</i>	Common Woodsorrel	O
<i>Oxalis stricta</i>	Common Yellow Woodsorrel	C
<i>Phalaris arundinacea</i>	Reed Canarygrass	C, wetland
<i>Phegopteris connectilis</i>	Northern Beechfern	C
<i>Picea glauca</i>	White Spruce	C
<i>Pinus strobus</i>	Eastern White Pine	O
<i>Polygonum lapathifolium</i>	Dock-leaf Smartleaf (Pale Smartleaf)	O, wetland
<i>Populus tremuloides</i>	Trembling Aspen	C
<i>Prunus pensylvanica</i>	Pin Cherry	C
<i>Pteridium aquilinum</i>	Bracken Fern	O
<i>Ranunculus acris</i>	Tall Buttercup	C, wetland
<i>Ranunculus repens</i>	Creeping Buttercup	C
<i>Ribes glandulosum</i>	Skunk Currant	C
<i>Ribes hirtellum</i>	Smooth Gooseberry	O
<i>Rubus allegheniensis</i>	Allegheny Blackberry (Common Blackberry)	C
<i>Rubus idaeus</i>	Common Red Raspberry	C
<i>Rumex orbiculatus</i>	Greater Water Dock	C, wetland
<i>Sambucus racemosa</i>	Red Elderberry	C
<i>Sium suave</i>	Hemlock Water Parsnip (Common Water Parsnip)	O
<i>Solanum dulcamara</i>	Bittersweet Nightshade	O
<i>Sorbus americana</i>	American Mountain-ash	O
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C
<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	C
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	C
<i>Thalictrum pubescens</i>	Tall Meadowrue	C, wetland
<i>Thelypteris noveboracensis</i>	New York Fern	C
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Tsuga canadensis</i>	Eastern Hemlock	O, S3S4 , large
<i>Typha latifolia</i>	Broadleaf Cattail	C, wetland
<i>Vaccinium angustifolium</i>	Late Lowbush Blueberry	O
<i>Veronica americana</i>	American Speedwell (Brooklime)	C, wetland
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	C

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AREA E OPEN AREA

Table 29: Vascular Plants Observed in Area E Open Area

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Achillea millefolium</i>	Common Yarrow	C
<i>Arctium minus</i>	Lesser Burdock	I
<i>Chimerion angustifolium</i>	Fireweed	C
<i>Cirsium arvense</i>	Canada Thistle	O
<i>Elymus repens</i>	Couch Grass	O
<i>Equisetum arvense</i>	Field Horsetail	C
<i>Euthamia graminifolia</i> var. <i>graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	C
<i>Fragaria virginiana</i>	Virginia Strawberry	C
<i>Hieracium aurantiacum</i>	Orange Hawkweed (Devil's Paintbrush)	C
<i>Hieracium floribundum</i>	Pale Hawkweed (King Devil Hawkweed)	C
<i>Hypericum boreale</i>	Northern St. John's Wort	O
<i>Leontodon autumnalis</i>	Fall Dandelion	O
<i>Leucanthemum vulgare</i>	Oxeye Daisy	O
<i>Lotus corniculatus</i>	Birdsfoot Trefoil	O
<i>Oenothera biennis</i>	Common Evening-primrose	I
<i>Phleum pratense</i>	Meadow Timothy	O
<i>Potentilla recta</i>	Sulfur Cinquefoil	C
<i>Prunella vulgaris</i>	Self-heal	C
<i>Raphanus raphanistrum</i>	Wild Radish	O
<i>Rosa virginiana</i>	Virginia Rose	C
<i>Rudbeckia hirta</i>	Black-eyed Susan	O
<i>Rumex crispus</i>	Curly Dock	C
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	C
<i>Solidago gigantea</i>	Giant Goldenrod	O
<i>Solidago rugosa</i>	Roughleaf Goldenrod	C
<i>Taraxacum officinale</i>	Common Dandelion	C
<i>Tragopogon dubius</i>	Meadow Goat's-beard	O
<i>Trifolium avens</i>	Rabbitsfoot Clover	C
<i>Trifolium campestre</i>	Low Hop Clover	C
<i>Trifolium hybridum</i>	Alsike Clover	C
<i>Trifolium pratense</i>	Red Clover	O
<i>Vicea cracca</i>	Tufted Vetch	C

AREA E MOSSES, FUNGI AND LICHENS

Table 30: Fungi, Lichens and Non-Vascular Species Observed in Area E

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for fungi, lichens and non-vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Chanterelle sp.</i>	Chanterelle	O
<i>Hylocomium splendens</i>	Stairstep Moss (Glittering Wood Moss)	C
<i>Parmelia sp.</i>	Shield Lichen	C
<i>Russula emetica</i>	Emetic Russula	O
<i>Tricholomopsis platyphylla</i>	Platterfull Mushroom	O
<i>Usnea sp.</i>	Old Man’s Beard Lichen	C

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of of fungi, lichens and non-vascular plants in this area.



Figure 13: Wild Lily-of-the-valley (*Maianthemum canadense*) in Area E

AREA E FAUNA

Table 31: Avifauna Species Observed in Area E

Name	Common Name	Notes
<i>Empidonax alnorum</i>	Alder Flycatcher	
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	
<i>Anas platyrhynchos</i>	Mallard	
<i>Anas rubripes</i>	American Black Duck	
<i>Ardea herodias</i>	Great Blue Heron	
<i>Bombycilla cedrorum</i>	Cedar Waxwing	
<i>Bonasa umbellus</i>	Ruffed Grouse	
<i>Buteo jamaicensis</i>	Red-tailed Hawk	S3B
<i>Catharus guttatus</i>	Hermit Thrush	
<i>Certhia americana</i>	Brown Creeper	
<i>Colaptes auratus</i>	Northern Flicker	
<i>Contopus virens</i>	Eastern Wood-pewee	
<i>Corvus brachyrhynchos</i>	American Crow	
<i>Corvus corax</i>	Common Raven	
<i>Cyanocitta cristata</i>	Blue Jay	
<i>Geothlypis philadelphia</i>	Mourning Warbler	
<i>Geothlypis trichas</i>	Common Yellowthroat	
<i>Haemorhous purpureus</i>	Purple Finch	
<i>Haliaeetus leucocephalus</i>	Bald Eagle	
<i>Junco hyemalis</i>	Dark-eyed Junco	
<i>Megaceryle alcyon</i>	Belted Kingfisher	
<i>Melospiza melodia</i>	Song Sparrow	
<i>Mniotilta varia</i>	Black-and-white Warbler	
<i>Molothrus ater</i>	Brown-headed Cowbird	S3B
<i>Pandion haliaetus</i>	Osprey	
<i>Picoides villosus</i>	Hairy Woodpecker	
<i>Poecile atricapillus</i>	Black-capped Chickadee	
<i>Regulus calendula</i>	Ruby-crowned Kinglet	
<i>Regulus satrapa</i>	Golden-crowned Kinglet	
<i>Seiurus aurocapillus</i>	Ovenbird	
<i>Setophaga americana</i>	Northern Parula	
<i>Setophaga coronata</i>	Yellow-rumped Warbler	
<i>Setophaga fusca</i>	Blackburnian Warbler	
<i>Setophaga magnolia</i>	Magnolia Warbler	
<i>Setophaga ruticilla</i>	American Redstart	
<i>Setophaga striata</i>	Blackpoll Warbler	
<i>Setophaga virens</i>	Black-throated Green Warbler	
<i>Sitta canadensis</i>	Red-breasted Nuthatch	

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<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
<i>Spinus tristis</i>	American Goldfinch	
<i>Spizella passerina</i>	Chipping Sparrow	
<i>Turdus migratorius</i>	American Robin	
<i>Vireo olivaceus</i>	Red-eyed Vireo	
<i>Vireo solitarius</i>	Blue-headed Vireo	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	



Figure 14:
Swamp Jack-in-
the Pulpit
(*Arisaema
triphyllum*) in
Area E

AREA E ADDITIONAL FAUNA SPECIES OBSERVED

Table 32: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Area E

Name	Common Name	Notes
<i>Lepus americanus</i>	Snowshoe Hare	
<i>Pseudacris crucifer</i>	Spring peepers	
<i>Tamias striatus</i>	Chipmunk	
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	
<i>Vulpes vulpes</i>	Red Fox	

Addition Fauna Species Observed: A number of invertebrate species such as cicadas, moths, butterflies, spiders and biting insects were noted but not identified.

Equestrian Grounds Corridor

Equestrian Grounds Corridor Vascular Plants

This survey focused on a 50 metre wide corridor along the riparian zone at the southern edge of the property, where there is a walking path connecting to area M and Strathgartney Park. This area is approximately five acres in total and exhibits a steep decline to the water dominated by Balsam Fir and Eastern Hemlock. The Equestrian Grounds are located in PID# 402958 (42.8 acres) and PID# 218867 (1.4 acres) There is field and open area for equestrian activities as well as woodland. On most of its south boundary the land borders the West River. A former house site contains remnants of ornamental plantings. Several species in this list are recorded from wooded and open areas within the Equestrian Park but are actually outside the target corridor. This area was visited on June 10 and August 4, 2014. A total of 127 vascular plant species was recorded.

EQUESTRIAN GROUNDS WOODLAND (OUTSIDE THE CORRIDOR)

Table 33: Vascular Plants Observed in the Woodlands Associated with the Equestrian Grounds
 Frequency Notes: C=Common, O=Occasional, I=Infrequent
 Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer pensylvanicum</i>	Striped Maple	C
<i>Acer rubrum</i>	Red Maple	C
<i>Acer saccharum</i>	Sugar Maple	C
<i>Acer spicatum</i>	Mountain Maple	O
<i>Alnus incana</i>	Speckled Alder	I, wetland
<i>Amelanchier laevis</i>	Allegheny Serviceberry (Smooth Serviceberry)	O, S3 . N46 12 06.4 W063 20 55.2; N46 11 52.9 W063 20 36.9
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Argentina anserina</i>	Silverweed	I, wetland
<i>Betula allegheniensis</i>	Yellow Birch	C
<i>Betula papyrifera</i>	White Birch	C
<i>Betula populifolia</i>	Gray Birch (Wire Birch)	I
<i>Bidens cernua</i>	Nodding Bur-marigold	O, wetland
<i>Callitriche palustris</i>	Vernal Water-starwort	C, wetland
<i>Caltha palustris</i>	Marsh Marigold	O, wetland
<i>Carex crawfordi</i>	Crawford's Sedge	O, wetland
<i>Carex gracillima</i>	Graceful Sedge	O
<i>Carex trisperma</i>	Three-seeded Sedge	O
<i>Chimaphila umbellata</i>	Common Wintergreen (Princes' Pine)	I

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<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	O
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	O
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	I
<i>Corylus cornuta</i>	Beaked Hazelnut	O
<i>Crataegus monogyna</i>	English Hawthorn	O, woods edge
<i>Cypripedium acaule</i>	Pink Lady's-slipper	O
<i>Diervilla lonicera</i>	Northern Bush-honeysuckle	O
<i>Dryopteris intermedia</i>	Evergreen Woodfern	C
<i>Epifagus americana</i>	Beech-drops	I, S3 , parasite on Beech roots. Not located in path corridor.
<i>Epilobium ciliatum</i> ssp.	Hairy Willowherb	O, wetland
<i>Fagus grandifolia</i>	American Beech	C
<i>Filipendula ulmaria</i>	Queen-of-the-Meadow	C, wetland
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	C, wetland
<i>Geum allepicum</i>	Yellow Avens	C, wetland
<i>Geum laciniatum</i>	Rough Avens	C, wetland
<i>Geum macrophyllum</i>	Largeleaf Avens	C, S2 , end of path. N46 11 46.2 W063 20 49.4
<i>Impatiens capensis</i>	Spotted Jewelweed (Orange Jewelweed) (Spotted Touch-me-not)	O, wetland
<i>Juncus tenuis</i>	Path Rush	O
<i>Kalmia angustifolia</i>	Sheep Laurel	C
<i>Larix laricina</i>	American Larch	I
<i>Leucanthemum vulgare</i>	Oxeye Daisy	O
<i>Lonicera canadensis</i>	Fly Honeysuckle	I
<i>Luzula multiflora</i> ssp	Woodrush	C
<i>Lycopodium obscurum</i>	Ground Pine	O
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Maianthemum racemosum</i>	Solomon's-plume	I
<i>Malus pumila</i>	Apple	C, woods edge
<i>Monotropa uniflora</i>	Indian-pipe	O
<i>Morella pensylvanica</i>	Northern Bayberry	I, woods edge
<i>Onoclea sensibilis</i>	Sensitive Fern	O, wetland
<i>Osmunda cinnamomea</i>	Cinnamon Fern	O
<i>Osmunda claytoniana</i>	Interrupted Fern	C
<i>Oxalis stricta</i>	Common Yellow Woodsorrel	O
<i>Panicum dichotomiflorum</i>	Fall Panic Grass	O
<i>Phalaris arundinacea</i>	Reed Canarygrass	C, wetland
<i>Phegopteris connectilis</i>	Northern Beechfern	C

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<i>Picea glauca</i>	White Spruce	C
<i>Pinus strobus</i>	Eastern White Pine	C
<i>Populus grandidentata</i>	Large-toothed Aspen	I
<i>Populus tremuloides</i>	Trembling Aspen	C
<i>Prunus pensylvanica</i>	Pin Cherry	C
<i>Prunus virginiana</i>	Choke Cherry	C
<i>Pteridium aquilinum</i>	Bracken Fern	C
<i>Pyrola americana</i> (<i>rotundifolia</i>)	American Wintergreen	O
<i>Pyrola elliptica</i>	Shinleaf	I
<i>Ranunculus repens</i>	Creeping Buttercup	C
<i>Ribes hirtellum</i>	Smooth Gooseberry	O
<i>Ribes triste</i>	Wild Red Currant	C
<i>Rosa multiflora</i>	Multiflora Rose	O
<i>Rosa virginiana</i>	Virginia Rose	I
<i>Rubus idaeus</i>	Common Red Raspberry	O
<i>Rumex orbiculatus</i>	Greater Water Dock	I, wetland
<i>Salix discolor</i>	Pussy Willow	C
<i>Salix pedicellaris</i>	Bog Willow	I, wetland
<i>Sambucus racemosa</i>	Red Elderberry	C
<i>Schoenoplectus tabernaemontani</i>	Softstem Bulrush	C, wetland
<i>Scirpus georgianus</i>	Georgia Bulrush	I, S1 (exotic) N 46 11 46.2 W 063 20 49.4
<i>Sium suave</i>	Hemlock Water Parsnip (Common Water Parsnip)	O, wetland
<i>Solanum dulcamara</i>	Bittersweet Nightshade	O, wetland
<i>Sorbus americana</i>	American Mountain-ash	C
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C
<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	C
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	I
<i>Thalictrum pubescens</i>	Tall Meadowrue	O, wetland
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Trillium undulatum</i>	Painted Trillium	O
<i>Tsuga canadensis</i>	Eastern Hemlock	O, S3S4 , large trees. Not located in path corridor.
<i>Typha latifolia</i>	Broadleaf Cattail	C, wetland
<i>Ulmus americana</i>	American Elm	O, S3
<i>Vaccinium angustifolium</i>	Late Lowbush Blueberry	O, woods edge
<i>Viola cucullata</i>	Blue Violet	I

EQUESTRIAN GROUNDS OPEN AREA

Table 34: Vascular Plants Observed in the Equestrian Ground Corridor Open Area

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Achillea millefolium</i>	Common Yarrow	C
<i>Chimerion angustifolium</i>	Fireweed	C
<i>Crataegus monogyna</i>	English Hawthorn	O
<i>Dactylis glomerata</i>	Orchard Grass	O
<i>Daucus carota</i>	Wild Carrot (Queen Anne's Lace)	I
<i>Equesetum arvense</i>	Field Horsetail	O
<i>Erigeron strigosus</i>	Daisy Fleabane (Rough Fleabane)	C
<i>Euphrasia officinalis</i>	Eyebright	C
<i>Fragaria virginiana</i>	Virginia Strawberry	C
<i>Galium mollugo</i>	Hedge Bedstraw (False Baby's Breath)	C
<i>Hieracium aurantiacum</i>	Orange Hawkweed (Devil's Paintbrush)	O
<i>Hieracium floribundum</i>	Pale Hawkweed (King Devil Hawkweed)	O
<i>Hieracium lachenalii</i>	Common Hawkweed (Yellow Hawkweed)	C
<i>Hieracium pilosella</i>	Mouse-ear Hawkweed	O
<i>Leontodon autumnalis</i>	Fall Dandelion	C
<i>Lonicera tatarica</i>	Tatarian Honeysuckle	O, old house site
<i>Matricaria discoidea</i>	Pineapple Weed	O
<i>Melilotus officinalis</i>	Sweetclover	C
<i>Oenothera biennis</i>	Common Evening-primrose	O
<i>Plantago lanceolata</i>	English Plantain	O
<i>Poa pratensis</i>	Kentucky Bluegrass	O
<i>Potentilla recta</i>	Sulfur Cinquefoil	C
<i>Prunella vulgaris</i>	Self-heal	O
<i>Rheum rhabarbarum</i>	Rhubarb	I, old house site
<i>Rumex crispus</i>	Curly Dock	C
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	C
<i>Solidago rugosa</i>	Roughleaf Goldenrod	C
<i>Stellaria graminea</i>	Little Starwort	C

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<i>Symphotrichum cordifolium</i>	Heartleaf Aster	O
<i>Taraxacum officinale</i>	Common Dandelion	C
<i>Thymus praecox</i>	Creeping Thyme	C
<i>Tragopogon dubius</i>	Meadow Goat's-beard	O
<i>Trifolium avens</i>	Rabbitsfoot Clover	C
<i>Trifolium campestre</i>	Low Hop Clover	O
<i>Verbascum thaspus</i>	Common Mullein	I
<i>Veronica arvensis</i>	Field Speedwell	C
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	C
<i>Vicea cracca</i>	Tufted Vetch	C
<i>Viola arvensis</i>	Small Wild Pansy	I

EQUESTRIAN GROUNDS MOSSES, FUNGI AND LICHENS

Table 35: Fungi, Lichens and Non-Vascular Species Observed in the Equestrian Grounds Corridor

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for fungi, lichens and non-vascular plants as per explore.natureserve.org .

Name	Common Name	Frequency, Notes
<i>Hylocomium splendens</i>	Stairstep Moss (Glittering Wood Moss)	C
<i>Lobaria pulmonaria</i>	Lung Lichen	C
<i>Marasmius Oreades</i>	Fairy Ring Mushroom	O
<i>Parmelia sp.</i>	Shield Lichen	C
<i>Polytrichum sp. (commune or formosum)</i>	Hair-cap Moss	O
<i>Usnea sp.</i>	Old Man's Beard Lichen	C

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of of fungi, lichens and non-vascular plants in this area.

EQUESTRIAN GROUNDS FAUNA

Table 36: Avifauna Species Observed in Equestrian Grounds and Area M Corridors

Note: This avifauna list also includes the species found on area M, the trail corridor connecting the Equestrian Grounds and Strathgartney Park.

Name	Common Name	Notes
<i>Empidonax alnorum</i>	Alder Flycatcher	
<i>Actitis macularius</i>	Spotted Sandpiper	
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	
<i>Anas crecca</i>	Green-winged Teal	
<i>Anas discors</i>	Blue-winged Teal	
<i>Anas platyrhynchos</i>	Mallard	
<i>Anas rubripes</i>	American Black Duck	
<i>Ardea herodias</i>	Great Blue Heron	
<i>Bombycilla cedrorum</i>	Cedar Waxwing	
<i>Bonasa umbellus</i>	Ruffed Grouse	
<i>Buteo jamaicensis</i>	Red-tailed Hawk	S3B
<i>Catharus ustulatus</i>	Swainson's Thrush	
<i>Certhia americana</i>	Brown Creeper	
<i>Colaptes auratus</i>	Northern Flicker	
<i>Contopus cooperi</i>	Olive-sided Flycatcher	S3B observed by Diane and Dan
<i>Contopus virens</i>	Eastern Wood-pewee	
<i>Corvus brachyrynchos</i>	American Crow	
<i>Corvus corax</i>	Common Raven	
<i>Cyanocitta cristata</i>	Blue Jay	
<i>Empidonax minimus</i>	Least Flycatcher	
<i>Geothlypis philadelphia</i>	Mourning Warbler	
<i>Geothlypis trichas</i>	Common Yellowthroat	
<i>Haliaeetus leucocephalus</i>	Bald Eagle	
<i>Junco hyemalis</i>	Dark-eyed Junco	
<i>Megaceryle alcyon</i>	Belted Kingfisher	
<i>Melospiza georgiana</i>	Swamp Sparrow	
<i>Melospiza melodia</i>	Song Sparrow	
<i>Mergus merganser</i>	Common Merganser	
<i>Mniotilta varia</i>	Black-and-white Warbler	
<i>Molothrus ater</i>	Brown-headed Cowbird	S3B
<i>Pandion haliaetus</i>	Osprey	
<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak	S3B
<i>Picoides pubescens</i>	Downy Woodpecker	
<i>Picoides villosus</i>	Hairy Woodpecker	
<i>Poecile atricapillus</i>	Black-capped Chickadee	

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<i>Poecile hudsonicus</i>	Boreal Chickadee	
<i>Quiscalus quiscula</i>	Common Grackle	
<i>Regulus calendula</i>	Ruby-crowned Kinglet	
<i>Regulus satrapa</i>	Golden-crowned Kinglet	
<i>Seivrus aurocapillus</i>	Ovenbird	
<i>Setophaga americana</i>	Northern Parula	
<i>Setophaga coronata</i>	Yellow-rumped Warbler	
<i>Setophaga fusca</i>	Blackburnian Warbler	
<i>Setophaga magnolia</i>	Magnolia Warbler	
<i>Setophaga pensylvanica</i>	Chestnut-sided Warbler	
<i>Setophaga ruticilla</i>	American Redstart	
<i>Setophaga virens</i>	Black-throated Green Warbler	
<i>Sitta canadensis</i>	Red-breasted Nuthatch	
<i>Sitta carolinensis</i>	White-breasted Nuthatch	S1B
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
<i>Spinus tristis</i>	American Goldfinch	
<i>Spizella passerina</i>	Chipping Sparrow	
<i>Strix varia</i>	Barred Owl	
<i>Troglodytes hiemalis</i>	Winter Wren	
<i>Turdus migratorius</i>	American Robin	
<i>Vireo olivaceus</i>	Red-eyed Vireo	
<i>Vireo solitarius</i>	Blue-headed Vireo	
<i>Zenaida macroura</i>	Mourning Dove	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	

EQUESTRIAN GROUNDS ADDITIONAL FAUNA SPECIES OBSERVED

Table 37: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in the Equestrian Grounds

Name	Common Name	Notes
<i>Bufo americanus</i>	American Toad	
<i>Camponotus herculeanus</i>	Carpenter Ant	signs in decaying trees
<i>Malacosoma americanum</i>	Eastern Tent Caterpillar	cocoons in trees
<i>Tamias striatus</i>	Eastern Chipmunk	
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	
<i>Tibicen sp. (canicularis?)</i>	(Dog-day?) Cicada	sound

A number of invertebrate species such as cicadas, moths, butterflies, spiders and biting insects were observed but not identified.

Area G

AREA G VASCULAR PLANTS

This area is the northern part of PID# 219097 and 219089 totalling 64.3 acres. It begins about 30 m north of MacKinnon Rd and reaches the West River on its northern boundary. There are farm fields on the southern part of the area and the remainder of the property is mature woodland with wetland associated species at the river's edge. The wooded area is dominated by Balsam Fir and maple species with alders and weedy plants near the water. The field is mainly various species of clover, Sulfur Cinquefoil and Tufted Vetch. Area G was surveyed on June 4 and August 6. A total of 134 vascular plant species was recorded for the area.

AREA G WOODLAND

Table 38: Vascular Plants Observed in Area G Woodland

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer pensylvanicum</i>	Striped Maple	C
<i>Acer rubrum</i>	Red Maple	C
<i>Acer saccharum</i>	Sugar Maple	C
<i>Acer spicatum</i>	Mountain Maple	C
<i>Agrostus hyemalis</i>	Ticklegrass (Winter Bentgrass)	O
<i>Agrostus perennans</i>	Perennial Bentgrass	O
<i>Alnus incana</i>	Speckled Alder	C, wetland
<i>Amelanchier laevis</i>	Allegheny Serviceberry (Smooth Serviceberry)	O, S3 , woodland edge
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Arisaema triphyllum</i>	Swamp Jack-in-the-pulpit	C, wetland
<i>Betula allegheniensis</i>	Yellow Birch	C
<i>Betula papyrifera</i>	White Birch	C
<i>Caltha palustris</i>	Marsh Marigold	C, wetland
<i>Cardamine pensylvanica</i>	Pennsylvania Bittercress	O, wetland
<i>Carex crawfordi</i>	Crawford's Sedge	O, wetland
<i>Carex gracillima</i>	Graceful Sedge	O
<i>Carex intumescens</i>	Bladder Sedge	O, wetland
<i>Carex scabrata</i>	Rough Sedge	O, wetland
<i>Carex stipata</i>	Awl-fruit Sedge	O, wetland
<i>Carex trisperma</i>	Three-seeded Sedge	O
<i>Chelone glabra</i>	White Turtlehead	O, wetland
<i>Chimerion angustifolium</i>	Fireweed	C

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<i>Chrysosplenium americanum</i>	American Golden Saxifrage	C, wetland
<i>Circaea alpina</i>	Small Enchanter's-nightshade	O, wetland
<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	C
<i>Coptis trifolia</i>	Goldthread	O
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	I
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C
<i>Cornus sericea</i>	Red Osier Dogwood	O
<i>Corylus cornuta</i>	Beaked Hazelnut	O
<i>Dennstaedtia punctilobula</i>	Eastern Hay-scented Fern	O
<i>Doellingeria umbellata</i>	Flat-top White Aster	O
<i>Dryopteris intermedia</i>	Evergreen Woodfern	C
<i>Epilobium ciliatum ssp.</i>	Hairy Willowherb	C, wetland
<i>Equisetum fluviatile</i>	Water Horsetail	C, wetland
<i>Equisetum sylvaticum</i>	Wood Horsetail	C
<i>Eurybia radula</i>	Rough Aster (Low Rough Aster)	C, S3 , wetland
<i>Fagus grandifolia</i>	American Beech	O
<i>Filipendula ulmaria</i>	Queen-of-the-Meadow	C, wetland
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	C, wetland
<i>Galium palustra</i>	Marsh Bedstraw	I, wetland
<i>Geum allepicum</i>	Yellow Avens	O, wetland
<i>Geum macrophyllum</i>	Largeleaf Avens	O, wetland
<i>Gymnocarpium dryopteris</i>	Northern Oak Fern	C
<i>Hemerocallis fulva</i>	Orange Daylily	O, exotic
<i>Impatiens capensis</i>	Spotted Jewelweed (Orange Jewelweed) (Spotted Touch-me-not)	C, wetland
<i>Impatiens pallida</i>	Pale Jewelweed (Pale Touch-me-not)	O, wetland
<i>Juncus effusus</i>	Soft Rush	C, wetland
<i>Lathyrus palustris</i>	Vetchling Peavine (Wild Pea)	O, wetland
<i>Lycopus americanus</i>	American Bugleweed	I, wetland
<i>Lysimachia thysiflora</i>	Water Loosestrife	C, wetland
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Maianthemum racemosum</i>	Solomon's-plume	C
<i>Malus pumila</i>	Apple	I
<i>Matteuccia struthiopteris</i>	Ostrich Fern	O, wetland
<i>Mitella nuda</i>	Naked Bishop's-cap (Miterwort)	O, wetland

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<i>Monotropa uniflora</i>	Indian-pipe	C
<i>Onoclea sensibilis</i>	Sensitive Fern	C, wetland
<i>Osmunda cinnamomea</i>	Cinnamon Fern	C
<i>Osmunda claytoniana</i>	Interrupted Fern	C
<i>Oxalis stricta</i>	Common Yellow Woodsorell	C
<i>Phalaris arundinacea</i>	Reed Canarygrass	C, wetland
<i>Phegopteris connectilis</i>	Northern Beechfern	O
<i>Phleum pratense</i>	Meadow Timothy	C
<i>Picea glauca</i>	White Spruce	C
<i>Polygonum lapathifolium</i>	Dock-leaf Smartleaf (Pale Smartleaf)	I, wetland
<i>Polygonum sagittatum</i>	Arrowleaf Tearthumb	I, wetland
<i>Populus tremuloides</i>	Trembling Aspen	C
<i>Prunus pensylvanica</i>	Pin Cherry	C, woods edge
<i>Ranunculus acris</i>	Tall Buttercup	C, wetland
<i>Ranunculus repens</i>	Creeping Buttercup	C
<i>Rhynchospora alba</i>	Whitebeak Sedge	O, wood road
<i>Ribes glandulosum</i>	Skunk Currant	C
<i>Ribes hirtellum</i>	Smooth Gooseberry	O
<i>Ribes lacustre</i>	Bristly Black Current	O
<i>Rubus allegheniensis</i>	Allegheny Blackberry (Common Blackberry)	O, woods edge
<i>Rubus idaeus</i>	Common Red Raspberry	G
<i>Rubus pubescens</i>	Dwarf Red Raspberry	C, wetland
<i>Rumex orbiculatus</i>	Greater Water Dock	C, wetland
<i>Salix discolor</i>	Pussy Willow	C
<i>Sambucus racemosa</i>	Red Elderberry	C
<i>Scirpus atrovirens</i>	Woolgrass Bulrush	C, wetland
<i>Scutellaria galericulata</i>	Hooded Skullcap (Marsh Skullcap)	O, wetland
<i>Scutellaria lateriflora</i>	Mad-dog Skullcap	O, wetland
<i>Solanum dulcamara</i>	Bittersweet Nightshade	C, wetland
<i>Sorbus americana</i>	American Mountain-ash	C
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	O
<i>Streptopus lanceolatus</i>	Rosy Twisted-stalk	I
<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	C
<i>Symphotrichum novi-belgii</i>	New York Aster	O, woods edge
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	C

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<i>Thalictrum pubescens</i>	Tall Meadowrue	O, wetland
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Trillium cernuum</i>	Nodding Trillium	C
<i>Trillium undulatum</i>	Painted Trillium	C
<i>Tsuga canadensis</i>	Eastern Hemlock	O, S3S4 , large
<i>Typha latifolia</i>	Broadleaf Cattail	O, wetland
<i>Veronica americana</i>	American Speedwell (Brooklime)	C, wetland
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	C
<i>Viburnum nudum</i>	Wild Raisin	O
<i>Viola cucullata</i>	Blue Violet	C

AREA G FIELD

Table 39: Vascular Plants Observed in Area G Field

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Achillea millefolium</i>	Common Yarrow	C
<i>Anaphalis margaritacea</i>	Pearly Everlasting	O
<i>Arctium minus</i>	Lesser Burdock	O
<i>Barbarea vulgaris</i>	Yellow Rocket	O
<i>Cirsium arvense</i>	Canada Thistle	C
<i>Cirsium vulgare</i>	Bull Thistle	I
<i>Dactylis glomerata</i>	Orchard Grass	C
<i>Equisetum arvense</i>	Field Horsetail	C
<i>Euthamia graminifolia</i> var. <i>graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	C
<i>Fragaria virginiana</i>	Virginia Strawberry	C
<i>Galium mollugo</i>	Hedge Bedstraw (False Baby's Breath)	C
<i>Hesperis matronalis</i>	Dame's Rocket	I, ornamental
<i>Hieracium floribundum</i>	Pale Hawkweed (King Devil Hawkweed)	O
<i>Hieracium pilosella</i>	Mouse-ear Hawkweed	O
<i>Leontodon autumnalis</i>	Fall Dandelion	C
<i>Oenothera biennis</i>	Common Evening-primrose	C
<i>Onopordum acanthium</i>	Scotch Cotton-thistle	I
<i>Plantago lanceolata</i>	English Plantain	C
<i>Plantago major</i>	Common Plantain	C

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<i>Poa pratensis</i>	Kentucky Bluegrass	C
<i>Potentilla recta</i>	Sulfur Cinquefoil	O
<i>Prunella vulgaris</i>	Self-heal	C
<i>Raphanus raphanistrum</i>	Wild Radish	O
<i>Rumex crispus</i>	Curly Dock	C
<i>Senecio jacobaea</i>	Tansy Ragwort	O
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	C
<i>Solidago gigantea</i>	Giant Goldenrod	C
<i>Solidago rugosa</i>	Roughleaf Goldenrod	C
<i>Stellaria graminea</i>	Little Starwort	C
<i>Symphotrichum novi-belgii</i>	New York Aster	O
<i>Taraxacum officinale</i>	Common Dandelion	C
<i>Trifolium pratense</i>	Red Clover	C
<i>Vicea cracca</i>	Tufted Vetch	C

AREA G MOSSES, FUNGI AND LICHENS

Table 40: Fungi, Lichens and Non-vascular Plant Species Observed in Area G

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for fungi, lichens and non-vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Hylocomium splendens</i>	Stairstep Moss (Glittering Wood Moss)	C
<i>Lobaria pulmonaria</i>	Lung Lichen	C
<i>Lycoperdon Perlatum</i>	Common Puffball	O
<i>Parmelia sp.</i>	Shield Lichen	C
<i>Polytrichum sp. (commune or formosum)</i>	Hair-cap Moss	C
<i>Usnea sp.</i>	Old Man's Beard Lichen	C

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of fungi, lichens and non-vascular plants in this area.

AREA G FAUNA

Table 41: Avifauna Species Observed in Area G

Name	Common Name	Notes
<i>Empidonax alnorum</i>	Alder Flycatcher	
<i>Anas platyrhynchos</i>	Mallard	
<i>Archilochus colubris</i>	Ruby-throated Hummingbird	
<i>Bombycilla cedrorum</i>	Cedar Waxwing	
<i>Bonasa umbellus</i>	Ruffed Grouse	Drumming
<i>Buteo jamaicensis</i>	Red-tailed Hawk	S3B
<i>Cardellina canadensis</i>	Canada Warbler	Threatened (SARA), S3
<i>Catharus guttatus</i>	Hermit Thrush	
<i>Catharus ustulatus</i>	Swainson's Thrush	
<i>Charadrius vociferus</i>	Killdeer	S3B
<i>Colaptes auratus</i>	Northern Flicker	
<i>Contopus virens</i>	Eastern Wood-pewee	
<i>Corvus brachyrynchos</i>	American Crow	
<i>Corvus corax</i>	Common Raven	
<i>Cyanocitta cristata</i>	Blue Jay	
<i>Dolichonyx oryzivorus</i>	Bobolink	S3 Threatened (COSEWIC)
<i>Empidonax minimus</i>	Least Flycatcher	
<i>Geothlypis philadelphia</i>	Mourning Warbler	
<i>Geothlypis trichas</i>	Common Yellowthroat	
<i>Junco hyemalis</i>	Dark-eyed Junco	
<i>Megaceryle alcyon</i>	Belted Kingfisher	
<i>Melospiza melodia</i>	Song Sparrow	
<i>Mniotilta varia</i>	Black-and-white Warbler	
<i>Pandion haliaetus</i>	Osprey	
<i>Passerculus sandwichensis</i>	Savannah Sparrow	
<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak	S3B
<i>Picoides villosus</i>	Hairy Woodpecker	
<i>Poecile atricapillus</i>	Black-capped Chickadee	
<i>Quiscalus quiscula</i>	Common Grackle	
<i>Regulus calendula</i>	Ruby-crowned Kinglet	
<i>Regulus satrapa</i>	Golden-crowned Kinglet	
<i>Scolopax minor</i>	American Woodcock	3 observed
<i>Seivrus aurocapillus</i>	Ovenbird	
<i>Setophaga americana</i>	Northern Parula	
<i>Setophaga caerulescens</i>	Black-throated Blue Warbler	
<i>Setophaga coronata</i>	Yellow-rumped Warbler	

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<i>Setophaga magnolia</i>	Magnolia Warbler	
<i>Setophaga pensylvanica</i>	Chestnut-sided Warbler	
<i>Setophaga petechia</i>	Yellow Warbler	
<i>Setophaga ruticilla</i>	American Redstart	
<i>Setophaga striata</i>	Blackpoll Warbler	
<i>Setophaga virens</i>	Black-throated Green Warbler	
<i>Sitta canadensis</i>	Red-breasted Nuthatch	
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
<i>Spinus tristis</i>	American Goldfinch	
<i>Spizella passerina</i>	Chipping Sparrow	
<i>Strix varia</i>	Barred Owl	
<i>Sturnus vulgaris</i>	European Starling	
<i>Troglodytes hiemalis</i>	Winter Wren	
<i>Turdus migratorius</i>	American Robin	
<i>Vireo olivaceus</i>	Red-eyed Vireo	
<i>Vireo solitarius</i>	Blue-headed Vireo	
<i>Zenaida macroura</i>	Mourning Dove	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	

AREA G - ADDITIONAL FAUNA SPECIES OBSERVED

Table 42: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Area G

Name	Common Name	Notes
<i>Canis latrans</i>	Eastern Coyote	2 seen, running into trail head
<i>Lithobates sylvaticus</i>	Wood Frog	Observed
<i>Mustela erminea</i>	Short-tailed weasel	
<i>Oncorhynchus mykiss</i>	Rainbow Trout	in stream
<i>Procyon lotor</i>	Raccoon	Tracks
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	
<i>Vulpes vulpes</i>	Red Fox	

A number of invertebrate species such as cicadas, moths, butterflies, spiders and biting insects were noted but not identified.

Areas I and J

AREAS I AND J VASCULAR PLANTS

This land consists of approximately 115 acres, the majority of PID# 218628. Both the West River and Bolger Park Road cross through the property. Area J is the property west of the Bolger Park Rd, while area I is the portion to the east of the road. A small segment of the original land parcel in the southwest portion of area I bordering the Bolger Park Road is to remain privately owned. Most of area J has been cut and re-planted, showing a variety of successional species, and some of this is in monoculture Red Pine plantation. In area I, there is an exceptionally high quality, pristine woodland with maples and Eastern Hemlock. Wetland species occur on the riparian area of the West River and a small feeder stream. Area J has a few trails present. These areas were visited on June 23, June 24, July 4, July 30, August 6 and August 13, and a total of 154 vascular species was recorded within.

AREAS I AND J WOODLAND

Table 43: Vascular Plants Observed in Areas I and J Woodland
 Frequency Notes: C=Common, O=Occasional, I=Infrequent
 Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer pensylvanicum</i>	Striped Maple	C
<i>Acer rubrum</i>	Red Maple	C
<i>Acer saccharum</i>	Sugar Maple	O
<i>Acer spicatum</i>	Mountain Maple	O
<i>Achillea millefolium</i>	Common Yarrow	C, west
<i>Actaea rubra</i>	Red Baneberry	I
<i>Agrostus hyemalis</i>	Ticklegrass (Winter Bentgrass)	O
<i>Alnus incana</i>	Speckled Alder	C, wetland
<i>Alopecurus pratensis</i>	Meadow Foxtail	O, west
<i>Amelanchier laevis</i>	Allegheny Serviceberry (Smooth Serviceberry)	O, S3, woodland edge
<i>Anaphalis margaritacea</i>	Pearly Everlasting	O, west
<i>Apocynum androsaemifolium</i>	Spreading Dogbane	C, west
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Arisaema triphyllum</i>	Swamp Jack-in-the-pulpit	O, wetland
<i>Barbarea vulgaris</i>	Yellow Rocket	O
<i>Betula allegheniensis</i>	Yellow Birch	C
<i>Betula papyrifera</i>	White Birch	C
<i>Cardamine pensylvanica</i>	Pennsylvania Bittercress	O, wetland

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<i>Carex brunnescens</i>	Brownish Sedge	O, west
<i>Carex crawfordi</i>	Crawford's Sedge	O, west, wetland
<i>Carex deweyana</i>	Dewey Sedge (Short Scale Sedge)	O
<i>Carex gracillima</i>	Graceful Sedge	C
<i>Carex intumescens</i>	Bladder Sedge	O, wetland
<i>Carex lupulina</i>	Hop Sedge	I, wetland
<i>Carex pseudocyperus</i>	Cyperus-like Sedge	C, wetland
<i>Carex scabrata</i>	Rough Sedge	C, wetland
<i>Carex trisperma</i>	Three-seeded Sedge	C
<i>Chelone glabra</i>	White Turtlehead	O, wetland
<i>Chimerion angustifolium</i>	Fireweed	C
<i>Chrysosplenium americanum</i>	American Golden Saxifrage	C, wetland
<i>Circaea alpina</i>	Small Enchanter's-nightshade	C, wetland
<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	C
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	C
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C
<i>Cornus sericea</i>	Red Osier Dogwood	C
<i>Corylus cornuta</i>	Beaked Hazelnut	C
<i>Cypripedium acaule</i>	Pink Lady's-slipper	O
<i>Dactylis glomerata</i>	Orchard Grass	O, west
<i>Danthonia spicata</i>	Poverty Oat Grass	O
<i>Dennstaedtia punctilobula</i>	Eastern Hay-scented Fern	C
<i>Dichanthelium villosissimum</i>	White-hair Witchgrass	O, west
<i>Diervilla lonicera</i>	Northern Bush-honeysuckle	O
<i>Doellingeria umbellata</i>	Flat-top White Aster	C
<i>Dryopteris intermedia</i>	Evergreen Woodfern	C
<i>Elymus repens</i>	Couch Grass	C, west
<i>Epifagus americana</i>	Beech-drops	I, S3 , parasite on Beech roots
<i>Epilobium ciliatum</i> ssp.	Hairy Willowherb	I, wetland
<i>Epilobium leptophyllum</i>	Linear-leaf Willowherb (Bog Willowherb)	O, wetland
<i>Equisetum fluviatile</i>	Water Horsetail	C, wetland
<i>Equisetum sylvaticum</i>	Wood Horsetail	O
<i>Eupatorium dubium</i>	Joe-pye Thoroughwort (Little Joe)	C, wetland
<i>Euphrasia officinalis</i>	Eyebright	C
<i>Eurybia radula</i>	Rough Aster (Low Rough Aster)	O, S3 , wetland
<i>Euthamia graminifolia</i> var. <i>graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	C
<i>Eutrochium maculatum</i>	Spotted Joe-pye Weed	C

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<i>Fagus grandifolia</i>	American Beech	I
<i>Filipendula ulmaria</i>	Queen-of-the-Meadow	C, wetland
<i>Fragaria virginiana</i>	Virginia Strawberry	C, west
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	C, wetland
<i>Galium mollugo</i>	Hedge Bedstraw (False Baby's Breath)	O, wood road
<i>Galium palustris</i>	Marsh Bedstraw	C, wetland
<i>Geum laciniatum</i>	Rough Avens	C, wetland
<i>Geum macrophyllum</i>	Largeleaf Avens	O, wetland
<i>Gymnocarpium dryopteris</i>	Northern Oak Fern	C
<i>Heracleum maximum</i>	Cow Parsnip	C, wetland
<i>Hieracium aurantiacum</i>	Orange Hawkweed (Devil's Paintbrush)	C, west
<i>Hieracium kalmii</i>	Kalm's Hawkweed	O
<i>Hieracium lachenalii</i>	Common Hawkweed (Yellow Hawkweed)	O
<i>Hieracium scabrum</i>	Rough Hawkweed	O
<i>Impatiens capensis</i>	Spotted Jewelweed (Orange Jewelweed) (Spotted Touch-me-not)	C, wetland
<i>Impatiens pallida</i>	Pale Jewelweed (Pale Touch-me-not)	O, wetland
<i>Juncus tenuis</i>	Path Rush	O, wood road
<i>Kalmia angustifolia</i>	Sheep Laurel	C, west
<i>Lactuca canadensis</i>	Wild Lettuce	I, S3, N46 12 58.2 W063 21 23.4 (road edge)
<i>Lemna minor</i>	Duckweed	C, wetland
<i>Leontodon autumnalis</i>	Fall Dandelion	O, wood road
<i>Leucanthemum vulgare</i>	Oxeye Daisy	C, west
<i>Linnaea borealis</i>	Twinflower	I
<i>Lonicera canadensis</i>	Fly Honeysuckle	O
<i>Luzula multiflora ssp</i>	Woodrush	C
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Maianthemum racemosum</i>	Solomon's-plume	O
<i>Matteuccia struthiopteris</i>	Ostrich Fern	O, wetland
<i>Mitella nuda</i>	Naked Bishop's-cap (Miterwort)	O, wetland
<i>Moehringia lateriflora</i>	Grove Sandwort	O
<i>Monotropa uniflora</i>	Indian-pipe	C
<i>Myosotis arvensis</i>	Rough Forget-me-not	C, wetland
<i>Myosotis laxa</i>	Small Forget-me-not	O, wetland
<i>Oclemena acuminatus</i> (syn. <i>Aster acuminatus</i>)	Whorled Wood Aster	C
<i>Oenothera perennis</i>	Small Sundrops	O, west
<i>Onoclea sensibilis</i>	Sensitive Fern	C, wetland
<i>Osmunda cinnamomea</i>	Cinnamon Fern	C

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<i>Osmunda claytoniana</i>	Interrupted Fern	C
<i>Oxalis acetosella</i>	Common Woodsorrel	C
<i>Oxalis stricta</i>	Common Yellow Woodsorrel	C
<i>Phalaris arundinacea</i>	Reed Canarygrass	C, wetland
<i>Phegopteris connectilis</i>	Northern Beechfern	C
<i>Phleum pratense</i>	Meadow Timothy	C
<i>Picea glauca</i>	White Spruce	C
<i>Picea rubens</i>	Red Spruce	C
<i>Pinus resinosa</i>	Red Pine	C, S2, planted
<i>Pinus strobus</i>	Eastern White Pine	C
<i>Plantago major</i>	Common Plantain	C
<i>Poa pratensis</i>	Kentucky Bluegrass	C, west
<i>Polygonum lapathifolium</i>	Dock-leaf Smartleaf (Pale Smartleaf)	O
<i>Populus grandidentata</i>	Large-toothed Aspen	O, west
<i>Populus tremuloides</i>	Trembling Aspen	C
<i>Prenanthes trifoliolata</i>	Threeleaf Rattlesnake-root (Lion's Paw)	I
<i>Prunella vulgaris</i>	Self-heal	C
<i>Prunus pensylvanica</i>	Pin Cherry	O
<i>Prunus virginiana</i>	Choke Cherry	C
<i>Pteridium aquilinum</i>	Bracken Fern	C
<i>Pyrola americana</i> (<i>rotundifolia</i>)	American Wintergreen	C
<i>Queercus rubra</i>	Northern Red Oak	I
<i>Ranunculus acris</i>	Tall Buttercup	C, wetland
<i>Ranunculus repens</i>	Creeping Buttercup	O, west
<i>Ribes glandulosum</i>	Skunk Currant	C, wetland
<i>Ribes lacustre</i>	Bristly Black Current	C
<i>Ribes triste</i>	Wild Red Currant	C
<i>Rubus allegheniensis</i>	Allegheny Blackberry (Common Blackberry)	C
<i>Rubus pubescens</i>	Dwarf Red Raspberry	C, wetland
<i>Rudbeckia hirta</i>	Black-eyed Susan	O
<i>Rumex orbiculatus</i>	Greater Water Dock	C, wetland
<i>Salix discolor</i>	Pussy Willow	O
<i>Sambucus nigra</i>	Common Elderberry (Black Elderberry)	I
<i>Sambucus racemosa</i>	Red Elderberry	C
<i>Scirpus atrovirens</i>	Woolgrass Bulrush	C, wetland
<i>Scutellaria galericulata</i>	Hooded Skullcap (Marsh Skullcap)	O, wetland
<i>Scutellaria lateriflora</i>	Mad-dog Skullcap	O, wetland
<i>Solanum dulcamara</i>	Bittersweet Nightshade	C, west
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	C, west
<i>Solidago gigantea</i>	Giant Goldenrod	O
<i>Solidago rugosa</i>	Roughleaf Goldenrod	C, west

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<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C
<i>Stellaria graminea</i>	Little Starwort	C, west
<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	O, west
<i>Symphotrichum novibelgii</i>	New York Aster	O, west
<i>Symphotrichum puniceum</i>	Swamp Aster	O
<i>Taraxacum officinale</i>	Common Dandelion	C
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	C
<i>Thalictrum pubescens</i>	Tall Meadowrue	C, wetland
<i>Thelypteris noveboracensis</i>	New York Fern	O
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Trillium cernuum</i>	Nodding Trillium	C
<i>Trillium undulatum</i>	Painted Trillium	O
<i>Tsuga canadensis</i>	Eastern Hemlock	C, S3S4 , large specimens
<i>Typha latifolia</i>	Broadleaf Cattail	I, wetland
<i>Ulmus americana</i>	American Elm	O, S3
<i>Urtica dioica</i>	Stinging Nettle	C, wetland
<i>Veronica americana</i>	American Speedwell (Brooklime)	O, wetland
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	C
<i>Vicea cracca</i>	Tufted Vetch	C
<i>Viola cucullata</i>	Blue Violet	C, west



Figure 15: Large Eastern Hemlock (*Tsuga canadensis*) on steep slope in Area I east of West River

AREAS I AND J MOSSES, FUNGI AND LICHENS

Table 44: Fungi, Lichens and Non-Vascular Plant Species Observed in Areas I and J
 Frequency Notes: C=Common, O=Occasional, I=Infrequent
 Nomenclature for fungi, lichens and non-vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Lobaria pulmonaria</i>	Lung Lichen	C
<i>Lycoperdon Perlatum</i>	Common Puffball	C
<i>Lycoperdon umbrinum</i>	Umber-brown Puffball	O
<i>Lycopodium obscurum</i>	Ground Pine	C
<i>Marasmius Oreades</i>	Fairy Ring Mushroom	O
<i>Parmelia sp.</i>	Shield Lichen	C
<i>Paxillus atrotomentosus</i>	Velvet Footed Pax	O
<i>Polytrichum sp. (commune or formosum)</i>	Hair-cap Moss	C
<i>Pycnoporus cinnabarinus</i>	Cinnabar-Red Polypore	O
<i>Usnea sp.</i>	Old Man’s Beard Lichen	C

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of of fungi, lichens and non-vascular plants in this area.



Figure 16: Wood frog (*Lithobates sylvaticus*) in area I

AREAS I AND J FAUNA

Table 45: Avifauna Species Observed in Areas I and J

Name	Common Name	Notes
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	
<i>Anas platyrhynchos</i>	Mallard	
<i>Archilochus colubris</i>	Ruby-throated Hummingbird	
<i>Ardea herodias</i>	Great Blue Heron	
<i>Bombycilla cedrorum</i>	Cedar Waxwing	
<i>Bonasa umbellus</i>	Ruffed Grouse	
<i>Catharus fuscescens</i>	Veery	
<i>Catharus guttatus</i>	Hermit Thrush	
<i>Catharus ustulatus</i>	Swainson's Thrush	
<i>Certhia americana</i>	Brown Creeper	
<i>Colaptes auratus</i>	Northern Flicker	
<i>Contopus virens</i>	Eastern Wood-pewee	
<i>Corvus brachyrynchos</i>	American Crow	
<i>Corvus corax</i>	Common Raven	
<i>Cyanocitta cristata</i>	Blue Jay	
<i>Empidonax minimus</i>	Least Flycatcher	
<i>Geothlypis philadelphia</i>	Mourning Warbler	
<i>Haliaeetus leucocephalus</i>	Bald Eagle	immature
<i>Junco hyemalis</i>	Dark-eyed Junco	
<i>Megaceryle alcyon</i>	Belted Kingfisher	
<i>Melospiza melodia</i>	Song Sparrow	
<i>Mniotilta varia</i>	Black-and-white Warbler	
<i>Oreothlypis ruficapilla</i>	Nashville Warbler	
<i>Pandion haliaetus</i>	Osprey	
<i>Passerculus sandwichensis</i>	Savannah Sparrow	
<i>Picoides pubescens</i>	Downy Woodpecker	
<i>Picoides villosus</i>	Hairy Woodpecker	
<i>Poecile atricapillus</i>	Black-capped Chickadee	
<i>Quiscalus quiscula</i>	Common Grackle	
<i>Regulus calendula</i>	Ruby-crowned Kinglet	
<i>Regulus satrapa</i>	Golden-crowned Kinglet	
<i>Seivrus aurocapillus</i>	Ovenbird	
<i>Setophaga americana</i>	Northern Parula	
<i>Setophaga caerulescens</i>	Black-throated Blue Warbler	
<i>Setophaga coronata</i>	Yellow-rumped Warbler	
<i>Setophaga fusca</i>	Blackburnian Warbler	
<i>Setophaga magnolia</i>	Magnolia Warbler	
<i>Setophaga ruticilla</i>	American Redstart	

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<i>Setophaga virens</i>	Black-throated Green Warbler	
<i>Sitta canadensis</i>	Red-breasted Nuthatch	
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
<i>Spinus tristis</i>	American Goldfinch	
<i>Strix varia</i>	Barred Owl	
<i>Troglodytes hiemalis</i>	Winter Wren	
<i>Turdus migratorius</i>	American Robin	
<i>Vireo olivaceus</i>	Red-eyed Vireo	
<i>Vireo solitarius</i>	Blue-headed Vireo	
<i>Zenaida macroura</i>	Mourning Dove	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	

AREAS I AND J ADDITIONAL FAUNA SPECIES OBSERVED

Table 46: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Areas I and J

Name	Common Name	Notes
<i>Canis latrans</i>	Eastern Coyote	scat, possibly fox
<i>Lithobates sylvaticus</i>	Wood Frog	
<i>Napaeozapus insignis</i>	Woodland Jumping Mouse	2 observed
<i>Procyon lotor</i>	Raccoon	
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	
<i>Thamnophis sirtalis</i>	Garter Snake	
<i>Tibicen sp. (canicularis?)</i>	(Dog-day?) Cicada	sound
<i>Vulpes vulpes</i>	Red Fox	scat, possibly coyote

A number of invertebrate species such as moths, butterflies, spiders and biting insects were noted but not identified.



Figure 17: Eastern Garter Snake
(*Thamnophis sirtalis*)

Area M - Connecting Trail Corridor

AREA M VASCULAR PLANTS

This species list is for the woodland trail in PID# 218644 which is a 50 metre wide corridor running from the Equestrian Grounds to the western edge of Strathgartney Provincial Park. This trail was mapped by the province in early 2014. The area is wooded but a portion has been impacted by clearing for expansion of the Strathgartney Highlands Golf Course. This trail was surveyed on June 10 and August 4. A total of 59 vascular plant species was recorded in this area, which is dominated mostly by Eastern Hemlock, as well as various maple and birch trees.

AREA M WOODLAND TRAIL CORRIDOR

Table 47: Vascular Plants Observed in Area M Woodland Trail Corridor

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Acer pensylvanicum</i>	Striped Maple	C
<i>Acer rubrum</i>	Red Maple	C
<i>Acer saccharum</i>	Sugar Maple	C
<i>Acer spicatum</i>	Mountain Maple	C
<i>Alnus incana</i>	Speckled Alder	C
<i>Amelanchier laevis</i>	Allegheny Serviceberry (Smooth Serviceberry)	O. S3 , edge of opening
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Betula allegheniensis</i>	Yellow Birch	C
<i>Betula papyrifera</i>	White Birch	C
<i>Carex gracillima</i>	Graceful Sedge	C
<i>Chimaphila umbellata</i>	Common Wintergreen (Prince's Pine)	I
<i>Chimerion angustifolium</i>	Fireweed	C
<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	C
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	C
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C
<i>Cypripedium acaule</i>	Pink Lady's-slipper	O
<i>Dactylis glomerata</i>	Orchard Grass	C
<i>Dryopteris intermedia</i>	Evergreen Woodfern	C
<i>Epifagus americana</i>	Beech-drops	I. S3 , a parasite of beech roots, both sides of trail
<i>Eurybia radula</i>	Rough Aster (Low Rough Aster)	C, S3 , wetland
<i>Euthamia graminifolia</i> var. <i>graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	C

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<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	C
<i>Galium mollugo</i>	Hedge Bedstraw (False Baby's Breath)	C
<i>Gymnocarpium dryopteris</i>	Northern Oak Fern	C
<i>Hieracium aurantiacum</i>	Orange Hawkweed (Devil's Paintbrush)	O
<i>Hieracium lachenalii</i>	Common Hawkweed (Yellow Hawkweed)	C
<i>Hieracium pilosella</i>	Mouse-ear Hawkweed	C
<i>Hieracium scabrum</i>	Rough Hawkweed	O
<i>Luzula multiflora ssp</i>	Woodrush	C
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Monotropa uniflora</i>	Indian-pipe	C
<i>Myotosis laxa</i>	Small Forget-me-not	O, wetland
<i>Oclemena acuminatus</i> (syn. <i>Aster acuminatus</i>)	Whorled Wood Aster	O
<i>Osmunda cinnamomea</i>	Cinnamon Fern	C
<i>Osmunda claytoniana</i>	Interrupted Fern	C
<i>Oxalis acetosella</i>	Common Woodsorell	C
<i>Phegopteris connectilis</i>	Northern Beech Fern	C
<i>Picea rubens</i>	Red Spruce	O
<i>Pinus strobus</i>	Eastern White Pine	C
<i>Plantago major</i>	Common Plantain	C
<i>Populus tremuloides</i>	Trembling Aspen	C
<i>Potentilla recta</i>	Sulfur Cinquefoil	C
<i>Prunus pensylvanica</i>	Pin Cherry	C
<i>Pteridium aquilinum</i>	Bracken Fern	C
<i>Pyrola americana</i> (<i>rotundifolia</i>)	American Wintergreen	C
<i>Ranunculus acris</i>	Tall Buttercup	C, wetland
<i>Ranunculus repens</i>	Creeping Buttercup	C
<i>Rubus idaeus</i>	Common Red Raspberry	C
<i>Rubus pubescens</i>	Dwarf Red Raspberry	C, wetland
<i>Salix discolor</i>	Pussy Willow	O
<i>Sambucus racemosa</i>	Red Elderberry	O
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C
<i>Symphotrichum novi-belgii</i>	New York Aster	O
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	C
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Tsuga canadensis</i>	Eastern Hemlock	C, S3S4
<i>Ulmus americana</i>	American Elm	O, S3 , large
<i>Veronica arvensis</i>	Field Speedwell	C
<i>Viola macloskeyi</i>	Small White Violet	C



Figure 18: Beech-drops (*Epifagus americana*), Area M

AREA M MOSSES, FUNGI AND LICHENS

Table 48: Fungi, Lichens and Non-Vascular PLant Species Observed in Area M

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for fungi, lichens and non-vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Lobaria pulmonaria</i>	Lung Lichen	C
<i>Usnea sp.</i>	Old Man’s Beard Lichen	O

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of of fungi, lichens and non-vascular plants in this area.

AREA M FAUNA

AVIFAUNA SPECIES OBSERVED

*Note: Avifauna list for this corridor is combined with the list for the Equestrian Grounds trail corridor. Please see Table 36.

AREA M - ADDITIONAL FAUNA SPECIES OBSERVED

Table 49: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Area M

Name	Common Name	Notes
<i>Tamias striatus</i>	Eastern Chipmunk	
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	
<i>Thamnophis sirtalis</i>	Garter Snake	

A number of invertebrate species such as cicadas, moths, butterflies, spiders and biting insects were noted but not identified.



Figure 19: Eastern Chipmunk (*Tamias striatus*), Area M trail corridor

Area O (Encounter Creek, Fairy land)

AREA O VASCULAR PLANTS

This land consists of 48.2 acres of PID#s 1059039, 600767 and 227199, located south of the new highway. This area is the southern half of the activity park and campground formerly known as Encounter Creek or Fairyland, referred to in this survey as area O. The open areas of this site contain several ornamental species among former park structures that were torn down in August 2014. Several piles of park refuse have not yet been removed, and are located at N46 13 11.7 W063 18 28.3, and N46 13 09.2 W063 18 23.6.

The area is mainly Balsam Fir and Eastern Hemlock dominated woodland with weedy species growing near intersecting trails throughout the lot. This area exhibited unique finds such as several mutated Painted Trilliums and the highly toxic Broad-leaved Helleborine. The Broad-leaved Helleborine is located on the edges of a path. The area was surveyed on June 3 and July 28 and 30, with additional samples collected on July 30. A total of 122 vascular plant species was recorded.

AREA O WOODLAND

Table 50: Vascular Plants Observed in Area O Woodland

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer pensylvanicum</i>	Striped Maple	C
<i>Acer rubrum</i>	Red Maple	O
<i>Acer saccharum</i>	Sugar Maple	C
<i>Acer spicatum</i>	Mountain Maple	I
<i>Agrostus hyemalis</i>	Ticklegrass (Winter Bentgrass)	O, wetland
<i>Amelanchier laevis</i>	Allegheny Serviceberry (Smooth Serviceberry)	I, S3 , woodland edge
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Atriplex patula</i>	Halberd-leaf Orache	I, wetland
<i>Betula allegheniensis</i>	Yellow Birch	C
<i>Betula papyrifera</i>	White Birch	C
<i>Calamagrostis 92anadensis</i>	Bluejoint Reedgrass	C, wetland
<i>Callitriche palustris</i>	Vernal Water-starwort	O, wetland
<i>Carex brunnescens</i>	Brownish Sedge	C
<i>Carex crawfordi</i>	Crawford's Sedge	C, wetland
<i>Carex gracillima</i>	Graceful Sedge	O

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<i>Carex pseudocyperus</i>	Cyperus-like Sedge	O, wetland
<i>Carex scabrata</i>	Rough Sedge	C, wetland
<i>Carex trisperma</i>	Three-seeded Sedge	O
<i>Chimerion angustifolium</i>	Fireweed	C
<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	C
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	I
<i>Cypripedium acaule</i>	Pink Lady's-slipper	O
<i>Dennstaedtia punctilobula</i>	Eastern Hay-scented Fern	C
<i>Doellingeria umbellata</i>	Flat-top White Aster	O
<i>Epilobium ciliatum ssp.</i>	Hairy Willowherb	O, wetland
<i>Equesetum arvense</i>	Field Horsetail	O
<i>Eurybia radula</i>	Rough Aster (Low Rough Aster)	O, S3 , wetland
<i>Fagus grandifolia</i>	American Beech	O
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	O
<i>Galium palustra</i>	Marsh Bedstraw	C, wetland
<i>Juncus effusus</i>	Soft Rush	O, wetland
<i>Kalmia angustifolia</i>	Sheep Laurel	O
<i>Lonicera canadensis</i>	Fly Honeysuckle	O
<i>Lycopodium annotinum</i>	Stiff Clubmoss	O
<i>Lycopodium obscurum</i>	Tree Clubmoss	O
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Maianthemum racemosum</i>	Solomon's-plume	C
<i>Malus pumila</i>	Apple	I
<i>Medeola virginiana</i>	Indian Cucumber Root	O
<i>Mimulus ringens var. ringens</i>	Monkey Flower	I, wetland
<i>Monotropa uniflora</i>	Indian-pipe	O
<i>Oclemena acuminatus (syn. Aster acuminatus)</i>	Whorled Wood Aster	C
<i>Omalotheca sylvatica</i>	Woodland Cudweed	I, near highway
<i>Onoclea sensibilis</i>	Sensitive Fern	C, wetland
<i>Orthilia secunda (var. Pyrola s.)</i>	One-side Wintergreen	O
<i>Osmunda cinnamomea</i>	Cinnamon Fern	C
<i>Osmunda claytoniana</i>	Interrupted Fern	I
<i>Oxalis acetosella</i>	Common Woodsorrel	C
<i>Phalaris arundinacea</i>	Reed Canarygrass	O, wetland
<i>Phegopteris connectilis</i>	Northern Beech Fern	O
<i>Picea glauca</i>	White Spruce	O
<i>Picea rubens</i>	Red Spruce	O
<i>Populus grandidentata</i>	Large-toothed Aspen	O

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<i>Populus tremuloides</i>	Trembling Aspen	C
<i>Prenanthes trifoliolata</i>	Threelobed Rattlesnake-root (Lion's Paw)	I
<i>Prunus pensylvanica</i>	Pin Cherry	C
<i>Prunus virginiana</i>	Choke Cherry	C
<i>Pteridium aquilinum</i>	Bracken Fern	C
<i>Pyrola americana</i> (<i>rotundifolia</i>)	American Wintergreen	C
<i>Pyrola elliptica</i>	Shinleaf	O
<i>Ranunculus repens</i>	Creeping Buttercup	C
<i>Rosa virginiana</i>	Virginia Rose	C
<i>Rubus allegheniensis</i>	Allegheny Blackberry (Common Blackberry)	C
<i>Rubus idaeus</i>	Common Red Raspberry	C
<i>Rumex orbiculatus</i>	Greater Water Dock	O, wetland
<i>Salix discolor</i>	Pussy Willow	O
<i>Salix pedicellaris</i>	Bog Willow	O, wetland
<i>Sambucus racemosa</i>	Red Elderberry	C
<i>Scirpus atrovirens</i>	Woolgrass Bulrush	O, wetland
<i>Solanum dulcamara</i>	Bittersweet Nightshade	C, wetland
<i>Solidago nemoralis</i>	Field Goldenrod	I
<i>Sorbus americana</i>	American Mountain-ash	O
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	C
<i>Streptopus lanceolatus</i>	Rosy Twisted-stalk	I
<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	O
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	C
<i>Thelypteris noveboracensis</i>	New York Fern	O
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Trillium undulatum</i>	Painted Trillium	C
<i>Tsuga canadensis</i>	Eastern Hemlock	C, S3S4 , large trees, N 46 13 02.3 W 063 18 19.3; N 46 12.5 59.2 W 063 18 05.8
<i>Ulmus americana</i>	American Elm	I, S3
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	C
<i>Viburnum nudum</i>	Wild Raisin	O
<i>Viola macloskeyi</i>	Small White Violet	O

AREA O OPEN AREA AND CAMPGROUND

Table 51: Vascular Plants Observed in Area O Open Area and Campground

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Achillea millefolium</i>	Common Yarrow	C
<i>Agrostus perennans</i>	Perennial Bentgrass	C
<i>Anaphalis margaritacea</i>	Pearly Everlasting	O
<i>Capnoides sempervirens</i>	Pale/Pink Corydalis (Rock Harlequin)	O, S2 , ornamental. N46 13 11.9 W063 18 25.5
<i>Cirsium arvense</i>	Canada Thistle	I
<i>Danthonia spicata</i>	Poverty Oat Grass	O
<i>Dianthus sp.</i>	Dianthus	I, ornamental
<i>Digitalis sp.</i>	Foxglove	I, ornamental
<i>Elymus repens</i>	Couch Grass	C
<i>Epipactis helleborine</i>	Broad-leaved Helleborine	O, along path: N46 12 28.4 W063 17 13.2, N46 13 08.0 W063 18 26.0, N46 13 04.5 W063 18 21.0
<i>Erechtites hieraciifolia</i>	Eastern Burnweed	I, S4 , edge of Hwy R.O.W
<i>Erigeron annuus</i>	Annual Fleabane	C, S1 , Exotic (as per ACCDC)
<i>Euthamia graminifolia</i> var. <i>graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	C
<i>Fragaria virginiana</i>	Virginia Strawberry	C
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	I
<i>Galium mollugo</i>	Hedge Bedstraw (False Baby's Breath)	O
<i>Gnaphalium uliginosum</i>	Marsh Cudweed (Low Cudweed)	O, exotic
<i>Hemerocallis fulva</i>	Orange Day-lily	O, ornamental
<i>Hieracium aurantiacum</i>	Orange Hawkweed (Devil's Paintbrush)	O
<i>Hieracium caespitosum</i>	Meadow Hawkweed	O
<i>Hieracium floribundum</i>	Pale Hawkweed (King Devil Hawkweed)	C
<i>Hieracium pilosella</i>	Mouse-ear Hawkweed	O
<i>Hypericum boreale</i>	Northern St. John's Wort	C
<i>Juncus tenuis</i>	Path Rush	O
<i>Leontodon autumnalis</i>	Fall Dandelion	C
<i>Melilotus officinalis</i>	Sweetclover	C, edge of Hwy R.O.W.
<i>Oenothera biennis</i>	Common Evening-primrose	I

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<i>Oenothera perennis</i>	Small Sundrops	I
<i>Omalotheca sylvaticum</i>	Woodland Cudweed	I, S4?
<i>Oxalis stricta</i>	Common Yellow Woodsorrel	C
<i>Plantago major</i>	Common Plantain	C
<i>Poa palustris</i>	Fowl Bluegrass	O
<i>Potentilla norvegica</i>	Norwegian Cinquefoil	O
<i>Prunella vulgaris</i>	Self-heal	O
<i>Rhododendron sp</i>	Rhododendron	O, ornamental
<i>Rorippa microphylla</i>	One-row Watercress	C, Hwy R.O.W. culvert exit
<i>Senecio jacobaea</i>	Tansy Ragwort	O
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	C
<i>Solidago rugosa</i>	Roughleaf Goldenrod	O
<i>Symphotrichum cordifolium</i>	Heartleaf Aster	O
<i>Symphotrichum novi-belgii</i>	New York Aster	O
<i>Taraxacum officinale</i>	Common Dandelion	C
<i>Trifolium campestre</i>	Low Hop Clover	C
<i>Trifolium hybridum</i>	Alsike Clover	O
<i>Tussilago farfara</i>	Colts-foot	I, exotic
<i>Vicea cracca</i>	Tufted Vetch	C

AREA O MOSSES, FUNGI AND LICHENS

Table 52: Fungi, Lichens and Non-Vascular Plant Species Observed in Area O

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for fungi, lichens and non-vascular plants as per explore.natureserve.org.

Name	Common Name	Frequency, Notes
<i>Hylocomium splendens</i>	Stairstep Moss (Glittering Wood Moss)	C
<i>Lobaria pulmonaria</i>	Lung Lichen	O
<i>Parmelia sp.</i>	Shield Lichen	C
<i>Russula emetica</i>	Emetic Russula	I
<i>Usnea sp.</i>	Old Man's Beard Lichen	I

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of of fungi, lichens and non-vascular plants in this area.

AREA O FAUNA

Table 53: Avifauna Species Observed in Area O

Name	Common Name	Notes
<i>Anas rubripes</i>	American Black Duck	
<i>Archilochus colubris</i>	Ruby-throated Hummingbird	
<i>Bombycilla cedrorum</i>	Cedar Waxwing	
<i>Bonasa umbellus</i>	Ruffed Grouse	
<i>Catharus guttatus</i>	Hermit Thrush	
<i>Catharus ustulatus</i>	Swainson's Thrush	
<i>Certhia americana</i>	Brown Creeper	
<i>Colaptes auratus</i>	Northern Flicker	
<i>Contopus virens</i>	Eastern Wood-pewee	
<i>Corvus brachyrynchos</i>	American Crow	
<i>Corvus corax</i>	Common Raven	
<i>Cyanocitta cristata</i>	Blue Jay	
<i>Empidonax minimus</i>	Least Flycatcher	
<i>Geothlypis philadelphia</i>	Mourning Warbler	
<i>Haemorhous purpureus</i>	Purple Finch	
<i>Junco hyemalis</i>	Dark-eyed Junco	
<i>Megaceryle alcyon</i>	Belted Kingfisher	
<i>Melospiza melodia</i>	Song Sparrow	
<i>Mniotilta varia</i>	Black-and-white Warbler	
<i>Picoides villosus</i>	Hairy Woodpecker	
<i>Poecile atricapillus</i>	Black-capped Chickadee	
<i>Quiscalus quiscula</i>	Common Grackle	
<i>Regulus satrapa</i>	Golden-crowned Kinglet	
<i>Hirundo rustica</i>	Barn Swallow	S3B male and female flying over area
<i>Seivrus aurocapillus</i>	Ovenbird	
<i>Setophaga americana</i>	Northern Parula	
<i>Setophaga coronata</i>	Yellow-rumped Warbler	
<i>Setophaga fusca</i>	Blackburnian Warbler	
<i>Setophaga magnolia</i>	Magnolia Warbler	
<i>Setophaga ruticilla</i>	American Redstart	
<i>Setophaga virens</i>	Black-throated Green Warbler	
<i>Sitta canadensis</i>	Red-breasted Nuthatch	
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
<i>Spinus tristis</i>	American Goldfinch	
<i>Sturnus vulgaris</i>	European Starling	
<i>Troglodytes hiemalis</i>	Winter Wren	
<i>Turdus migratorius</i>	American Robin	

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<i>Vireo olivaceus</i>	Red-eyed Vireo	
<i>Vireo solitarius</i>	Blue-headed Vireo	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	

AREA O ADDITIONAL FAUNA SPECIES OBSERVED

Table 54: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Area O

Name	Common Name	Notes
<i>Lepus americanus</i>	Snowshoe Hare	Scat, browse
<i>Procyon lotor</i>	Raccoon	
<i>Vulpes vulpes</i>	Red Fox	

A number of invertebrate species such as cicadas, moths, butterflies, spiders and biting insects were noted but not identified.



Figure 20: Barred Owl (*Strix varia*), Strathgartney Provincial Park

Strathgartney Provincial Park

STRATHGARTNEY VASCULAR PLANTS

This area is Strathgartney Provincial Park, which was the first Provincial Park in Prince Edward Island, and consists of PID# 218925 (2 lots, 40.8 acres and 57.0 acres) and PID# 706556 (40.0 acres). Strathgartney Provincial Park has a variety of plant communities including mature woodland with Sugar Maple, Yellow Birch and American Beech. It also has a former campground and day-use areas which are mowed and have planted ornamental trees such as Crimson King Maple and Scotch Pine. The marsh is starting to show impact of salt water influence as the West River Causeway was opened up more about 15 years ago to allow more natural water flow in the estuary. Therefore, some salt tolerant species like Seaside Buttercup are present, albeit in small amounts, but the marsh is still dominated by freshwater plants like Chaffy Sedge, Cat-tails and Reed Canary-grass. Weedy species like Dandelion and Common Yarrow are in the open grassy areas including the former farm fields on the east side of the park. Items of concern are the American Basswood and Norway Maple, both numerous seed producers. These species are invading the edges of the native woodland. Also, Common Periwinkle (*Vinca minor*) from Strathgartney Homestead will invade the west side of the Park again. These situations require some active management to prevent the woodland from being further inundated by these invasives. The toxic Broad-leaved Helleborine was also located in small patches near the north-east portion of the park.

Strathgartney was visited on May 21, June 16, July 2 and August 4, and a total of 136 vascular plant species was recorded.

STRATHGARTNEY WOODLAND

Table 55: Vascular Plants Observed in Strathgartney Woodland
 Frequency Notes: C=Common, O=Occasional, I=Infrequent
 Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abies balsamea</i>	Balsam Fir	C
<i>Acer pensylvanicum</i>	Striped Maple	C
<i>Acer rubrum</i>	Red Maple	C
<i>Acer saccharum</i>	Sugar Maple	C
<i>Achillea millefolium</i>	Common Yarrow	C, woods edge
<i>Anaphalis margaritacea</i>	Pearly Everlasting	C
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	C
<i>Betula allegheniensis</i>	Yellow Birch	C
<i>Betula papyrifera</i>	White Birch	O
<i>Carex brunnescens</i>	Brownish Sedge	O

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<i>Clintonia borealis</i>	Blue-bead Lily (Clinton Lily)	C
<i>Cornus alternifolia</i>	Alternate Leaved Dogwood	O
<i>Cornus canadensis</i>	Dwarf Dogwood (Bunchberry)	C
<i>Crataegus monogyna</i>	English Hawthorn	O
<i>Cypripedium acaule</i>	Pink Lady's-slipper	O
<i>Dactylis glomerata</i>	Orchard Grass	C
<i>Daucus carota</i>	Wild Carrot (Queen Anne's Lace)	C
<i>Dennstaedtia punctilobula</i>	Eastern Hay-scented Fern	O
<i>Diervilla lonicera</i>	Northern Bush-honeysuckle	I
<i>Dryopteris intermedia</i>	Evergreen Woodfern	C
<i>Elymus repens</i>	Couch Grass	O
<i>Epifagus americana</i>	Beech-drops	C, S3 , a parasite on beech roots
<i>Epilobium ciliatum ssp.</i>	Hairy Willowherb	C, fresh water influenced
<i>Epipactis helleborine</i>	Broad-leaved Helleborine	I, exotic, toxic, N46 12 54.1 W063 20 01.8
<i>Eurybia radula</i>	Rough Aster (Low Rough Aster)	I, S3 , wetland
<i>Fagus grandifolia</i>	American Beech	C, some unaffected by beech canker
<i>Filipendula ulmaria</i>	Queen-of-the-Meadow	C, wetland
<i>Fragaria virginiana</i>	Virginia Strawberry	O, open area in woods
<i>Galium mollugo</i>	Hedge Bedstraw (False Baby's Breath)	O
<i>Gaultheria hispidula</i>	Creeping Snowberry	O
<i>Hieracium aurantiacum</i>	Orange Hawkweed (Devil's Paintbrush)	O
<i>Hieracium floribundum</i>	Pale Hawkweed (King Devil Hawkweed)	I
<i>Hieracium lachenalii</i>	Common Hawkweed (Yellow Hawkweed)	O, woods edge
<i>Juncus effusus</i>	Soft Rush	O, wetland
<i>Kalmia angustifolia</i>	Sheep Laurel	I
<i>Lactuca hirsuta</i>	Hairy Wild Lettuce	I
<i>Larix laricina</i>	American Larch	O
<i>Linnaea borealis</i>	Twinflower	C
<i>Luzula multiflora ssp</i>	Woodrush	O
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C

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<i>Maianthemum racemosum</i>	Solomon's-plume	O
<i>Melampyrum lineare</i>	American Cow-wheat	O
<i>Monotropa uniflora</i>	Indian-pipe	C
<i>Morella pensylvanica</i>	Northern Bayberry	O
<i>Oclemena acuminatus</i> (syn: <i>Aster acuminatus</i>)	Whorled Wood Aster	C
<i>Onoclea sensibilis</i>	Sensitive Fern	C, wetland
<i>Osmunda cinnamomea</i>	Cinnamon Fern	O
<i>Picea glauca</i>	White Spruce	C
<i>Picea rubens</i>	Red Spruce	O, on path near river
<i>Pinus strobus</i>	Eastern White Pine	C, some large specimens but younger trees present
<i>Populus grandidentata</i>	Large-toothed Aspen	O
<i>Populus tremuloides</i>	Trembling Aspen	C
<i>Prunella vulgaris</i>	Self-heal	O
<i>Prunus pensylvanica</i>	Pin Cherry	I, edge of road
<i>Prunus virginiana</i>	Choke Cherry	I, woodland edge
<i>Pteridium aquilinum</i>	Bracken Fern	O
<i>Pyrola americana</i> (syn: <i>Pyrola rotundifolia</i>)	American Wintergreen	O
<i>Pyrola elliptica</i>	Shinleaf	I
<i>Ranunculus repens</i>	Creeping Buttercup	O, wetland
<i>Rosa virginiana</i>	Virginia Rose	O, wetland
<i>Rubus idaeus</i>	Common Red Raspberry	I
<i>Sambucus racemosa</i>	Red Elderberry	O
<i>Sorbus americana</i>	American Mountain-ash	I, woods edge
<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	C
<i>Taraxacum officinale</i>	Common Dandelion	I
<i>Taxus canadensis</i>	Canada Yew (Ground Hemlock)	C
<i>Trientalis borealis</i>	Northern Starflower	C
<i>Trillium undulatum</i>	Painted Trillium	O
<i>Tsuga canadensis</i>	Eastern Hemlock	O
<i>Typha latifolia</i>	Broadleaf Cattail	C, wetland
<i>Veronica americana</i>	American Speedwell (Brooklime)	O, wetland
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	C
<i>Viburnum nudum</i>	Wild Raisin	O

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STRATHGARTNEY MARSHLAND

Table 56: Vascular Plants Observed in Strathgartney Marshland
 Frequency Notes: C=Common, O=Occasional, I=Infrequent
 Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Agrostus perennans</i>	Perennial Bentgrass	O
<i>Argentina anserina</i>	Silverweed	C
<i>Callitriche palustris</i>	Vernal Water-starwort	C
<i>Calystegia sepium</i>	Hedge False Bindweed (Wild Morning Glory)	C
<i>Carex crawfordi</i>	Crawford's Sedge	C
<i>Carex paleacea</i>	Chaffy Sedge	C
<i>Chenopodium album</i>	White Goosefoot (Lamb's Quarters)	O
<i>Glyceria borealis</i>	Small Floating Mannagrass	C, S2S3 , covered at high tide
<i>Hieracium kalmii</i>	Kalm's Hawkweed	O
<i>Moehringia lateriflora</i>	Grove Sandwort	C
<i>Phalaris arundinacea</i>	Reed Canarygrass	C
<i>Poa palustris</i>	Fowl Bluegrass	C
<i>Poa pratensis</i>	Kentucky Bluegrass	C
<i>Ranunculus cymbalari</i>	Seaside Crowfoot (Seaside Buttercup)	I
<i>Rosa nitida</i>	Swamp Rose	O
<i>Schoenoplectus tabernaemontani</i>	Softstem Bulrush	C
<i>Solanum dulcamara</i>	Bittersweet Nightshade	O
<i>Spartina alterniflora</i>	Saltwater Cordgrass	C
<i>Symphotrichum novi-belgii</i>	New York Aster	C
<i>Triglochin maritima</i>	Common Bog Arrow-grass	O
<i>Typha angustifolia</i>	Narrowleaf Cattail	C
<i>Vicea cracca</i>	Tufted Vetch	C

STRATHGARTNEY FIELD AND CAMPGROUND

Table 57: Vascular Plants Observed in Strathgartney Field and Campground

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Abelmoschus moschatus</i>	Muskmallow	O, Exotic, planted
<i>Acer platinoides</i>	Norway Maple	C, planted, invading edge of woods
<i>Acer platinoides</i>	Crimson King Maple (Purple Maple)	I, planted, cultivar of Norway Maple
<i>Acer saccharinum</i>	Silver Maple	C, planted
<i>Achillea millefolium</i>	Common Yarrow	C
<i>Alnus incana</i>	Speckled Alder	I, road edge
<i>Alnus viridis</i>	Downy Alder	O
<i>Calystegia sepium</i>	Hedge False Bindweed (Wild Morning Glory)	C
<i>Cirsium arvense</i>	Canada Thistle	C
<i>Crataegus monogyna</i>	English Hawthorn	O
<i>Euthamia graminifolia</i> var. <i>graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	C
<i>Erigeron strigosus</i>	Daisy Fleabane (Rough Fleabane)	C
<i>Euphrasia officinalis</i>	Eyebright	C
<i>Fragaria virginiana</i>	Virginia Strawberry	C
<i>Galium mollugo</i>	Hedge Bedstraw (False Baby's Breath)	C
<i>Glechoma hederacea</i>	Ground Ivy	C
<i>Hesperis matronalis</i>	Dame's Rocket	O
<i>Hieracium aurantiacum</i>	Orange Hawkweed (Devil's Paintbrush)	C
<i>Hieracium lachenalii</i>	Common Hawkweed (Yellow Hawkweed)	C
<i>Hieracium pilosella</i>	Mouse-ear Hawkweed	C
<i>Hieracium scabrum</i>	Rough Hawkweed	C
<i>Hosta plantaginea</i>	Fragrant Plantain-lily (Hosta)	I, planted
<i>Iris pseudacorus</i>	Yellow Flag Iris	O, planted
<i>Larix laricina</i>	American Larch	O, planted
<i>Leontodon autumnalis</i>	Fall Dandelion	C, woods edge
<i>Leucanthemum vulgare</i>	Oxeye Daisy	O, woods edge
<i>Lonicera tatarica</i>	Tatarian Honeysuckle	O
<i>Lupinus polyphyllus</i>	Largeleaf Lupine	C, planted
<i>Melilotus officinalis</i>	Sweetclover	C, woods edge

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<i>Myotosis laxa</i>	Small Forget-Me-Not	O, wetland
<i>Oenothera biennis</i>	Common Evening-primrose	C
<i>Photinia pyrifolia</i> (syn: <i>Aronia arbutifolia</i>)	Red Chokeberry	I
<i>Picea abies</i>	Norway Spruce	I, planted
<i>Pinus sylvestris</i>	Scotch Pine	I, planted
<i>Poa pratensis</i>	Kentucky Bluegrass	C
<i>Populus grandidentata</i>	Large-toothed Aspen	C
<i>Populus x canadensis</i>	Carolina Poplar	I, planted
<i>Potentilla recta</i>	Sulfur Cinquefoil	C
<i>Prunella vulgaris</i>	Self-heal	C
<i>Quercus rubra</i>	Northern Red Oak	O, planted
<i>Ranunculus acris</i>	Tall Buttercup	O
<i>Rubus idaeus</i>	Common Red Raspberry	
<i>Rudbeckia hirta</i>	Black-eyed Susan	I
<i>Rumex crispus</i>	Curly Dock	C
<i>Salix babylonica</i>	Weeping Willow	I, planted
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	C, woods edge
<i>Solidago gigantea</i>	Giant Goldenrod	O
<i>Solidago rugosa</i>	Roughleaf Goldenrod	C, woods edge
<i>Stellaria graminea</i>	Little Starwort	C
<i>Symphotrichum lateriflorum</i>	Starved Aster (Calico Aster)	C
<i>Taraxacum officinale</i>	Common Dandelion	C
<i>Thymus praecox</i>	Creeping Thyme	C, exotic
<i>Tilia americana</i>	American Basswood (Largeleaf Linden)	C, planted, invading edge of woods
<i>Tragopogon dubius</i>	Meadow Goat's-beard	O
<i>Trifolium avens</i>	Rabbitsfoot Clover	C
<i>Trifolium campestre</i>	Low Hop Clover	O
<i>Trifolium pratense</i>	Red Clover	O
<i>Vicea cracca</i>	Tufted Vetch	C

STRATHGARTNEY MOSSES, FUNGI AND LICHENS

Table 58: Fungi, Lichens and Non-Vascular Plant Species Observed in Strathgartney Provincial Park

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for fungi, lichens and non-vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Boletus sp.</i>	Bolete Mushroom	I
<i>Cladonia cristatella</i>	British Soldier Lichen	O
<i>Cladonia pyxidata</i>	Pebbled Pixie Cup Lichen	O
<i>Clavatia sp.</i>	Puffball	O
<i>Hylocomium splendens</i>	Stairstep Moss (Glittering Wood Moss)	I
<i>Lobaria pulmonaria</i>	Lung Lichen	C
<i>Marasmius Oreades</i>	Fairy Ring Mushroom	O
<i>Parmelia sp.</i>	Shield Lichen	C
<i>Polytrichum sp. (commune or formosum)</i>	Hair-cap Moss	O
<i>Russula emetica</i>	Emetic Russula	O
<i>Usnea sp.</i>	Old Man’s Beard Lichen	C

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of of fungi, lichens and non-vascular plants in this area.



Figure 21: Bracket fungi in Strathgartney Woodland

STRATHGARTNEY FAUNA

This site is the most diverse of all sites in this report for birds at 58 species. Five of those are S1 to S3. While those rarer woodland species are secure globally and nationally, they are rare in Prince Edward Island and consideration should be given in management of this site.

Table 59: Avifauna Species Observed in Strathgartney Provincial Park

Name	Common Name	Notes
<i>Accipiter striatus</i>	Sharp-shinned Hawk	
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	
<i>Anas platyrhynchos</i>	Mallard	
<i>Ardea herodias</i>	Great Blue Heron	
<i>Bombycilla cedrorum</i>	Cedar Waxwing	
<i>Branta canadensis</i>	Canada Goose	
<i>Catharus guttatus</i>	Hermit Thrush	
<i>Catharus ustulatus</i>	Swainson's Thrush	
<i>Certhia americana</i>	Brown Creeper	
<i>Colaptes auratus</i>	Northern Flicker	
<i>Columba livia</i>	Rock Pigeon	
<i>Contopus virens</i>	Eastern Wood-pewee	
<i>Corvus brachyrynchos</i>	American Crow	
<i>Corvus corax</i>	Common Raven	
<i>Cyanocitta cristata</i>	Blue Jay	
<i>Dryocopus pileatus</i>	Pileated Woodpecker	S1
<i>Empidonax minimus</i>	Least Flycatcher	
<i>Geothlypis trichas</i>	Common Yellowthroat	
<i>Haemorhous purpureus</i>	Purple Finch	
<i>Haliaeetus leucocephalus</i>	Bald Eagle	
<i>Junco hyemalis</i>	Dark-eyed Junco	
<i>Megaceryle alcyon</i>	Belted Kingfisher	
<i>Melospiza georgiana</i>	Swamp Sparrow	
<i>Melospiza melodia</i>	Song Sparrow	
<i>Mniotilta varia</i>	Black-and-white Warbler	
<i>Molothrus ater</i>	Brown-headed Cowbird	S3B (4 sighted, Diane and Dan May 26)
<i>Passerculus sandwichensis</i>	Savannah Sparrow	
<i>Phalacrocoracidae auritus</i>	Double-crested Cormorant	
<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak	S3B
<i>Picoides pubescens</i>	Downy Woodpecker	
<i>Picoides villosus</i>	Hairy Woodpecker	
<i>Poecile atricapillus</i>	Black-capped Chickadee	

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<i>Porzana carolina</i>	Sora	
<i>Quiscalus quiscula</i>	Common Grackle	
<i>Regulus satrapa</i>	Golden-crowned Kinglet	
<i>Seivrus aurocapillus</i>	Ovenbird	
<i>Setophaga americana</i>	Northern Parula	
<i>Setophaga coronata</i>	Yellow-rumped Warbler	
<i>Setophaga fusca</i>	Blackburnian Warbler	
<i>Setophaga magnolia</i>	Magnolia Warbler	
<i>Setophaga petechia</i>	Yellow Warbler	
<i>Setophaga ruticilla</i>	American Redstart	
<i>Setophaga virens</i>	Black-throated Green Warbler	
<i>Sitta canadensis</i>	Red-breasted Nuthatch	
<i>Sitta carolinensis</i>	White-breasted Nuthatch	S1B
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
<i>Spinus tristis</i>	American Goldfinch	
<i>Spizella passerina</i>	Chipping Sparrow	
<i>Strix varia</i>	Barred Owl	
<i>Sturnus vulgaris</i>	European Starling	
<i>Tringa melanoleuca</i>	Greater Yellowlegs	
<i>Troglodytes hiemalis</i>	Winter Wren	
<i>Turdus migratorius</i>	American Robin	
<i>Vireo olivaceus</i>	Red-eyed Vireo	
<i>Vireo philadelphicus</i>	Philadelphia Vireo	S1S2
<i>Vireo solitarius</i>	Blue-headed Vireo	
<i>Zenaida macroura</i>	Mourning Dove	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	

STRATHGARTNEY - ADDITIONAL FAUNA SPECIES OBSERVED

Table 60: Additional Fauna (mammals, reptiles, amphibians, etc.) Species Observed in Strathgartney Provincial Park.

Name	Common Name	Notes
<i>Lepus americanus</i>	Snowshoe Hare	scat
<i>Procyon lotor</i>	Raccoon	
<i>Tamias striatus</i>	Eastern Chipmunk	
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	

A number of invertebrate species such as cicadas, moths, butterflies, spiders and biting insects were noted but not identified.

Lot at Strathgartney

This land consists of 0.99 acre; PID # 219279, located south of the Trans-Canada Highway and immediately to the northeast of and abutting Strathgartney Provincial Park. It is a former home site but all buildings have been removed. However, most of the vegetation remains and consists of exotic trees, shrubs and herbaceous plants as well as weed species.

This site is to be designated as a natural area and will become a part of Strathgartney Provincial Park and is considered a part of the Park for the purposes of this report, i.e. not a fourteenth site.

There is an old engine block in the trees near the road and spring-toothed harrows on the eastern edge and toward the back of the lot.

The site was visited on August 4th and September 14th. One hundred and eleven plant species were found, of which 99 were identified. The remaining twelve are exotic herbs or shrubs planted for ornamental purposes.

Several species are considered invasive, including Norway Maple, Creeping Bell flower, Scotch Pine and Creeping Buttercup.

No bird survey was completed for this small site, but species heard and seen in adjacent surveys from the Strathgartney parking area are included in Strathgartney Provincial Park.

Table 61: Vascular Plants Observed in Lot at Strathgartney
 Frequency Notes: C=Common, O=Occasional, I=Infrequent
 Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Notes
<i>Abelmoschus moschatus</i>	Muskmallow	O
<i>Acer grannala</i>	Amur maple	I, exotic, ornamental
<i>Acer palmatum</i>	Japanese Maple	I, exotic, ornamental
<i>Acer platinoides</i>	Chrimson King Maple (Norway cultivar)	I, exotic, ornamental
<i>Achillea millefolium</i>	Common Yarrow	C
<i>Agrostus perennans</i>	Perennial Bentgrass	C
<i>Alopecurus pratensis</i>	Meadow Foxtail	O
<i>Berberis sp.</i>	Barberry	I
<i>Betula allegheniensis</i>	Yellow Birch	I
<i>Betula papyrifera</i>	White Birch	O
<i>Calluna vulgaris</i>	Heather	O, exotic, ornamental
<i>Campanula rapunculoides</i>	Creeping Bellflower	I, exotic, ornamental
<i>Campanula rotundifolia</i>	American Hare-bell	I, ornamental
<i>Capnoides sempervirens</i>	Pale/Pink Corydalis (Rock Harlequin)	O, S2 , ornamental
<i>Cerastium arvense</i>	Mouse-ear Chickweed	O

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<i>Chenopodium album</i>	White Goosefoot (Lamb's Quarters)	O
<i>Chimerion angustifolium</i>	Fireweed	O
<i>Cornus alternifolia</i>	Alternate-leaved Dogwood	I
<i>Corydalis sp.</i>	Corydalis	I, ornamental, planted
<i>Craetaegus monogyna</i>	English Hawthorn	I, exotic, ornamental
<i>Dactylis glomerata</i>	Orchard Grass	O
<i>Digitalis sp.</i>	Foxglove	O, planted
<i>Diervilla sp.</i>	Honeysuckle	I, planted, ornamental
<i>Dryopteris intermedia</i>	Evergreen Woodfern	I
<i>Epilobium ciliatum</i>	Hairy Willowherb	O
<i>Equisetum arvense</i>	Field Horsetail	I
<i>Erigeron annuus</i>	Annual Fleabane	C, S1 , Exotic (as per ACCDC)
<i>Euthamia graminifolia var. graminifolia</i>	Flat-top Fragrant Goldenrod (Narrow Leaf Goldenrod)	C
<i>Fraxinus americanus</i>	White Ash	I
<i>Galeopsis tetrahit</i>	Brittle-stem Hempnettle	O
<i>Galium mollugo</i>	Hedge Bedstraw (False Baby's Breath)	I
<i>Ginkgo biloba</i>	Maidenhair Tree	I, exotic, ornamental
<i>Glechoma hederacea</i>	Ground Ivy	C, exotic, ornamental
<i>Gnaphalium uliginosum</i>	Marsh Cudweed (Low Cudweed)	C
<i>Hemerocallis fulva</i>	Orange Daylily	O, exotic, ornamental
<i>Hesperis matronalis</i>	Dame's Violet	O, exotic, ornamental
<i>Hieracium caespitosum</i>	Meadow Hawkweed	C
<i>Hieracium pilosella</i>	Mouse-ear Hawkweed	C
<i>Hydrangea arborescens</i>	Hydrangea	I, exotic, ornamental
<i>Hypericum boreale</i>	Northern St. John's Wort	O
<i>Hosta plantaginea</i>	Fragrant Plantain-lily (Hosta)	I, exotic, ornamental
<i>Juglans cinerea</i>	Butternut	O, planted
<i>Juniperus sp.</i>	Juniper	I, exotic, ornamental
<i>Larix decidua</i>	Europaen Larch	I, exotic, ornamental
<i>Leontodon autumnalis</i>	Fall Dandelion	C
<i>Leucanthemum maximum</i>	Shasta daisy	I, exotic, ornamental
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley (Mayflower)	C
<i>Malus x soulardii</i>	Soulard Crab Apple	I, planted
<i>Matricaria discoidea</i>	Pineapple Weed	O
<i>Monotropa uniflora</i>	Indian-Pipe	O
<i>Oenothera biennis</i>	Common Evening-primrose	O

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<i>Oxalis stricta</i>	Common Yellow Woodsorrel	C
<i>Phleum pratense</i>	Meadow Timothy	O
<i>Phlox paniculata</i>	Fall Phlox	I, exotic, ornamental
<i>Picea glauca</i>	White Spruce	C, exotic, ornamental
<i>Picea pungens</i>	Blue spruce	I, exotic, ornamental
<i>Pinus resinosa</i>	Red Pine	O, planted
<i>Pinus strobus</i>	Eastern White Pine	C, planted
<i>Pinus sylvestris</i>	Scotch Pine	O, exotic, ornamental
<i>Plantago lanceolata</i>	English Plantain	C
<i>Plantago major</i>	Common Plantain	C
<i>Poa pratensis</i>	Kentucky Bluegrass	C
<i>Polygonum aviculare</i>	Knotweed	C
<i>Polygonum cilinode</i>	Fringed Black-bindweed	I
<i>Populus tremuloides</i>	Trembling Aspen	O
<i>Prunella vulgaris</i>	Self-heal	C
<i>Prunus pensylvanica</i>	Pin Cherry	C
<i>Prunus virginiana</i>	Choke Cherry	C
<i>Pseudognaphalium obtusifolium</i>	Fragrant Cudweed (Eastern Cudweed)	I, S1 , probably planted, specimen collected
<i>Quercus rubra</i>	Northern Red Oak	I, planted
<i>Ranunculus repens</i>	Creeping Buttercup	C
<i>Rhododendron sp.</i>	Rhododendron	I, exotic, ornamental
<i>Rhus typhina</i>	Staghorn Sumach	O, S1S2 ornamental, planted
<i>Rubus idaeus</i>	Common Red Raspberry	C
<i>Rudbeckia hirta</i>	Black-eyed Susan	O, ornamental
<i>Rumex acetosella</i>	Sheep Sorrel	O
<i>Salix babylonica</i>	Weeping Willow	I, exotic, ornamental
<i>Sambucus racemosa</i>	Red Elderberry	I
<i>Senecio jacobaea</i>	Tansy Ragwort	O
<i>Solidago canadense</i>	Smooth Goldenrod (Canada Goldenrod)	C
<i>Solidago rugosa</i>	Roughleaf Goldenrod	C
<i>Sonchus asper</i>	Spiny-leaf Sowthistle	O
<i>Sorbus decora</i>	Northern Mountain-ash (Showy Mountain-ash)	I
<i>Symphotrichum lateriflorum</i>	Starved Aster	C
<i>Symphotrichum novi-belgii</i>	New York Aster	O
<i>Syringa vulgaris</i>	Common Lilac	I, exotic, ornamental
<i>Taraxacum officinale</i>	Dandelion	C

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<i>Thuja occidentalis</i>	Eastern White Cedar	I, S3S4 , planted
<i>Tilia americana</i> (<i>x vulgaris?</i>)	American Basswood (Largeleaf Linden)	O, exotic, planted
<i>Trientalis borealis</i>	Northern Starflower	O
<i>Trifolium avens</i>	Rabbitsfoot Clover	C
<i>Trifolium campestre</i>	Low Hop Clover	C
<i>Trifolium hybridum</i>	Alsike Clover	O
<i>Trifolium pratense</i>	Red Clover	O
<i>Ulmus americana</i>	American Elm	I, S3 , planted
<i>Veronica officinalis</i>	Gypsy-weed (Common Speedwell)	O
<i>Vicea cracca</i>	Tufted Vetch	C
<i>Viola pedunculata</i>	California Golden Violet (Johnny Jump-up)	I, exotic, ornamental
<i>Viola spp.</i>	Violets	O

LOT AT STRATHGARTNEY MOSSES, FUNGI AND LICHENS

Table 62: Fungi, Lichens and Non-Vascular Plant Species Observed in Lot at Strathgartney

Frequency Notes: C=Common, O=Occasional, I=Infrequent

Nomenclature for vascular plants as per explore.natureserve.org

Name	Common Name	Frequency, Notes
<i>Boletus sp.</i>	Bolete mushroom	I

Non-vascular species were identified as observed but were not the target of this study. This list is incomplete and does not represent the full diversity of of fungi, lichens and non-vascular plants in this area.

Appendix B

Bonshaw Bird Survey, Point Sightings Map

Figure 22: Bonshaw Bird Survey points of interest

