

# Vascular Plant Inventory of the Pye Farm, Happy Valley – Goose Bay, Labrador



Tall Hawkweed (*Pilosella piloselloides*, left) and Garden Stonecrop (*Hylotelephium telephium*, right),  
two exotic species newly documented for Labrador at the Pye Farm

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Report to Labrador Institute, Memorial University of Newfoundland

September 12, 2019

## **BACKGROUND**

The Atlantic Canada Conservation Data Centre (AC CDC) is a non-profit, non-governmental organization founded in 1998 through the cooperation of federal agencies (Environment Canada, Parks Canada, Canadian Forest Service), provincial wildlife departments in New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador and the Nature Conservancy Canada and Nature Conservancy (USA). The organization's mandate is to compile and provide objective data about biological diversity in Atlantic Canada, and to undertake fieldwork to further knowledge of the distribution and status of species and ecological communities of conservation concern. All AC CDC efforts are in support of conservation-related decision making, research and education.

As of 2019, the AC CDC manages conservation status ranks for over 15,000 species and ecological communities and maintains a database of over two million occurrence records representing a species or ecological community at a particular location. The information documented in this report will be maintained for the long term in the AC CDC database.

This report documents the vascular plant diversity of the Pye Farm property, with some additional information gathered incidentally on birds, amphibians and insects. The report and the accompanying database can be used by future farm researchers, students and others as learning tool to narrow down possibilities when one is attempting to identify a plant on the farm and as a master list to build on. Some small proportion of species will have been overlooked in our field efforts and additional species will establish over time, especially exotic species arriving with human activity. The information we have gathered provides a baseline against which future changes in species' distribution and abundance on the property can be assessed.

AC CDC is pleased to have helped build understanding of the biodiversity of the Pye Farm and would welcome any additional opportunities to assist farm managers on future initiatives.

## **METHODS**

AC CDC biologist Sean Blaney was contracted by the Labrador Institute, Memorial University of Newfoundland to carry out a vascular plant inventory of the Pye Farm property in Happy Valley – Goose Bay, Labrador. Erica Oberndorfer, of Agriculture and Agrifoods Canada assisted with field inventory work in her position as Cultural Botanist.

Field inventory took place on July 18 and 19, 2019. Prior to field survey, we entered a grid of transect lines into GPS units, with eight lines of approximately 950 m running north to south and 22 lines of approximately 300 m running west to east. These transects were roughly followed on foot to ensure comprehensive coverage. In addition to the transect lines, we directed survey effort to sites observed to have different habitat types and disturbance histories where additional plant species might be expected. We documented areas covered with GPS units left on at all times to record track files, which are mapped in Figures 1 and 2. The first location observed for each vascular plant and bird species was recorded by GPS, as were provincially rare or otherwise significant records. Specimens were collected for a few significant plant species. These will be deposited at the Newfoundland and Labrador provincial museum herbarium (The Rooms) and/or the National Museum of Natural History herbarium in Gatineau, Quebec.

Certain records were also documented by photographs uploaded to the iNaturalist.ca website. Frequency of each vascular plant species over the project area was subjectively estimated as one of: *rare* (one or two sites only, small numbers), *uncommon* (few sites, generally low numbers), *fairly common* (multiple sites but not frequent), *common* (widespread and frequent). All species' location data has been digitized and will be entered into the Atlantic Canada Conservation Data Centre database, where it will be permanently maintained.

Breeding birds were recorded incidentally, with evidence of breeding noted using the breeding evidence codes of the Maritimes Breeding Bird Atlas (<https://www.mba-aom.ca/jsp/codes.jsp?lang=en&pg=breeding>). Amphibians were also recorded incidentally, as were a few species of insects.

## RESULTS AND RECOMMENDATIONS

### VASCULAR PLANTS

#### a) Diversity and rare native species, with conservation recommendations

We recorded 138 vascular plant species (87 native to Labrador, 51 not native to Labrador; Table 1). Of those species, 120 were established outside of cultivation and 19 were planted on the site and not sufficiently established outside of cultivation to be considered wild plants.

We recorded 20 species with status ranks rarer than S4, indicating some potential level of conservation concern (Table 2). Individual locations where each species was recorded are given in the accompanying Excel file "PyeFarmFieldData\_July18-19-2019.xlsx". As would be expected on a heavily altered site, almost all of the 20 plant species of potential conservation concern are species tolerant of and/or benefitting from human disturbance. These species may be reduced in numbers with more intensive cultivation of the fields at Pye Farm, but most are likely to persist to at some level around field margins and along trails and roadsides on site. A second factor to consider in making conservation recommendations is the fact that botanical exploration of southern Labrador has been relatively limited and developing accurate status ranks for plants in Labrador has been problematic as a result. Our observations on Pye Farm and around Happy Valley - Goose Bay suggest that many status ranks are overly conservative. All the species in the marginal categories of concern (S3, S3S4 and S3S5) are likely under-recorded in Labrador and not actually under significant threat in the region. This leaves four species with status ranks suggestive of greater conservation concern.

- Red Fescue (*Festuca rubra*, S1S3). Common on site in cultivated land and disturbed edges, likely including both native forms and exotic forms introduced for forage and lawn. Limited conservation concern.
- Running Clubmoss (*Lycopodium clavatum*, S1S3). Uncommon on site and restricted to untilled areas. Would be affected by conversion to agricultural fields.

- Canada Mannagrass (*Glyceria canadensis*, S2S3). Uncommon on site in wet, peaty, untilled habitats in the northwest part of the property. Would be affected by conversion to agricultural fields.
- Path Rush (*Juncus tenuis*, S2S3). Fairly common on site in disturbed ground. Strongly associated with disturbance and thus of no conservation concern.

Because of its small size and the small numbers of plants involved, the Pye Farm is unlikely to be significant for Labrador populations of Running Clubmoss or Canada Mannagrass. The habitats occupied by these species are likely widespread in at least the Happy Valley – Goose Bay area, if not in all of southern Labrador, and there is a good chance that they are considerably more widespread than is currently known. However, they do point to the more important habitats on the site for native biodiversity. The remaining uncleared and untilled wetlands, upland forest and shrubby woodland on the property support some species that are unlikely to persist if those habitats were converted to intensively managed agricultural land. If retaining the native biodiversity of the Pye Farm is a priority, retaining some of those habitats in a natural state is recommended.

#### **b) New species for Labrador**

We recorded eight plant species that were entirely new for Labrador or that were not listed for Labrador in Meades & Meades (2019) because of an absence of verified specimens or other supporting details. These are outlined below, with full details on observations noted in the accompanying Excel file “PyeFarmFieldData\_July18-19-2019.xlsx”.

- Sneezeweed Yarrow (*Achillea ptarmica*). European species, rare on the site. Recorded at one location in a previously cultivated field. This species has been listed for Labrador in VASCAN (2018) but was rejected as unconfirmed by Meades & Meades (2019) based on lack of records with supporting details or specimens. Sight record only, as we did not realize in the field that the species was no longer considered confirmed for Labrador.
- Common Hawkweed (*Hieracium lachenalii* ssp. *cruentifolium*, = *Hieracium vulgatum*). European species, rare on the site. Recorded at one location at the border of a previously cultivated field. The plant observed was of the form with purple spotted leaves, which is sometimes separated taxonomically. This species has been listed for Labrador in VASCAN (2018) as a native species (with the native status in error) but was rejected in Meades & Meades (2019) as unconfirmed based on lack of records with supporting details or specimens. Sight record only, as we did not realize in the field that the species was no longer considered confirmed for Labrador.
- Garden Stonecrop (*Hylotelephium telephium*, Figure 2). Rare on site. Recorded at one location in a wet area within a cultivated field. Photograph and specimen confirmation.
- Large-leaved Lupine (*Lupinus polyphyllus*). Western North American species, rare on site. Recorded as established at one location on the margin of a cultivated field where it may have been originally introduced deliberately. This species has been listed for Labrador in VASCAN (2018) but was rejected as unconfirmed by Meades and Meades (2019) based on lack of records with supporting details or specimens. Erica Oberndorfer (pers. obs.) notes that the



species is widespread and frequent elsewhere in the Happy Valley – Goose Bay region. Sight record only, as we did not realize in the field that the species was no longer considered confirmed for Labrador.

- Evening primrose species (*Oenothera biennis* / *parviflora*, Figure 3). Widespread North American species, potentially native to Labrador but very likely introduced to the Pye Farm site from further south. Uncommon on site, but thoroughly established in cultivated fields at various locations. Plants were not yet flowering, meaning that a definite identification to species was not possible. Both *O. parviflora* and *O. biennis* would be new species for Labrador. Photograph and specimen confirmation.
- Meadow Hawkweed (*Pilosella caespitosa*, Figure 4). European species, fairly common on the site in cultivated field and other disturbed ground. Listed for Labrador in CESCC (2016) but excluded for Labrador in Meades & Meades (2019) as “ephemeral” because no reports had occurred since the original report from Northwest River in 1974. We also found the species in Northwest River subsequent to the Pye Farm fieldwork. Photograph and specimen confirmation.
- Mouse-ear Hawkweed (*Pilosella officinarum*). European species, fairly common on the site in cultivated field and other disturbed ground. Specimen confirmation.
- Tall Hawkweed (*Pilosella piloselloides*, Figure 5). European species, abundant on site in all disturbed habitats. ID refers to the species in the broad sense (potentially including *Pilosella piloselloides* ssp. *praealta*, = *Hieracium praealtum*). Our specimens lacked stellate hairs on the leaf undersides and did not have a strongly stoloniferous habit, distinguishing them from the similar King Devil Hawkweed (*Pilosella x floribunda*). Photograph and specimen confirmation.

We documented 18 additional cultivated species that have not been noted in the wild in Labrador. Four of these were spreading to some degree. Details are noted below for future workers who may ultimately find sufficient establishment at the Pye Farm to include these species as part of the wild flora of Labrador.

- Maiden Pink (*Dianthus deltoides*). Fairly extensive spread into sandy fields, especially around the former sales area.
- Domestic Strawberry (*Fragaria x ananassa*). Widely persistent from cultivation in fields. Spreading vegetatively and possibly by seed beyond original rows.
- European Columbine (*Aquilegia vulgaris*). Minor spread by seed from garden areas. Confirmed as established in the wild at Northwest River after Pye Farm fieldwork was completed.
- Rugosa Rose (*Rosa rugosa*). A few seedlings noted around planted individuals near dwelling.

## **BIRDS, AMPHIBIANS and INSECTS**

We documented 19 bird species via incidental observations made during plant surveys (Table 3). One species, Palm Warbler (*Setophaga palmarum*) is of marginal conservation concern, with the breeding population ranked as vulnerable (S3B) in Labrador. This species is expanding in range and numbers in northeast North America (ECCC 2018; Robert et al. 2018) and was likely nesting in shrubby, semi-treed peatland or partially cut forest in or adjacent to the north end of the Pye Farm property.

We documented two species of amphibians: American Toad (*Anaxyrus americanus*, S5) and Northern Leopard Frog (*Lithobates pipiens*, S3S4).

We also documented moth species, *Nemophora bellela* (no common name; Figure 6), that had not previously been recorded in Labrador. This species in the family Adelidae (fairy longhorn moths) is known in boreal Canada from Yukon to Saskatchewan as well as Quebec, but the Pye Farm record appears to be the easternmost ever documented in Canada (CESCC 2016).

## **REFERENCES**

CESCC (Canadian Endangered Species Conservation Council). 2016. Wild Species 2015: The General Status of Species in Canada. National General Status Working Group: 128 pp. Available online: <https://www.wildspecies.ca/reports>

ECCC (Environment and Climate Change Canada). 2018. North American Breeding Bird Survey Trend results for Palm Warbler. Website: <https://wildlife-species.canada.ca/breeding-bird-survey-results/P004/A001/?lang=e&m=s&r=PAWA&p=L> [Accessed Sept 13, 2019].

Meades, S.J., and W.J. Meades. 2019. Flora of Newfoundland and Labrador. Website: <https://newfoundland-labradorflora.ca/index.cfm> [Accessed Sept 13, 2019].

Robert, M., M.-H. Hachey, D. Lepage and A. Couturier. 2018. Second Atlas of the Breeding Birds of Southern Québec. Regroupement QuébecOiseaux, Canadian Wildlife Service (Environment and Climate Change Canada) and Bird Studies Canada. Montreal, QC.

**Table 1.** Vascular plant species list for Pye Farm, July 18-19, 2019, with Labrador status rank (LB S-rank) and status within Pye Farm (Site Status). *S-rank definitions:* S1 = Critically imperilled, S2= imperilled, S3 = Vulnerable, S4 = Apparently secure, S5 = Demonstrably secure, SNA = Non-native species, conservation status not applicable, "--" = no LB status, not sufficiently established outside of cultivation at Pye Farm to be listed as a wild plant). *Site Status definitions:* C = common, F = fairly common, U = uncommon, R = rare).

Species / Family	Common Name	LB S-rank	Site Status	NOTetax
<b>LYCOPODIACEAE</b>		<b>CLUBMOSSES</b>		
<i>Dendrolycopodium dendroideum</i> (= <i>Lycopodium dendroideum</i> )	Round-branched Tree-clubmoss	S4	F	
<i>Diphasiastrum sitchense</i>	Sitka Ground-cedar	S3S4	R	
<i>Lycopodium annotinum</i>	Stiff Clubmoss	S5	U	ID refers to the species in the narrow sense
<i>Lycopodium clavatum</i>	Running Clubmoss	S1S3	U	
<b>EQUISETACEAE</b>		<b>HORSETAILS</b>		
<i>Equisetum arvense</i>	Field Horsetail	S5	U	
<i>Equisetum sylvaticum</i>	Woodland Horsetail	S5	R	
<b>DRYOPTERIDACEAE</b>		<b>WOOD FERNS</b>		
<i>Dryopteris</i> sp.	wood-fern species		R	
<b>PINACEAE</b>		<b>PINES</b>		
<i>Larix laricina</i>	Tamarack	S5	F	
<i>Picea mariana</i>	Black Spruce	S5	C	
<i>Pinus banksiana</i>	Jack Pine	S1	R	
<b>LILIACEAE</b>		<b>LILIES</b>		
<i>Lilium bulbiferum</i>	Orange Lily	--	R	planted, not spreading
<b>ORCHIDACEAE</b>		<b>ORCHIDS</b>		
<i>Platanthera aquilonis</i>	Tall Northern Green Orchid	S3S4	R	immature; ID uncertain
<i>Spiranthes romanzoffiana</i>	Hooded Ladies's-tresses	S3S4	R	
<b>IRIDACEAE</b>		<b>IRISES</b>		
<i>Iris versicolor</i>	Harlequin Blue Flag	S4	U	
<b>AMARYLLIDACEAE</b>		<b>AMARYLLISES</b>		
<i>Allium cepa</i>	Onion	--	R	planted, not spreading
<i>Allium schoenoprasum</i> var. <i>schoenoprasum</i>	Chives	SNA	R	
<b>ASPARAGACEAE</b>		<b>ASPARAGUSES</b>		
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley	S5	R	
<i>Maianthemum trifolium</i>	Three-leaved False Solomon's Seal	S5	U	
<b>JUNCACEAE</b>		<b>RUSHES</b>		
<i>Juncus brevicaudatus</i>	Short-tailed Rush	S4	R	

Species / Family	Common Name	LB S-rank	Site Status	NOTetax
<i>Juncus filiformis</i>	Thread Rush	S5	F	
<i>Juncus tenuis</i>	Path Rush	S2S3	F	
<b>CYPERACEAE</b>	<b>SEDGES</b>			
<i>Carex brunnescens</i>	Brownish Sedge	S5	C	
<i>Carex canescens</i>	Hoary Sedge	S4	R	
<i>Carex crawfordii</i>	Crawford's Sedge	S3S4	R	
<i>Carex deflexa</i>	Bent Northern Sedge	S3S5	F	Some originally recorded as <i>C. umbellata</i> ; all collections were <i>C. deflexa</i> but some <i>C. umbellata</i> may have occurred
<i>Carex foenea</i>	Bronze Sedge	S3S5	C	
<i>Carex oligosperma</i>	Few-seeded Sedge	S5	F	
<i>Carex trisperma</i>	Three-seeded Sedge	S4S5	R	
<i>Carex vesicaria</i>	Inflated Sedge	S4S5	U	
<i>Eriophorum angustifolium</i>	Narrow-leaved Cottongrass	S4S5	U	
<i>Eriophorum vaginatum ssp. spissum</i>	Dense Cottongrass	S5	U	
<i>Scirpus atrocinctus</i>	Black-girdled Bulrush	S4	F	
<b>POACEAE</b>	<b>GRASSES</b>			
<i>Agrostis scabra</i>	Rough Bentgrass	S5	C	
<i>Avenella flexuosa</i>	Wavy Hairgrass	S5	U	
<i>Calamagrostis canadensis</i>	Bluejoint Reedgrass	S5	C	
<i>Elymus repens</i>	Quackgrass	SNA	C	
<i>Festuca rubra</i>	Red Fescue	S1S3	C	
<i>Glyceria canadensis</i>	Canada Mannagrass	S2S3	U	
<i>Leymus mollis</i>	Sea Lyme-grass	S5	R	
<i>Phalaris arundinacea</i>	Reed Canarygrass	--	R	planted, not spreading; variegated form
<i>Phleum pratense</i>	Common Timothy	SNA	C	
<i>Poa annua</i>	Annual Bluegrass	SNA	F	
<i>Poa glauca</i>	Glaucous Bluegrass	S3S5	R	
<i>Poa pratensis</i>	Kentucky Bluegrass	S3S4	C	
<b>RANUNCULACEAE</b>	<b>BUTTERCUPS</b>			
<i>Aquilegia vulgaris</i>	European Columbine	--	R	minor spread from cultivation
<b>GROSSULARIACEAE</b>	<b>GOOSEBERRIES</b>			
<i>Ribes glandulosum</i>	Skunk Currant	S5	F	
<b>CRASSULACEAE</b>	<b>STONECROPS</b>			
<i>Hylotelephium telephium</i>	Garden Stonecrop	[SNA - new]	R	
<b>FABACEAE</b>	<b>BEANS</b>			
<i>Lotus corniculatus</i>	Garden Bird's-foot Trefoil	SNA	R	
<i>Lupinus polyphyllus</i>	Large-leaved Lupine	[SNA - new]	R	Prev. LB reports rejected in Meades & Meades 2019



Species / Family	Common Name	LB S-rank	Site Status	NOTetax
<i>Medicago sativa</i>	Alfalfa	SNA	R	
<i>Trifolium hybridum</i>	Alsike Clover	SNA	C	
<i>Trifolium pratense</i>	Red Clover	SNA	F	
<i>Trifolium repens</i>	White Clover	SNA	F	
<i>Vicia cracca</i>	Tufted Vetch	SNA	U	
<b>ROSACEAE</b>	<b>ROSES</b>			
<i>Amelanchier bartramiana</i>	Bartram's Serviceberry	S4S5	R	
<i>Fragaria x ananassa</i>	Domestic Strawberry	--	F	spreading from cultivation
<i>Physocarpus opulifolius</i>	Eastern Ninebark	--	R	planted, not spreading; purple-leaved form
<i>Potentilla norvegica</i>	Rough Cinquefoil	S4S5	F	
<i>Prunus pensylvanica</i>	Pin Cherry	S4S5	C	
<i>Prunus sp.</i>	domestic cherry / plum species	--	R	planted, not spreading
<i>Rosa rugosa</i>	Rugosa Rose	--	R	minor spread from cultivation
<i>Rubus chamaemorus</i>	Cloudberry	S5	U	
<i>Rubus idaeus ssp. strigosus</i>	Red Raspberry	S4S5	F	
<i>Rubus pubescens</i>	Dwarf Raspberry	S5	R	
<i>Sibbaldia tridentata</i>	Three-toothed Cinquefoil	S5	R	
<i>Sorbus decora</i>	Showy Mountain-ash	S4S5	R	
<b>RHAMNACEAE</b>	<b>BUCKTHORNS</b>			
<i>Hippophae rhamnoides</i>	Sea Buckthorn	--	R	planted, not spreading
<b>MYRICACEAE</b>	<b>BAYBERRIES</b>			
<i>Myrica gale</i>	Sweet Gale	S5	F	
<b>BETULACEAE</b>	<b>BIRCHES</b>			
<i>Alnus alnobetula ssp. crispa (=Alnus viridis ssp. crispa)</i>	Green Alder	S5	F	
<i>Alnus incana ssp. rugosa</i>	Speckled Alder	S4S5	U	
<i>Betula cordifolia</i>	Heart-leaved Birch	S4S5	F	
<i>Betula glandulosa</i>	Glandular Birch	S5	C	
<i>Betula minor</i>	Dwarf White Birch	S4S5	F	
<i>Betula papyrifera</i>	Paper Birch	S4S5	C	ID refers to the species in the narrow sense
<b>SALICACEAE</b>	<b>WILLOWS</b>			
<i>Populus balsamifera</i>	Balsam Poplar	S3	U	
<i>Populus tremuloides</i>	Trembling Aspen	S4S5	C	
<i>Salix bebbiana</i>	Bebb's Willow	S3S4	C	
<i>Salix discolor</i>	Pussy Willow	S4	U	

Species / Family	Common Name	LB S-rank	Site Status	NOTetax
<i>Salix humilis</i>	Prairie Willow	S4S5	C	
<i>Salix lucida</i>	Shining Willow	S4	F	
<i>Salix planifolia</i>	Tea-leaved Willow	S5	F	
<i>Salix pyrifolia</i>	Balsam Willow	S4S5	F	
<b>ONAGRACEAE</b>	<b>EVENING-PRIMROSES</b>			
<i>Chamaenerion angustifolium</i> (= <i>Chamerion angustifolium</i> )	Fireweed	S5	C	
<i>Epilobium ciliatum</i>	Northern Willowherb	S5	C	
<i>Oenothera biennis</i> / <i>parviflora</i>	evening primrose species	[SNA - new]	U	both <i>O. parviflora</i> and <i>O. biennis</i> would be new spp. for LB
<b>SAPINDACEAE</b>	<b>MAPLES</b>			
<i>Acer tataricum</i> ssp. <i>ginnala</i>	Amur Maple	--	R	planted, not spreading
<b>BRASSICACEAE</b>	<b>MUSTARDS</b>			
<i>Arabis alpina</i>	Alpine Rockcress	S4	R	
<i>Brassica rapa</i>	Field Mustard	SNA	R	
<i>Capsella bursa-pastoris</i>	Common Shepherd's Purse	SNA	R	
<b>SANTALACEAE</b>	<b>SANDALWOODS</b>			
<i>Geocaulon lividum</i>	Northern Comandra	S5	R	
<b>POLYGONACEAE</b>	<b>SMARTWEEDS</b>			
<i>Fallopia convolvulus</i>	Eurasian Black Bindweed	SNA	R	
<i>Persicaria maculosa</i>	Lady's Thumb Smartweed	SNA	R	infertile; ID presumed vs. <i>P. lapathifolia</i>
<i>Rheum rhabarbarum</i>	Rhubarb	--	R	planted, not spreading
<i>Rumex acetosella</i>	Sheep Sorrel	SNA	F	
<b>CARYOPHYLLACEAE</b>	<b>PINKS</b>			
<i>Dianthus barbatus</i>	Sweet William	--	R	planted, not spreading
<i>Dianthus deltoides</i>	Maiden Pink	--	R	spreading from cultivation
<i>Silene chalcedonica</i>	Maltese-cross Champion	--	R	planted, not spreading
<i>Stellaria media</i>	Common Chickweed	SNA	U	
<b>AMARANTHACEAE</b>	<b>AMARANTHS</b>			
<i>Chenopodium album</i>	Common Lamb's-quarters	SNA	U	
<b>CORNACEAE</b>	<b>DOGWOODS</b>			
<i>Cornus alba</i>	Tatarian Dogwood	--	R	planted, not spreading; variegated form
<i>Cornus canadensis</i>	Bunchberry	S5	C	
<i>Cornus sericea</i> (= <i>Cornus stolonifera</i> )	Red-osier Dogwood	S5	R	
<b>PRIMULACEAE</b>	<b>PRIMROSE</b>			
<i>Lysimachia borealis</i>	Northern Starflower	S5	R	
<b>ERICACEAE</b>	<b>HEATHS</b>			

Species / Family	Common Name	LB S-rank	Site Status	NOTetax
<i>Andromeda polifolia</i> var. <i>latifolia</i> (= <i>Andromeda polifolia</i> var. <i>glaucophylla</i> )	Bog Rosemary	S5	R	
<i>Chamaedaphne calyculata</i>	Leatherleaf	S5	F	
<i>Gaultheria hispidula</i>	Creeping Snowberry	S5	C	
<i>Kalmia angustifolia</i>	Sheep Laurel	S3S4	C	
<i>Kalmia polifolia</i>	Pale Bog Laurel	S5	R	
<i>Orthilia secunda</i>	One-sided Wintergreen	S5	R	
<i>Pyrola minor</i>	Lesser Pyrola	S4S5	R	
<i>Rhododendron groenlandicum</i>	Common Labrador Tea	S5	C	
<i>Vaccinium angustifolium</i>	Early Lowbush Blueberry	S5	F	
<i>Vaccinium boreale</i>	Northern Blueberry	S4S5	C	
<i>Vaccinium myrtilloides</i>	Velvet-leaved Blueberry	S4	R	
<i>Vaccinium oxycoccos</i>	Small Cranberry	S5	R	
<i>Vaccinium vitis-idaea</i>	Mountain Cranberry	S5	C	
<b>OLEACEAE</b>	<b>OLIVES</b>			
<i>Syringa vulgaris</i>	Common Lilac	--	R	planted, not spreading
<b>PLANTAGINACEAE</b>	<b>PLANTAINS</b>			
<i>Plantago major</i>	Common Plantain	SNA	R	
<b>LAMIACEAE</b>	<b>MINTS</b>			
<i>Thymus pulegioides</i>	Lemon Thyme	--	F	leaf margins not strongly revolute, leaves and calyces ciliate
<b>OROBANCHACEAE</b>	<b>BROOMRAPES</b>			
<i>Euphrasia</i> sp.	eyebright species		F	
<b>ASTERACEAE</b>	<b>ASTERS</b>			
<i>Achillea borealis</i>	Woolly Yarrow	S3S4	C	
<i>Achillea ptarmica</i>	Sneezeweed Yarrow	[SNA - new]	R	Prev. LB reports rejected in Meades & Meades 2019
<i>Anaphalis margaritacea</i>	Pearly Everlasting	S4S5	F	
<i>Crepis tectorum</i>	Narrow-leaved Hawksbeard	SNA	C	
<i>Hieracium umbellatum</i>	Umbellate Hawkweed	S3S4	R	(canadensis)
<i>Hieracium lachenalii</i> ssp. <i>cruentifolium</i> (= <i>Hieracium vulgatum</i> )	Common Hawkweed	[SNA - new]	R	spotted-leaf form; Prev. LB reports rejected in Meades & Meades 2019
<i>Leucanthemum vulgare</i>	Oxeye Daisy	SNA	R	
<i>Matricaria discoidea</i>	Pineappleweed	SNA	F	
<i>Pilosella aurantiaca</i>	Orange Hawkweed	SNA	R	
<i>Pilosella caespitosa</i>	Meadow Hawkweed	SNA	F	
<i>Pilosella officinarum</i>	Mouse-ear Hawkweed	[SNA - new]	F	

Species / Family	Common Name	LB S-rank	Site Status	NOTetax
<i>Pilosella piloselloides</i>	Tall Hawkweed	[SNA - new]	C	ID refers to the species in the broad sense
<i>Scorzoneroides autumnalis</i>	Autumn Hawkbit	SNA	C	
<i>Senecio vulgaris</i>	Common Ragwort	SNA	U	
<i>Solidago fallax / brendae</i>	Deceptive or Brenda's Goldenrod	[SU]	R	Both S. brendae & S. fallax are ranked SU in LB
<i>Solidago multiradiata</i>	Multi-rayed Goldenrod	S3S4	U	
<i>Taraxacum officinale</i>	Common Dandelion	SNA	C	
<b>CAPRIFOLIACEAE</b>	<b>HONEYSUCKLES</b>			
<i>Lonicera caerulea</i>	Blue Honeysuckle ("Haskap")	--	R	planted, not spreading
<b>ARALIACEAE</b>	<b>SARSAPARILLAS</b>			
<i>Aralia hispida</i>	Bristly Sarsaparilla	S3	C	
<b>APIACEAE</b>	<b>CARROTS</b>			
<i>Heracleum maximum</i>	American Cow Parsnip	S3S4	R	

**Table 2.** Labrador rare / uncommon plant species recorded at Pye Farm, July 18-19, 2019 with provincial ranks and site status. See Table 1 for definitions.

<b>Species</b>	<b>Common Name</b>	<b>LB S-rank</b>	<b>Site Status</b>
<i>Festuca rubra</i>	Red Fescue	S1S3	Common
<i>Lycopodium clavatum</i>	Running Clubmoss	S1S3	Uncommon
<i>Glyceria canadensis</i>	Canada Mannagrass	S2S3	Uncommon
<i>Juncus tenuis</i>	Path Rush	S2S3	Fairly common
<i>Aralia hispida</i>	Bristly Sarsaparilla	S3	Common
<i>Populus balsamifera</i>	Balsam Poplar	S3	Uncommon
<i>Achillea borealis</i>	Woolly Yarrow	S3S4	Common
<i>Carex crawfordii</i>	Crawford's Sedge	S3S4	Rare
<i>Diphasiastrum sitchense</i>	Sitka Ground-cedar	S3S4	Rare
<i>Heracleum maximum</i>	American Cow Parsnip	S3S4	Rare
<i>Hieracium umbellatum</i>	Umbellate Hawkweed	S3S4	Rare
<i>Kalmia angustifolia</i>	Sheep Laurel	S3S4	Common
<i>Platanthera aquilonis</i> <sup>1</sup>	Tall Northern Green Orchid	S3S4	Rare
<i>Poa pratensis</i>	Kentucky Bluegrass	S3S4	Common
<i>Salix bebbiana</i>	Bebb's Willow	S3S4	Common
<i>Solidago multiradiata</i>	Multi-rayed Goldenrod	S3S4	Uncommon
<i>Spiranthes romanzoffiana</i>	Hooded Ladies's-tresses	S3S4	Rare
<i>Carex deflexa</i>	Bent Northern Sedge	S3S5	Fairly common
<i>Carex foenea</i>	Bronze Sedge	S3S5	Common
<i>Poa glauca</i>	Glaucous Bluegrass	S3S5	Rare

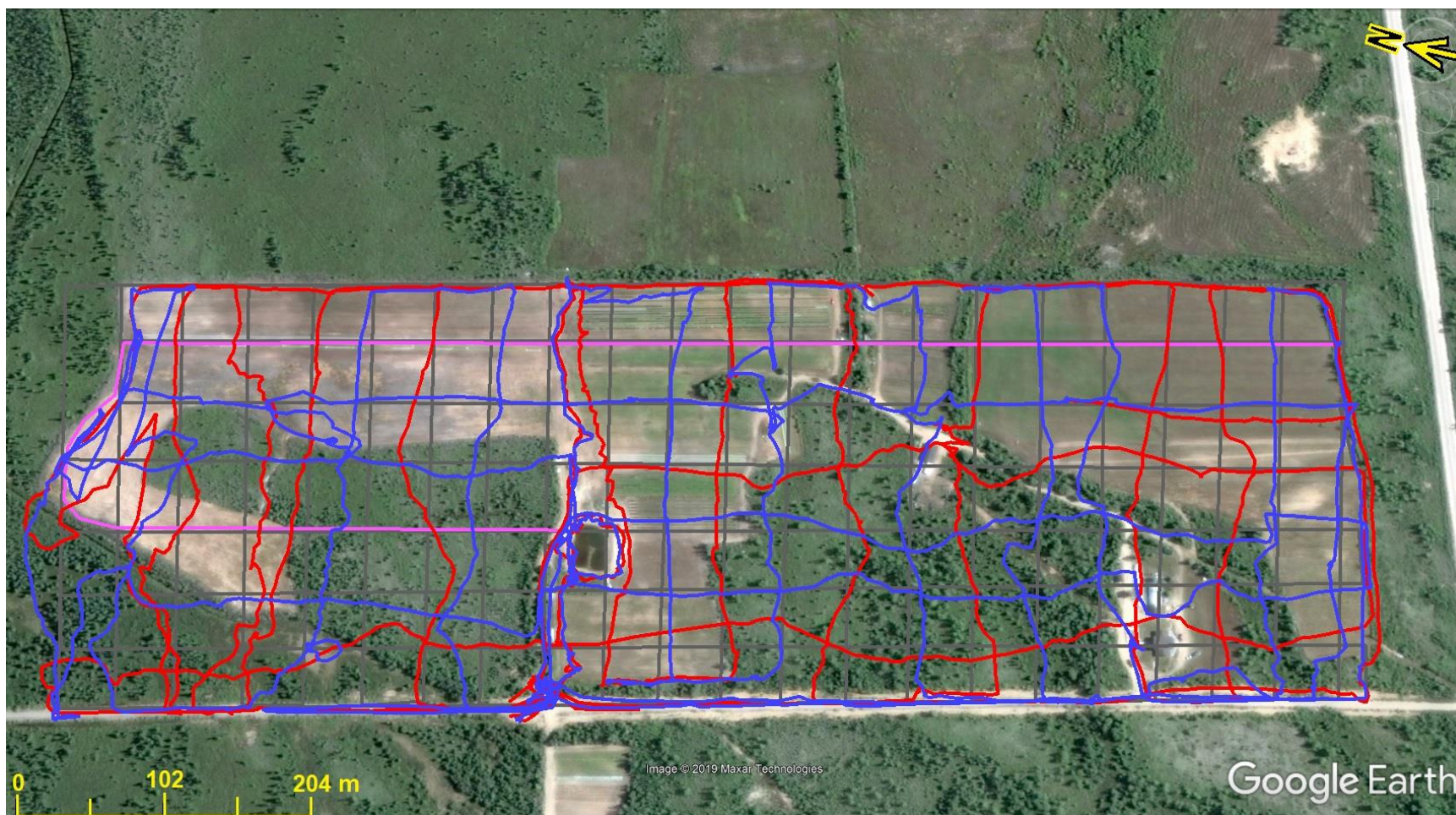
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<sup>1</sup> Plants were very immature and could not be definitively distinguished from certain other *Platanthera* species.



**Table 3.** Birds observed incidentally on the Pye Farm, July 18-19, 2019, with Labrador status (S-rank, see Table 1 for definitions) and breeding evidence (Maritimes Breeding Bird Atlas codes).

Species	Common Name	S-rank	Breeding Evidence
<i>Pandion haliaetus</i>	Osprey	S4B	No evidence of breeding; seen overhead
<i>Falco columbarius</i>	Merlin	S5B	Confirmed Breeding: Adult carrying food
<i>Empidonax alnorum</i>	Alder Flycatcher	S4B	Possible Breeding: Adult in suitable nesting habitat and season
<i>Tachycineta bicolor</i>	Tree Swallow	S5B	Possible Breeding: Adult in suitable nesting habitat and season
<i>Corvus corax</i>	Common Raven	S5	Possible Breeding: Adult in suitable nesting habitat and season
<i>Catharus ustulatus</i>	Swainson's Thrush	S5B	Probable Breeding: Pair in suitable nesting habitat and season
<i>Catharus guttatus</i>	Hermit Thrush	S5B	Possible Breeding: Singing male in suitable nesting habitat and season
<i>Turdus migratorius</i>	American Robin	S5B	Possible Breeding: Adult in suitable nesting habitat and season
<i>Oreothlypis peregrina</i>	Tennessee Warbler	S5B	Possible Breeding: Singing male in suitable nesting habitat and season
<i>Oreothlypis celata</i>	Orange-crowned Warbler	S4B	Possible Breeding: Singing male in suitable nesting habitat and season
<i>Setophaga palmarum</i>	Palm Warbler	S3B	Possible Breeding: Adult in suitable nesting habitat and season
<i>Passerculus sandwichensis</i>	Savannah Sparrow	S4B	Possible Breeding: Singing male in suitable nesting habitat and season
<i>Passerella iliaca</i>	Fox Sparrow	S5B	Possible Breeding: Singing male in suitable nesting habitat and season
<i>Melospiza lincolnii</i>	Lincoln's Sparrow	S5B	Possible Breeding: Singing male in suitable nesting habitat and season
<i>Zonotrichia albicollis</i>	White-throated Sparrow	S5B	Possible Breeding: Singing male in suitable nesting habitat and season
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow	S5B	Possible Breeding: Singing male in suitable nesting habitat and season
<i>Junco hyemalis</i>	Dark-eyed Junco	S5B	Possible Breeding: Singing male in suitable nesting habitat and season
<i>Loxia leucoptera</i>	White-winged Crossbill	S5	Possible Breeding: Adult in suitable nesting habitat and season
<i>Spinus pinus</i>	Pine Siskin	S4B	Possible Breeding: Adult in suitable nesting habitat and season



**Figure 1.** Map of transect lines approximately followed (gray grid in background), and tracks recorded by GPS units during plant surveys at Pye Farm by Sean Blaney (blue tracks) and Erica Oberndorfer (red tracks) on July 18-19, 2019. The magenta line indicates approximate area covered by Erica Oberndorfer after a GPS failure.





**Figure 2.** Garden Stonecrop (*Hylotelephium telephium*) in a wet depression in a cultivated field at the southern end of the Pye Farm property. This is the first documented wild occurrence of the species for Labrador.





**Figure 3.** Evening primrose species (probably either *Oenothera biennis* or *Oenothera parviflora*, with identification not possible prior to flowering), in cultivated field at the Pye Farm property. Both species would be new to the flora of Labrador. The species was fairly widely established in fields in the central part of the property, where it was likely introduced by seed inadvertently transferred from its native range further south.





**Figure 4.** Meadow Hawkweed (*Pilosella caespitosa*) in cultivated field at Pye Farm, where it was fairly common. Prior to this record, the species had been excluded from the Labrador flora as “ephemeral” because it had not been seen since 1974.





**Figure 5.** Tall Hawkweed (*Pilosella piloselloides*, in the broad sense) at the Pye Farm, where the species was abundant in various disturbed habitats across most of the property.





**Figure 6.** The long-horned fairy moth *Nemophora bellela* (family Adelidae) on Glandular Dwarf Birch (*Betula glandulifera*) at the Pye Farm property. This represented the first Labrador record of this boreal species and the first record east of Quebec (CESCC 2016).