

Reconnaissance biological inventory of the Lund Property, Sackville, New Brunswick



Alain Belliveau & Sean Blaney

**A report to the Canadian Wildlife Service
by the Atlantic Canada Conservation Data Centre
P.O. Box 6416, Sackville, NB E4L 1C6. www.accdc.com**

October 10, 2014

Introduction

The Lund Property is a 12 ha area located in Sackville, New Brunswick, and bisected by the TransCanada Highway. The property is composed of 8.5 ha on the southwest side of the highway between the Sackville Waterfowl Park and Squire Street (composed of seven separate properties; herein “southern parcels”), and a single parcel on the northeast side of the TransCanada Highway just north of the junction of Folkins Drive is 3.5 ha (herein “northern parcel”). The Lund Property is part of the Tantramar Marsh system, a large dykeland and marsh complex that is particularly important for waterfowl and marsh birds. The property also represents an important green space for the town of Sackville, being located within town limits and adjacent to the Sackville Waterfowl Park.

The Lund Property has been offered for donation to the Town of Sackville, with the owner under consideration for benefits provided through the Ecological Gifts Program of Environment Canada. As a result, Matt Mahoney, Environment Canada’s regional coordinator for the Ecological Gifts Program requested that Atlantic Canada Conservation Data Centre biologists visit the site to further assess its biological significance. Sean Blaney (June 17, 2014) and Alain Belliveau (October 9, 2014) visited the site for a reconnaissance natural history survey. Fieldwork was primarily focused on vascular plants, documenting 154 vascular plant species (120 native, 34 exotic) within or immediately adjacent to the Lund Property boundaries, and making notes on vascular plant communities present. The fieldwork produced one probable record of a provincially uncommon vascular plant species (Horned Pondweed, *Zannichellia palustris*, S3 – Secure, but plants infertile and identification not confirmed). In addition, six Chimney Swifts (S2S3 - At Risk, federally Threatened under the Species at Risk Act), which were likely nesting in downtown Sackville, were observed feeding over the site in June.

Methods

Atlantic Canada Conservation Data Centre (AC CDC) botanists Sean Blaney (with Ecological Gifts coordinator Matt Mahoney) on June 17, 2014 and Alain Belliveau on October 9, 2014 conducted approximately 2 hours and 3 hours of fieldwork respectively, in and adjacent to the Lund Property, covering all major habitat types present: the southern branch of Morice Brook, open marshland, old field uplands, and various forest and thicket communities. We kept GPS units on while in the field to precisely record area covered, and our tracks are mapped in Figure 1. We traveled a combined 5.3 km on foot, 4.6 km of which was within or immediately adjacent to the Lund Property.

We compiled a full vascular plant species list for the Lund Property and vicinity, with locations documented for first sightings of non-rare species, and with most species assigned a general ranking of their abundance within the property (rare, uncommon, fairly common, common). For provincially rare species (those species with provincial status ranks [S-ranks], of S1 to S3S4 and/or provincial General Status Ranks assigned by New Brunswick Department of Natural Resources of At Risk, May Be At Risk or Sensitive)¹, we recorded locations by GPS

¹ S-ranks are defined in detail at www.natureserve.org/explorer/ranking.htm#globalstatus, with S1 = critically imperiled, S2 = imperiled, S3 = vulnerable, S4 = Secure with some cause for long term concern, and S5 = Demonstrably secure. General Status Ranks are defined in detail at

(accurate to 10 m or less), along with information on population size and extent, habitat and associated species. All data is attached with this report in the file “LundPropertySackvilleNB_fieldnotes.xls”, and will be permanently maintained in the Atlantic Canada Conservation Data Centre database for use in response to any future conservation-related data request in the vicinity of the study area.

In addition to vascular plant data, Sean Blaney recorded incidental observations of birds (breeding evidence documented using Maritimes Breeding Bird Atlas codes) for birds noted incidentally during his June fieldwork.

Results and Discussion

Vascular plant species diversity

We found 154 vascular plant species (120 native, 34 exotic; Table 1) in and around the Lund Property. The total native species diversity we recorded on the Lund Property is relatively low because of the property’s small size and limited number of undisturbed habitats present. The proportion of exotic species (22%) is lower than is typical for an urban property and many of the exotic species were only found along and just outside the property’s edge.

Rare plant species

The single provincially rare plant species we recorded was only tentatively identified because it was infertile when observed in June and was not detectable when we returned to the site in October. The record is thus probable only and requires later confirmation. The probable Horned Pondweed (*Zannichellia palustris*, S3 – Secure; Figure 2) was in a muddy ditch in the formerly tidal wet meadow at the western end of the southern parcels, in association with Broad-fruited Burreed (*Sparganium eurycarpum*). This species of muddy brackish waters is found throughout the coastal areas of the Maritimes provinces and is likely more overlooked than truly rare, with a majority of high-potential upper tidal rivers and streams searched by AC CDC in the past eight years having been found to support the species.

Vascular plant communities

The vascular plant communities present on the Lund Property include upland and wetland forests and thickets, a limited area of upland old field, extensive open wet graminoid meadow, and a slow-moving stream habitat of the southern branch of Morice Brook. The forests (Figure 3) in the eastern half of the southern parcels are mostly mixed wood with one small hardwood-dominated area and a small Black Spruce (*Picea mariana*) stand with Black Huckleberry (*Gaylussacia baccata*) shrubby understory. Some forested areas have regenerated

<http://www.gov.ns.ca/natr/wildlife/genstatus/background.asp>, with ranks of At Risk, May Be At Risk, Sensitive, Secure, Undetermined, Not Assessed, Exotic, Extirpated, Extinct, Accidental, Occurrence Not Verified.

relatively recently from old field, but uneven local microtopography (indicating a long period of larger fallen trees having been left to decay naturally) suggests other portions of forest to have had limited recent history of cultivation. The mixed wood forest is mainly White Spruce (*Picea glauca*), Gray Birch (*Betula populifolia*), Tamarack (*Larix laricina*), and Red Maple (*Acer rubrum*) in varying combinations, and is characterized by an understory of Mountain Holly (*Nemopanthus mucronatus*), Northern Wild Raisin (*Viburnum nudum* var. *cassinoides*), and Spinulose Wood Fern (*Dryopteris carthusiana*). The small patch of hardwood forest is composed of Red Maple, Red Oak (*Quercus rubra*), Gray Birch, and scattered English Oak (*Quercus robur*, non-native) and Norway Maple (*Acer platanoides*, non-native) in the overstory, and with an understory primarily characterized by Evergreen Wood Fern (*Dryopteris intermedia*) and Glossy Buckthorn (*Frangula alnus*), a locally abundant and particularly invasive shrub species that may be of management concern in future.

Old field forests (Figure 4) are located in the eastern half of the southern parcels and the southern edge of the northern parcel, and are dominated by either White Spruce and Tamarack, or Trembling Aspen (*Populus tremuloides*). Understory species in old field forests include White Birch (*Betula papyrifera* var. *papyrifera*), Red Raspberry (*Rubus idaeus* ssp. *strigosus*), American and European Mountain Ash (*Sorbus americana* and *S. aucuparia*), Rough-stemmed Goldenrod (*Solidago rugosa*), and Hairy Flat-top White Aster (*Doellingeria umbellata*). One small area of open, shrubby old field conditions (Figure 4) still remains at the northern edge of the southern parcels and is dominated by White Meadowsweet (*Spiraea alba*), Virginia Rose (*Rosa virginiana*), Hairy Flat-top White Aster, and a serviceberry species (*Amelanchier* sp.).

The marsh in the western half of the southern parcels (Figure 5) is mostly dominated by Bluejoint Reed Grass (*Calamagrostis canadensis*), with scattered patches of White Meadowsweet and Purple Loosestrife (*Lythrum salicaria*). A small portion of drier and more disturbed marshland is dominated by the European pasture grass Meadow Foxtail (*Alopecurus pratensis*). The marsh extending over most of the northern parcel (Figure 5) is dominated by Broad-leaved Cattail (*Typha latifolia*), Blue Cattail (*Typha x glauca*), and White Meadowsweet, with scattered Tamarack and Speckled Alder. The slow-moving stream (Figure 6) at the western tip of the southern parcels is near the upper reaches of the tide and is muddy-bottomed, with scattered vegetation including Broad-fruited Burreed (*Sparganium eurycarpum*), Rice Cut Grass (*Leersia oryzoides*), and Canada Waterweed (*Elodea canadensis*). The swampy, shrubby margin between upland forests and wetlands (Figure 6) is often characterized by Speckled Alder (*Alnus incana* ssp. *rugosa*), or Mountain Holly.

Birds

Birds were not the focus of this project and were only recorded during the single mid-afternoon visit in June. As a result, we recorded just 11 bird species (Table 2), one of which is of conservation significance. A group of six Chimney Swifts (S2S3 - At Risk, federally Threatened under the Species at Risk Act) was feeding overhead on the June visit. These birds were seen repeatedly by Sean Blaney and other observers around downtown Sackville through June and were likely nesting in a building somewhere nearby.

Conclusions

The Lund Property represents an important opportunity to protect a portion of the larger Tantramar Marsh complex and its high diversity of flora and fauna. The site will be a significant urban green space for the town of Sackville that will greatly increase the size of the Sackville Waterfowl Park. In particular, the southern branch of Morice Brook benefits from added protection and wetland function, which should promote the persistence of the uncommon Horned Pondweed and other aquatic habitat-dependent species present.

This survey provides a fairly good preliminary documentation of vascular plant species and vascular plant communities on the Lund Property but further fieldwork would undoubtedly add more species of plants to the total site list. Further fieldwork in birds and insects would also add to the understanding of the biological diversity and significance of from the property.

Acknowledgements

Matt Mahoney of Environment Canada, Canadian Wildlife Service, provided site boundaries and mapping and accompanied Sean Blaney in the field.

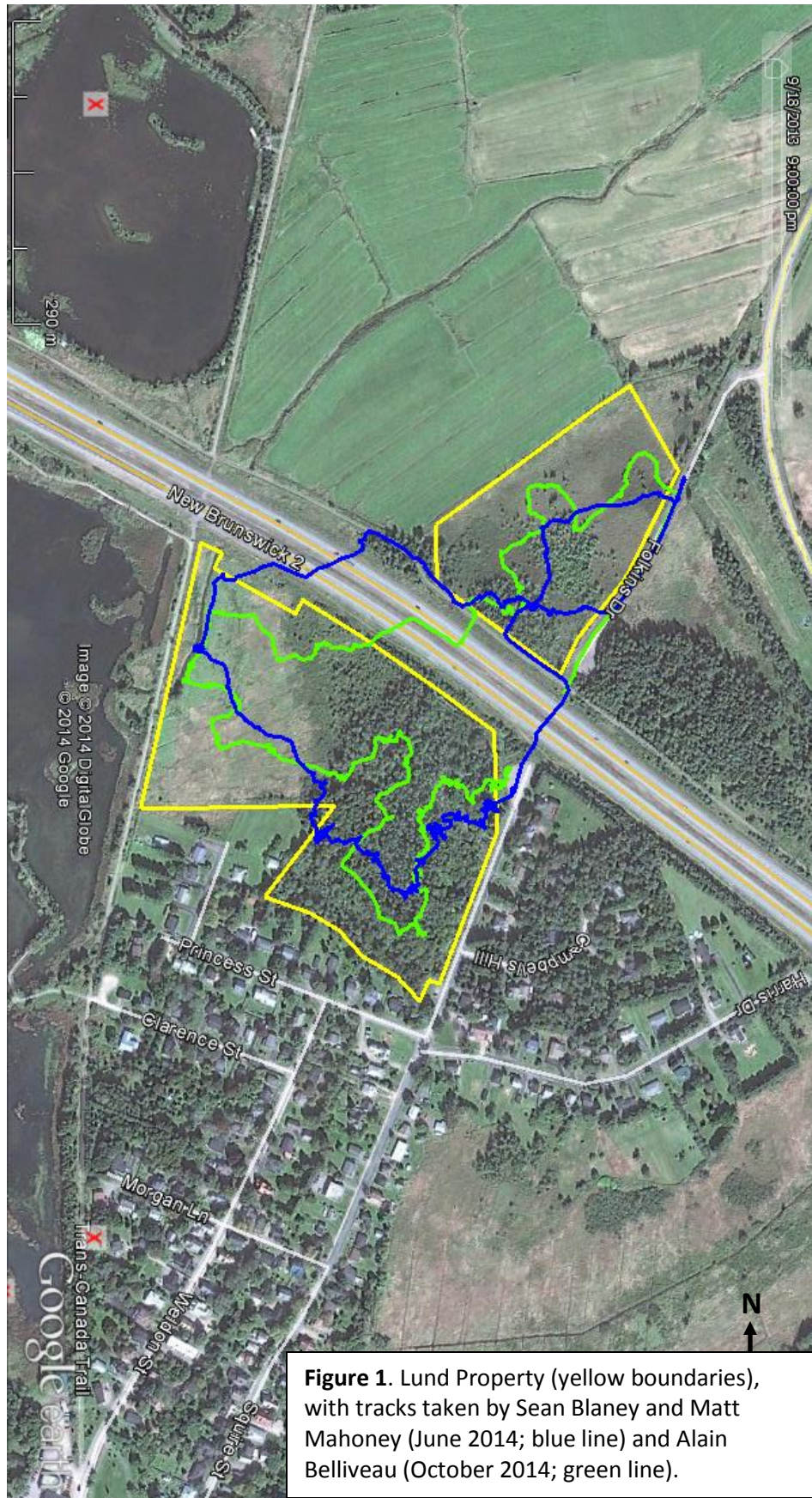


Figure 1. Lund Property (yellow boundaries), with tracks taken by Sean Blaney and Matt Mahoney (June 2014; blue line) and Alain Belliveau (October 2014; green line).



Figure 2. Horned Pondweed (*Zannichellia palustris*, S3 – Secure; photo from Wallace River, Nova Scotia, not from the Lund Property). Plants that were likely this species, but were infertile and not readily identifiable, were observed on the southern branch of Morice Brook, but could not be relocated on the second visit. Confirmation of identification will require another visit when mature fruit are present.



Figure 3. Upland mixed wood forest (left) and hardwood forest (right) found in the eastern half of the southern parcels.



Figure 4. Upland old field forest (left) and shrubby old field (right).



Figure 5. Graminoid marsh dominated by Bluejoint Reed Grass (*Calamagrostis canadensis*) (left) and tall graminoid marsh dominated by Broad-leaved Cattail (*Typha latifolia*) with scattered Tamarack (*Larix laricina*) (right).



Figure 6. Southern branch of Morice Brook (left) and shrubby, swampy margin between upland and wetland in the northern parcel (right).

Table 1. Vascular plants recorded by Sean Blaney and Alain Belliveau in and adjacent to the Lund Property during June 17, 2014 and October 9, 2014 surveys, with provincial ranks (see Methods) and status on site (c = common; f = fairly common, u = uncommon, r = rare, lc = locally common, x = status not noted).

Species / Family	Common Name	S-rank	GS Rank	Site Status
EQUISETACEAE		HORSETAILS		
<i>Equisetum arvense</i>	Field Horsetail	S5	Secure	x
OSMUNDACEAE		FLOWERING FERNS		
<i>Osmunda cinnamomea</i>	Cinnamon Fern	S5	Secure	x
<i>Osmunda claytoniana</i>	Interrupted Fern	S5	Secure	x
THELYPTERIDACEAE		MARSH FERNS		
<i>Thelypteris palustris</i> var. <i>pubescens</i>	Eastern Marsh Fern	S5	Secure	x
DRYOPTERIDACEAE		WOOD FERNS		
<i>Dryopteris carthusiana</i>	Spinulose Wood Fern	S5	Secure	x
<i>Dryopteris cristata</i>	Crested Wood Fern	S5	Secure	x
<i>Dryopteris intermedia</i>	Evergreen Wood Fern	S5	Secure	x
<i>Onoclea sensibilis</i>	Sensitive Fern	S5	Secure	x
PINACEAE		PINES		
<i>Abies balsamea</i>	Balsam Fir	S5	Secure	u
<i>Larix laricina</i>	Tamarack	S5	Secure	x
<i>Picea glauca</i>	White Spruce	S5	Secure	x
<i>Picea mariana</i>	Black Spruce	S5	Secure	x
<i>Pinus strobus</i>	Eastern White Pine	S5	Secure	x
<i>Pinus sylvestris</i>	Scotch Pine	SNA	Exotic	r
RANUNCULACEAE		BUTTERCUPS		
<i>Ranunculus repens</i>	Creeping Buttercup	SNA	Exotic	x
BERBERIDACEAE		BARBERRIES		
<i>Berberis thunbergii</i>	Japanese Barberry	SNA	Exotic	r
MYRICACEAE		BAYBERRIES		
<i>Myrica gale</i>	Sweet Gale	S5	Secure	x
FAGACEAE		BEECHES		
<i>Quercus robur</i>	English Oak	SNA	Exotic	x
<i>Quercus rubra</i>	Northern Red Oak	S5	Secure	x
BETULACEAE		BIRCHES		
<i>Alnus incana</i> ssp. <i>rugosa</i>	Speckled Alder	S5	Secure	x
<i>Alnus viridis</i> ssp. <i>crispa</i>	Green Alder	S5	Secure	x
<i>Betula papyrifera</i> var. <i>papyrifera</i>	White Birch	S5	Secure	x
<i>Betula populifolia</i>	Gray Birch	S5	Secure	x
<i>Betula x caerulea</i>	a hybrid Birch [papyrifera X populifolia]	SNA	Not Assessed	x

Species / Family	Common Name	S-rank	GS Rank	Site Status
CARYOPHYLLACEAE		PINKS		
<i>Moehringia lateriflora</i>	Blunt-leaved Sandwort	S5	Secure	x
POLYGONACEAE		SMARTWEEDS		
<i>Polygonum hydropiper</i>	Marshpepper Smartweed	SNA	Exotic	x
<i>Polygonum sagittatum</i>	Arrow-leaved Smartweed	S5	Secure	u
<i>Rumex orbiculatus</i>	Greater Water Dock	S5	Secure	x
TILIACEAE		LINDENS		
<i>Tilia cordata</i>	Little-leaved Linden	SNA	Exotic	r
VIOLACEAE		VIOLETS		
<i>Viola macloskeyi</i> ssp. <i>pallens</i>	Small White Violet	S5	Secure	x
<i>Viola sororia</i>	Woolly Blue Violet	S5	Secure	r
SALICACEAE		WILLOWS		
<i>Populus tremuloides</i>	Trembling Aspen	S5	Secure	x
<i>Salix discolor</i>	Pussy Willow	S5	Secure	x
ERICACEAE		HEATHS		
<i>Chamaedaphne calyculata</i>	Leatherleaf	S5	Secure	x
<i>Gaylussacia baccata</i>	Black Huckleberry	S5	Secure	x
<i>Kalmia angustifolia</i>	Sheep Laurel	S5	Secure	x
<i>Ledum groenlandicum</i>	Common Labrador Tea	S5	Secure	x
<i>Rhododendron canadense</i>	Rhodora	S5	Secure	x
<i>Vaccinium angustifolium</i>	Late Lowbush Blueberry	S5	Secure	x
<i>Vaccinium myrtilloides</i>	Velvet-leaved Blueberry	S5	Secure	x
PYROLACEAE		PYROLAS		
<i>Pyrola elliptica</i>	Shinleaf	S5	Secure	u
PRIMULACEAE		PRIMROSE		
<i>Lysimachia terrestris</i>	Swamp Yellow Loosestrife	S5	Secure	x
<i>Lysimachia thyrsoiflora</i>	Tufted Yellow Loosestrife	S4	Secure	x
<i>Trientalis borealis</i>	Northern Starflower	S5	Secure	x
ROSACEAE		ROSES		
<i>Amelanchier</i> sp.	a Serviceberry sp.		[native]	x
<i>Comarum palustre</i>	Marsh Cinquefoil	S5	Secure	x
<i>Crataegus</i> sp.	a Hawthorn		[native]	lc
<i>Fragaria virginiana</i>	Wild Strawberry	S5	Secure	x
<i>Photinia melanocarpa</i>	Black Chokeberry	S5	Secure	x
<i>Prunus pensylvanica</i>	Chokecherry	S5	Secure	u
<i>Prunus virginiana</i>	Chokecherry	S5	Secure	x
<i>Rosa multiflora</i>	Multiflora Rose	SNA	Exotic	r

Species / Family	Common Name	S-rank	GS Rank	Site Status
<i>Rosa virginiana</i>	Virginia Rose	S5	Secure	x
<i>Rubus allegheniensis</i>	Alleghaney Blackberry	S5	Secure	f
<i>Rubus hispida</i>	Bristly Dewberry	S5	Secure	x
<i>Rubus idaeus ssp. strigosus</i>	Red Raspberry	S5	Secure	x
<i>Rubus pubescens</i>	Dwarf Red Raspberry	S5	Secure	x
<i>Sorbus americana</i>	American Mountain Ash	S5	Secure	x
<i>Sorbus aucuparia</i>	European Mountain Ash	SNA	Exotic	x
<i>Spiraea alba var. latifolia</i>	White Meadowsweet	S5	Secure	x
FABACEAE	BEANS			
<i>Lathyrus palustris</i>	Marsh Vetchling	S5	Secure	x
<i>Lupinus polyphyllus</i>	Large-Leaved Lupine	SNA	Exotic	x
<i>Trifolium aureum</i>	Yellow Clover	SNA	Exotic	lc
<i>Trifolium pratense</i>	Red Clover	SNA	Exotic	x
<i>Vicia cracca</i>	Tufted Vetch	SNA	Exotic	x
LYTHRACEAE	LOOSESTRIFES			
<i>Lythrum salicaria</i>	Purple Loosestrife	SNA	Exotic	x
ONAGRACEAE	EVENING-PRIMROSES			
<i>Chamerion angustifolium</i>	Fireweed	S5	Secure	x
<i>Epilobium leptophyllum</i>	Bog Willowherb	S5	Secure	r
<i>Oenothera biennis</i>	Common Evening Primrose	S5	Secure	lc
CORNACEAE	DOGWOODS			
<i>Cornus canadensis</i>	Bunchberry	S5	Secure	x
<i>Cornus sericea</i>	Red Osier Dogwood	S5	Secure	x
AQUIFOLIACEAE	HOLLIES			
<i>Ilex verticillata</i>	Common Winterberry	S5	Secure	x
<i>Nemopanthus mucronatus</i>	Mountain Holly	S5	Secure	x
RHAMNACEAE	BUCKTHORNS			
<i>Frangula alnus</i>	Glossy Buckthorn	SNA	Exotic	x
ACERACEAE	MAPLES			
<i>Acer pensylvanicum</i>	Striped Maple	S5	Secure	r
<i>Acer platanoides</i>	Norway Maple	SNA	Exotic	x
<i>Acer rubrum</i>	Red Maple	S5	Secure	x
<i>Acer saccharum</i>	Sugar Maple	S5	Secure	r
BALSAMINACEAE	TOUCH-ME-NOTS			
<i>Impatiens capensis</i>	Spotted Jewelweed	S5	Secure	x
ARALIACEAE	SARSAPARILLAS			
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	S5	Secure	x

Species / Family	Common Name	S-rank	GS Rank	Site Status
APOCYNACEAE		DOGBANES		
<i>Apocynum androsaemifolium</i>	Spreading Dogbane	S5	Secure	x
SOLANACEAE		NIGHTSHADES		
<i>Solanum dulcamara</i>	Bittersweet Nightshade	SNA	Exotic	x
CONVOLVULACEAE		BINDWEEDS		
<i>Calystegia sepium</i>	Hedge False Bindweed	S5	Secure	x
LAMIACEAE		MINTS		
<i>Lycopus uniflorus</i>	Northern Water Horehound	S5	Secure	x
<i>Scutellaria galericulata</i>	Marsh Skullcap	S5	Secure	x
CALLITRICHACEAE		WATER-STARWORTS		
<i>Callitriche palustris</i>	Marsh Water-starwort	S5	Secure	x
PLANTAGINACEAE		PLANTAINS		
<i>Plantago major</i>	Common Plantain	SNA	Exotic	lc
SCROPHULARIACEAE		FIGWORTS		
<i>Chelone glabra</i>	White Turtlehead	S5	Secure	x
<i>Veronica officinalis</i>	Common Speedwell	S5	Exotic	x
<i>Veronica serpyllifolia</i>	Thyme-Leaved Speedwell	S5	Secure	r
RUBIACEAE		BEDSTRAWES		
<i>Galium mollugo</i>	Smooth Bedstraw	SNA	Exotic	x
<i>Galium palustre</i>	Common Marsh Bedstraw	S5	Secure	x
CAPRIFOLIACEAE		HONEYSUCKLES		
<i>Lonicera villosa</i>	Mountain Fly Honeysuckle	S5	Secure	x
<i>Viburnum nudum var. cassinoides</i>	Northern Wild Raisin	S5	Secure	x
<i>Viburnum opulus var. opulus</i>	Highbush Cranberry	SNA	Exotic	x
VALERIANACEAE		VALERIANS		
<i>Valeriana officinalis</i>	Common Valerian	SNA	Exotic	x
ASTERACEAE		ASTERS		
<i>Achillea millefolium</i>	Common Yarrow	S5	Secure	u
<i>Bidens cernua</i>	Nodding Beggarticks	S5	Secure	x
<i>Cirsium arvense</i>	Canada Thistle	SNA	Exotic	x
<i>Doellingeria umbellata</i>	Hairy Flat-top White Aster	S5	Secure	x
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	S5	Secure	u
<i>Hieracium caespitosum</i>	Field Hawkweed	SNA	Exotic	lc
<i>Hieracium scabrum</i>	Rough Hawkweed	S5	Secure	lc
<i>Lactuca biennis</i>	Tall Blue Lettuce	S5	Secure	x
<i>Lapsana communis</i>	Common Nipplewort	SNA	Exotic	x
<i>Leucanthemum vulgare</i>	Oxeye Daisy	SNA	Exotic	lc

Species / Family	Common Name	S-rank	GS Rank	Site Status
<i>Solidago canadensis</i>	Canada Goldenrod	S5	Secure	f
<i>Solidago rugosa</i>	Rough-stemmed Goldenrod	S5	Secure	x
<i>Solidago uliginosa</i>	Northern Bog Goldenrod	S5	Secure	x
<i>Symphotrichum novi-belgii</i>	New York Aster	S5	Secure	x
<i>Symphotrichum puniceum</i>	Purple-stemmed Aster	S5	Secure	x
<i>Taraxacum officinale</i>	Common Dandelion	SNA	Exotic	x
<i>Tragopogon pratensis</i>	Meadow Goatsbeard	SNA	Exotic	x
<i>Tussilago farfara</i>	Coltsfoot	SNA	Exotic	lc
ALISMATACEAE	WATER-PLANTAINS			
<i>Sagittaria latifolia</i>	Broad-leaved Arrowhead	S5	Secure	x
HYDROCHARITACEAE	WATER-WEEDS			
<i>Elodea canadensis</i>	Canada Waterweed	S4S5	Secure	r
ZANNICHELLIACEAE	HORNED PONDWEEDS			
<i>Zannichellia palustris</i> [ID tentative]	Horned Pondweed	S3	Secure	r
LEMNACEAE	DUCKWEEDS			
<i>Lemna turionifera</i>	Turion Duckweed	S5	Secure	x
JUNCACEAE	RUSHES			
<i>Juncus effusus</i>	Soft Rush	S5	Secure	x
CYPERACEAE	SEDGES			
<i>Carex brunnescens</i> ssp. <i>sphaerostachya</i>	Brownish Sedge	S5	Secure	x
<i>Carex canescens</i>	Silvery Sedge	S5	Secure	x
<i>Carex debilis</i> var. <i>rudgei</i>	White-edged Sedge	S5	Secure	x
<i>Carex gynandra</i>	Nodding Sedge	S5	Secure	u
<i>Carex lasiocarpa</i> var. <i>americana</i>	Slender Sedge	S5	Secure	r
<i>Carex novae-angliae</i>	New England Sedge	S5	Secure	x
<i>Carex paleacea</i>	Chaffy Sedge	S5	Secure	x
<i>Carex pseudocyperus</i>	Cyperuslike Sedge	S5	Secure	x
<i>Carex stipata</i>	Awl-fruited Sedge	S5	Secure	x
<i>Carex trisperma</i> var. <i>trisperma</i>	Three-seeded Sedge	S5	Secure	x
<i>Schoenoplectus acutus</i>	Hardstem Bulrush	S4S5	Secure	x
<i>Scirpus cyperinus</i>	Common Woolly Bulrush	S5	Secure	r
<i>Scirpus microcarpus</i>	Small-fruited Bulrush	S5	Secure	x
POACEAE	GRASSES			
<i>Agrostis capillaris</i>	Colonial Bent Grass	SNA	Exotic	f
<i>Agrostis gigantea</i>	Redtop	SNA	Exotic	f
<i>Alopecurus pratensis</i>	Meadow Foxtail	SNA	Exotic	x
<i>Calamagrostis canadensis</i>	Bluejoint Reed Grass	S5	Secure	x

Species / Family	Common Name	S-rank	GS Rank	Site Status
<i>Elymus repens</i>	Quack Grass	SNA	Exotic	r
<i>Festuca rubra</i>	Red Fescue	S5	Secure	x
<i>Glyceria canadensis</i>	Canada Manna Grass	S5	Secure	u
<i>Glyceria grandis</i>	Common Tall Manna Grass	S5	Secure	x
<i>Glyceria melicaria</i>	Slender Manna Grass	S5	Secure	x
<i>Glyceria striata</i>	Fowl Manna Grass	S5	Secure	x
<i>Hierochloe odorata</i>	Vanilla Sweet Grass	S5	Secure	x
<i>Leersia oryzoides</i>	Rice Cut Grass	S5	Secure	r
<i>Phalaris arundinacea</i>	Reed Canary Grass	S5	Secure	x
<i>Phleum pratense</i>	Common Timothy	SNA	Exotic	u
<i>Poa pratensis</i>	Kentucky Blue Grass	S5	Secure	x
<i>Spartina pectinata</i>	Prairie Cord Grass	S5	Secure	x
SPARGANIACEAE		BUR-REEDS		
<i>Sparganium eurycarpum</i>	Broad-fruited Burreed	S4S5	Secure	x
TYPHACEAE		CATTAILS		
<i>Typha latifolia</i>	Broad-leaved Cattail	S5	Secure	x
<i>Typha x glauca</i>	Blue Cattail	SNA	Not Assessed	x
LILIACEAE		LILIES		
<i>Maianthemum canadense</i>	Wild Lily-of-The-Valley	S5	Secure	x
<i>Maianthemum trifolium</i>	Three-leaved False Solomon's Seal	S5	Secure	x
IRIDACEAE		IRISES		
<i>Iris versicolor</i>	Harlequin Blue Flag	S5	Secure	x

Table 2. Breeding birds recorded in and around the Lund Property, with maximum breeding evidence noted (following Maritimes Breeding Bird Atlas methods).

Species	Common Name	S-rank	GS Rank	Breeding Evidence
<i>Accipiter gentilis</i>	Northern Goshawk	S4	Secure	No evidence of breeding on site; flying over
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	S4B	Secure	Probably breeding – Courtship / territorial interaction between two adults
<i>Archilochus colubris</i>	Ruby-throated Hummingbird	S5B	Secure	Possible breeding – Adult in suitable breeding habitat
<i>Bombycilla cedrorum</i>	Cedar Waxwing	S5B	Secure	Possible breeding – Adult in suitable breeding habitat
<i>Carpodacus purpureus</i>	Purple Finch	S4S5B	Secure	Possible breeding – Adult in suitable breeding habitat
<i>Chaetura pelagica</i>	Chimney Swift	S2S3B	At Risk	No evidence of breeding on site; aerial feeding overhead
<i>Dendroica coronata</i>	Yellow-rumped Warbler	S5B	Secure	Possible breeding – Singing male in suitable breeding habitat
<i>Empidonax alnorum</i>	Alder Flycatcher	S5B	Secure	Possible breeding – Singing male in suitable breeding habitat
<i>Parula americana</i>	Northern Parula	S5B	Secure	Possible breeding – Singing male in suitable breeding habitat
<i>Sturnus vulgaris</i>	European Starling	SNA	Exotic	Possible breeding – Adult in suitable breeding habitat
<i>Vireo olivaceus</i>	Red-eyed Vireo	S5B	Secure	Possible breeding – Singing male in suitable breeding habitat