

OW2

Black spruce / Lambkill / Reindeer lichen

Picea mariana / *Kalmia angustifolia* / *Cladina* spp.

n=28



Riversdale,
Colchester County

Concept: The Black spruce / Lambkill / Reindeer lichen woodland is found on acidic rock outcrops and thin glacial soils. This coniferous ecosystem is characterized by its open black spruce canopy, very poor soils, low productivity and prominent representation of reindeer lichens.

Vegetation: The open canopy is dominated by black spruce or co-dominated by black spruce and pine (white or red). Other tree species are uncommon. The well-developed woody understory is comprised of acid tolerant shrubs (e.g. lambkill, low bush blueberry and wild raisin). Species usually found on moist soils (e.g. rhodora and false holly) are supported by surface peat deposits found over mineral soil or in cracks and depressions of exposed bedrock. Herbaceous species richness and abundance is reduced. Reindeer lichens (usually grey and/or lesser green) are frequent and usually abundant. In some occurrences, bryophyte cover is higher than lichen cover.

Environmental Setting: OW2 is associated with dry to moist, nutrient very poor soils that are often shallow to bedrock and/or stony. The low elevation ecosystem is found on rocky outcrops or on shallow glacial tills. Soil moisture increases with organic accumulation, particularly where near-surface bedrock is present or cemented (orstein) soil horizons reduce drainage. Site exposure is moderate to high, while surface microtopography and stoniness is low. It occurs throughout the province but is especially common in the Eastern and Western ecoregions. OW2 is uncommon but widespread across the Maritimes. Although this Vegetation Type (VT) is similar to boreal lichen woodlands from eastern Canada, it is considered nationally distinct.

Successional Dynamics: This early successional ecosystem is largely maintained by exposure and limiting soil conditions. It will not succeed to latter successional stages (e.g. other black spruce or pine vegetation types) and is considered a type of edaphic climax. Possible disturbances include fire, windthrow and breakage. Black spruce will regenerate on OW2 sites by seed and/or layering. Most stands have uneven age class structures.

Ecological Features

The Black spruce / Lambkill / Reindeer lichen is unique to the east coast, occurring as a small patch ecosystem in each of the four Atlantic Provinces. This relatively rare woodland has strong boreal affinity, but the presence of northern temperate species (e.g. huckleberry,

rhodora and chokeberry, among others) differentiates the VT from its boreal analogs in Quebec and Ontario. Limited distribution in Nova Scotia may present a conservation challenge. This ecosystem supports unique habitat conditions, but associated animal, plant and lichen

species are undocumented. It typically features a very open canopy, and high shrub and lichen cover. Productivity, tree age, canopy height and old growth potential are all low.

Characteristic Plants

OW2

	Freq. (%)	Cover (%)
Black spruce	96	14.3
White pine	46	4.8
Tamarack	29	4.4
Balsam fir	25	2.4
Red pine	21	7.8
Grey birch	14	5.5
Red maple	14	3.8
White birch	7	3.5
Red spruce	7	3.0
White spruce	4	8.0
Heart-leaf birch	4	3.0
Red oak	4	2.0
Large-tooth aspen	4	0.1

Tree Layer (Mean % Cover)

22

Lambkill	96	24.5
Wild raisin	96	1.8
Black spruce	89	15.9
False holly	82	3.3
Red maple	68	3.7
Velvet-leaf blueberry	64	5.3
Rhodora	61	6.3
Serviceberry	57	0.2
Huckleberry	54	25.5
Lowbush blueberry	50	10.3
Balsam fir	43	2.0
Grey birch	39	3.8
Labrador tea	36	8.6
White pine	25	3.2
Ground juniper	25	2.3
Chokeberries	25	0.2
Mountain-ash	21	0.1

Shrub Layer (Mean % Cover)

78

Teaberry	86	4.2
Bracken	75	12.2
Bunchberry	64	2.2
Mayflower	50	0.6
Pink lady's slipper	46	0.2
Starflower	36	0.5
Wild lily-of-the-valley	36	0.2
Black crowberry	29	18.1
Creeping snowberry	29	0.7
Cow-wheat	21	0.2

Herb Layer (Mean % Cover)

21

Grey reindeer lichen	100	22.2
Schreber's moss	89	31.9
Star-tipped reindeer lichen	64	6.0
Wavy dicranum	50	3.2
Ladies tresses	46	11.1
Cup lichens	39	0.5
Green reindeer lichen	32	8.3
Broom moss	32	1.5
Hair-cap moss	32	0.8
Bazzania	21	6.8

Bryo-Lichen Layer (Mean % Cover)

69

Distinguishing Features

This woodland is characterized by scattered black spruce, and sometimes, white or red pine, exposed bedrock, stony and/or shallow soils and prominent reindeer lichen.



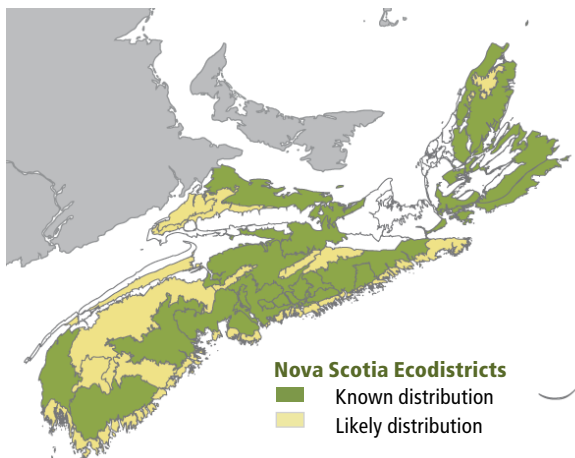
Reindeer lichen

Site Characteristics

Slope Position:	Level ⁵ Crest ³ Other ²
Surface Stoniness:	(Non - Slightly) ⁶ (Very - Excessively) ³ (Moderately) ¹
Bedrock Outcrop:	(Non-Rocky) ⁵ (Very - Excessively) ⁴ (Slightly - Moderately) ¹
Elevation Range:	9 - 327m
Slope Gradient:	Level ⁷ Gentle ¹ Moderate ¹ nd ¹
Aspect:	West ¹ None ² Other ¹
Exposure:	Moderate ⁶ Exposed ² Other ²
Microtopography:	Level ⁸ Slightly ¹ Moderately ¹
Drainage:	Imperfect ³ Rapid ³ Well ³ Other ¹

Soil Characteristics

Soil Type:	ST15 ³ ST3 ² ST1 ¹ ST2-G ¹ ST16 ¹ Other ²
Parent Material:	Glacial till ⁶ Till/Bedrock ² Glaciofluvial ¹ Organic/Bedrock ¹
Rooting Depth (cm):	(<30) ⁵ (30-45) ² (>45) ¹ nd ²
Duff Thickness (cm):	(6-10) ³ (11-20) ⁴ nd ³



Nova Scotia Ecodistricts

- Known distribution
- Likely distribution