

SP2

Red pine / Blueberry / Bracken

Pinus resinosa / *Vaccinium* spp. / *Pteridium aquilinum*



Aldershot,
Kings County

Concept: This early to mid-successional Vegetation Type (VT) has significant red pine in the overstory and black spruce in one or more layers. Occurrences dominated by black spruce with lesser red pine are defined by the SP2a variant. These variant stands either occur at a later successional stage or are characterized by less red pine at the time of stand establishment. SP2 is similar to SP3 (Red Pine - White pine / Bracken - Mayflower), but is distinguished by the nearly homogeneous overstory of red pine. SP2 usually follows stand-replacing disturbance events such as fire or harvesting.

Vegetation: Red pine is typically the dominant overstory tree, although black spruce cover can be significant. The shrub layer consists mainly of ericaceous species such as lambkill, velvet-leaf blueberry and lowbush blueberry, along with wild raisin. Black spruce and red maple regeneration can also be extensive. Herb layer diversity is low, typically dominated by bracken and teaberry. Abundant Schreber's moss characterizes the bryophyte layer, but a needle carpet can also be found in dense stands.

Environmental Setting: SP2 occurs on dry to moist, nutrient very poor to poor soils. Drier sites are generally associated with glaciofluvial deposits or shallow, gravelly

and/or coarse textured glacial tills found in the Western ecoregion. Moist sites are mainly associated with finer textured soils (e.g. sandy clay loam) found in the Central Lowlands and Northumberland Lowlands ecodistricts. SP2 may be interspersed with OW3 (Red pine / Broom crowberry / Reindeer lichen) in some areas. This VT is very rare on Prince Edward Island and somewhat uncommon in New Brunswick.

Successional Dynamics: Dry, nutrient poor soils and stand-replacing disturbances strongly shape both the canopy structure and successional patterns of SP2. Historically SP2 stands originated from a few residual trees that survived high intensity fires. (Fire scars can often be found on the older trees at a site). Occasional, low intensity fires would have maintained red pine presence by eliminating or reducing undergrowth competition. SP2 stands are predominantly even-aged until red pine succumbs to senescence and is gradually replaced by black spruce, balsam fir, red oak and/or white pine. Dominance of these latter tree species increases over time, especially as the potential impacts of fire are reduced through management. Later successional stages may include SP4 (White pine / Blueberry / Bracken) or advance directly to SP5 (Black spruce / Lambkill / Bracken), the edaphic climax for this successional pathway.

Ecological Features

This closed canopy forest occurs as small to large patches. Red pine is shade-intolerant and usually requires fire to regenerate to near-pure forests. As such, fire suppression practices may reduce the abundance of this ecosystem. Fire scars

on residual pine are often found scattered through SP2 stands and can lead to the formation of hollow trunks. The acidity (low nutrient content) of the forest floor (due to the abundance of pine needles and ericaceous vegetation) reduces soil fauna,

plant diversity, and vertebrate diversity and abundance. Seeds of red pine may provide food for pine siskins, nuthatches and chickadees. Saffron milkcap is a well-known edible mushroom that forms a mycorrhizal relationship with red pine.

Characteristic Plants	SP2		SP2a	
	Freq. (%)	Cover (%)	Freq. (%)	Cover (%)
Red pine	100	64.5	100	27.0
Black spruce	53	9.8	100	33.3
White pine	53	3.6	40	5.5
Red maple	33	2.6	30	1.7
Large-tooth aspen	20	3.3		
White birch	20	0.1		
Jack pine	13	3.0	20	4.0
Balsam fir	7	4.0	20	7.5
Tamarack	7	0.1	20	2.5
Tree Layer (Mean % Cover)		74		66
Red maple	87	2.0	90	3.0
Black spruce	80	9.2	100	6.7
Velvet-leaf blueberry	80	7.3	80	12.4
Lambkill	73	12.3	100	20.3
Serviceberry	73	0.5	60	0.1
Wild raisin	67	1.2	80	1.0
White pine	60	0.1	30	0.1
Lowbush blueberry	53	2.2	70	5.1
Red oak	40	0.1	20	0.1
Rhodora	33	5.6	40	2.5
Balsam fir	33	2.2	30	2.0
Huckleberry	33	1.2	20	2.1
False holly	27	1.4	50	2.4
Grey birch	13	0.5	40	0.1
Labrador tea	13	0.1	20	2.5
Shrub Layer (Mean % Cover)		30		49
Bracken	87	20.2	90	33.9
Teaberry	73	1.3	90	2.1
Bunchberry	53	5.8	80	12.8
Wild lily-of-the-valley	47	3.1	20	0.3
Mayflower	47	0.2	60	1.3
Sarsaparilla	33	0.2		
Pink lady's slipper	33	0.1	30	0.1
Cow-wheat	27	0.1	30	0.2
Partridge-berry	27	0.1	20	0.1
Starflower	27	0.1	30	0.1
False violet	13	0.1	40	0.2
Indian pipe	13	0.1	20	0.1
Painted trillium	13	0.1	20	0.1
Goldthread	7	0.1	30	0.6
Herb Layer (Mean % Cover)		24		40
Schreber's moss	87	27.8	100	64.7
Wavy dicranum	87	4.9	100	3.3
Bazzania	33	0.7	30	1.1
Hypnum moss	27	0.3		
Broom moss	27	0.1	30	0.3
Stair-step moss	20	1.7	30	4.7
Ladies' tresses	20	0.4	50	2.2
Grey reindeer lichen	13	0.1	60	0.7
Cup lichens	7	0.1	20	0.3
Flat topped sphagnum			20	1.5
Bryo-Lichen Layer (Mean % Cover)		30		72

Distinguishing Features

Red pine is diagnostic for this vegetation type found with scattered black spruce. Ericaceous species such as lambkill, blueberry and rhodora are common. In the variant, SP2a, black spruce is co-dominant with red pine. A needle carpet condition exists in stands with closed canopies.



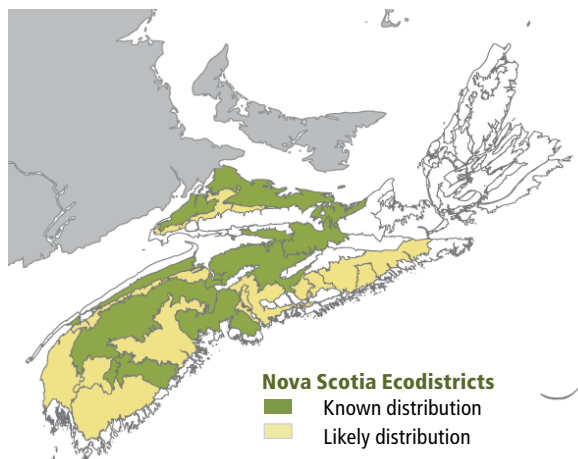
Bracken

Site Characteristics

Slope Position: Level³ Upper³ Middle² Other²
 Surface Stoniness: (Non - Slightly)⁸ (Moderately)¹ (Very - Excessively)¹
 Bedrock Outcrop: (Non-rocky)¹⁰
 Elevation Range: 9 - 199m
 Slope Gradient: Gentle⁵ Level³ Moderate¹ nd¹
 Aspect: North² East² South² West² None²
 Exposure: Moderate¹⁰
 Microtopography: Slightly⁶ Moderately² Level¹ Strongly¹
 Drainage: Well⁴ Imperfect² Moderately well² Rapid²

Soil Characteristics

Soil Type: ST¹ ST² Other²
 Parent Material: Glacial till⁶ Glaciofluvial³ Till/Bedrock¹
 Rooting Depth (cm): (<30)⁴ (30-45)¹ (>45)⁴ nd¹
 Duff Thickness (cm): (0-5)¹ (6-10)⁴ (11-20)⁴ nd¹



Nova Scotia Ecodistricts
 ■ Known distribution
 ■ Likely distribution