

## SP6

### Black spruce – Red maple / Bracken – Sarsaparilla

*Picea mariana* – *Acer rubrum* /  
*Pteridium aquilinum* – *Aralia nudicaulis*

n=7



Thomson Station,  
Cumberland County

**Concept:** This early to mid-successional Vegetation Type (VT) supports a mixedwood canopy and a relatively broad suite of herbaceous plants compared to other black spruce dominated VTs. Black spruce – Red maple / Bracken – Sarsaparilla usually follows stand-replacing disturbance events such as fire, windthrow or harvesting.

**Vegetation:** Black spruce is the dominant overstory tree, but red maple (with its greater potential for crown expansion) also occupies a large proportion of the canopy. White birch, balsam fir, hybrid (red/black) spruce, trembling aspen and white pine can also be found in this VT. Regenerating black spruce and balsam fir dominate the shrub layer along with wild raisin, lambkill, velvet-leaf blueberry and false holly. Bracken and bunchberry are the main species in the herb layer, but a variety of other plants can also be found including sarsaparilla, teaberry and starflower. Bryophyte coverage is generally low with leaf litter dominating the forest floor.

#### Ecological Features

This forest occurs as small to large patches in many parts of the province. It can exhibit closed or open canopies, depending on past disturbances and the degree of surface stoniness, which is often excessive in this ecosystem. Black spruce has intermediate shade

tolerance and does not seed well under closed canopies; however vegetative regeneration by layering is common especially where there is a thick duff layer and adequate moisture. Dwarf mistletoe sometimes creates dense witches brooms, providing important

nest and rest areas for small mammals. Mature forests develop abundant old man's beard, a lichen sought for nest material by northern parula warblers and other species, and for winter food by deer foraging on fallen trees.

**Environmental Setting:** SP6 is associated with fresh to moist, nutrient poor soils. This VT can be found throughout Nova Scotia on a variety of soils with low nutrient status. This VT is widespread and common across the Maritime provinces.

**Successional Dynamics:** Nutrient poor soils and stand-replacing disturbances strongly shape both VT canopy structure and successional patterns. This generally even-aged VT usually follows stand-replacing disturbances, with harvesting the most common cause. In the absence of similar disturbance events, SP6 may succeed to a more softwood dominant stand with SP4a (White pine / Blueberry / Bracken variant Black spruce) and SP5 (Black spruce / Lambkill / Bracken) possible outcomes. SP5 is the edaphic climax for this successional pathway.

## Characteristic Plants

SP6

	Freq. (%)	Cover (%)
Black spruce	100	34.0
Red maple	100	19.7
White birch	86	3.7
White pine	57	6.8
Balsam fir	43	8.7
Large-tooth aspen	29	6.0
Grey birch	14	15.0
Red oak	14	8.0
Jack pine	14	5.0
Red pine	14	3.0
Red spruce	14	3.0
White spruce	14	0.1
<b>Tree Layer (Mean % Cover)</b>		<b>71</b>
Black spruce	100	7.9
Balsam fir	86	14.9
Lambkill	86	11.3
Red maple	86	2.0
Wild raisin	86	0.5
Velvet-leaf blueberry	71	2.5
Red oak	71	0.1
Lowbush blueberry	57	6.4
White pine	43	0.7
False holly	43	0.2
Serviceberry	43	0.1
Striped maple	29	0.4
Willows	29	0.1
<b>Shrub Layer (Mean % Cover)</b>		<b>46</b>
Bunchberry	100	5.2
Starflower	100	0.3
Bracken	86	6.2
Wild lily-of-the-valley	71	1.0
Pink lady's slipper	71	0.1
Teaberry	57	4.6
Sarsaparilla	57	1.1
Goldthread	43	0.5
Bluebead lily	43	0.1
Ground pine	43	0.1
Mayflower	43	0.1
Partridge-berry	43	0.1
Twinflower	43	0.1
Interrupted fern	29	1.8
Bristly club-moss	29	0.1
Indian cucumber root	29	0.1
New York fern	29	0.1
<b>Herb Layer (Mean % Cover)</b>		<b>16</b>
Schreber's moss	100	10.2
Hypnum moss	71	5.5
Bazzania	71	5.1
Wavy dicranum	71	2.5
Broom moss	71	1.0
Hair-cap moss	71	1.0
Ladies' tresses	43	9.0
Stair-step moss	43	5.5
Grey reindeer lichen	43	0.1
<b>Bryo-Lichen Layer (Mean % Cover)</b>		<b>28</b>

## Distinguishing Features

A mixedwood forest usually dominated by black spruce with a significant component of red maple and scattered other species. The shrub and herb layer is indicative of poor and dry to fresh conditions represented by lambkill and bracken. Moss cover is reduced as red maple cover increases.



Black spruce cones

## Site Characteristics

Slope Position:	Upper <sup>4</sup> Lower <sup>3</sup> Middle <sup>3</sup>
Surface Stoniness:	(Non - Slightly) <sup>4</sup> (Very - Excessively) <sup>4</sup> (Moderately) <sup>2</sup>
Bedrock Outcrop:	(Non-rocky) <sup>7</sup> (Slightly - Moderately) <sup>3</sup>
Elevation Range:	46 - 187m
Slope Gradient:	Gentle <sup>6</sup> Moderate <sup>3</sup> nd <sup>1</sup>
Aspect:	North <sup>4</sup> East <sup>2</sup> West <sup>4</sup>
Exposure:	Moderate <sup>10</sup>
Microtopography:	Moderately <sup>8</sup> Slightly <sup>3</sup> Level <sup>1</sup>
Drainage:	Well <sup>8</sup> Imperfect <sup>1</sup> Moderately well <sup>1</sup>

## Soil Characteristics

Soil Type:	ST2 <sup>8</sup> ST3-G <sup>1</sup> ST16 <sup>1</sup>
Parent Material:	Glacial till <sup>8</sup> Till/Bedrock <sup>1</sup> nd <sup>1</sup>
Rooting Depth (cm):	(<30) <sup>3</sup> (30-45) <sup>2</sup> (>45) <sup>4</sup> nd <sup>1</sup>
Duff Thickness (cm):	(0-5) <sup>1</sup> (6-10) <sup>5</sup> (11-20) <sup>3</sup> nd <sup>1</sup>

