

## White spruce / Wood goldenrod / Shaggy moss

*Picea glauca* / *Solidago flexicaulis* /  
*Rhytidiadelphus triquetrus*

n=11



Wallace River,  
Lower Wentworth,  
Cumberland County

**Concept:** The White spruce / Wood goldenrod / Shaggy moss forest features prominent white spruce, variable shrub and herb development, and moderate to high bryophyte cover. Site conditions suggest this forest floods less frequently and/or for shorter durations than other flooded forest ecosystems in Nova Scotia. The ecosystem has some boreal affinity but differs from boreal floodplain forests by its array of temperate species (e.g. white ash, sugar maple, and plants such as sensitive fern and wood goldenrod).

**Vegetation:** Canopy layers are heavily dominated by white spruce. Elm, white and yellow birch, white ash, sugar maple and balsam fir may be scattered with low cover or restricted to the understory. Black ash is an infrequent associate. Shrub cover is low to moderate depending on disturbance history, stand size and adjacent land use. Compared to most other flooded forests of Nova Scotia, herbaceous development is relatively low, but more actively flooded, usually moister, and more northern stands support higher herb cover. Mean bryophyte cover is the highest of any flooded forest type. Shaggy moss is the only common species, but some stands support high levels of *Atrichum* moss.

### Ecological Features

This ecosystem displays a unique combination of upland and riparian features, and is the only floodplain forest dominated by an evergreen tree species. Infrequent and/or low duration floods promote favourable habitat

conditions for ground bryophytes, fungi and some rare vascular plants. Stands may be important deer yards in cooler areas of Cape Breton and northern Nova Scotia. This ecosystem promotes riparian connectivity, reduces erosion

**Environmental Setting:** FP6 is mainly associated with fresh to fresh-moist, nutrient rich alluvium soils. This Vegetation Type (VT) is most often found in Cape Breton, but can also occur in central and northern areas of Nova Scotia. Flood cycles are intermittent or of short duration. Soils are usually deep with low coarse fragment content and thin forest floor. FP6 is uncommon across northern and central New Brunswick, but absent from Prince Edward Island.

**Successional Dynamics:** The White spruce / Wood goldenrod / Shaggy moss forest is an early to mid-successional ecosystem. Stands may succeed shrub and herb dominated vegetation, after floodplain formation, or after some level of human disturbance (usually agriculture). On most sites FP6 is expected to perpetuate or transition to FP4 (Balsam poplar – White spruce / Ostrich fern – Cow-parsnip). Stands on relatively inactive floodplains may eventually succeed to an upland forest type. Disturbance agents include flood events, insects and disease (especially spruce bark beetle) and harvesting.

of stream channels and banks, and augments levels of coarse woody debris and organic matter into adjacent aquatic habitats. Rare plant potential is low.

## Characteristic Plants

FP6

	Freq. (%)	Cover (%)
White spruce	100	50.5
White ash	64	7.9
White birch	36	7.3
Elm	36	2.0
Balsam fir	27	10.3
Yellow birch	27	7.3
Black cherry	18	17.0
Balsam poplar	18	16.0
White pine	18	8.0
Sugar maple	18	6.0
Red maple	18	4.0
<b>Tree Layer (Mean % Cover)</b>		<b>74</b>
Sugar maple	91	3.9
White ash	82	17.1
Balsam fir	55	3.7
Red maple	45	2.0
Wild raisin	45	0.1
Choke cherry	36	4.0
Striped maple	36	2.5
Speckled alder	36	1.3
Beaked hazelnut	36	0.8
Fly-honeysuckle	36	0.6
White spruce	27	2.5
Yellow birch	27	1.5
<b>Shrub Layer (Mean % Cover)</b>		<b>26</b>
Wood goldenrod	73	1.1
Bladder sedge	73	0.7
Sensitive fern	64	3.1
Drooping wood sedge	64	0.9
Meadow-rue	64	0.8
Starflower	64	0.1
Ostrich fern	55	2.8
Common speedwell	55	1.0
Calico aster	55	0.3
Coltsfoot	45	3.4
Lady fern	45	2.4
Tall white aster	45	1.9
Evergreen wood fern	45	1.8
Short husk	45	1.0
Wild lily-of-the-valley	45	0.5
Long-stalked sedge	36	2.0
Creeping buttercup	36	0.8
Dwarf raspberry	36	0.8
Wood-sorrel	36	0.8
Red baneberry	36	0.1
Violets	27	20.1
Northern beech fern	27	6.3
Spinulose wood fern	27	3.5
Bloodroot	27	1.7
New York fern	27	1.7
Cow-parsnip	27	0.7
Wood aster	27	0.7
Jewelweed	27	0.5
Stinking Willie	27	0.4
<b>Herb Layer (Mean % Cover)</b>		<b>30</b>
Shaggy moss	82	36.0
Schreber's moss	45	7.2
Stair-step moss	27	19.0
<b>Bryo-Lichen Layer (Mean % Cover)</b>		<b>41</b>

## Distinguishing Features

Sites for this softwood forest occupy a floodplain or river terrace setting that is flooded less frequently than other floodplain forest types. Mosses are common, including shaggy, stair-step and Schreber's. Evidence of recent flooding is not always present.



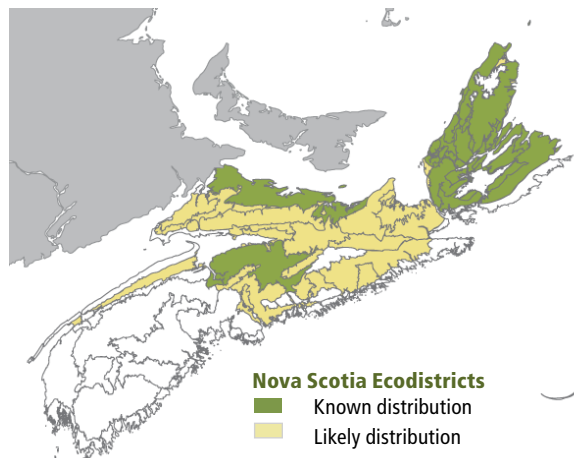
Meadow-rue

## Site Characteristics

Slope Position:	Level <sup>10</sup>
Surface Stoniness:	(Non - Slightly) <sup>9</sup> (Moderately) <sup>1</sup>
Bedrock Outcrop:	(Non-rocky) <sup>10</sup>
Elevation Range:	10 - 96m
Slope Gradient:	Level <sup>10</sup>
Aspect:	None <sup>10</sup>
Exposure:	Sheltered <sup>4</sup> Mod. sheltered <sup>3</sup> Moderate <sup>2</sup> nd <sup>1</sup>
Microtopography:	Level <sup>8</sup> Slightly <sup>2</sup>
Drainage:	Well <sup>4</sup> Imperfect <sup>3</sup> Moderately well <sup>2</sup> Rapid <sup>1</sup>

## Soil Characteristics

Soil Type:	ST8 <sup>3</sup> ST9 <sup>3</sup> ST8-C <sup>2</sup> ST11 <sup>1</sup> nd <sup>1</sup>
Parent Material:	Alluvium <sup>10</sup>
Rooting Depth (cm):	(<30) <sup>1</sup> (30-45) <sup>2</sup> (>45) <sup>5</sup> nd <sup>2</sup>
Duff Thickness (cm):	(0-5) <sup>5</sup> (6-10) <sup>1</sup> nd <sup>4</sup>



**Nova Scotia Ecodistricts**  
 ■ Known distribution  
 ■ Likely distribution