

C05

White birch – Balsam fir / Foxberry – Wood aster

Betula papyrifera – *Abies balsamea* / *Vaccinium
vitis-idaea* – *Aster acuminatus*

n=2



Waddens Cove,
Cape Breton County

Concept: This mid-successional Vegetation Type (VT) has an overstory dominated by white birch, usually with a strong component of balsam fir. In western Nova Scotia, trembling aspen, red maple and white spruce can also be common in the overstory. Extensive conifer regeneration often dominates the shrub layer. White birch – Balsam fir / Foxberry – Wood aster is usually associated with more sheltered sites across the Atlantic Coastal ecoregion.

Vegetation: White birch is the dominant overstory tree, along with balsam fir and/or white spruce. Scattered red maple and black spruce are also typical and minor amounts of heart-leaf birch—a species usually confined to Nova Scotia’s coastal and highland ecoregions—is sometimes in the overstory. The shrub layer is often dominated by regenerating balsam fir. Other shrubs include wild raisin, velvet-leaf blueberry, lambkill, false holly and mountain-ash (which can sometimes attain overstory height and crown breadth). Herb layer diversity is low; only bunchberry, goldthread, creeping snowberry and foxberry are common. The bryophyte layer is well developed for a mixedwood VT, with Schreber’s moss the main species. *Bazzania* cover can also be high where coarse woody debris has accumulated on the forest floor.

Ecological Features

This mixedwood patch forest of white birch, red maple and balsam fir is primarily associated with the Maritime Boreal Atlantic Coastal ecoregion. It is usually found inland, protected by

seaward stands of spruce and fir forest or on sites sheltered from coastal winds and salt spray. The short longevity and shade intolerance of white birch, relative to red maple, can produce uneven-aged

canopy structures. Older stands with balsam fir may have the endangered boreal felt lichen and other uncommon cyanolichens.

Environmental Setting: C05 is associated with fresh to moist, nutrient medium to rich soils of glacial origin. These soils are generally medium to coarse textured. This VT occurs on relatively well drained upper and middle slopes of gentle terrain along the Atlantic coastline. Sites are generally more sheltered than those associated with softwood dominated VTs in this group (C01 – C04). The VT likely occurs in coastal areas of both New Brunswick and Prince Edward Island, but has not been documented.

Successional Dynamics: C05 is a mid-successional VT dominated by white birch and balsam fir and/or white spruce. This even-aged VT typically follows stand-replacing disturbances such as windthrow, breakage, insect infestation and harvesting. Although still influenced by wind and exposure, like other coastal VTs, increased shelter allows hardwood tree species to rise above or co-dominate the canopy with softwoods on C05 sites. Depending on the disturbance agent and its return interval, and on the degree of sheltering, C05 may succeed to C06 (Red maple – White birch / Bunchberry – Sarsaparilla) or transition to C04 (Balsam fir / Foxberry – Twinflower).

Characteristic Plants	C05	
	Freq. (%)	Cover (%)
White birch	100	41.5
Black spruce	100	4.5
Red maple	100	2.5
Balsam fir	50	30.0
White spruce	50	20.0
Tree Layer (Mean % Cover)		74
Velvet-leaf blueberry	100	3.8
Lambkill	100	3.3
Wild raisin	100	2.1
Black spruce	100	0.8
White birch	100	0.2
False holly	100	0.1
Balsam fir	50	15.0
White spruce	50	1.5
Bush-honeysuckle	50	0.8
Red maple	50	0.4
Red-berried elder	50	0.3
Mountain-ash	50	0.1
Serviceberry	50	0.1
Shrub Layer (Mean % Cover)		20
Bunchberry	100	9.5
Goldthread	100	3.3
Creeping snowberry	100	1.8
Foxberry	100	0.6
Starflower	100	0.6
Wild lily-of-the-valley	100	0.6
Twinflower	100	0.5
Wood aster	100	0.1
Bracken	50	1.0
Evergreen wood fern	50	0.5
Bluebead lily	50	0.1
Mayflower	50	0.1
Spinulose wood fern	50	0.1
Herb Layer (Mean % Cover)		18
Schreber's moss	100	49.5
Broom moss	100	4.5
Hair-cap moss	100	2.0
Cup lichens	100	0.6
Bazzania	50	8.0
Stair-step moss	50	7.0
Grey reindeer lichen	50	3.0
Hypnum moss	50	0.5
Bryo-Lichen Layer (Mean % Cover)		66

Distinguishing Features

White birch and balsam fir are common in the overstory of this coastal mixedwood forest. The presence of mountain-ash, heart-leaf birch, foxberry and bazzania are indicators of a coastal influence though not always present. Wood aster is common. Moss coverage on the forest floor is still extensive even with the hardwood overstory.



Foxberry
(Breagh Quigley)

Site Characteristics

Slope Position:	Middle ⁵ Upper ⁵
Surface Stoniness:	(Very - Excessively) ¹⁰
Bedrock Outcrop:	(Non-rocky) ⁵ (Slightly - Moderately) ⁵
Elevation Range:	17 - 24m
Slope Gradient:	Gentle ⁵ Moderate ⁵
Aspect:	West ¹⁰
Exposure:	Exposed ⁵ Mod. exposed ⁵
Microtopography:	Level ⁵ Slightly ⁵
Drainage:	Well ¹⁰

Soil Characteristics

Soil Type:	ST ² ST ² -L ⁵
Parent Material:	Glacial till ⁵ Till/Bedrock ⁵
Rooting Depth (cm):	(30-45) ¹⁰
Duff Thickness (cm):	(0-5) ¹⁰

