

White spruce / Bayberry

Picea glauca / *Myrica pensylvanica*

n=3



Carters Beach,
Queens County

Concept: This white spruce dominated woodland is found on coastal sand dunes, where it marks the last stage of dune vegetation succession. Crown closure is variable but usually moderate. Woody species contribute largely to understory stand structure, except in mature occurrences where increased bryophyte cover is typical. Stands with high lichen cover have been observed but have not been surveyed and are not currently recognized in this classification. Under denser canopy growth, understory vegetation is usually sparse and discontinuous.

Vegetation: The evergreen canopy supports high white spruce cover, and occasionally includes minor to moderate levels of white pine, black spruce and/or balsam fir. Stands have either open or closed canopies, depending on their age and degree of exposure. More open stands are characterized by increased shrub (usually bayberry) cover and scattered herbaceous plants like baltic rush and beach grass. Terric (ground dwelling) lichen cover is not characteristic except on the edges of open areas more heavily dominated by reindeer lichen species.

Ecological Features

Vertical and horizontal structure in the White Spruce/ Bayberry ecosystem is variable, but most occurrences have an open canopy and high shrub and/or herbaceous cover. On more extensive dune complexes, C07 stands sometime provide the only available forest cover. C07's occurrence at shorelines may

make it important coastal bird habitat (e.g. for fox and sharp-tailed sparrows; yellow-rumped and blackpoll warblers), epiphytic and ground lichens, and various invertebrates, among other taxonomic groups. Records from available plot data show very few plant species (e.g. adders-tongue, checkered rattlesnake plantain)

and no lichen species of conservation concern. Many dune woodlands in Nova Scotia have been impacted by recreational activities and past land-use practices (e.g. anthropogenic fire, tree harvest and farming). These impacts, and the relative rarity of C07, present important conservation challenges.

Environmental Setting: Dune forest is found at low elevation on flat and hummocky terrain. It occurs on both wind and marine deposited sands. These relatively young deposits show little mineral soil development, but evidence of leaching (thin Ae and Bfj horizons) can be found in some profiles. In addition, mature C07 stands often have continuous forest floor and moss cover. Moist dune forests have not been sampled, but may be possible on longer dunes in lower slope positions. Exposure is high; exposed stones and bedrock are very low. C07 occurs in eastern New Brunswick and on the north shore of Prince Edward Island.

Successional Dynamics: Successional dynamics of dune forest in Nova Scotia are poorly understood. This ecosystem is considered the final stage of succession on aeolian and marine landforms, but little discussion or investigation of its longer-term persistence is documented. Increased litter and humus under these older closed canopy dune forests may increase available moisture and promote species that are more characteristic of mesic coastal forests. If this scenario is valid, dune evergreen forests may advance to coastal white spruce (C01) or coastal black spruce forest (C02), depending on soil structure, nutrient and moisture availability, and topographic position.

Characteristic Plants

C07

	Freq. (%)	Cover (%)
White spruce	100	31.7
Trembling aspen	33	6.0
White pine	33	5.0
Red maple	33	3.0
Tree Layer (Mean % Cover)		36.3
Bayberry	67	10.0
Wild rose	67	7.5
Serviceberries	67	1.0
Red maple	67	0.1
Red oak	67	0.1
White spruce	33	10.0
Western poison ivy	33	2.0
Choke cherry	33	1.0
Pin cherry	33	1.0
Gooseberry family	33	0.1
Red raspberry	33	0.1
Shrub Layer (Mean % Cover)		17.2
Sarsaparilla	33	40.0
Dwarf raspberry	33	3.0
Field horsetail	33	3.0
Mouse eared hawkweed	33	3.0
Canada bluegrass	33	2.0
Tall white aster	33	2.0
Baltic rush	33	1.0
Red fescue	33	1.0
Rough goldenrod	33	1.0
Spinulose wood fern	33	1.0
Bladder sedge	33	0.5
Beach grass	33	0.1
Bunchberry	33	0.1
Coltsfoot	33	0.1
Creeping bent-grass	33	0.1
Evening primrose	33	0.1
Millet grass	33	0.1
New York aster	33	0.1
Sheep-sorrel	33	0.1
Small enchanter's nightshade	33	0.1
Strawberry	33	0.1
Sweet-scented bedstraw	33	0.1
Wild carrot	33	0.1
Woodland horsetail	33	0.1
Yarrow	33	0.1
Herb Layer (Mean % Cover)		19.7
Wavy dicranum	67	0.5
Schreber's moss	33	15.0
Broom moss	33	2.0
Plume moss	33	0.5
Stair-step moss	33	0.5
Atrichum moss	33	0.1
Bazzania	33	0.1
Pin cushion moss	33	0.1
Shaggy moss	33	0.1
Bryo-Lichen Layer (Mean % Cover)		6.5

Distinguishing Features

This coastal softwood woodland of white spruce is found on dunes and marine sands. Under very open conditions beach grass and other seashore plants are expected.



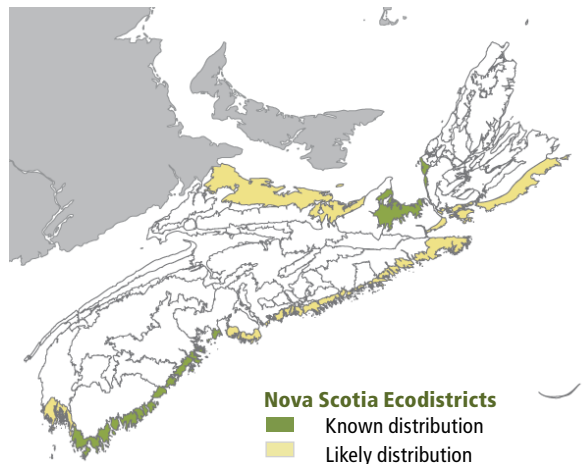
Bayberry

Site Characteristics

Slope Position:	Level ⁷ Upper ³
Surface Stoniness:	(Non - Slightly) ¹⁰
Bedrock Outcrop:	(Non-rocky) ¹⁰
Elevation Range:	2 - 25m
Slope Gradient:	Level ⁷ nd ³
Aspect:	East ³ None ⁷
Exposure:	Exposed ⁷ Mod. exposed ³
Microtopography:	Level ¹⁰
Drainage:	Rapid ⁷ Well ³

Soil Characteristics

Soil Type:	ST1 ¹⁰
Parent Material:	Aeolian ¹⁰
Rooting Depth (cm):	(>45) ⁷ nd ³
Duff Thickness (cm):	(0-5) ³ (6-10) ³ nd ³



Nova Scotia Ecodistricts

- Known distribution
- Likely distribution