Castlereagh,
Colchester County

SH6

Red spruce – Balsam fir / Stair-step moss – Sphagnum

Picea rubens – Abies balsamea /
Hylocomium splendens – Sphagnum spp.

n=23

Concept: This mid-successional Vegetation Type (VT) is very similar to SH5 (Red spruce – Balsam fir / Schreber's moss), but occurs on moister sites. Tree cover is mainly red spruce with varying amounts of balsam fir. Typically minor amounts of red maple and white birch indicate recent disturbance events, whereas yellow birch, white pine and hemlock indicate development toward a later successional stage. Red spruce – Balsam fir / Stair-step moss – Sphagnum is a typical Acadian softwood VT found on moist, zonal sites in Nova Scotia.

Vegetation: Red spruce is usually the dominant overstory tree, although balsam fir may be abundant in some stands. Both species are usually well represented as regeneration in the shrub layer. Hybrid (red/black) spruce can also be found on more marginal sites. Low light availability often reduces the abundance of woodland flora, but moist soils associated with this VT generally support a higher diversity of species than drier red spruce types. In more moist sites, herbs like cinnamon fern, creeping snowberry, New York fern, interrupted fern and three seeded sedge will be present. The bryophyte layer is characterized by extensive coverage of mainly stair-step moss and Schreber's moss, with sphagnum moss present in wetter parts of the stand.

Environmental Setting: SH6 is mainly associated with fresh-moist to moist, nutrient medium soils of glacial origin. These soils are generally medium to coarse textured and often stony. This VT is found throughout mainland Nova Scotia and parts of Cape Breton. It is common in New Brunswick but infrequent across Prince Edward Island.

Successional Dynamics: SH6 is a predominantly even-aged, mid-successional VT dominated by red spruce. Usually SH6 develops from advanced regeneration that was present at the time of stand-level disturbance. If advanced regeneration is not present (or has been destroyed), SH6 can also develop from other vegetation types including IH3 (Large-tooth aspen / Christmas fern – New York fern), IH4 (Trembling aspen / Wild raisin / Bunchberry), IH5 (Trembling aspen – White ash / Beaked hazelnut / Christmas fern), IH6 (White birch – Red maple / Sarsaparilla – Bracken) and MW4 (Balsam fir – Red maple / Wood sorrel – Goldthread). This VT may succeed to later successional types such as SH1 (Hemlock / Pin cushion moss/ Needle carpet), SH2 (Hemlock – White pine / Sarsaparilla) and SH3 (Red spruce – Hemlock / Wild lily-of-the-valley).

Ecological Features

This closed canopy forest typically occurs over hundreds of hectares, forming matrix in many ecoregions. Balsam fir and red spruce are very shade-tolerant in the understory. Good seed crops in red spruce start at age 35-45, and the species does not regenerate well before age 50. Mature forests may provide habitat for spruce grouse, grey jays, red squirrels and flying squirrels. Large trees may provide nest sites for pileated and black-backed woodpeckers, barred owls and northern goshawks. South facing slopes may provide winter cover for deer. Young forests are preferred habitat for snowshoe hare. Creeping rattlesnake plantain is the only plant species of conservation concern known from this VT.

Characteristic Plants	SH6	
	Freq. (%)	Cover (%)
Red spruce	100	54.3
Balsam fir	78	17.4
Red maple	70	5.4
Yellow birch	17	5.5
White birch	17	1.9
Black spruce	13	16.0
White pine	13	2.0
Tree Layer (Mean % Cover)		**76**
Balsam fir	100	5.6
Red spruce	91	4.5
Red maple	74	0.5
Lambkill	70	1.2
Velvet-leaf blueberry	57	0.8
False holly	52	0.6
Wild raisin	39	0.1
Serviceberry	35	0.1
White pine	30	0.3
White birch	22	1.0
Lowbush blueberry	22	0.4
Shrub Layer (Mean % Cover)		**13**
Goldthread	83	2.5
Wild lily-of-the-valley	74	0.6
Cinnamon fern	70	2.8
Bunchberry	70	2.1
Bracken	57	3.3
Creeping snowberry	52	0.8
Starflower	52	0.4
Painted trillium	48	0.1
Bluebead lily	43	1.2
Sarsaparilla	43	0.7
New York fern	35	2.6
Three seeded sedge	30	0.5
Twinflower	30	0.2
Wood-sorrel	26	1.1
Hay-scented fern	22	3.1
Interrupted fern	22	2.1
Evergreen wood fern	22	0.2
Herb Layer (Mean % Cover)		**13**
Schreber's moss	96	41.2
Stair-step moss	96	19.9
Bazzania	91	11.9
Ladies' tresses	65	1.1
Wavy dicranum	57	7.5
Broom moss	57	2.6
Common green sphagnum	52	11.6
Hypnum moss	52	1.5
Hair-cap moss	30	0.1
Pale fat-leaved sphagnum	26	0.9
Plume moss	22	0.1
Bryo-Lichen Layer (Mean % Cover)		**87**

Distinguishing Features

A softwood forest of abundant red spruce with varying amounts of balsam fir occurring on imperfectly drained sites. Cinnamon fern, creeping snowberry, New York fern, interrupted fern and three seeded sedge indicate moister soils. The presence of sphagnum moss can be used to identify this vegetation type.

Stair-step moss

Site Characteristics

Slope Position:	Level[7] Lower[2] Other[1]
Surface Stoniness:	(Non - Slightly)[9] (Very - Excessively)[1]
Bedrock Outcrop:	(Non-rocky)[9] (Slightly - Moderately)[1]
Elevation Range:	16 - 278m
Slope Gradient:	Level[7] Gentle[3]
Aspect:	North[1] East[2] South[1] None[6]
Exposure:	Moderate[6] Mod. exposed[3] Mod. sheltered[1]
Microtopography:	Slightly[4] Moderately[3] Level[1] Other[2]
Drainage:	Imperfect[7] Moderately well[3]

Soil Characteristics

Soil Type:	ST3[4] ST6[2] ST3-G[1] ST16[1] Other[2]
Parent Material:	Glacial till[7] Till/Bedrock[1] Other[2]
Rooting Depth (cm):	(<30)[6] (30-45)[3] (>45)[1]
Duff Thickness (cm):	(6-10)[3] (11-20)[7]