



Tidney River
Wilderness Area,
Queens County

MW2

Red spruce – Red maple – White birch / Goldthread

Picea rubens – *Acer rubrum* – *Betula papyrifera* /
Coptis trifolia

MW2a

Aspen variant

Populus grandidentata – *Populus tremuloides*

n=20

Concept: This mid-successional mixedwood Vegetation Type (VT) has an overstory co-dominated by red spruce and red maple, accompanied by lesser amounts of various other trees. There is one variant (MW2a) where aspen (trembling and/or large-tooth) co-dominates with spruce and maple. MW2 usually occurs as a result of partial harvesting or windthrow. It is a common mixedwood VT found throughout mainland Nova Scotia.

Vegetation: Red spruce and red maple are the dominant overstory trees, with either trembling or large-tooth aspen co-dominant in variant MW2a. Several shade-tolerant trees (e.g. sugar maple, beech, white pine, hemlock) are typical but lesser overstory species. The shrub layer is moderately developed and includes mainly regenerating trees, striped maple and fly-honeysuckle. The herb layer is represented by typical mixedwood forest flora, however species normally associated with poorer sites (e.g. bracken, bunchberry and goldthread) are more common in MW2 than they are in yellow birch mixedwood VTs (MW1 and MW3). Bryophyte development varies, with coverage directly related to relative softwood abundance in the overstory. Schreber's moss and stair-step moss are the main species. *Bazzania* can also be common where coarse woody debris has accumulated on the forest floor.

Environmental Setting: MW2 is mainly associated with fresh to fresh-moist, nutrient medium soils of variable texture. This VT occurs on mainland Nova Scotia wherever red spruce forests are found. It is common throughout New Brunswick but rare on Prince Edward Island.

Successional Dynamics: MW2 is a mid-successional VT that follows partial stand disturbances such as windthrow and harvesting. Earlier successional VTs may include IH4 (Trembling aspen / Wild raisin / Bunchberry) and IH6 (White birch – Red maple / Sarsaparilla – Bracken). Later successional VTs include SH3 (Red spruce – Hemlock / Wild lily-of-the-valley), MW1 (Red spruce – Yellow birch / Evergreen wood fern) and MW3 (Hemlock – Yellow birch / Evergreen wood fern). Early successional stages can be by-passed if, at the time of disturbance, advanced red spruce regeneration is present and maintained. Depending on disturbance history, this VT can be even-aged, but it will develop an uneven-aged structure as it matures. Residual trees in the overstory can provide evidence of pre-disturbance conditions and should be considered when assessing possible successional trends.

Ecological Features

This closed canopy forest typically occurs as large patches following stand or patch-scale disturbances such as clearcutting or partial harvesting. Red maple regeneration is by seed or coppice. This ecosystem provides several ecological functions including the facilitation of nutrient cycling, rapid site revegetation

after disturbance, and the establishment of nurse crops for later successional species such as red spruce, hemlock and yellow birch. Residual trees from early successional stages are common and may provide notable wildlife habitat values and increased forest structural complexity. Large trees can provide nest

sites for pileated woodpeckers, barred owls and northern goshawks. Downed coarse woody debris may provide cover for red-backed salamanders and small mammals. Mixedwood forests may also provide both shelter and food for overwintering deer.

Characteristic Plants	MW2		MW2a	
	Freq. (%)	Cover (%)	Freq. (%)	Cover (%)
Red spruce	100	32.1	100	34.0
Red maple	100	24.0	80	16.5
Balsam fir	67	10.1	40	15.0
White birch	53	12.1	40	7.5
Yellow birch	47	9.3	20	0.1
Black spruce	20	12.7		
Sugar maple	20	3.3		
Hemlock	13	6.0	20	12.0
Beech	13	5.0	20	0.1
White pine	13	4.0	40	2.5
Large-tooth aspen	7	15.0	80	33.5
Trembling aspen	7	10.0	40	14.0
Red oak	7	8.0	40	2.5
Tree Layer (Mean % Cover)		81		93
Balsam fir	100	11.8	100	5.7
Red spruce	87	4.0	60	4.4
Red maple	67	1.4	100	1.1
Yellow birch	47	1.3	20	0.1
Striped maple	47	0.4	60	2.5
Wild raisin	47	0.1	40	0.1
White pine	40	0.4	60	0.2
Fly-honeysuckle	40	0.1	40	0.1
Beech	33	1.7	40	0.1
Lowbush blueberry	33	1.0		
False holly	33	0.2		
Lambkill	27	2.3	20	2.0
Velvet-leaf blueberry	27	0.6	60	0.7
Sugar maple	13	1.0	20	0.1
Hemlock	13	0.5	40	0.1
Serviceberry	13	0.3	80	0.1
Red oak	7	0.1	60	0.2
Shrub Layer (Mean % Cover)		20		13
Starflower	100	1.7	80	1.1
Wild lily-of-the-valley	87	1.3	100	0.5
Goldthread	73	3.2	20	1.0
Bracken	60	5.1	60	3.3
Sarsaparilla	60	3.2	60	0.7
Painted trillium	60	0.1	60	0.1
Bunchberry	53	3.4	40	5.0
Evergreen wood fern	53	2.6	40	0.1
Partridge-berry	53	0.1	20	0.1
Hay-scented fern	47	5.9	20	0.1
New York fern	40	14.8	40	0.1
Cinnamon fern	40	2.9		
Twinflower	40	0.7	20	1.5
Bluebead lily	40	0.3	60	0.1
Indian cucumber root	40	0.1	40	0.1
Pink lady's slipper	40	0.1	40	0.1
Wood aster	33	0.1	40	0.3
Wood-sorrel	27	7.6	20	2.0
Herb Layer (Mean % Cover)		28		8
Bazzania	93	5.3	80	2.9
Schreber's moss	87	8.0	80	1.3
Hypnum moss	87	2.5	80	1.4
Broom moss	87	1.9	100	0.4
Stair-step moss	67	8.3	60	0.8
Hair-cap moss	47	0.3	80	0.3
Wavy dicranum	40	2.3	20	0.3
Bryo-Lichen Layer (Mean % Cover)		23		6

Distinguishing Features

Red spruce and early successional species such as red maple, white birch and aspen occur in this mixedwood forest on well drained soils. For the variant MW2a, aspen replaces much of the red maple. Bracken fern, bunchberry and goldthread are common.



Goldthread [John Gillis]

Site Characteristics

Slope Position:	Crest ² Lower ² Middle ² Upper ² Other ¹ nd ¹
Surface Stoniness:	(Non - Slightly) ⁵ (Moderately) ³ (Very - Excessively) ²
Bedrock Outcrop:	(Non-rocky) ⁹ (Slightly - Moderately) ¹
Elevation Range:	24 - 211m
Slope Gradient:	Gentle ⁶ Level ² Other ¹ nd ¹
Aspect:	North ³ East ¹ South ¹ West ³ None ¹ nd ¹
Exposure:	Moderate ⁶ Mod. exposed ³ Mod. sheltered ¹
Microtopography:	Moderately ⁴ Slightly ² Strongly ² Level ¹ nd ¹
Drainage:	Moderately well ⁵ Imperfect ² Well ² nd ¹

Soil Characteristics

Soil Type:	ST2 ³ ST3-L ² ST6 ² ST2-G ¹ ST3 ¹ Other ¹
Parent Material:	Glacial till ⁰
Rooting Depth (cm):	(<30) ³ (30-45) ³ (>45) ⁴
Duff Thickness (cm):	(0-5) ¹ (6-10) ⁵ (11-20) ³ nd ¹

