

## MW4

### Balsam fir – Red maple / Wood sorrel – Goldthread

*Abies balsamea* – *Acer rubrum* /  
*Oxalis acetosella* – *Coptis trifolia*

n=12



Moose River,  
Pictou County

**Concept:** This early to mid-successional mixedwood Vegetation Type (VT) has an overstory co-dominated by balsam fir and red maple, with a variety of other associates. MW4 is a broadly defined VT that follows stand-replacing disturbance events such as windthrow or harvesting. Residual trees (survivors of past disturbance events) should not be used for classifying this VT from others. Due to the short-lived nature of balsam fir, this VT often has significant levels of coarse wood debris and/or numerous snags. Balsam fir – Red maple / Wood sorrel – Goldthread is a commonly found VT in eastern Nova Scotia.

**Vegetation:** Balsam fir and red maple are the dominant overstory trees, with lesser red spruce, yellow birch, white birch, white spruce and/or aspen. Minor levels of black spruce can also be found on some sites. The shrub layer is moderately developed and includes mainly regenerating trees (especially balsam fir and red maple). The herb layer is represented by common forest flora (e.g. wild lily-of-the-valley, starflower, bluebead lily, goldthread and wood sorrel). Bracken, hay-scented fern and cinnamon fern can also be found – their presence and relative abundance reflecting available moisture. Bryophyte development varies, with coverage directly related to relative softwood abundance in the overstory. Schreber’s moss, stair-step moss and broom

moss are the main species. Bazzania can also be common where coarse woody debris has accumulated on the forest floor.

**Environmental Setting:** MW4 is mainly associated with fresh to moist, nutrient medium soils of variable texture. This VT is common throughout eastern Nova Scotia and is scattered elsewhere. It is common throughout the Maritime provinces, but less frequent across higher elevation of northern New Brunswick.

**Successional Dynamics:** MW4 is an early to mid-successional VT dominated by balsam fir and red maple. It is an even-aged forest that usually follows stand-level disturbances such as windthrow and harvesting. MW4 can sometimes renew itself through natural stand deterioration (facilitated by minor insect predation, disease and natural senescence) followed by development of advanced regeneration. Over time, and with possible increases in red spruce presence, MW4 could succeed to other VTs including: SH5 (Red spruce – Balsam fir / Schreber’s moss), SH6 (Red spruce – Balsam fir / Stair-step moss – Sphagnum), SH3 (Red spruce – Hemlock / Wild lily-of-the-valley) or MW1 (Red spruce – Yellow birch / Evergreen wood fern). Residuals 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-level disturbances such as fire or harvesting. Regeneration is by seed and 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. Mixedwood forests can also provide both shelter and food for

overwintering deer. Sapling stage forests are an ideal habitat for snowshoe hare, and are a favoured browsing habitat for moose and deer. Red maple provides one of the most important early and abundant sources of pollen and nectar for a wide range of insects.

## Characteristic Plants

MW4

	Freq. (%)	Cover (%)
Red maple	100	29.8
Balsam fir	92	36.0
Red spruce	42	12.4
Yellow birch	42	8.2
White spruce	33	8.0
Trembling aspen	25	5.7
White birch	25	4.0
Black spruce	17	10.0
<b>Tree Layer (Mean % Cover)</b>		<b>82</b>
Balsam fir	100	3.9
Red maple	92	1.8
Velvet-leaf blueberry	58	0.2
Serviceberry	50	0.1
Red spruce	42	5.4
False holly	42	0.7
Lambkill	42	0.4
Yellow birch	33	1.3
Striped maple	33	0.5
Wild raisin	33	0.1
Trembling aspen	25	0.3
Red oak	25	0.2
Fly-honeysuckle	25	0.1
Lowbush blueberry	25	0.1
<b>Shrub Layer (Mean % Cover)</b>		<b>13</b>
Wild lily-of-the-valley	100	2.6
Starflower	92	1.3
Goldthread	83	2.7
Bunchberry	75	5.0
Wood-sorrel	67	12.6
Cinnamon fern	67	3.2
Sarsaparilla	67	1.5
Evergreen wood fern	67	1.3
Bluebead lily	67	0.7
New York fern	58	5.1
Wood aster	58	0.8
Bracken	50	2.6
Interrupted fern	42	1.6
Ground pine	42	0.3
Hay-scented fern	33	0.2
Indian pipe	33	0.1
Twinflower	25	2.4
Bristly club-moss	25	0.2
Partridge-berry	25	0.2
Violets	25	0.2
White panicle aster	25	0.1
<b>Herb Layer (Mean % Cover)</b>		<b>31</b>
Broom moss	100	1.3
Schreber's moss	83	14.7
Stair-step moss	83	13.8
Bazzania	83	6.9
Common green sphagnum	58	2.7
Hypnum moss	58	0.9
Hair-cap moss	50	2.2
Wavy dicranum	42	3.3
Grey reindeer lichen	25	0.1
<b>Bryo-Lichen Layer (Mean % Cover)</b>		<b>36</b>

## Distinguishing Features

This mixedwood forest of balsam fir and red maple establishes after a stand-level disturbance. The herbaceous layer is generally comprised of common woodland plants such as wild lily-of-the-valley, starflower, bluebead lily, goldthread and wood sorrel.



Bluebead lily

## Site Characteristics

Slope Position:	Level <sup>5</sup> Lower <sup>2</sup> Upper <sup>2</sup> Toe <sup>1</sup>
Surface Stoniness:	(Non - Slightly) <sup>8</sup> (Moderately) <sup>1</sup> (Very - Excessively) <sup>1</sup>
Bedrock Outcrop:	(Non-rocky) <sup>10</sup>
Elevation Range:	39 - 252m
Slope Gradient:	Level <sup>6</sup> Gentle <sup>4</sup>
Aspect:	North <sup>3</sup> East <sup>1</sup> South <sup>1</sup> West <sup>2</sup> None <sup>3</sup>
Exposure:	Moderate <sup>6</sup> Mod. exposed <sup>2</sup> Mod. sheltered <sup>2</sup>
Microtopography:	Moderately <sup>6</sup> Slightly <sup>4</sup>
Drainage:	Imperfect <sup>6</sup> Moderately well <sup>4</sup>

## Soil Characteristics

Soil Type:	ST6 <sup>5</sup> ST2 <sup>1</sup> ST3 <sup>1</sup> ST5 <sup>1</sup> ST9 <sup>1</sup> ST12 <sup>1</sup>
Parent Material:	Glacial till <sup>10</sup>
Rooting Depth (cm):	(<30) <sup>3</sup> (30-45) <sup>7</sup>
Duff Thickness (cm):	(6-10) <sup>6</sup> (11-20) <sup>3</sup> nd <sup>1</sup>

