

## IH7

### Red maple / Hay-scented fern – Wood sorrel

*Acer rubrum* / *Dennstaedtia punctilobula*  
– *Oxalis acetosella*

n=18



Tyndal Road,  
Cumberland County

**Concept:** This early to mid-successional Vegetation Type (VT) has an overstory dominated by red maple and lesser amounts of several shade-tolerant associates, possibly including sugar maple, yellow birch and/or red spruce. IH7 is also distinguished by its diverse herb layer, which is indicative of mesic Nova Scotia hardwood forests. Red maple / Hay-scented fern – Wood sorrel usually follows stand-replacing disturbances events such as fire, windthrow or clearcutting, but it can also result from partial harvesting within hardwood forests.

**Vegetation:** Red maple is the dominant overstory tree, accompanied by a lesser amount of sugar maple, yellow birch, red spruce and/or beech. The shrub layer is moderately developed and includes regenerating trees (including balsam fir), fly-honeysuckle and striped maple. The herb layer is dominated by several species of ferns, most notably hay-scented fern which can be an aggressive competitor in open, disturbed sites. Other common species include New York fern, evergreen wood fern, rose twisted stalk, Indian cucumber root, wood aster, wood sorrel, bristly and shining club-moss, and various violet species. The bryophyte layer is poorly developed.

#### Ecological Features

This early successional closed canopy hardwood forest typically develops following stand-level disturbance. Regeneration is by seed or coppice. The longevity and relatively high shade tolerance of red maple facilitate its

persistence into later successional stages. Red maple regenerates quickly as coppice and is a favoured browse by both deer and moose. It flowers before most other spring plants, providing one of the most important early and abundant

pollen and nectar sources used by a wide range of insects. With increased light availability caused by canopy disturbances, hay-scented fern can be very invasive and spread aggressively, which restricts tree regeneration.

**Environmental Setting:** IH7 is associated with fresh to moist, nutrient medium to rich soils of variable texture. This VT is found scattered throughout Nova Scotia, but is particularly common on upper slope positions within the Nova Scotia Uplands ecoregion. This VT is common in New Brunswick and on Prince Edward Island. It is the most widespread red maple forest in the Maritimes.

**Successional Dynamics:** IH7 is an early to mid-successional VT that usually follows stand-level disturbance events in hardwood forests. The main disturbance agents are typically windthrow and harvesting, including aggressive partial harvesting, which can promote coppice red maple regeneration. The smothering and competitive nature of hay-scented fern can also restrict and/or delay establishment of other hardwood species. With sufficient time between disturbance events, IH7 can succeed to TH1 (Sugar maple / Hay-scented fern), TH2 (Sugar maple / New York fern – Northern beech fern), TH6 (Red oak – Yellow birch / Striped maple) or MW1 (Red spruce – Yellow birch / Evergreen wood fern).

## Characteristic Plants

IH7

	Freq. (%)	Cover (%)
Red maple	100	66.4
Sugar maple	56	17.8
Yellow birch	56	7.3
Red spruce	33	3.8
Beech	33	3.2
White spruce	11	2.0
White ash	11	1.5
<b>Tree Layer (Mean % Cover)</b>		<b>84</b>
Balsam fir	89	4.0
Yellow birch	78	2.4
Red maple	78	1.2
Sugar maple	67	5.4
Fly-honeysuckle	56	1.1
Red spruce	44	1.2
Striped maple	39	2.2
Beech	39	0.7
White spruce	33	3.4
Wild raisin	22	0.8
White pine	22	0.3
Beaked hazelnut	22	0.1
<b>Shrub Layer (Mean % Cover)</b>		<b>15</b>
Hay-scented fern	94	48.2
Evergreen wood fern	89	6.3
Violets	89	1.2
Wild lily-of-the-valley	72	1.3
Goldthread	67	1.7
Wood-sorrel	67	1.6
Starflower	67	0.7
Sarsaparilla	56	1.1
Wood aster	56	0.6
Rose twisted stalk	56	0.5
Indian cucumber root	50	0.3
Bristly club-moss	44	4.4
Ground pine	44	0.7
Partridge-berry	44	0.7
Drooping wood sedge	44	0.1
Painted trillium	44	0.1
New York fern	39	9.0
Bluebead lily	39	0.1
Short husk	39	0.1
Christmas fern	33	2.4
Northern beech fern	33	0.9
Bunchberry	28	0.4
Shining club-moss	28	0.4
Dwarf raspberry	28	0.2
Three seeded sedge	28	0.1
Bracken	22	2.5
Cinnamon fern	22	1.0
Blue joint	22	0.1
White lettuce	22	0.1
Wood reed	22	0.1
<b>Herb Layer (Mean % Cover)</b>		<b>66</b>
Hypnum moss	67	1.8
Hair-cap moss	67	0.2
Broom moss	39	1.8
Stair-step moss	39	1.1
Fern moss	39	0.7
Bazzania	33	0.3
<b>Bryo-Lichen Layer (Mean % Cover)</b>		<b>3</b>

## Distinguishing Features

This hardwood forest on well drained soils is dominated by red maple. On better sites sugar maple, yellow birch and beech are present. Extensive hay-scented fern cover is diagnostic for this unit. New York fern and evergreen wood fern are also common.



Hay-scented fern

## Site Characteristics

Slope Position:	Middle <sup>4</sup> Upper <sup>3</sup> Crest <sup>2</sup> Level <sup>1</sup>
Surface Stoniness:	(Non - Slightly) <sup>7</sup> (Moderately) <sup>1</sup> (Very - Excessively) <sup>1</sup> nd <sup>1</sup>
Bedrock Outcrop:	(Non-rocky) <sup>9</sup> (Slightly - Moderately) <sup>1</sup>
Elevation Range:	28 - 261m
Slope Gradient:	Gentle <sup>4</sup> Moderate <sup>3</sup> Level <sup>2</sup> Steep <sup>1</sup>
Aspect:	North <sup>4</sup> East <sup>2</sup> South <sup>1</sup> West <sup>1</sup> None <sup>1</sup> nd <sup>1</sup>
Exposure:	Moderate <sup>5</sup> Mod. exposed <sup>4</sup> Mod. sheltered <sup>1</sup>
Microtopography:	Moderately <sup>4</sup> Strongly <sup>4</sup> Other <sup>2</sup>
Drainage:	Moderately well <sup>5</sup> Well <sup>5</sup>

## Soil Characteristics

Soil Type:	ST2-L <sup>4</sup> ST5 <sup>2</sup> ST2 <sup>1</sup> ST8 <sup>1</sup> Other <sup>2</sup>
Parent Material:	Glacial till <sup>10</sup>
Rooting Depth (cm):	(30-45) <sup>4</sup> (>45) <sup>6</sup>
Duff Thickness (cm):	(0-5) <sup>2</sup> (6-10) <sup>5</sup> (11-20) <sup>1</sup> (>40) <sup>1</sup> nd <sup>1</sup>

