



Sixth Lake Stream,
Queens County

WD4

Red maple / Poison ivy / Sphagnum

Acer rubrum / *Toxicodendron radicans* /
Sphagnum spp.

WD4a

Huckleberry – Inkberry variant

Gaylussacia baccata – *Ilex glabra*

n=27

Concept: This Vegetation Type (VT) is distinguished from other wet red maple forests (WD2 and WD3) by the presence of Atlantic Coastal Plain flora like poison ivy, catbriar, inkberry, Elliot’s goldenrod and other plants. WD4 is found in wet organic depressions or on wet mineral flats, where it persists as an edaphic climax. Small- to intermediate-scale disturbances, including windthrow, flooding, ice-scour and timber harvest are common components of stand history.

Vegetation: Canopy layers are strongly dominated by red maple or co-dominated by red maple and black spruce. Mixedwood occurrences are defined by WD4a. In some stands, low to moderate levels of balsam fir, tamarack and/or hemlock may be supported. Black ash and/or white ash are infrequent canopy components. The well-developed woody understory is largely comprised of regenerating trees and poison ivy with scattered pockets of winterberry, speckled alder and/or huckleberry. Cinnamon fern is the only frequent wetland herb. Other coastal plain species (e.g. inkberry, catbriar, highbush blueberry, Elliot’s goldenrod, Massachusetts fern, skunk cabbage, button sedge, Virginia chain fern, Torrey’s Sphagnum, etc.) seldom co-occur with great frequency but at least one or more species is usually represented in each stand. Bryophyte cover is very high and usually dominated by pale fat-leaved sphagnum and flat top sphagnum.

Ecological Features

WD4 supports more Atlantic Coastal Plain flora (ACPF) than any other VT in Nova Scotia. ACPF are temperate plants largely known from an expansive and relatively flat area along the southeastern seaboard of the United States. Although the coastal plain only extends north to Massachusetts, many ACPF occur in small, isolated areas of

Canada including the Atlantic Coast and inland areas of western Nova Scotia. Productivity, surface water accumulation, and structural heterogeneity of this ecosystem are variable, but most occurrences are at least moderately productive, supporting well-developed canopy features, moist micro-depressions and tall patches of ferns. Stands along

Environmental Setting: WD4 is mainly found in western Nova Scotia, often adjacent to larger rivers and/or lakes. This low elevation ecosystem is usually on poorly drained flats or in shallow depressions, with moderate exposure. WD4 can be found on riverside or lakeside alluvium (floodplain) deposits or on glacial tills, but most stands develop on organic deposits. Low surface microtopography, exposed bedrock and surface stoniness are typical. This forest is not known outside Nova Scotia, but could occur in southwestern New Brunswick.

Successional Dynamics: This forest is usually expressed at mid-successional stages and persists as an edaphic climax. It is maintained by small- to intermediate-scale canopy disturbances (e.g. windthrow, flooding, ice-scour and timber harvest) and limiting site conditions. Depending on disturbance history and local conditions, WD4a could also transition to WC7a (Tamarack – Black spruce / Lambkill / Sphagnum variant Huckleberry – Inkberry) or even CE1a (Eastern white cedar / Speckled alder / Cinnamon fern / Sphagnum variant poison ivy). Windthrow, harvesting and flooding are potential stand-level disturbance agents, while natural senescence can create uneven age class and stand structures between larger disturbance events.

slow moving rivers are prone to ice scour as well as longer periods of flooding and soil saturation. Numerous rare plants have been documented from this small patch ecosystem. Canopy tree senescence and uprooting are often followed by vigorous stump sprouting, which may support a uniquely persistent and poorly understood form of old growth.

Characteristic Plants	WD4		WD4a	
	Freq. (%)	Cover (%)	Freq. (%)	Cover (%)
Red maple	100	55.1	100	42.4
Balsam fir	53	3.0	70	8.7
Black spruce	41	4.4	90	13.2
Yellow birch	29	9.2	10	4.0
White pine	29	3.2	40	2.3
White ash	18	10.7	10	16.0
Tamarack	18	10.3	60	6.3
Black ash	12	6.5	10	1.0
Tree Layer (Mean % Cover)		69		70
Red maple	82	6.0	90	4.0
Balsam fir	82	1.9	90	4.1
Winterberry	76	4.3	40	2.8
Speckled alder	71	11.4	60	2.5
Wild raisin	59	1.3	50	1.6
Red oak	53	0.5	50	1.5
White pine	53	0.4	70	3.3
Poison ivy	47	16.0	30	1.7
Huckleberry	47	3.2	60	3.1
Black spruce	41	1.9	90	5.0
Meadow-sweet	41	0.8	20	0.4
Western poison ivy	35	5.5	20	1.6
Lambkill	35	0.7	70	11.9
Lowbush blueberry	29	1.7	50	9.0
Serviceberry	24	0.1	40	0.3
False holly	18	1.0	60	2.1
Labrador tea	12	0.1	50	0.9
Shrub Layer (Mean % Cover)		36		41
Cinnamon fern	88	11.6	100	25.2
Marsh fern	71	0.7	20	0.8
Wild lily-of-the-valley	71	0.2	80	0.5
Blue joint	65	11.8	40	0.8
Stiff sedge	59	34.1	30	34.7
Blue flag	59	0.2	40	0.6
Goldthread	53	0.9	90	1.9
Starflower	53	0.3	90	0.7
Sensitive fern	47	4.6	10	1.0
Bugleweed	47	4.3		
Dwarf raspberry	41	3.3	30	2.8
Massachusetts fern	41	0.9	10	6.0
Trailing blackberry	41	0.8	50	2.5
Spinulose wood fern	41	0.7		
Crested wood fern	41	0.4	20	0.1
Sarsaparilla	41	0.2	70	1.2
Bunchberry	29	2.1	50	1.5
Partridge-berry	18	0.1	60	0.4
Creeping snowberry	12	0.5	70	2.0
Teaberry		40	4.9	
Herb Layer (Mean % Cover)		62		54
Pale fat-leaved sphagnum	65	18.0	50	25.4
Flat topped sphagnum	47	28.1	60	20.8
Hypnum moss	47	1.0	70	5.0
Bazzania	47	0.7	80	2.0
Broom moss	41	0.3	70	1.3
Red fat-leaved sphagnum	29	21.5	50	21.7
Ladies' tresses	18	15.3	60	2.5
Schreber's moss	18	2.4	40	2.3
Stair-step moss	18	0.7	40	3.4
Bryo-Lichen Layer (Mean % Cover)		43		65

Distinguishing Features

This wet red maple forest is typically found only in the western counties with a moderate to highly developed woody shrub component including poison ivy, speckled alder, huckleberry and meadow-sweet. Atlantic Coastal Plain plants are often present; usually found next to lakes, rivers and large streams. Cinnamon fern and sphagnum mosses are common.



Winterberry

Site Characteristics

Slope Position:	Level ⁸ Depression ¹ Lower ¹
Surface Stoniness:	(Non - Slightly) ⁸ (Moderately) ¹ (Very - Excessively) ¹
Bedrock Outcrop:	(Non-rocky) ¹⁰
Elevation Range:	21 - 155m
Slope Gradient:	Level ⁹ Gentle ¹
Aspect:	None ⁹ Other ¹
Exposure:	Moderate ⁹ Mod. sheltered ² Mod. exposed ² nd ¹
Microtopography:	Level ⁷ Slightly ² nd ¹
Drainage:	Very poor ⁷ Poor ³

Soil Characteristics

Soil Type:	ST14 ⁸ ST4 ²
Parent Material:	Organic ³ Alluvium ¹ Glacial till ¹
Rooting Depth (cm):	(<30) ⁴ (30-45) ³ nd ³
Duff Thickness (cm):	(6-20) ¹ (21-40) ² (>40) ² nd ⁵

