



Canadian National Vegetation Classification (CNVC) Classification nationale de la végétation du Canada (CNVC)

<http://cnvc-cnvc.ca>

Wetland

Association CNVC00112

***Picea mariana* / *Vaccinium vitis-idaea* / *Sphagnum* spp.**
Black Spruce / Lingonberry / Peat Mosses
Épinette noire / Airelle rouge / Sphaignes

Subassociations: 112a *typic*, 112b *Gaultheria hispidula*, 112c *Chamaedaphne calyculata*
CNVC Alliance: CA00049 *Picea mariana* / *Rhododendron groenlandicum* / *Vaccinium vitis-idaea* / *Sphagnum* spp.
CNVC Group: CG0022 West-Central Boreal Black Spruce – Tamarack Poor – Intermediate Treed Wetland

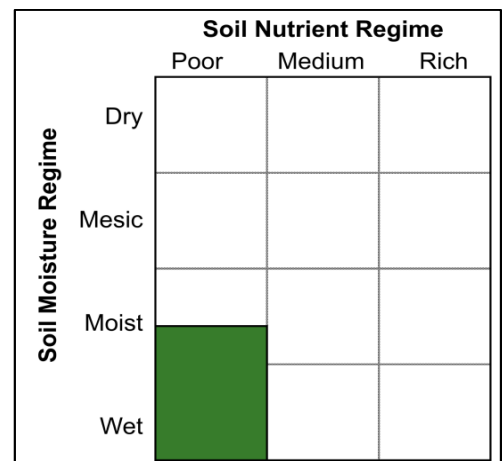


Source: Natural Resources Canada - Canadian Forest Service

Type Description

Concept: CNVC00112 is a boreal wetland coniferous woodland Association that ranges from British Columbia to Ontario. It has an open tree layer of stunted (usually < 10m height), narrow-crowned black spruce (*Picea mariana*). The understory is species poor, with a preponderance of ericaceous species. The well-developed to dense shrub layer comprises abundant common Labrador tea (*Rhododendron groenlandicum*) and black spruce of various ages. The herb layer is moderately developed; lingonberry (*Vaccinium vitis-idaea*), cloudberry (*Rubus chamaemorus*), and small cranberry (*V. oxycoccos*) are common. The moss layer is continuous and dominated by peat mosses (*Sphagnum* spp.), but red-stemmed feathermoss (*Pleurozium schreberi*) and reindeer lichens (*Cladina* spp.) are common on dry microsites (e.g., peat hummocks). CNVC00112 occurs on wet, acidic, nutrient-poor sites in a region with a subhumid boreal climate. Substrates are usually deep (> 40 cm) organic soils formed from slowly decomposing *Sphagnum* and other mosses. Although fire can occasionally occur, this is typically a stable condition that is maintained by a persistently high water table and poor nutrient conditions; local hydrology is the main driver of vegetation dynamics. Three subassociations are recognized: *typic*, *Gaultheria hispidula* and *Chamaedaphne calyculata*.

Vegetation: CNVC00112 is a coniferous woodland Association with an open tree layer of typically stunted (< 10m height) *Picea mariana*. *Larix laricina* is occasionally present in the tree layer but is never dominant. Generally, the species present in CNVC00112 are tolerant of wet, acidic substrates and poor nutrient status. The shrub layer is well developed to dense but species poor, primarily consisting of abundant *Rhododendron groenlandicum* in the low shrub layer, along with *P. mariana* of various heights and ages. The herb and dwarf shrub layer is moderately developed although *Vaccinium vitis-idaea*, *Rubus chamaemorus* and *V. oxycoccos* are the only common species. The continuous moss layer is dominated by *Sphagnum* spp. (particularly *S. fuscum*, *S. capillifolium* and *S. magellanicum*). Some of these species form dense hummocks with dry exposed tops that are covered by *Pleurozium schreberi* and sometimes *Hylocomium splendens*. *Cladina* spp. and other lichens are present on the driest of these microsites. Three subassociations are recognized: *typic*, *Gaultheria hispidula*, and *Chamaedaphne calyculata*.





***Picea mariana* / *Vaccinium vitis-idaea* / *Sphagnum* spp. CNVC00112**

Type Description (cont'd)

Environment: CNVC00112 is a peatland Association; it occurs on wet, nutrient-poor sites in a region with a subhumid continental boreal climate. Substrates are usually deep (> 40 cm) organic soils, formed from slowly decomposing *Sphagnum* and other mosses. Surface microtopography is hummocky. The peat surface is typically at the level of, or even above, the surrounding terrain, so it is possible that the rooting layer may not be in contact with groundwater at any time during the growing season. These sites are acidic (pH is usually < 4.7) because of isolation from mineral-enriched (minerotrophic) groundwater, as well as from the influence of *Sphagnum* mosses, which tend to acidify their environment. Nutrient inputs to the rooting layer are minimal; sources are essentially precipitation, dustfall and the capillary action of peat. CNVC00112 often occurs in large wetland complexes with open bog and fen conditions (M876 [North American Boreal & Sub-boreal Acidic Bog & Fen]; M877 [North American Boreal & Sub-boreal Alkaline Fen]).

Dynamics: CNVC00112 is a stable condition that is maintained by a persistently high water table, an acidic substrate and poor nutrient status. Local hydrology is the main driver of vegetation dynamics. Although fires occur on peatlands, they are infrequent and of limited extent because these sites are so wet. Consequently, stands of CNVC00112 tend to be long lived and multi-aged, with trees up to or exceeding 200 years. *Picea mariana* can establish from seed under favourable conditions (e.g., suitable seedbed) but typically self-replaces on these sites by vegetative layering.

Because of limited groundwater inputs and a cold climate, decomposition is slow, and peat accumulates over time. In the absence of hydrological changes, this process can promote succession to less productive, open bog conditions by raising the rooting zone above the water table, further reducing nutrient availability for tree growth.

Long-term change in the water table (either by anthropogenic activities or natural causes [e.g., beaver dams]) usually results in changes to the vegetation community. A rise in the water table can result in tree mortality and transition to open wetland vegetation. A drop in the water table can sometimes result in the development of more productive feathermoss forests (e.g., CNVC00128 [*Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi* (*Hylocomium splendens*)]). Enrichment of the rooting layer, typically by groundwater flow, can stimulate development of more productive wetland forest conditions (e.g., CNVC00116 [*Larix laricina* – *Picea mariana* / *Betula pumila* – *B. nana* / *Tomentypnum nitens*]) by increasing supplies of oxygen and macronutrients, and by reducing acidity.

Range: CNVC00112 occurs in the boreal region from British Columbia (BC) to Ontario. It occurs on the boreal plains from northeastern BC to Manitoba and on the Canadian Shield from northeastern Alberta to north of Lake Nipigon in northwestern Ontario. It is also recognized in the foothills of Alberta. The *typic* subassociation is described from BC, Alberta, and Saskatchewan. The *Gaultheria hispidula* and *Chamaedaphne calyculata* subassociations are described only from Ontario.

Conservation Status (NatureServe)

Global Conservation Rank: no applicable rank

National Conservation Rank: not yet determined

Subnational Conservation Rank: not yet determined



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Black Spruce / Lingonberry / Peat Mosses
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Distribution

Countries: Canada

Provinces / Territories / States: Alberta, British Columbia, Manitoba, Ontario, Saskatchewan

Terrestrial Ecozones and Ecoregions of Canada: Boreal Cordillera: Liard Basin; Boreal Plains: Boreal Transition, Clear Hills Upland, Mid-Boreal Lowland, Mid-Boreal Uplands, Muskwa Plateau, Peace Lowland, Wabasca Lowland, Western Alberta Upland, Western Boreal; Boreal Shield: Athabasca Plain, Big Trout Lake, Churchill River Upland, Lac Seul Upland; Taiga Plains: Northern Alberta Uplands; Taiga Shield: Tazin Lake Upland

Rowe's Forest Regions and Sections of Canada: Boreal: Aspen Grove, Athabasca South, Central Plateau, Hay River, Lower Foothills, Manitoba Lowlands, Mixedwood, Northern Coniferous, Northern Foothills, Northwestern Transition, Upper Churchill, Upper Foothills, Upper Liard, Upper Mackenzie

NAAEC CEC Ecoregions of North America (Levels I & II): Northern Forests: Boreal Plains, Softwood Shield; Northwestern Forested Mountains: Boreal Cordillera; Taiga: Taiga Plains, Taiga Shield

Nature Conservancy of Canada Ecoregions: Boreal Plains, Boreal Shield, Muskwa-Kechika, Taiga Plains, Western Taiga Shield

Biogeoclimatic Ecosystem Classification of British Columbia (zones and subzones): BWBSmk, BWBSmw

British Columbia Ecoregion Classification (ecoregions): Central Alberta Uplands, Hay-Slave Lowland, Liard Basin, Muskwa Plateau, Northern Alberta Upland, Peace River Basin, Southern Alberta Upland

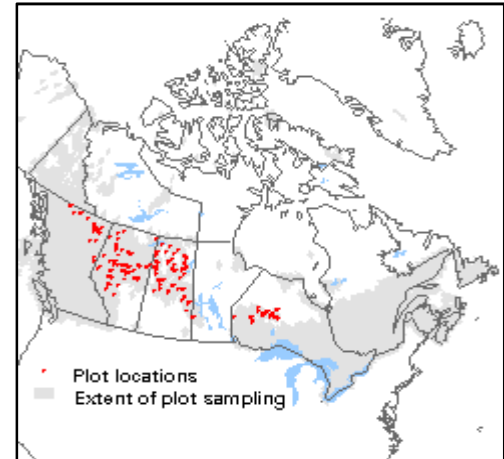
Natural Regions and Subregions of Alberta: Boreal Forest: Central Mixedwood, Dry Mixedwood, Lower Boreal Highlands, Northern Mixedwood; Canadian Shield: Kazan Uplands; Foothills: Lower Foothills, Upper Foothills

Ecozones and Ecoregions of Saskatchewan: Boreal Plain: Boreal Transition, Mid-Boreal Lowland, Mid-Boreal Upland; Boreal Shield: Athabasca Plain, Churchill River Upland

Ecozones and Ecoregions of Manitoba: Boreal Plains, Boreal Shield

Manitoba Protected Areas Initiative Natural Regions: Manitoba Lowlands, Precambrian Boreal Forest, Western Upland

Ecological Land Classification of Ontario (ecoregions and ecodistricts): 2W-3, 3S-1, 3S-2, 3S-4





***Picea mariana* / *Vaccinium vitis-idaea* / *Sphagnum* spp. CNVC00112**

Corresponding Types and Associations

112a typic	British Columbia	BWBSmk /Wb03	<i>Picea mariana</i> - <i>Vaccinium vitis-idaea</i> - <i>Sphagnum</i>
		BWBSmk /Wb03.1	<i>Picea mariana</i> - <i>Vaccinium vitis-idaea</i> - <i>Sphagnum</i> (Reindeer lichen variation)
		BWBSmk /Wb03.2	<i>Picea mariana</i> - <i>Vaccinium vitis-idaea</i> - <i>Sphagnum</i> (Feathermoss variation)
	Alberta	BWBSmw /Wb03	<i>Picea mariana</i> - <i>Vaccinium vitis-idaea</i> - <i>Sphagnum</i>
		NN/BM/I/01/01	Sb / Labrador tea / cloudberry / peat moss
		NN/CS/F/01/01	Sb / Labrador tea / cloudberry / peat moss
		SW/LF/I/01/01	Sb / Labrador tea / peat moss
Saskatchewan	SW/UF/I/01/01	Sb / Labrador tea / cloudberry / peat moss	
	WC/LF/K/01/01	Sb / Labrador tea / cloudberry / peat moss	
	BP19	Black spruce treed bog: Moderately wet fibric organic	
		BS17	Black spruce treed bog: Very moist mesic organic
112b <i>Gaultheria hispidula</i>	Ontario	BwTr11-3	<i>Picea mariana</i> / <i>Rhododendron groenlandicum</i> - <i>Vaccinium vitis-idaea</i> / <i>Sphagnum</i> spp. (<i>Pleurozium schreberi</i>)
112c <i>Chamaedaphne calyculata</i>	Ontario	BwTr16-2	<i>Picea mariana</i> / <i>Rhododendron groenlandicum</i> - <i>Chamaedaphne calyculata</i> - <i>Vaccinium vitis-idaea</i> / <i>Sphagnum</i> spp.



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Vegetation Summary*

Species Name [†]	Association CNVC00112		Subassociation 112a <i>typic</i>		Subassociation 112b <i>Gaultheria hispidula</i>	
	247 plots		202 plots		30 plots	
	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]
Overstory Trees						
<i>Picea mariana</i>	27	88	26	87	36	100
<i>Larix laricina</i>	4	21	4	25	4	3
Tree Stratum Cover (P ₁₀ P ₂₅ Mean P ₇₅ P ₉₀) [‡]	(0 10 25 38 53)		(0 10 24 38 51)		(18 23 36 44 61)	
Understory Woody Shrubs and Regenerating Trees						
<i>Rhododendron groenlandicum</i>	40	98	36	98	55	100
<i>Picea mariana</i>	19	89	16	88	26	93
<i>Chamaedaphne calyculata</i>	7	43	6	38	3	47
<i>Kalmia polifolia</i>	1	32	1	28	< 1	43
<i>Vaccinium myrtilloides</i>	3	27	4	21	2	67
<i>Larix laricina</i>	2	25	1	25	1	13
<i>Salix</i> sp.	4	19	4	22	4	3
<i>Betula pumila</i>	3	12	1	11	5	3
<i>Alnus incana</i>	5	9	3	4	5	33
Shrub Stratum Cover (P ₁₀ P ₂₅ Mean P ₇₅ P ₉₀) [‡]	(20 32 59 87 100)		(18 29 53 76 92)		(39 70 79 100 100)	
Understory Herbs and Dwarf Shrubs						
<i>Vaccinium vitis-idaea</i>	8	95	9	96	2	90
<i>Rubus chamaemorus</i>	7	83	8	82	2	80
<i>Vaccinium oxycoccos</i>	2	76	2	74	1	83
<i>Maianthemum trifolium</i>	3	51	2	47	4	63
<i>Equisetum sylvaticum</i>	4	36	4	29	5	80
<i>Carex</i> sp.	2	20	2	19	2	27
<i>Geocaulon lividum</i>	1	19	1	15	1	50
<i>Drosera rotundifolia</i>	< 1	19	< 1	17	1	23
<i>Gaultheria hispidula</i>	4	18	2	2	5	97
<i>Cornus canadensis</i>	2	16	2	13	2	43
<i>Lycopodium annotinum</i>	2	6	2	3	1	23
<i>Neottia cordata</i>	< 1	6	-	-	< 1	47
Herb Stratum Cover (P ₁₀ P ₂₅ Mean P ₇₅ P ₉₀) [‡]	(4 8 22 30 45)		(4 9 22 30 45)		(3 6 20 33 44)	
Bryophytes and Lichens						
<i>Pleurozium schreberi</i>	22	88	22	85	23	100
<i>Cladonia</i> sp.	3	66	4	68	< 1	47
<i>Cladina mitis</i>	10	58	11	64	1	20
<i>Hylocomium splendens</i>	10	56	11	52	7	80
<i>Cladina rangiferina</i>	5	55	6	53	5	60



***Picea mariana* / *Vaccinium vitis-idaea* / *Sphagnum* spp. CNVC00112**

Vegetation Summary (cont'd)*

Species Name [†]	Association CNVC00112		Subassociation 112a <i>typic</i>		Subassociation 112b <i>Gaultheria hispidula</i>	
	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]
<i>Sphagnum fuscum</i>	17	54	19	53	11	43
<i>Sphagnum</i> sp.	36	43	37	52	6	3
<i>Aulacomnium palustre</i>	3	41	3	42	< 1	37
<i>Sphagnum capillifolium</i>	18	38	8	25	31	93
<i>Dicranum undulatum</i>	1	36	1	38	1	27
<i>Dicranum polysetum</i>	1	35	1	29	2	70
<i>Ptilium crista-castrensis</i>	4	34	4	25	4	87
<i>Cladina stellaris</i>	3	29	3	27	2	27
<i>Polytrichum strictum</i>	1	27	1	28	0	20
<i>Evernia mesomorpha</i>	1	27	1	33	-	-
<i>Sphagnum angustifolium</i>	11	26	8	18	11	63
<i>Sphagnum magellanicum</i>	7	26	4	18	7	63
<i>Mylia anomala</i>	1	26	1	27	0	13
<i>Pohlia nutans</i>	1	26	1	28	0	13
<i>Hypogymnia physodes</i>	1	24	1	30	-	-
<i>Ptilidium ciliare</i>	1	21	1	14	1	50
<i>Vulpicida pinastris</i>	1	21	1	26	-	-
<i>Dicranum</i> sp.	1	20	1	24	-	-
<i>Polytrichum</i> sp.	1	20	1	25	-	-
<i>Peltigera aphthosa</i>	1	19	1	20	1	17
<i>Icmadophila ericetorum</i>	1	19	1	21	0	13
<i>Parmelia sulcata</i>	1	19	1	24	-	-
<i>Sphagnum girgensohnii</i>	12	14	16	4	12	60
<i>Dicranum ontariense</i>	< 1	8	-	-	< 1	47
<i>Cladina stygia</i>	3	6	1	1	2	20
<i>Dicranum fuscescens</i>	1	6	1	3	0	13
<i>Sphagnum wulfianum</i>	4	5	2	1	6	27
Bryo-Lichen Stratum Cover						
(P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(51 76 85 100 100)		(50 70 83 99 100)		(79 89 94 100 100)	

* species present in > 20% of sample plots are listed

[†] see **Botanical Nomenclature** link at <http://cnvc-cnvc.ca> for botanical sources, synonyms and common names

[‡] average percent cover of a species within the plots in which it occurs (i.e., characteristic cover)

[^] percent frequency occurrence for a species within the total plots

[‡] P_x = Xth percentile (e.g., P₁₀ = 10th percentile)



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Black Spruce / Lingonberry / Peat Mosses

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Vegetation Summary (cont'd)*

Subassociation
 112c *Chamaedaphne*
calyculata

15 plots

Species Name [†]	% Cover [‡]	% Presence [^]
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Overstory Trees

<i>Picea mariana</i>	16	87
<i>Larix laricina</i>	8	7
Tree Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(5 6 15 20 24)	

Understory Woody Shrubs and Regenerating Trees

<i>Rhododendron groenlandicum</i>	58	100
<i>Picea mariana</i>	42	100
<i>Chamaedaphne calyculata</i>	16	100
<i>Kalmia polifolia</i>	2	73
<i>Vaccinium myrtilloides</i>	6	33
<i>Larix laricina</i>	10	53
<i>Salix</i> sp.	4	7
<i>Betula pumila</i>	8	33
<i>Alnus incana</i>	6	27
Shrub Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(96 100 97 100 100)	

Understory Herbs and Dwarf Shrubs

<i>Vaccinium vitis-idaea</i>	2	93
<i>Rubus chamaemorus</i>	7	100
<i>Vaccinium oxycoccos</i>	3	93
<i>Maianthemum trifolium</i>	7	73
<i>Equisetum sylvaticum</i>	2	47
<i>Carex</i> sp.	2	20
<i>Geocaulon lividum</i>	1	20
<i>Drosera rotundifolia</i>	< 1	47
<i>Gaultheria hispidula</i>	3	80
<i>Cornus canadensis</i>	10	7
<i>Lycopodium annotinum</i>	-	-
<i>Neottia cordata</i>	0	7
Herb Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(8 10 25 33 45)	

Bryophytes and Lichens

<i>Pleurozium schreberi</i>	19	100
<i>Cladonia</i> sp.	0	73
<i>Cladina mitis</i>	3	47
<i>Hylocomium splendens</i>	2	60
<i>Cladina rangiferina</i>	5	73



***Picea mariana* / *Vaccinium vitis-idaea* / *Sphagnum* spp. CNVC00112**

Vegetation Summary (cont'd)*

Species Name [†]	Subassociation 112c <i>Chamaedaphne calyculata</i>	
	% Cover [‡]	% Presence [^]
<i>Sphagnum fuscum</i>	13	80
<i>Sphagnum</i> sp.	-	-
<i>Aulacomnium palustre</i>	1	33
<i>Sphagnum capillifolium</i>	27	100
<i>Dicranum undulatum</i>	< 1	33
<i>Dicranum polysetum</i>	1	47
<i>Ptilium crista-castrensis</i>	2	40
<i>Cladina stellaris</i>	2	60
<i>Polytrichum strictum</i>	1	20
<i>Evernia mesomorpha</i>	-	-
<i>Sphagnum angustifolium</i>	22	47
<i>Sphagnum magellanicum</i>	14	60
<i>Mylia anomala</i>	< 1	33
<i>Pohlia nutans</i>	1	27
<i>Hypogymnia physodes</i>	-	-
<i>Ptilidium ciliare</i>	2	53
<i>Vulpicida pinastri</i>	-	-
<i>Dicranum</i> sp.	-	-
<i>Polytrichum</i> sp.	-	-
<i>Peltigera aphthosa</i>	1	13
<i>Icmadophila ericetorum</i>	0	7
<i>Parmelia sulcata</i>	-	-
<i>Sphagnum girgensohnii</i>	8	53
<i>Dicranum ontariense</i>	1	40
<i>Cladina stygia</i>	5	40
<i>Dicranum fuscescens</i>	2	27
<i>Sphagnum wulfianum</i>	1	7
Bryo-Lichen Stratum Cover		
(P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(80 92 92 100 100)	

* species present in > 20% of sample plots are listed

[†] see **Botanical Nomenclature** link at <http://cnvc-cnvc.ca> for botanical sources, synonyms and common names

[‡] average percent cover of a species within the plots in which it occurs (i.e., characteristic cover)

[^] percent frequency occurrence for a species within the total plots

[‡] P_x = Xth percentile (e.g., P₁₀ = 10th percentile)



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Black Spruce / Lingonberry / Peat Mosses

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Site / Soil Characteristics

	Association CNVC00112	Subassociation 112a <i>typic</i>	Subassociation 112b <i>Gaultheria hispida</i>
	247 plots	202 plots	30 plots
Elevation Range (min–mean–max meters)	222–479–1170 missing data (18)	222–500–1170 missing data (11)	256–331–407 missing data (43)
Slope Gradient (% frequency)	moderate (1) gentle (1) level (90) missing data (8)	moderate (0) gentle (0) level (90) missing data (9)	moderate (3) gentle (3) level (90) missing data (3)
Aspect (% frequency)	north (5) east (4) south (2) west (3) level (77) missing data (9)	north (5) east (5) south (1) west (3) level (75) missing data (10)	north (7) east (0) south (3) west (3) level (83) missing data (3)
Meso Toposition (% frequency)	crest / upper (1) mid (2) lower / toe (7) depression (15) level (61) missing data (14)	crest / upper (1) mid (2) lower / toe (6) depression (15) level (59) missing data (16)	crest / upper (3) mid (0) lower / toe (10) depression (3) level (80) missing data (3)
Moisture Regime (% frequency)	very dry (0) dry (1) mesic (0) moist (25) wet (71) missing data (2)	very dry (0) dry (1) mesic (0) moist (28) wet (68) missing data (2)	very dry (3) dry (0) mesic (0) moist (17) wet (77) missing data (3)
Nutrient Regime (% frequency)	poor (37) medium (2) rich (0) missing data (60)	poor (46) medium (3) rich (0) missing data (51)	poor (0) medium (0) rich (0) missing data (100)



***Picea mariana* / *Vaccinium vitis-idaea* / *Sphagnum* spp. CNVC00112**

Site / Soil Characteristics (cont'd)

	Association CNVC00112	Subassociation 112a <i>typic</i>	Subassociation 112b <i>Gaultheria hispidula</i>
Soil Parent Material (% frequency)	eolian (0) moraine / till (5) fluvial (5) glaciofluvial (1) lacustrine (6) glaciolacustrine (2) organic (58) missing data (23)	eolian (0) moraine / till (5) fluvial (6) glaciofluvial (0) lacustrine (5) glaciolacustrine (2) organic (53) missing data (27)	eolian (0) moraine / till (10) fluvial (0) glaciofluvial (3) lacustrine (13) glaciolacustrine (0) organic (70) missing data (3)
Soil Rooting Zone Substrate (% frequency)	sandy (2) fine loamy (1) clayey (0) organic (70) missing data (27)	sandy (0) fine loamy (1) clayey (0) organic (68) missing data (31)	sandy (13) fine loamy (3) clayey (0) organic (70) missing data (13)
Root Restricting Depth (% frequency)	0 – 20 cm (5) 21 – 99 cm (14) ≥ 100 cm (26) missing data (55)	0 – 20 cm (1) 21 – 99 cm (10) ≥ 100 cm (30) missing data (58)	0 – 20 cm (20) 21 – 99 cm (40) ≥ 100 cm (7) missing data (33)
Humus Form (% frequency)	mor (39) peatymor (34) missing data (26)	mor (46) peatymor (22) missing data (32)	mor (7) peatymor (90) missing data (3)



Wetland

Association CNVC00112

Picea mariana / *Vaccinium vitis-idaea* / *Sphagnum* spp.

Black Spruce / Lingonberry / Peat Mosses

Épinette noire / Airelle rouge / Sphaignes

Site / Soil Characteristics (cont'd)

Subassociation
112c *Chamaedaphne calyculata*

15 plots

Elevation Range (min–mean–max meters)

256–287–328
missing data (60)

Slope Gradient (% frequency)

moderate (7)
gentle (0)
level (93)
missing data (0)

Aspect (% frequency)

north (0)
east (0)
south (13)
west (7)
level (80)
missing data (0)

Meso Toposition (% frequency)

crest / upper (0)
mid (0)
lower / toe (13)
depression (33)
level (53)
missing data (0)

Moisture Regime (% frequency)

very dry (0)
dry (0)
mesic (0)
moist (0)
wet (100)
missing data (0)

Nutrient Regime (% frequency)

poor (0)
medium (0)
rich (0)
missing data (100)



***Picea mariana* / *Vaccinium vitis-idaea* / *Sphagnum* spp. CNVC00112**

Site / Soil Characteristics (cont'd)

Subassociation
112c *Chamaedaphne calyculata*

Soil Parent Material (% frequency)

eolian (0)
moraine / till (0)
fluvial (0)
glaciofluvial (0)
lacustrine (0)
glaciolacustrine (0)
organic (100)
missing data (0)

Soil Rooting Zone Substrate (% frequency)

sandy (0)
fine loamy (0)
clayey (0)
organic (100)
missing data (0)

Root Restricting Depth (% frequency)

0 – 20 cm (27)
21 – 99 cm (13)
≥ 100 cm (7)
missing data (53)

Humus Form (% frequency)

mor (13)
peatymor (87)
missing data (0)



Canadian National Vegetation Classification (CNVC)
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<http://cnvc-cnvc.ca>

Wetland

Association CNVC00112

Picea mariana / *Vaccinium vitis-idaea* / *Sphagnum* spp.

Black Spruce / Lingonberry / Peat Mosses

Épinette noire / Airelle rouge / Sphaignes

Additional Characteristics

Species of High Conservation Concern:

Non-native Species:

Management Issues:

Type Statistics

Internal Similarity:

Confidence:

Strength:

Related Concepts

Similar CNVC Associations:

CNVC00113 [*Picea mariana* / *Equisetum arvense* (*E. pratense*) / *Sphagnum* spp.] is a similar condition that occurs on slightly richer sites in the same range and has *Equisetum arvense* and *E. pratense* as dominant understory components.

CNVC00116 [*Larix laricina* – *Picea mariana* / *Betula pumila* – *B. nana* / *Tomentypnum nitens*] occurs on wet, nutrient-medium to rich boreal sites from British Columbia to Manitoba. It has more *Larix laricina*, *Betula pumila*, *B. nana*, *Salix* spp. (e.g., *Salix myrtillofolia*), *Carex* spp. (particularly *C. aquatilis*) and greater cover of brown mosses (e.g., *Aulacomnium palustre* and *Tomentypnum nitens*) relative to *Sphagnum* mosses (see Dynamics).

CNVC00130 [*Picea mariana* / *Equisetum arvense* (*E. pratense*) / *Hylocomium splendens*] occurs on moist to wet, nutrient-medium boreal sites in the Rocky Mountain foothills of Alberta. It has greater *Picea glauca* in the tree and shrub layers and *Equisetum arvense*, *E. pratense* and *E. sylvaticum* as dominant understory components.

CNVC00282 [*Picea mariana* / *Rhododendron groenlandicum* – *Kalmia angustifolia* / *Sphagnum* spp.] is a slightly more productive condition with a forest physiognomy that occurs on comparable sites from southeastern Manitoba to Quebec. It has greater *Vaccinium myrtilloides*, *V. angustifolium* and, in the eastern portion of the range, *Kalmia angustifolia*, and much less *V. vitis-idaea*.

CNVC00283 [*Picea mariana* / *Chamaedaphne calyculata* – *Vaccinium angustifolium* / *Sphagnum* spp.] is a similar woodland condition that occurs on comparable sites from southeastern Manitoba to Quebec. It has greater *Chamaedaphne calyculata*, *Vaccinium myrtilloides*, *V. angustifolium* and *Kalmia polifolia* and much less *V. vitis-idaea*.

CNVC00327 [*Picea mariana* – *Larix laricina* / *Vaccinium vitis-idaea* – *Mitella nuda*] occurs on wet, nutrient-medium to rich sites in Saskatchewan and Manitoba. It has greater *Larix laricina* in the tree and shrub layers, lower constancy and cover of ericaceous shrubs and more *Carex* spp. with less *Sphagnum* spp.

Related United States National Vegetation Classification Associations:

Relationships with Other Classifications:

In southwestern Manitoba, CNVC00112 best matches the concept of ES64 [Black Spruce - Ericaceous - Sphagnum on Wet Organic Soil] in Arnup et al. 2006.

Comments

CNVC00112 is consistent with the concept of a treed bog in the Canadian Wetland Classification System. It is the poorest wet woodland in its range.



Canadian National Vegetation Classification (CNVC) Classification nationale de la végétation du Canada (CNVC)

<http://cnvc-cnvc.ca>

Picea mariana / *Vaccinium vitis-idaea* / *Sphagnum* spp. CNVC00112

Source Information

Number of source plots for CNVC00112: 247

Number of source plots for 112a typic: 202

Number of source plots for 112b *Gaultheria hispidula*: 30

Number of source plots for 112c *Chamaedaphne calyculata*: 15

Information Sources:

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Description Authors: D. Downing, K. Baldwin and K. Chapman

Date of Concept: March, 2012

Date of Description: November, 2016

Classification References:

Archibald, J.H.; Klappstein, G.D.; Corns, I.G.W. 1996. Field guide to ecosites of southwestern Alberta. Nat. Resour. Can., Can. For. Ser., North. For. Cent., Edmonton, AB. Spec. Rep. 8.

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Characterization References:

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Crum, H.A.; Planisek, S. 1988. A focus on peatlands and peat mosses. Univ. of Michigan Press, MI, US.

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Canadian National Vegetation Classification (CNVC)
Classification nationale de la végétation du Canada (CNVC)

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***Picea mariana* / *Vaccinium vitis-idaea* / *Sphagnum* spp. CNVC00112**

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The information contained in this factsheet is based on data and expert knowledge that is current to the date of description. As new information becomes available, the factsheet will be updated.

For more information about the contents of this factsheet and definitions of attribute names and data classes, see the **Understanding the Factsheet** link at <http://cnvc-cnvc.ca>.

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