



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

<http://cnvc-cnvc.ca>

Forest / Forêt

Association CNVC00209

Pinus banksiana* – *Picea mariana* / *Kalmia angustifolia* / *Pleurozium schreberi

Jack Pine – Black Spruce / Sheep Laurel / Red-stemmed Feathermoss

Pin gris – Épinette noire / Kalmia à feuilles étroites / Pleurozie dorée

Subassociations: 209a *typic*, 209b *inops*, 209c *Kalmia angustifolia*, 209d *Rhododendron groenlandicum*

CNVC Alliance: CA00012 *Picea mariana* (*Pinus banksiana*) / *Vaccinium angustifolium* / *Pleurozium schreberi*

CNVC Group: CG0006 Ontario-Quebec Boreal Mesic-Moist Black Spruce (Jack Pine) Forest

Type Description

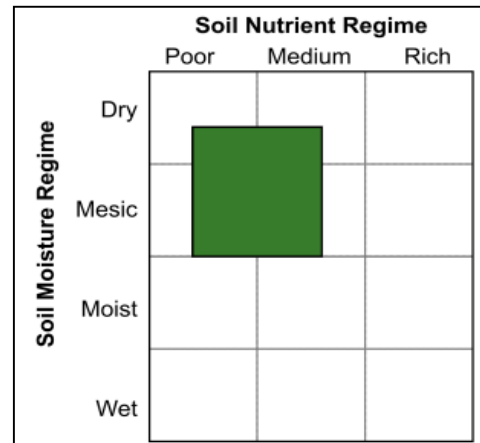
Concept: CNVC00209 is a boreal coniferous forest Association that occurs in Ontario and Quebec. It has a moderately closed to closed canopy dominated by jack pine (*Pinus banksiana*), with black spruce (*Picea mariana*) as the main companion species. The shrub layer is well developed to dense with abundant regenerating black spruce and heath species, especially sheep laurel (*Kalmia angustifolia*) but also velvet-leaved blueberry (*Vaccinium myrtilloides*), early lowbush blueberry (*V. angustifolium*) and common Labrador tea (*Rhododendron groenlandicum*). Willows (*Salix* spp.) are usually present but not abundant. The herb layer is sparse; only creeping snowberry (*Gaultheria hispida*) and bunchberry (*Cornus canadensis*) are common. A well-developed moss layer dominated by red-stemmed feathermoss (*Pleurozium schreberi*) further characterizes this Association. CNVC00209 occurs in a region with a humid continental boreal climate on mesic, nutrient-poor to medium sites. It typically establishes as the first cohort after fire. Four subassociations are distinguished: *typic*, *inops*, *Kalmia angustifolia* and *Rhododendron groenlandicum*.

Vegetation: CNVC00209 is a coniferous forest Association with a moderately closed to closed canopy dominated by *Pinus banksiana*, with variable but lower abundance of *Picea mariana*. The shrub layer is well developed to dense. It includes abundant *P. mariana* regeneration but is largely dominated by the ericaceous species *Kalmia angustifolia*, *Vaccinium myrtilloides*, *V. angustifolium* and *Rhododendron groenlandicum*, with a minor component of *Salix* spp. The herb layer is sparse, with only *Gaultheria hispida* and *Cornus canadensis* common. The moss layer is well developed and dominated by *Pleurozium schreberi*, with minor amounts of *Cladina rangiferina*, *Dicranum* spp. and *Ptilium crista-castrensis*.

Four subassociations are distinguished: *typic*, *inops*, *Kalmia angustifolia* and *Rhododendron groenlandicum*. The *typic* and *Rhododendron groenlandicum* subassociations have greater cover of *P. mariana* in the tree and shrub layers than the more purely *P. banksiana* overstory of the *inops* and *Kalmia angustifolia* subassociations. The *typic* and *inops* subassociations have more open shrub layers, with lower overall abundance of heath species than the *Kalmia angustifolia* and *Rhododendron groenlandicum* subassociations. The *Rhododendron groenlandicum* subassociation has greater cover of *R. groenlandicum* than does the *Kalmia angustifolia* subassociation.

Environment: CNVC00209 occurs in a humid continental boreal climate, primarily on mesic, nutrient-poor to medium sites. Stands are usually on level sites or gentle to moderate slopes on water-shedding, middle to upper-slope or crest topopositions. Soils are usually moderately deep to deep and well drained. Often they are sands or coarse loams in morainal or glaciofluvial surficial deposits, but stands also occur on fine-textured sediments deposited by proglacial lakes or seas. Mor humus forms are typical. The *inops* and *Kalmia angustifolia* subassociations occur more commonly on coarse-textured glaciofluvial deposits. The *typic* and *Rhododendron groenlandicum* subassociations are frequently on tills, where soils may have higher silt content and slightly enhanced nutrient status.

CNVC00209 is most common where the regional fire cycle is intermediate (100-270 years), but it also occurs in areas where the fire cycle is long (270-500 years) or even very long (>500 years). Where the regional fire cycle is longer, stands of CNVC00209 likely occur on sites that burn more frequently than the regional average.





***Pinus banksiana* – *Picea mariana* / *Kalmia angustifolia* / *Pleurozium schreberi*
CNVC00209**

Type Description (cont'd)

Dynamics: CNVC00209 is naturally perpetuated by stand-replacing fire. Stands commonly comprise both *Pinus banksiana* and *Picea mariana*. Both of these species rarely survive fire but have cones that open when heated to disperse seeds. Seedbeds are usually improved by a fire that reduces organic matter thickness and exposes mineral soil. Fire can also reduce competing vegetation and help to release nutrients from the organic matter. Maximum seed release can therefore coincide with optimal conditions for seedling establishment, survival and growth of both species.

P. banksiana grows more rapidly than *P. mariana* so usually forms the initial stand with *P. mariana* in the understory or subcanopy. *P. mariana* is longer lived, more shade tolerant and better able to regenerate in the absence of fire, so it can become dominant on these sites over time, forming CNVC00211 [*Picea mariana* / *Rhododendron groenlandicum* – *Kalmia angustifolia* / *Pleurozium schreberi*].

Regeneration failure of *P. banksiana* and/or *Picea mariana* can result in a more open stand with high lichen cover (e.g., CNVC00201 [*Pinus banksiana* (*Picea mariana*) / *Kalmia angustifolia* (*Rhododendron groenlandicum*) / *Cladina* spp.]). This could happen when successive fires occur before trees have reached reproductive maturity, when fire fails to prepare suitable seedbeds or when seedling mortality is unusually high. The resulting open canopy promotes an increase in *Cladina* cover. Lichen cover can also inhibit conifer germination and seedling survival.

Kalmia angustifolia is an aggressive competitor to conifer regeneration. It vigorously sprouts after disturbances that do not eliminate its root system (e.g., low severity fires or harvesting), reducing space available for tree establishment. Its litter may inhibit *P. mariana* seed germination (physically and chemically) and affect seedling growth by reducing available nitrogen and limiting ectomycorrhizal relationships.

Range: CNVC00209 occurs in the boreal region of northeastern Ontario and western Quebec. It extends from near Kapuskasing east to the Moisie River on the Upper North Shore of the Gulf of Saint Lawrence and to Matapédia in the Gaspé region. CNVC00209 occurs sporadically in the northern temperate region, usually on sites with poor soils or that are more fire-prone than is normal for that region. The *inops* subassociation is recognized in Ontario and Quebec. The *typic*, *Kalmia angustifolia* and *Rhododendron groenlandicum* subassociations are described only from Quebec.

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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Pin gris - Épinette noire / Kalmia à feuilles étroites / Pleurozie dorée

Distribution

Countries: Canada

Provinces / Territories / States: Ontario, Quebec

Terrestrial Ecozones and Ecoregions of Canada: Atlantic Highlands: Appalachians; Boreal Shield: Abitibi Plains, Algonquin-Lake Nipissing, Central Laurentians, Lake Timiskaming Lowland, Rivière Rupert Plateau, Southern Laurentians; Hudson Plains: James Bay Lowland

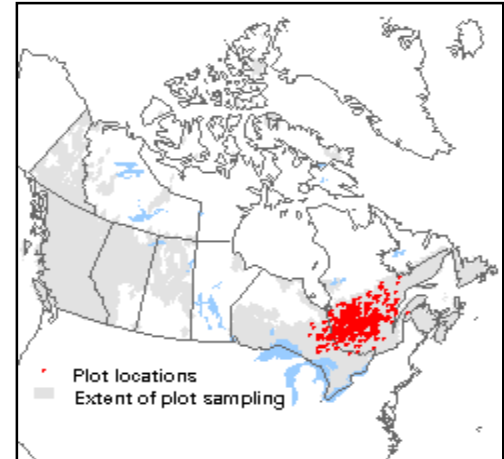
Rowe's Forest Regions and Sections of Canada: Boreal: Chibougamau-Natashquan, East James Bay, Gouin, Hudson Bay Lowlands, Laurentide-Onatchiway, Missinaibi-Cabonga, Northern Clay; Great Lakes-St. Lawrence: Algonquin-Pontiac, Haileybury Clay, Laurentian, Middle Ottawa, Saguenay, Sudbury-North Bay, Temiscouata-Restigouche, Timagami

NAAEC CEC Ecoregions of North America (Levels I & II): Hudson Plains; Northern Forests: Atlantic Highlands, Mixed Wood Shield, Softwood Shield

Nature Conservancy of Canada Ecoregions: Boreal Shield, Great Lakes, Hudson Plains, Northern Appalachians-Acadia

Ecological Land Classification of Ontario (ecoregions and ecodistricts): 3E-1, 3E-5, 3E-6, 3E-7, 4E-3, 4E-4, 5E-6

Bioclimatic Domains and Subdomains of Québec: 1, 2 Est, 3 Est, 3 Ouest, 4 Est, 4 Ouest, 5 Est, 5 Ouest, 6 Est, 6 Ouest



Corresponding Types and Associations

209a typic	Quebec	QC003A	Pinus banksiana - Picea mariana / Pleurozium schreberi [Typique]
		QC003B	Pinus banksiana - Picea mariana / Pleurozium schreberi [Alnus viridis]
209b inops	Ontario	BTr4-5	Pinus banksiana (Picea mariana) / Kalmia angustifolia / Pleurozium schreberi
	Quebec	QC002	Pinus banksiana / Pleurozium schreberi
209c Kalmia angustifolia	Quebec	QC029	Pinus banksiana / Kalmia angustifolia / Pleurozium schreberi
209d Rhododendron groenlandicum	Quebec	QC030	Pinus banksiana - Picea mariana / Kalmia angustifolia / Pleurozium schreberi



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Vegetation Summary*

Species Name [†]	Association CNVC00209		Subassociation 209a <i>typic</i>		Subassociation 209b <i>inops</i>	
	853 plots		291 plots		123 plots	
	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]
Overstory Trees						
<i>Pinus banksiana</i>	37	100	37	100	39	100
<i>Picea mariana</i>	20	89	26	100	8	50
<i>Betula papyrifera</i>	8	34	9	45	9	32
<i>Populus tremuloides</i>	7	25	7	30	7	23
<i>Abies balsamea</i>	5	16	6	24	6	14
Tree Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(32 49 60 70 86)		(49 66 70 86 99)		(20 30 48 66 85)	
Understory Woody Shrubs and Regenerating Trees						
<i>Picea mariana</i>	12	95	12	100	10	81
<i>Kalmia angustifolia</i>	27	94	9	91	16	89
<i>Vaccinium myrtilloides</i>	9	86	4	86	7	77
<i>Vaccinium angustifolium</i>	9	85	4	81	6	89
<i>Salix</i> sp.	4	70	3	60	4	41
<i>Rhododendron groenlandicum</i>	14	68	6	71	4	34
<i>Amelanchier</i> sp.	3	49	3	50	3	24
<i>Abies balsamea</i>	5	42	7	50	5	55
<i>Betula papyrifera</i>	4	39	4	46	4	46
<i>Alnus viridis</i>	14	37	16	38	18	25
<i>Ilex mucronata</i>	5	32	3	35	2	20
<i>Viburnum nudum</i>	4	27	4	33	3	15
<i>Pinus banksiana</i>	3	24	3	8	3	32
<i>Sorbus americana</i>	4	23	4	33	4	24
<i>Prunus pensylvanica</i>	3	23	3	19	4	28
<i>Diervilla lonicera</i>	4	22	4	24	4	47
<i>Alnus incana</i>	11	16	11	20	12	10
<i>Populus tremuloides</i>	3	15	3	11	3	20
Shrub Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(30 49 65 86 99)		(17 32 43 53 66)		(20 32 50 66 83)	
Understory Herbs and Dwarf Shrubs						
<i>Gaultheria hispidula</i>	4	70	4	82	3	54
<i>Cornus canadensis</i>	6	69	6	79	8	71
<i>Maianthemum canadense</i>	4	58	4	69	5	71
<i>Linnaea borealis</i>	3	43	3	54	3	58
<i>Clintonia borealis</i>	3	37	4	51	3	37
<i>Coptis trifolia</i>	3	35	2	47	3	24
<i>Lysimachia borealis</i>	2	29	2	45	2	44
<i>Epigaea repens</i>	3	23	4	19	3	30
<i>Pteridium aquilinum</i>	7	22	7	26	6	33



Pinus banksiana* – *Picea mariana* / *Kalmia angustifolia* / *Pleurozium schreberi
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Vegetation Summary (cont'd)*

Species Name [†]	Association CNVC00209		Subassociation 209a <i>typic</i>		Subassociation 209b <i>inops</i>	
	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]
<i>Aralia nudicaulis</i>	4	18	4	29	4	31
<i>Cypripedium acaule</i>	2	15	2	14	2	25
<i>Gaultheria procumbens</i>	5	9	3	4	4	24
Herb Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(0 3 13 16 33)		(0 3 16 16 33)		(2 3 19 30 49)	
Bryophytes and Lichens						
<i>Pleurozium schreberi</i>	56	99	55	99	50	98
<i>Cladina rangiferina</i>	5	82	4	79	3	67
<i>Dicranum</i> sp.	3	81	4	93	4	41
<i>Ptilium crista-castrensis</i>	8	69	12	75	3	53
<i>Cladonia</i> sp.	3	54	2	66	2	25
<i>Cladina stellaris</i>	5	49	3	44	2	24
<i>Cladina mitis</i>	3	46	3	40	4	24
<i>Polytrichum</i> sp.	3	44	3	54	8	24
<i>Sphagnum</i> sp.	7	35	6	44	2	7
<i>Ptilidium ciliare</i>	3	20	3	19	1	11
<i>Sphagnum fuscum</i>	3	15	3	14	2	2
<i>Hylocomium splendens</i>	3	14	3	22	2	5
<i>Dicranum polysetum</i>	5	6	-	-	5	44
Bryo-Lichen Stratum Cover						
(P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(33 63 72 90 90)		(33 50 71 90 90)		(5 33 59 90 92)	

* 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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Pin gris – Épinette noire / *Kalmia* à feuilles étroites / Pleurozie dorée

Vegetation Summary (cont'd)*

Species Name [†]	Subassociation 209c <i>Kalmia angustifolia</i>		Subassociation 209d <i>Rhododendron groenlandicum</i>	
	131 plots		308 plots	
	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]
Overstory Trees				
<i>Pinus banksiana</i>	46	100	31	100
<i>Picea mariana</i>	4	73	22	100
<i>Betula papyrifera</i>	8	33	6	24
<i>Populus tremuloides</i>	6	31	6	19
<i>Abies balsamea</i>	4	12	4	12
Tree Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(34 49 55 66 73)		(32 49 56 66 83)	
Understory Woody Shrubs and Regenerating Trees				
<i>Picea mariana</i>	7	85	15	100
<i>Kalmia angustifolia</i>	49	97	38	98
<i>Vaccinium myrtilloides</i>	17	82	11	91
<i>Vaccinium angustifolium</i>	18	81	11	90
<i>Salix</i> sp.	4	83	4	86
<i>Rhododendron groenlandicum</i>	14	53	22	86
<i>Amelanchier</i> sp.	4	51	4	58
<i>Abies balsamea</i>	4	42	4	30
<i>Betula papyrifera</i>	4	42	4	29
<i>Alnus viridis</i>	14	43	10	38
<i>Ilex mucronata</i>	6	33	6	33
<i>Viburnum nudum</i>	4	31	4	25
<i>Pinus banksiana</i>	3	57	3	22
<i>Sorbus americana</i>	3	14	3	17
<i>Prunus pennsylvanica</i>	4	44	3	17
<i>Diervilla lonicera</i>	3	16	4	14
<i>Alnus incana</i>	15	15	9	15
<i>Populus tremuloides</i>	3	27	3	10
Shrub Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(70 83 87 99 99)		(66 73 84 99 99)	
Understory Herbs and Dwarf Shrubs				
<i>Gaultheria hispidula</i>	3	38	4	77
<i>Cornus canadensis</i>	7	59	6	62
<i>Maianthemum canadense</i>	4	48	3	46
<i>Linnaea borealis</i>	4	31	3	32
<i>Clintonia borealis</i>	3	22	3	30
<i>Coptis trifolia</i>	3	19	3	35
<i>Lysimachia borealis</i>	2	17	2	12
<i>Epigaea repens</i>	3	26	3	23
<i>Pteridium aquilinum</i>	10	25	8	14



Pinus banksiana* – *Picea mariana* / *Kalmia angustifolia* / *Pleurozium schreberi
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Vegetation Summary (cont'd)*

Species Name [†]	Subassociation 209c <i>Kalmia angustifolia</i>		Subassociation 209d <i>Rhododendron groenlandicum</i>	
	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]
<i>Aralia nudicaulis</i>	3	7	3	6
<i>Cypripedium acaule</i>	2	24	2	9
<i>Gaultheria procumbens</i>	9	18	4	6
Herb Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(0 3 13 16 50)		(0 3 9 16 16)	
Bryophytes and Lichens				
<i>Pleurozium schreberi</i>	54	99	62	100
<i>Cladina rangiferina</i>	7	83	6	91
<i>Dicranum</i> sp.	3	73	3	88
<i>Ptilium crista-castrensis</i>	3	53	8	76
<i>Cladonia</i> sp.	6	44	4	58
<i>Cladina stellaris</i>	4	45	6	66
<i>Cladina mitis</i>	4	55	3	57
<i>Polytrichum</i> sp.	2	41	3	44
<i>Sphagnum</i> sp.	5	24	8	44
<i>Ptilidium ciliare</i>	2	8	3	29
<i>Sphagnum fuscum</i>	2	11	4	24
<i>Hylocomium splendens</i>	2	3	3	15
<i>Dicranum polysetum</i>	-	-	-	-
Bryo-Lichen Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(16 50 65 90 90)		(50 70 81 90 90)	

* 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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Pin gris – Épinette noire / Kalmia à feuilles étroites / Pleurozie dorée

Site / Soil Characteristics

	Association CNVC00209	Subassociation 209a <i>typic</i>	Subassociation 209b <i>inops</i>
	853 plots	291 plots	123 plots
Elevation Range (min–mean–max meters)	50–348–640 missing data (0)	50–355–640 missing data (0)	50–330–541 missing data (1)
Slope Gradient (% frequency)	very steep (0) steep (2) moderately steep (8) moderate (18) gentle (30) level (41) missing data (1)	very steep (0) steep (2) moderately steep (9) moderate (19) gentle (33) level (36) missing data (0)	very steep (1) steep (2) moderately steep (7) moderate (20) gentle (22) level (40) missing data (9)
Aspect (% frequency)	north (12) east (14) south (17) west (24) level (34) missing data (0)	north (10) east (15) south (18) west (25) level (32) missing data (0)	north (12) east (12) south (9) west (25) level (38) missing data (3)
Meso Toposition (% frequency)	crest / upper (31) mid (33) lower / toe (8) depression (1) level (26)	crest / upper (33) mid (36) lower / toe (7) depression (1) level (22)	crest / upper (33) mid (24) lower / toe (6) depression (1) level (37)
Moisture Regime (% frequency)	very dry (1) dry (10) mesic (79) moist (10) wet (1)	very dry (1) dry (4) mesic (80) moist (13) wet (1)	very dry (2) dry (31) mesic (52) moist (15) wet (0)
Nutrient Regime (% frequency)	missing data (100)	missing data (100)	missing data (100)



Pinus banksiana* – *Picea mariana* / *Kalmia angustifolia* / *Pleurozium schreberi
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Site / Soil Characteristics (cont'd)

	Association CNVC00209	Subassociation 209a <i>typic</i>	Subassociation 209b <i>inops</i>
Soil Parent Material (% frequency)	bedrock (3) colluvium (0) eolian (1) moraine / till (42) fluvial (1) glaciofluvial (31) lacustrine (1) glaciolacustrine (16) marine (3) organic (0) missing data (0)	bedrock (3) colluvium (0) eolian (1) moraine / till (53) fluvial (1) glaciofluvial (20) lacustrine (1) glaciolacustrine (20) marine (1) organic (1) missing data (0)	bedrock (4) colluvium (2) eolian (2) moraine / till (27) fluvial (2) glaciofluvial (43) lacustrine (5) glaciolacustrine (7) marine (6) organic (0) missing data (2)
Soil Rooting Zone Substrate (% frequency)	non-soil (3) sandy (18) coarse loamy (13) fine loamy (2) silty (2) clayey (1) organic (1) missing data (61)	non-soil (3) sandy (15) coarse loamy (13) fine loamy (3) silty (1) clayey (2) organic (1) missing data (62)	non-soil (6) sandy (22) coarse loamy (15) fine loamy (0) silty (8) clayey (1) organic (0) missing data (48)
Root Restricting Depth (% frequency)	0 – 20 cm (5) 21 – 99 cm (64) ≥ 100 cm (4) missing data (27)	0 – 20 cm (6) 21 – 99 cm (63) ≥ 100 cm (0) missing data (31)	0 – 20 cm (7) 21 – 99 cm (37) ≥ 100 cm (26) missing data (29)
Humus Form (% frequency)	mor (89) moder (6) mull (0) peatymor (3) missing data (1)	mor (92) moder (5) mull (0) peatymor (3) missing data (0)	mor (79) moder (12) mull (0) peatymor (0) missing data (7)



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Jack Pine – Black Spruce / Sheep Laurel / Red-stemmed Feathermoss	
Pin gris – Épinette noire / Kalmia à feuilles étroites / Pleurozie dorée	

Site / Soil Characteristics (cont'd)		
	Subassociation 209c <i>Kalmia angustifolia</i>	Subassociation 209d <i>Rhododendron groenlandicum</i>
	131 plots	308 plots
Elevation Range (min–mean–max meters)		
	55–327–580 missing data (0)	60–359–580 missing data (0)
Slope Gradient (% frequency)		
	very steep (0) steep (2) moderately steep (6) moderate (13) gentle (28) level (51) missing data (0)	very steep (0) steep (1) moderately steep (8) moderate (18) gentle (31) level (42) missing data (0)
Aspect (% frequency)		
	north (12) east (11) south (18) west (19) level (40) missing data (0)	north (12) east (14) south (19) west (24) level (31) missing data (0)
Meso Toposition (% frequency)		
	crest / upper (29) mid (31) lower / toe (7) depression (2) level (32)	crest / upper (29) mid (36) lower / toe (10) depression (1) level (24)
Moisture Regime (% frequency)		
	very dry (0) dry (15) mesic (82) moist (4) wet (0)	very dry (0) dry (4) mesic (87) moist (8) wet (1)
Nutrient Regime (% frequency)		
	missing data (100)	missing data (100)



Pinus banksiana* – *Picea mariana* / *Kalmia angustifolia* / *Pleurozium schreberi
CNVC00209

Site / Soil Characteristics (cont'd)

	Subassociation 209c <i>Kalmia angustifolia</i>	Subassociation 209d <i>Rhododendron groenlandicum</i>
Soil Parent Material (% frequency)		
	bedrock (5)	bedrock (2)
	colluvium (0)	colluvium (0)
	eolian (2)	eolian (1)
	moraine / till (24)	moraine / till (46)
	fluvial (1)	fluvial (1)
	glaciofluvial (43)	glaciofluvial (33)
	lacustrine (0)	lacustrine (0)
	glaciolacustrine (20)	glaciolacustrine (14)
	marine (5)	marine (2)
	organic (0)	organic (0)
	missing data (0)	missing data (0)
Soil Rooting Zone Substrate (% frequency)		
	non-soil (5)	non-soil (2)
	sandy (22)	sandy (17)
	coarse loamy (10)	coarse loamy (13)
	fine loamy (1)	fine loamy (2)
	silty (0)	silty (1)
	clayey (0)	clayey (1)
	organic (1)	organic (1)
	missing data (62)	missing data (64)
Root Restricting Depth (% frequency)		
	0 – 20 cm (4)	0 – 20 cm (4)
	21 – 99 cm (76)	21 – 99 cm (70)
	≥ 100 cm (0)	≥ 100 cm (0)
	missing data (21)	missing data (26)
Humus Form (% frequency)		
	mor (82)	mor (93)
	moder (11)	moder (2)
	mull (1)	mull (0)
	peatymor (5)	peatymor (5)
	missing data (0)	missing data (0)



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Forest / Forêt

Association CNVC00209

Pinus banksiana – *Picea mariana* / *Kalmia angustifolia* / *Pleurozium schreberi*

Jack Pine – Black Spruce / Sheep Laurel / Red-stemmed Feathermoss

Pin gris – Épinette noire / Kalmia à feuilles étroites / Pleurozie dorée

Additional Characteristics

Species of High Conservation Concern:

Non-native Species:

Management Issues:

Type Statistics

Internal Similarity:

Confidence:

Strength:

Related Concepts

Similar CNVC Associations:

CNVC00201 [*Pinus banksiana* (*Picea mariana*) / *Kalmia angustifolia* (*Rhododendron groenlandicum*) / *Cladina* spp.] occurs on poorer sites in the same range and has a moss layer with lower cover of feathermosses and more of *Cladina* lichens (see Dynamics).

CNVC00207 [*Pinus banksiana* (*Picea mariana*) / *Vaccinium angustifolium* / *Pleurozium schreberi*] occurs in Ontario on comparable boreal sites but has lower abundance of ericaceous shrubs and no *Kalmia angustifolia*.

CNVC0211 [*Picea mariana* / *Rhododendron groenlandicum* – *Kalmia angustifolia* / *Pleurozium schreberi*] occurs on similar sites in the same range but is dominated by *Picea mariana* rather than *Pinus banksiana* (see Dynamics).

Related United States National Vegetation Classification Associations:

Relationships with Other Classifications:

Comments

Source Information

Number of source plots for CNVC00209: 853

Number of source plots for 209a typic: 291

Number of source plots for 209b inops: 123

Number of source plots for 209c *Kalmia angustifolia*: 131

Number of source plots for 209d *Rhododendron groenlandicum*: 308

Information Sources:

McMurray, S.C., Johnson, J.A., Zhou, K., Uhlig, P.W.C. 2015. Ontario ecological land classification program - Ecological Data Repository (EDR). Ont. Min. Nat. Resour. & For., Sci. & Info. Branch, Sault Ste. Marie, ON.

Ministère des Ressources naturelles, de la Faune et des Parcs, Forêt Québec. 2003. Base de données des points d'observation écologique (version 2003). Gouv. du Qué., Min. des Res. nat., de la Faune et des Parcs, Forêt Qué., Dir. des inv. for., QC.

Concept Authors: K. Baldwin, K. Chapman, M. Major, C. Morneau, P. Uhlig, M. Wester

Description Authors: K. Chapman, K. Baldwin and J.-P. Saucier

Date of Concept: February, 2012

Date of Description: February, 2016



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***Pinus banksiana* – *Picea mariana* / *Kalmia angustifolia* / *Pleurozium schreberi* CNVC00209**

Classification References:

Bergeron, J-F.; Grondin, P.; Blouin, J. 1999. Rapport de classification écologique du sous-domaine bioclimatique de la pessière à mousses de l'ouest. Min. des Res. nat. du Qué., Dir. des inv. for., Sainte-Foy, QC.

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Characterization References:

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Pinus banksiana* – *Picea mariana* / *Kalmia angustifolia* / *Pleurozium schreberi
CNVC00209

Characterization References (cont'd):

Mansuy, N.; Gauthier, S.; Robitaille, A.; Bergeron, Y. 2010. The effects of surficial deposit-drainage combinations on spatial variations of fire cycles in the boreal forest of eastern Canada. *Int. J. Wildland Fire* 19:1083-1098.

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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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