



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

<http://cnvc-cnvc.ca>

Forest / Forêt

Association CNVC00270

***Betula papyrifera* – *Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp.**

Paper Birch – Black Spruce – Balsam Fir / Red-stemmed Feathermoss – Peat Mosses

Bouleau à papier – Épinette noire – Sapin baumier / Pleurozie dorée – Sphaignes

Subassociations: 270a *typic*, 270b *Picea mariana*, 270c *Betula papyrifera*

CNVC Alliance: CA00013 *Betula papyrifera* – *Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp.

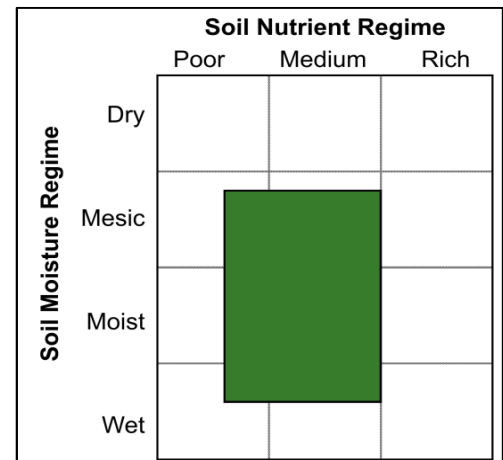
CNVC Group: CG0006 Ontario-Quebec Boreal Mesic-Moist Black Spruce (Jack Pine) Forest

Type Description

Concept: CNVC00270 is a boreal mixedwood forest Association that occurs in Ontario and Quebec. It has a moderately closed to closed canopy comprising paper birch (*Betula papyrifera*), black spruce (*Picea mariana*) and balsam fir (*Abies balsamea*) in various mixtures. Regeneration of these tree species, especially balsam fir, dominates the well-developed to dense shrub layer. American mountain-ash (*Sorbus americana*) is common but less abundant in this layer. The herb layer is moderately developed and typically includes low cover of bunchberry (*Cornus canadensis*), creeping snowberry (*Gaultheria hispidula*), yellow clintonia (*Clintonia borealis*), goldthread (*Coptis trifolia*), wild lily-of-the-valley (*Maianthemum canadense*), northern starflower (*Lysimachia borealis*), common wood-sorrel (*Oxalis montana*), wood ferns (*Dryopteris* spp.) and sedges (*Carex* spp.). The moss layer is well developed and characterized by abundant feathermosses, especially red-stemmed feathermoss (*Pleurozium schreberi*), and peat mosses (*Sphagnum* spp.), especially Girgensohn's peat moss (*S. girgensohnii*). Minor amounts of broom mosses (*Dicranum* spp.), haircap mosses (*Polytrichum* spp.) and reindeer lichens (*Cladina* spp.) are also present. CNVC00270 typically occurs on moist to mesic, nutrient-medium sites in a region with a humid continental boreal climate. It is a mid-seral condition that can develop after low-severity fires, harvesting or partial disturbances such as insect outbreaks or windthrow. Three subassociations are distinguished: *typic*, *Picea mariana* and *Betula papyrifera*.

Vegetation: CNVC00270 is a mixedwood forest Association with a moderately closed to closed canopy and a well-developed to dense shrub layer, both dominated by various mixes of *Betula papyrifera*, *Picea mariana* and *Abies balsamea*. In addition to tree species regeneration, the shrub layer commonly includes low abundance of *Sorbus americana*. The herb layer is moderately developed, with low cover of *Cornus canadensis*, *Gaultheria hispidula*, *Clintonia borealis*, *Coptis trifolia*, *Maianthemum canadense*, *Lysimachia borealis*, *Oxalis montana*, *Dryopteris* spp. and *Carex* spp. The moss layer is well developed with abundant *Pleurozium schreberi* and *Sphagnum* spp. (especially *S. girgensohnii*). *Dicranum* and *Polytrichum* mosses as well as *Cladina* lichens are often present.

Three subassociations are distinguished: *typic*, *Picea mariana* and *Betula papyrifera*. The *typic* subassociation has approximately equal cover of *B. papyrifera* and *A. balsamea* in the canopy, the *Picea mariana* subassociation has *P. mariana* codominant with *B. papyrifera*, and *B. papyrifera* is dominant in the *Betula papyrifera* subassociation, where there is lower cover of both *P. mariana* and *A. balsamea*.





***Betula papyrifera* – *Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp. CNVC00270**

Type Description (cont'd)

Environment: CNVC00270 occurs mainly in a humid continental boreal climate, primarily on moist to mesic (sometimes wet), nutrient-medium sites. Stands often occur on level sites in the transition between upland and wetland forests, but they also occur on moisture-collecting, middle to lower or toe-slope topopositions. On slopes, stands are often on cooler aspects (i.e., east or north-facing). Soils are usually moderately deep and coarse-textured, derived primarily from morainal parent materials. Mor humus forms are most common, but peatymors develop on wetter sites.

On wet or cool sites, paludification can reduce site productivity over time. This process happens as decomposition slows and organic matter (peat) accumulates, further insulating the soil and slowing nutrient cycling.

Within the range of CNVC00270 regional fire cycles are intermediate (100-270 years), long (270-500 years) or even very long (>500 years). However, these stands often occur where there are natural fire breaks (e.g., water bodies or wetlands) and are less prone to fire because of their moisture status and thick moss layer. Where the regional fire cycle is intermediate, stands are less likely to burn than the surrounding landscape.

Dynamics: CNVC00270 is a mid-seral condition that often results from low-severity fire or partial disturbance (e.g., harvesting, outbreaks of spruce budworm (*Choristoneura fumiferana*) or windthrow) in a conifer condition such as CNVC00277 [*Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp.]. Disturbance type, severity and history affect stand composition. *Abies balsamea* is usually eliminated by fire, but *Betula papyrifera* and *Picea mariana* are adapted to disturbance. *B. papyrifera* can reproduce vegetatively from stump sprouts. It is a pioneer species that also produces abundant, light, wind-dispersed seeds that can readily colonize mineral soil seedbeds exposed by disturbance. *P. mariana* has cones that open when heated to release seeds. Although its seeds can germinate on a variety of substrates, seedbeds are usually improved by a fire that reduces organic matter and exposes mineral soil. *B. papyrifera* grows rapidly in full-light conditions and is intolerant of shade, whereas *P. mariana* grows more slowly and is self-replacing in a stand because of its shade tolerance. *Abies balsamea* becomes established in these stands, forming CNVC00270, when seeds are disseminated from nearby areas, growing into the canopy with *P. mariana* as *B. papyrifera* declines.

Low-severity fires and partial disturbances by harvesting, windthrow or outbreak of spruce budworm (*Choristoneura fumiferana*) can create large enough canopy openings in older stands to meet the high light requirements of *B. papyrifera*, while still maintaining *P. mariana* and *A. balsamea*. Severe outbreaks of spruce budworm can temporarily reduce the host conifers, but such stands are typically short lived since surviving *P. mariana* and *A. balsamea* in the understory quickly grow into the canopy and return these stands to the mixedwood condition. The *Betula papyrifera* subassociation describes younger stands (generally less than about 70 years) than those described by the *Picea mariana* and *typic* subassociations.

Range: CNVC00270 occurs mainly in the boreal region of Quebec. It is most common in western Quebec, but its range extends west into northeastern Ontario and east to the Lower North Shore of the Gulf of Saint Lawrence near the Romaine river. CNVC00270 occurs sporadically in the northern temperate region, usually on sites that are cooler than normal for that region (e.g., at higher elevations or on north aspects). The *Picea mariana* subassociation is recognized in Ontario and Quebec. The *typic* and *Betula papyrifera* subassociations are only described 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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Paper Birch – Black Spruce – Balsam Fir / Red-stemmed Feathermoss – Peat Mosses

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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, Mecatina Plateau, Rivière Rupert Plateau, Southern Laurentians

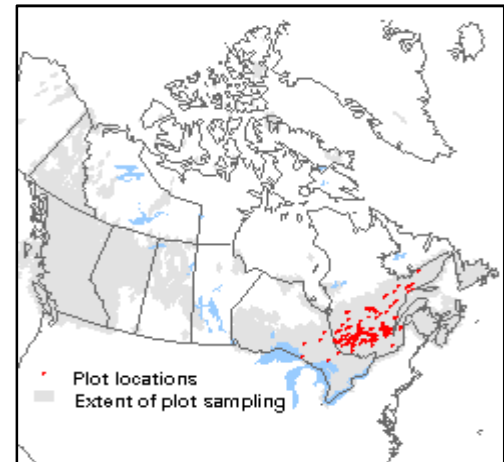
Rowe's Forest Regions and Sections of Canada: Boreal: Chibougamau-Natashquan, Gouin, Laurentide-Onatchiway, Missinaibi-Cabonga, Northern Clay; Great Lakes-St. Lawrence: Algoma, Algonquin-Pontiac, Georgian Bay, Laurentian, Saguenay, Temiscouata-Restigouche, Timagami

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

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

Ecological Land Classification of Ontario (ecoregions and ecodistricts): 3E-1, 3E-2, 3E-4, 3E-5, 3E-6, 3E-7, 4E-1, 4E-3, 4E-4, 4E-5, 4W-1, 4W-2, 5E-1, 5E-3, 5E-4, 5E-5, 5E-6, 5E-7, 5E-13

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



Corresponding Types and Associations

270a typic	Quebec	QC074A	<i>Abies balsamea</i> - <i>Betula papyrifera</i> / <i>Sphagnum</i> spp. [Typique]
		QC074B	<i>Abies balsamea</i> - <i>Betula papyrifera</i> / <i>Sphagnum</i> spp. [<i>Sphagnum girgensohnii</i>]
270b <i>Picea mariana</i>	Ontario	BwTr12-1	<i>Picea mariana</i> (<i>Betula papyrifera</i>) / <i>Abies balsamea</i> / <i>Sphagnum</i> spp. (<i>Pleurozium schreberi</i>)
	Quebec	QC064A	<i>Picea mariana</i> - <i>Betula papyrifera</i> (<i>Abies balsamea</i>) / <i>Pleurozium schreberi</i> - <i>Sphagnum</i> spp. [Typique]
		QC064B	<i>Picea mariana</i> - <i>Betula papyrifera</i> (<i>Abies balsamea</i>) / <i>Pleurozium schreberi</i> - <i>Sphagnum</i> spp. [<i>Sphagnum girgensohnii</i>]
270c <i>Betula papyrifera</i>	Quebec	QC105	<i>Betula papyrifera</i> (<i>Picea mariana</i>) / <i>Sphagnum</i> spp.



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Bouleau à papier – Épinette noire – Sapin baumier / Pleurozie dorée – Sphaignes

Vegetation Summary*

Species Name [†]	Association CNVC00270		Subassociation 270a <i>typic</i>		Subassociation 270b <i>Picea mariana</i>	
	142 plots		51 plots		64 plots	
	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]
Overstory Trees						
<i>Betula papyrifera</i>	24	99	22	100	20	97
<i>Picea mariana</i>	16	92	7	80	25	100
<i>Abies balsamea</i>	15	89	22	100	13	81
<i>Picea glauca</i>	7	37	7	43	8	34
<i>Populus tremuloides</i>	12	16	8	14	15	22
Tree Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(32 49 60 66 83)		(32 49 59 66 83)		(32 49 59 69 83)	
Understory Woody Shrubs and Regenerating Trees						
<i>Abies balsamea</i>	26	98	29	100	26	98
<i>Betula papyrifera</i>	9	94	9	96	8	92
<i>Picea mariana</i>	11	90	7	82	14	95
<i>Sorbus americana</i>	5	64	5	71	4	61
<i>Vaccinium myrtilloides</i>	3	58	3	47	3	67
<i>Vaccinium angustifolium</i>	3	53	3	39	3	58
<i>Amelanchier sp.</i>	4	51	5	51	3	53
<i>Viburnum nudum</i>	6	44	5	49	8	41
<i>Ilex mucronata</i>	5	44	6	45	5	42
<i>Acer spicatum</i>	5	41	4	51	6	30
<i>Ribes glandulosum</i>	3	37	3	37	2	31
<i>Rhododendron groenlandicum</i>	6	35	4	16	7	42
<i>Kalmia angustifolia</i>	5	35	3	18	6	45
<i>Alnus incana</i>	5	34	3	29	7	36
<i>Picea glauca</i>	5	31	6	45	3	23
<i>Acer rubrum</i>	4	25	4	29	4	19
<i>Rubus idaeus</i>	4	24	4	27	3	23
<i>Prunus pensylvanica</i>	4	19	5	16	3	20
<i>Salix sp.</i>	4	16	3	8	4	19
<i>Sorbus decora</i>	4	14	3	10	3	13
Shrub Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(32 49 59 83 99)		(19 49 58 74 99)		(32 49 61 83 95)	
Understory Herbs and Dwarf Shrubs						
<i>Cornus canadensis</i>	6	94	5	94	7	92
<i>Gaultheria hispidula</i>	6	83	4	71	7	95
<i>Clintonia borealis</i>	5	82	6	82	5	84
<i>Coptis trifolia</i>	3	79	2	80	3	75
<i>Maianthemum canadense</i>	3	78	3	75	3	80
<i>Lysimachia borealis</i>	2	69	2	69	2	66
<i>Oxalis montana</i>	8	65	12	82	5	53



***Betula papyrifera* – *Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp. CNVC00270**

Vegetation Summary (cont'd)*

Species Name [†]	Association CNVC00270		Subassociation 270a <i>typic</i>		Subassociation 270b <i>Picea mariana</i>	
	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]
<i>Dryopteris spinulosa</i> complex	4	64	6	76	3	50
<i>Carex</i> sp.	4	63	4	71	4	53
<i>Linnaea borealis</i>	3	58	2	55	3	56
<i>Aralia nudicaulis</i>	3	41	3	43	3	41
Poaceae	4	25	5	29	4	22
<i>Lycopodium annotinum</i>	2	25	2	16	2	25
<i>Gymnocarpium dryopteris</i>	2	23	2	25	2	17
<i>Lycopodium obscurum</i>	2	23	2	14	2	25
<i>Osmunda claytoniana</i>	5	19	4	20	7	16
<i>Athyrium filix-femina</i>	3	19	4	27	3	16
<i>Phegopteris connectilis</i>	2	18	2	27	2	11
<i>Oclemena acuminata</i>	4	17	5	22	5	14
<i>Rubus pubescens</i>	3	15	4	14	2	13
Herb Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(3 16 28 33 50)		(3 16 32 50 70)		(5 16 26 33 46)	
Bryophytes and Lichens						
<i>Pleurozium schreberi</i>	17	95	14	94	21	97
<i>Dicranum</i> sp.	4	89	5	96	4	84
<i>Polytrichum</i> sp.	3	77	3	86	3	70
<i>Sphagnum</i> sp.	30	73	31	71	21	67
<i>Cladina rangiferina</i>	2	61	2	41	2	72
<i>Ptilium crista-castrensis</i>	4	56	3	63	4	59
<i>Sphagnum girgensohnii</i>	25	52	25	59	24	58
<i>Hylocomium splendens</i>	7	49	7	53	9	53
<i>Cladonia</i> sp.	2	46	2	39	2	48
<i>Cladina mitis</i>	2	30	2	18	2	36
<i>Sphagnum fuscum</i>	4	28	2	18	5	33
<i>Bazzania trilobata</i>	3	28	2	31	2	27
<i>Sphagnum magellanicum</i>	3	23	2	18	3	23
Bryo-Lichen Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(33 50 60 90 90)		(33 50 60 90 90)		(16 49 61 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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Bouleau à papier – Épinette noire – Sapin baumier / Pleurozie dorée – Sphaignes

Vegetation Summary (cont'd)*

Species Name [†]	Subassociation	
	270c <i>Betula papyrifera</i>	
	27 plots	
	% Cover [‡]	% Presence [^]
Overstory Trees		
<i>Betula papyrifera</i>	40	100
<i>Picea mariana</i>	10	93
<i>Abies balsamea</i>	6	85
<i>Picea glauca</i>	5	30
<i>Populus tremuloides</i>	4	7
Tree Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(42 49 62 66 84)	
Understory Woody Shrubs and Regenerating Trees		
<i>Abies balsamea</i>	21	93
<i>Betula papyrifera</i>	10	96
<i>Picea mariana</i>	11	93
<i>Sorbus americana</i>	5	59
<i>Vaccinium myrtilloides</i>	3	59
<i>Vaccinium angustifolium</i>	3	67
<i>Amelanchier</i> sp.	3	44
<i>Viburnum nudum</i>	4	44
<i>Ilex mucronata</i>	4	48
<i>Acer spicatum</i>	4	48
<i>Ribes glandulosum</i>	3	48
<i>Rhododendron groenlandicum</i>	6	56
<i>Kalmia angustifolia</i>	5	41
<i>Alnus incana</i>	4	37
<i>Picea glauca</i>	4	22
<i>Acer rubrum</i>	4	30
<i>Rubus idaeus</i>	3	19
<i>Prunus pensylvanica</i>	3	22
<i>Salix</i> sp.	3	26
<i>Sorbus decora</i>	4	26
Shrub Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(27 32 57 74 89)	
Understory Herbs and Dwarf Shrubs		
<i>Cornus canadensis</i>	6	100
<i>Gaultheria hispidula</i>	4	78
<i>Clintonia borealis</i>	4	74
<i>Coptis trifolia</i>	3	85
<i>Maianthemum canadense</i>	3	81
<i>Lysimachia borealis</i>	3	78
<i>Oxalis montana</i>	3	63



***Betula papyrifera* – *Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp. CNVC00270**

Vegetation Summary (cont'd)*

Species Name [†]	Subassociation 270c <i>Betula papyrifera</i>	
	Cover [‡] %	Presence [^] %
<i>Dryopteris spinulosa</i> complex	3	74
<i>Carex</i> sp.	4	74
<i>Linnaea borealis</i>	2	67
<i>Aralia nudicaulis</i>	2	37
Poaceae	4	26
<i>Lycopodium annotinum</i>	3	41
<i>Gymnocarpium dryopteris</i>	2	33
<i>Lycopodium obscurum</i>	2	37
<i>Osmunda claytoniana</i>	6	26
<i>Athyrium filix-femina</i>	2	11
<i>Phegopteris connectilis</i>	2	15
<i>Oclemena acuminata</i>	2	15
<i>Rubus pubescens</i>	2	22
Herb Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(3 10 23 33 48)	
Bryophytes and Lichens		
<i>Pleurozium schreberi</i>	13	93
<i>Dicranum</i> sp.	4	89
<i>Polytrichum</i> sp.	3	74
<i>Sphagnum</i> sp.	43	89
<i>Cladina rangiferina</i>	2	70
<i>Ptilium crista-castrensis</i>	2	33
<i>Sphagnum girgensohnii</i>	24	26
<i>Hylocomium splendens</i>	2	30
<i>Cladonia</i> sp.	2	56
<i>Cladina mitis</i>	2	37
<i>Sphagnum fuscum</i>	2	37
<i>Bazzania trilobata</i>	4	26
<i>Sphagnum magellanicum</i>	2	30
Bryo-Lichen Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(33 50 59 70 78)	

* 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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Paper Birch – Black Spruce – Balsam Fir / Red-stemmed Feathermoss – Peat Mosses

Bouleau à papier – Épinette noire – Sapin baumier / Pleurozie dorée – Sphaignes

Site / Soil Characteristics

	Association CNVC00270 142 plots	Subassociation 270a <i>typic</i> 51 plots	Subassociation 270b <i>Picea mariana</i> 64 plots
Elevation Range (min–mean–max meters)	55–460–945	230–519–945	180–438–850
Slope Gradient (% frequency)	very steep (1) steep (4) moderately steep (11) moderate (14) gentle (31) level (38)	very steep (2) steep (2) moderately steep (14) moderate (18) gentle (33) level (31)	very steep (0) steep (6) moderately steep (9) moderate (14) gentle (28) level (42)
Aspect (% frequency)	north (22) east (23) south (13) west (15) level (27) missing data (1)	north (20) east (29) south (18) west (16) level (18) missing data (0)	north (20) east (19) south (13) west (17) level (30) missing data (2)
Meso Toposition (% frequency)	crest / upper (9) mid (46) lower / toe (16) depression (8) level (20)	crest / upper (12) mid (51) lower / toe (12) depression (8) level (18)	crest / upper (6) mid (44) lower / toe (19) depression (9) level (22)
Moisture Regime (% frequency)	dry (5) mesic (34) moist (44) wet (17)	dry (6) mesic (27) moist (47) wet (20)	dry (3) mesic (41) moist (47) wet (9)
Nutrient Regime (% frequency)	missing data (100)	missing data (100)	missing data (100)



***Betula papyrifera* – *Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp. CNVC00270**

Site / Soil Characteristics (cont'd)

	Association CNVC00270	Subassociation 270a <i>typic</i>	Subassociation 270b <i>Picea mariana</i>
Soil Parent Material (% frequency)	bedrock (1) colluvium (1) moraine / till (80) glaciofluvial (5) glaciolacustrine (8) marine (1) organic (4)	bedrock (0) colluvium (0) moraine / till (86) glaciofluvial (2) glaciolacustrine (6) marine (0) organic (6)	bedrock (0) colluvium (3) moraine / till (80) glaciofluvial (5) glaciolacustrine (9) marine (0) organic (3)
Soil Rooting Zone Substrate (% frequency)	non-soil (2) sandy (4) coarse loamy (12) fine loamy (1) silty (1) clayey (3) organic (4) missing data (72)	non-soil (0) sandy (2) coarse loamy (18) fine loamy (2) silty (2) clayey (4) organic (6) missing data (67)	non-soil (3) sandy (5) coarse loamy (13) fine loamy (2) silty (0) clayey (3) organic (3) missing data (72)
Root Restricting Depth (% frequency)	0 – 20 cm (15) 21 – 99 cm (58) ≥ 100 cm (1) missing data (26)	0 – 20 cm (16) 21 – 99 cm (65) ≥ 100 cm (0) missing data (20)	0 – 20 cm (14) 21 – 99 cm (56) ≥ 100 cm (3) missing data (27)
Humus Form (% frequency)	mor (73) moder (3) peatymor (24) missing data (1)	mor (65) moder (4) peatymor (31) missing data (0)	mor (80) moder (2) peatymor (17) missing data (2)



Forest / Forêt

Association CNVC00270

***Betula papyrifera* – *Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp.**

Paper Birch – Black Spruce – Balsam Fir / Red-stemmed Feathermoss – Peat Mosses

Bouleau à papier – Épinette noire – Sapin baumier / Pleurozie dorée – Sphaignes

Site / Soil Characteristics (cont'd)

Subassociation

270c *Betula papyrifera*

27 plots

Elevation Range (min–mean–max meters)

55–401–780

Slope Gradient (% frequency)

very steep (4)
 steep (4)
 moderately steep (11)
 moderate (7)
 gentle (33)
level (41)

Aspect (% frequency)

north (30)
 east (19)
 south (4)
 west (11)
level (37)
 missing data (0)

Meso Toposition (% frequency)

crest / upper (11)
mid (44)
 lower / toe (19)
 depression (4)
 level (22)

Moisture Regime (% frequency)

dry (7)
 mesic (30)
moist (33)
 wet (30)

Nutrient Regime (% frequency)

missing data (100)



***Betula papyrifera* – *Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp. CNVC00270**

Site / Soil Characteristics (cont'd)

Subassociation

270c *Betula papyrifera*

Soil Parent Material (% frequency)

- bedrock (4)
- colluvium (0)
- moraine / till (67)**
- glaciofluvial (11)
- glaciolacustrine (11)
- marine (4)
- organic (4)

Soil Rooting Zone Substrate (% frequency)

- non-soil (4)
- sandy (7)
- coarse loamy (0)
- fine loamy (0)
- silty (4)
- clayey (0)
- organic (4)
- missing data (81)

Root Restricting Depth (% frequency)

- 0 – 20 cm (15)
- 21 – 99 cm (48)**
- ≥ 100 cm (0)
- missing data (37)

Humus Form (% frequency)

- mor (70)**
- moder (4)
- peatymor (26)
- missing data (0)



Forest / Forêt

Association CNVC00270

***Betula papyrifera* – *Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp.**

Paper Birch – Black Spruce – Balsam Fir / Red-stemmed Feathermoss – Peat Mosses

Bouleau à papier – Épinette noire – Sapin baumier / Pleurozie dorée – Sphaignes

Additional Characteristics

Species of High Conservation Concern:

Non-native Species:

Management Issues:

Type Statistics

Internal Similarity:

Confidence:

Strength:

Related Concepts

Similar CNVC Associations:

CNVC00216 [*Picea mariana* – *Betula papyrifera* (*Abies balsamea*) / *Acer spicatum*], occurs on boreal sites in Quebec that are not as moist. It has abundant *Acer spicatum* in the shrub layer and much less cover of *Sphagnum* mosses.

CNVC00232 [*Abies balsamea* – *Betula papyrifera* / *Pleurozium schreberi*] occurs on boreal sites in Quebec that are not as moist. It has lower abundance of *Picea mariana* in the overstory and much less *Sphagnum* moss cover.

CNVC00234 [*Picea mariana* – *Betula papyrifera* – *Abies balsamea* / *Clintonia borealis*] occurs on sites that are not as moist in the same range. It lacks the *Sphagnum* moss abundance of CNVC00270.

CNVC00271 [*Picea mariana* – *Abies balsamea* – *Betula papyrifera* / *Rhododendron groenlandicum* / *Sphagnum* spp.] occurs on wet sites in the same range. In CNVC00271, *Sphagnum* moss cover exceeds feathermoss cover.

CNVC00276 [*Picea mariana* / *Rhododendron groenlandicum* – *Vaccinium angustifolium* / *Pleurozium schreberi* (*Sphagnum* spp.)] is a similar coniferous Association that occurs on comparable sites in the same range but has much less *Abies balsamea* and *Betula papyrifera* in the tree layer.

CNVC00344 [*Picea mariana* – *Betula papyrifera* – *Abies balsamea* / *Pleurozium schreberi*] occurs on boreal sites in Quebec that are not as moist. It has less *Sphagnum* moss cover.

Related United States National Vegetation Classification Associations:

Relationships with Other Classifications:

Comments



***Betula papyrifera* – *Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp. CNVC00270**

Source Information

Number of source plots for CNVC00270: 142

Number of source plots for 270a *typic*: 51

Number of source plots for 270b *Picea mariana*: 64

Number of source plots for 270c *Betula papyrifera*: 27

Information Sources:

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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: December, 2012

Date of Description: May, 2017

Classification References:

Gosselin, J.; Grondin, P.; Saucier, J.-P. 1998. Rapport de classification écologique du sous-domaine bioclimatique de la sapinière à bouleau jaune de l'ouest. Min. des Res. nat du Qué., Dir. de la gestion des stocks forestiers, QC.

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

<http://cnvc-cnvc.ca>

***Betula papyrifera* – *Picea mariana* – *Abies balsamea* / *Pleurozium schreberi* – *Sphagnum* spp. CNVC00270**

Characterization References (cont'd):

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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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