



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

<http://cnvc-cnvc.ca>

Forest / Forêt

Association CNVC00120

Pinus contorta* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi

Lodgepole Pine – Black Spruce / Lingonberry / Red-stemmed Feathermoss

Pin tordu – Épinette noire / Airelle rouge / Pleurozie dorée

Subassociations: 120a *typic*, 120b *Rhododendron groenlandicum*, 120c *Alnus viridis*

CNVC Alliance: CA00030 *Pinus contorta* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi*

CNVC Group: CG0013 Cordilleran Boreal Mesic-Moist Black Spruce – Lodgepole Pine Forest



Source: Yukon government

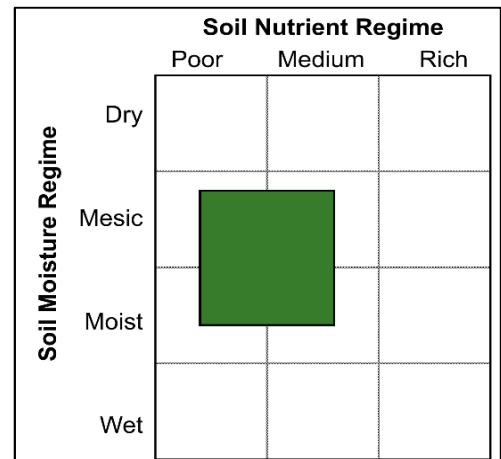
Type Description

Concept: CNVC00120 is a boreal coniferous forest Association that occurs in Alberta, British Columbia and Yukon. It has a moderately closed canopy of lodgepole pine (*Pinus contorta*) and/or black spruce (*Picea mariana*), usually dominated by lodgepole pine. The understory is generally species poor. The poorly to well-developed shrub layer usually includes common Labrador tea (*Rhododendron groenlandicum*) and prickly rose (*Rosa acicularis*). The herb and dwarf shrub layer is moderately developed and includes lingonberry (*Vaccinium vitis-idaea*), bunchberry (*Cornus canadensis*) and twinflower (*Linnaea borealis*). A well-developed to continuous moss layer of stairstep moss (*Hylocomium splendens*), red-stemmed feathermoss (*Pleurozium schreberi*) and knight's plume moss (*Ptilium crista-castrensis*) further characterizes this Association. CNVC00120 occurs on mesic to moist, nutrient-poor to medium sites in a region with a subhumid continental climate. It is often the first cohort after fire, but can succeed earlier seral conditions. Three subassociations are distinguished: *typic*, *Rhododendron groenlandicum* and *Alnus viridis*.

Vegetation: CNVC00120 is a coniferous forest Association with a moderately closed canopy that is typically dominated by *Pinus contorta* (see Comments section), usually in mixture with *Picea mariana*. Infrequently, *P. mariana* is dominant. *Picea glauca* is an occasional component of the canopy. The understory is generally species poor. Shrub layer development is variable; typically it is poorly developed but can be moderately or well developed, depending on subassociation. *Rhododendron groenlandicum* and *Rosa acicularis* are constant species. The herb and dwarf shrub layer is usually moderately developed and commonly includes *Vaccinium vitis-idaea*, *Cornus canadensis* and *Linnaea borealis*. A well-developed to continuous moss layer of *Hylocomium splendens*, *Pleurozium schreberi* and *Ptilium crista-castrensis* characterizes this Association. The *Rhododendron groenlandicum* and *Alnus viridis* subassociations are distinguished from the *typic* by better developed shrub layers with dominance of these species, respectively.

Environment: CNVC00120 occurs in a subhumid continental boreal climate on nutrient-poor to medium sites. Site moisture conditions range from mesic, on well-drained soils, to moist, on imperfectly drained soils. It is most common on mid to upper slope topopositions with fine to coarse loamy or clay soils of morainal or (glacio) fluvial origin. Humus forms are predominantly mors.

CNVC00120 occurs where the regional fire cycle is intermediate (100-270 years), long (270-500 years) or very long (>500 years). Fire cycle length and site conditions influence the relative dominance of *Picea mariana* and *Pinus contorta* in each stand. Moister sites and longer fire cycles favour *P. mariana*.





Pinus contorta* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi
CNVC00120

Type Description (cont'd)

Dynamics: CNVC00120 is naturally perpetuated by stand-replacing fire. Stands commonly comprise both *Pinus contorta* 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 the 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.

Where both species are present in the initial post-fire stand, *P. contorta* grows more rapidly so it can dominate, 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. These older stands develop an uneven-age structure.

In recent years, mountain pine beetle (*Dendroctonus ponderosae*) has caused significant economic and ecological impacts on *P. contorta* forests in temperate British Columbia (BC). Recently the beetle has spread northward and eastward into boreal *P. contorta* forests, affecting even hybrid *Pinus x murraybanksiana* and *P. banksiana* stands. Climate change and forest management practices, including fire suppression, have likely contributed to these unprecedented beetle densities, as well as to the expansion of its range and host species. Since the mountain pine beetle is novel to boreal ecosystems, long-term effects on these forests are uncertain.

Range: CNVC00120 occurs in the boreal regions of Yukon, British Columbia and Alberta as well as the Rocky Mountain foothills of Alberta. The *Rhododendron groenlandicum* subassociation is described from throughout the range of CNVC00120. The *typic* and *Alnus viridis* subassociations are recognized in Alberta and Yukon.

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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Distribution

Countries: Canada

Provinces / Territories / States: Alberta, British Columbia, Yukon

Terrestrial Ecozones and Ecoregions of Canada: Boreal Cordillera: Boreal Mountains and Plateaus, Hyland Highland, Liard Basin, Northern Canadian Rocky Mountains, Pelly Mountains, Yukon Plateau - Central, Yukon Plateau - North, Yukon Southern Lakes, Yukon-Stikine Highlands; Boreal Plains: Clear Hills Upland, Mid-Boreal Uplands, Muskwa Plateau, Peace Lowland, Western Alberta Upland; Montane Cordillera: Central Canadian Rocky Mountains, Omineca Mountains; Taiga Cordillera: Selwyn Mountains; Taiga Plains: Northern Alberta Uplands

Rowe's Forest Regions and Sections of Canada: Boreal: Central Yukon, Dawson, Eastern Yukon, Hay River, Lower Foothills, Mixedwood, Northern Foothills, Stikine Plateau, Upper Foothills, Upper Liard, Upper Mackenzie; Subalpine: Interior Subalpine

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

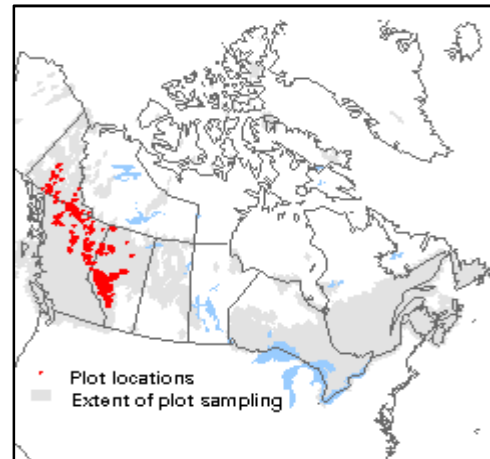
Nature Conservancy of Canada Ecoregions: Boreal Cordillera, Boreal Plains, Canadian Rocky Mountains, Central Interior, Montane Cordillera, Muskwa - Kechika, Taiga Cordillera, Taiga Plains

Ecozones and Ecoregions of the Yukon: Boreal Cordillera: Hyland Highland, Liard Basin, Pelly Mountains, Yukon Plateau - Central, Yukon Plateau - North, Yukon Southern Lakes, Yukon - Stikine Highlands; Taiga Cordillera: Selwyn Mountains

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

British Columbia Ecoregion Classification (ecoregions): Boreal Mountains and Plateaus, Central Alberta Uplands, Central Canadian Rocky Mountains, Hay-Slave Lowland, Liard Basin, Muskwa Plateau, Northern Alberta Upland, Northern Canadian Rocky Mountains, Omineca Mountains, Peace River Basin, Southern Alberta Upland, Yukon Southern Lakes, Yukon-Stikine Highlands

Natural Regions and Subregions of Alberta: Boreal Forest: Boreal Subarctic, Lower Boreal Highlands, Upper Boreal Highlands; Foothills: Lower Foothills, Upper Foothills



Corresponding Types and Associations

120a typic	Yukon	P21	<i>Picea mariana</i> – <i>Pinus contorta</i> / <i>Alnus viridis</i> / Feathermoss
		P28	<i>Pinus contorta</i> / <i>Vaccinium vitis-idaea</i> / <i>Hylocomium splendens</i>
		PSbSw22	<i>Pinus contorta</i> – <i>Picea mariana</i> (<i>P. glauca</i>) / <i>Vaccinium vitis-idaea</i>
		PSbSw23	<i>Pinus contorta</i> – <i>Picea mariana</i> (<i>P. glauca</i>) / <i>Vaccinium vitis-idaea</i> / <i>Hylocomium splendens</i>
Alberta	NN/SB/C/01/02	PI - Sb / feather moss	
	SW/LF/C/01/02	PI / bog cranberry	
	SW/LF/C/01/03	PI / Schreber's moss	



***Pinus contorta* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi*
 CNVC00120**

Corresponding Types and Associations (cont'd)

120a typic (con'td)	Alberta	SW/LF/F/01/01	PI / bog cranberry / feather moss
		SW/LF/F/01/03	PI / feather moss
		SW/UF/C/01/04	PI / bog cranberry / Schreber's moss
		SW/UF/C/01/07	PI / feather moss
		SW/UF/C/04/03	PI – Sb / bog cranberry / Schreber's moss
		SW/UF/C/04/04	PI – Sb / feather moss
		SW/UF/F/01/01	Sb – PI / bog cranberry / Schreber's moss
		SW/UF/F/01/03	Sb – PI / Schreber's moss
		WC/LF/D/01/03	PI – Sb / feather moss
		WC/LF/H/01/03	Sb – PI / Schreber's moss
		WC/UF/D/01/03	PI – Sb / feather moss
		WC/UF/H/01/03	Sb – PI / Schreber's moss
		120b <i>Rhododendron groenlandicum</i>	Yukon
P29	<i>Pinus contorta</i> / <i>Rhododendron groenlandicum</i> / <i>Hylocomium splendens</i>		
PSb25	<i>Pinus contorta</i> – <i>Picea mariana</i> / <i>Rhododendron groenlandicum</i> / Feathermoss		
Sb22	<i>Picea mariana</i> (<i>Pinus contorta</i>) / <i>Vaccinium vitis-idaea</i> – Feathermoss		
British Columbia	BWBSdk /104		<i>Picea mariana</i> – <i>Ledum groenlandicum</i> – <i>Hylocomium splendens</i>
	BWBSmk /104		<i>Picea mariana</i> – <i>Ledum groenlandicum</i> – <i>Hylocomium splendens</i>
	BWBSmw /104		<i>Picea mariana</i> – <i>Ledum groenlandicum</i> – <i>Hylocomium splendens</i>
Alberta	NN/SB/E/01/01		Sb – PI / Labrador tea / feather moss
	SW/LF/C/01/01		PI / Labrador tea / Schreber's moss
	SW/LF/F/01/02		PI / Labrador tea / Schreber's moss
	SW/UF/C/01/03		PI / Labrador tea / Schreber's moss
	SW/UF/C/04/02		PI – Sb / Labrador tea / Schreber's moss
	SW/UF/F/01/02		Sb – PI / Labrador tea / Schreber's moss
	WC/LF/D/01/01	PI – Sb / Labrador tea / feather moss	
	WC/LF/H/01/01	Sb – PI / Labrador tea / feather moss	
	WC/UF/D/01/02	PI – Sb / Labrador tea / feather moss	
WC/UF/H/01/02	Sb – PI / Labrador tea / feather moss		
120c <i>Alnus viridis</i>	Yukon	P23	<i>Pinus contorta</i> / <i>Alnus viridis</i> / <i>Hylocomium splendens</i>
		P24	<i>Pinus contorta</i> / <i>Alnus viridis</i> – <i>Rhododendron groenlandicum</i> / <i>Hylocomium splendens</i>
		PSb23	<i>Picea mariana</i> – <i>Pinus contorta</i> / <i>Alnus viridis</i> / Feathermoss
	Alberta	SW/UF/C/01/01	PI / green alder
		WC/LF/D/01/02	PI – Sb / green alder / feather moss
		WC/LF/H/01/02	Sb – PI / green alder / feather moss



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Vegetation Summary*

Species Name [†]	Association CNVC00120		Subassociation 120a <i>typic</i>		Subassociation 120b <i>Rhododendron groenlandicum</i>	
	903 plots		317 plots		492 plots	
	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]
Overstory Trees						
<i>Pinus contorta</i>	28	89	30	97	27	83
<i>Picea mariana</i>	21	73	20	68	22	80
<i>Picea glauca</i>	9	39	9	47	8	35
<i>Betula papyrifera</i>	3	9	3	5	3	9
Tree Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(25 33 46 58 70)		(28 35 48 60 72)		(22 30 44 55 68)	
Understory Woody Shrubs and Regenerating Trees						
<i>Rhododendron groenlandicum</i>	14	79	3	63	20	93
<i>Rosa acicularis</i>	2	61	2	60	2	62
<i>Picea mariana</i>	7	53	6	49	8	59
<i>Vaccinium myrtilloides</i>	7	33	3	24	9	41
<i>Alnus viridis</i>	14	29	3	18	7	23
<i>Picea glauca</i>	3	28	3	36	3	23
<i>Shepherdia canadensis</i>	3	23	3	25	4	24
<i>Viburnum edule</i>	2	22	1	18	1	25
Shrub Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(6 11 31 44 68)		(5 7 15 19 33)		(10 20 38 51 75)	
Understory Herbs and Dwarf Shrubs						
<i>Vaccinium vitis-idaea</i>	10	86	11	82	11	90
<i>Cornus canadensis</i>	6	78	5	72	6	84
<i>Linnaea borealis</i>	4	73	4	81	3	68
<i>Chamerion angustifolium</i>	1	49	1	48	1	50
<i>Leymus innovatus</i>	3	35	3	46	3	29
<i>Petasites frigidus</i>	2	35	2	29	2	42
<i>Vaccinium caespitosum</i>	3	27	2	33	3	25
<i>Orthilia secunda</i>	1	27	1	26	1	26
<i>Geocaulon lividum</i>	2	26	3	18	2	31
<i>Lycopodium annotinum</i>	3	24	1	14	3	29
<i>Arnica cordifolia</i>	2	21	2	25	1	18
<i>Calamagrostis canadensis</i>	2	20	2	17	2	21
<i>Mertensia paniculata</i>	1	18	1	14	1	22
<i>Equisetum sylvaticum</i>	2	17	1	13	2	20
<i>Arctostaphylos uva-ursi</i>	3	15	4	25	3	9
<i>Equisetum scirpoides</i>	1	14	1	7	2	21
<i>Pyrola asarifolia</i>	2	13	1	14	1	11
Herb Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(2 9 26 38 57)		(2 8 26 38 55)		(4 10 26 38 60)	



Pinus contorta* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi
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Vegetation Summary (cont'd)*

Species Name [†]	Association CNVC00120		Subassociation 120a <i>typic</i>		Subassociation 120b <i>Rhododendron groenlandicum</i>	
	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]	% Cover [‡]	% Presence [^]
Bryophytes and Lichens						
<i>Hylocomium splendens</i>	28	88	27	89	29	87
<i>Pleurozium schreberi</i>	37	86	33	82	41	90
<i>Peltigera aphthosa</i>	3	74	3	78	3	74
<i>Ptilium crista-castrensis</i>	17	73	13	68	20	76
<i>Cladonia</i> sp.	3	43	3	56	3	34
<i>Cladina mitis</i>	3	38	3	43	4	36
<i>Dicranum polysetum</i>	2	25	2	34	1	20
<i>Polytrichum juniperinum</i>	2	21	1	29	2	16
<i>Ptilidium pulcherrimum</i>	1	15	1	24	1	10
<i>Vulpicida pinastris</i>	1	11	1	24	1	2
Bryo-Lichen Stratum Cover						
(P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(35 70 78 96 100)		(22 50 71 97 100)		(60 81 85 97 100)	

* 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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Pin tordu – Épinette noire / Airelle rouge / Pleurozie dorée

Vegetation Summary (cont'd)*

Subassociation
 120c *Alnus viridis*

94 plots

Species Name [†]	% Cover [‡]	% Presence [^]
Overstory Trees		
<i>Pinus contorta</i>	32	99
<i>Picea mariana</i>	16	56
<i>Picea glauca</i>	12	37
<i>Betula papyrifera</i>	2	22
Tree Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(23 32 46 56 70)	
Understory Woody Shrubs and Regenerating Trees		
<i>Rhododendron groenlandicum</i>	10	63
<i>Rosa acicularis</i>	2	59
<i>Picea mariana</i>	7	37
<i>Vaccinium myrtilloides</i>	7	26
<i>Alnus viridis</i>	30	96
<i>Picea glauca</i>	2	31
<i>Shepherdia canadensis</i>	1	11
<i>Viburnum edule</i>	2	19
Shrub Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(21 31 48 63 80)	
Understory Herbs and Dwarf Shrubs		
<i>Vaccinium vitis-idaea</i>	8	82
<i>Cornus canadensis</i>	7	61
<i>Linnaea borealis</i>	4	66
<i>Chamerion angustifolium</i>	2	49
<i>Leymus innovatus</i>	4	27
<i>Petasites frigidus</i>	1	22
<i>Vaccinium caespitosum</i>	3	22
<i>Orthilia secunda</i>	1	31
<i>Geocaulon lividum</i>	3	29
<i>Lycopodium annotinum</i>	3	30
<i>Arnica cordifolia</i>	2	23
<i>Calamagrostis canadensis</i>	2	20
<i>Mertensia paniculata</i>	1	15
<i>Equisetum sylvaticum</i>	3	10
<i>Arctostaphylos uva-ursi</i>	2	16
<i>Equisetum scirpoides</i>	1	6
<i>Pyrola asarifolia</i>	3	27
Herb Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(1 4 24 38 55)	



Pinus contorta* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi
CNVC00120

Vegetation Summary (cont'd)*

Species Name [†]	Subassociation 120c <i>Alnus viridis</i>	
	% Cover [‡]	% Presence [^]
Bryophytes and Lichens		
<i>Hylocomium splendens</i>	27	90
<i>Pleurozium schreberi</i>	27	82
<i>Peltigera aphthosa</i>	1	64
<i>Ptilium crista-castrensis</i>	14	79
<i>Cladonia</i> sp.	2	48
<i>Cladina mitis</i>	2	38
<i>Dicranum polysetum</i>	1	22
<i>Polytrichum juniperinum</i>	2	21
<i>Ptilidium pulcherrimum</i>	1	13
<i>Vulpicida pinastri</i>	1	15
Bryo-Lichen Stratum Cover		
(P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(17 46 66 92 95)	

* 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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Lodgepole Pine – Black Spruce / Lingonberry / Red-stemmed Feathermoss

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Site / Soil Characteristics

	Association CNVC00120 903 plots	Subassociation 120a <i>typic</i> 317 plots	Subassociation 120b <i>Rhododendron groenlandicum</i> 492 plots
Elevation Range (min–mean–max meters)	0–996–1738 missing data (5)	517–1091–1738 missing data (4)	0–942–1670 missing data (4)
Slope Gradient (% frequency)	very steep (0) steep (3) moderately steep (8) moderate (11) gentle (24) level (50) missing data (3)	very steep (0) steep (3) moderately steep (11) moderate (13) gentle (23) level (47) missing data (3)	very steep (1) steep (3) moderately steep (5) moderate (9) gentle (25) level (54) missing data (4)
Aspect (% frequency)	north (24) east (15) south (14) west (20) level (17) missing data (12)	north (21) east (16) south (13) west (22) level (13) missing data (15)	north (27) east (14) south (13) west (18) level (19) missing data (8)
Meso Toposition (% frequency)	crest / upper (13) mid (24) lower / toe (10) depression (1) level (18) missing data (34)	crest / upper (13) mid (28) lower / toe (9) depression (1) level (18) missing data (32)	crest / upper (10) mid (21) lower / toe (10) depression (1) level (19) missing data (37)
Moisture Regime (% frequency)	very dry (0) dry (4) mesic (58) moist (28) wet (2) missing data (8)	very dry (1) dry (1) mesic (63) moist (21) wet (3) missing data (12)	very dry (0) dry (4) mesic (55) moist (34) wet (2) missing data (5)
Nutrient Regime (% frequency)	poor (48) medium (36) rich (6) missing data (11)	poor (48) medium (35) rich (6) missing data (11)	poor (51) medium (36) rich (5) missing data (8)



Pinus contorta* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi
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Site / Soil Characteristics (cont'd)

	Association CNVC00120	Subassociation 120a <i>typic</i>	Subassociation 120b <i>Rhododendron groenlandicum</i>
Soil Parent Material (% frequency)	bedrock (0) colluvium (5) eolian (3) moraine / till (33) fluvial (8) glaciofluvial (11) lacustrine (3) glaciolacustrine (5) organic (1) missing data (30)	bedrock (0) colluvium (8) eolian (4) moraine / till (32) fluvial (12) glaciofluvial (10) lacustrine (4) glaciolacustrine (4) organic (1) missing data (24)	bedrock (0) colluvium (1) eolian (3) moraine / till (34) fluvial (7) glaciofluvial (12) lacustrine (2) glaciolacustrine (5) organic (2) missing data (34)
Soil Rooting Zone Substrate (% frequency)	non-soil (5) sandy (5) coarse loamy (18) fine loamy (19) silty (6) clayey (11) organic (2) missing data (33)	non-soil (9) sandy (2) coarse loamy (16) fine loamy (23) silty (6) clayey (12) organic (1) missing data (31)	non-soil (1) sandy (7) coarse loamy (19) fine loamy (18) silty (6) clayey (11) organic (3) missing data (34)
Root Restricting Depth (% frequency)	0 – 20 cm (0) 21 – 99 cm (5) ≥ 100 cm (1) missing data (93)	0 – 20 cm (0) 21 – 99 cm (1) ≥ 100 cm (0) missing data (99)	0 – 20 cm (1) 21 – 99 cm (8) ≥ 100 cm (2) missing data (89)
Humus Form (% frequency)	mor (36) moder (2) mull (0) peatymor (5) missing data (57)	mor (42) moder (2) mull (0) peatymor (3) missing data (52)	mor (33) moder (3) mull (0) peatymor (4) missing data (59)



Forest / Forêt

Association CNVC00120

Pinus contorta – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi*

Lodgepole Pine – Black Spruce / Lingonberry / Red-stemmed Feathermoss

Pin tordu – Épinette noire / Airelle rouge / Pleurozie dorée

Site / Soil Characteristics (cont'd)

Subassociation
120c *Alnus viridis*

94 plots

Elevation Range (min–mean–max meters)

600–958–1650
missing data (10)

Slope Gradient (% frequency)

very steep (0)
steep (2)
moderately steep (16)
moderate (17)
gentle (23)
level (41)
missing data (0)

Aspect (% frequency)

north (17)
east (13)
south (16)
west (21)
level (14)
missing data (19)

Meso Toposition (% frequency)

crest / upper (27)
mid (28)
lower / toe (6)
depression (2)
level (10)
missing data (28)

Moisture Regime (% frequency)

very dry (0)
dry (12)
mesic (59)
moist (19)
wet (1)
missing data (10)

Nutrient Regime (% frequency)

poor (26)
medium (43)
rich (6)
missing data (26)



Pinus contorta – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi*
CNVC00120

Site / Soil Characteristics (cont'd)

Subassociation
120c *Alnus viridis*

Soil Parent Material (% frequency)

bedrock (0)
colluvium (13)
eolian (1)
moraine / till (32)
fluvial (3)
glaciofluvial (13)
lacustrine (5)
glaciolacustrine (3)
organic (0)
missing data (30)

Soil Rooting Zone Substrate (% frequency)

non-soil (13)
sandy (7)
coarse loamy (13)
fine loamy (11)
silty (7)
clayey (7)
organic (0)
missing data (41)

Root Restricting Depth (% frequency)

0 – 20 cm (0)
21 – 99 cm (0)
≥ 100 cm (0)
missing data (100)

Humus Form (% frequency)

mor (26)
moder (0)
mull (0)
peatymor (11)
missing data (64)



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

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Forest / Forêt

Association CNVC00120

Pinus contorta* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi

Lodgepole Pine – Black Spruce / Lingonberry / Red-stemmed Feathermoss

Pin tordu – Épinette noire / Airelle rouge / 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:

CNVC00107 [*Pinus contorta* / *Alnus viridis* / *Arnica cordifolia* / *Pleurozium schreberi*] occurs on comparable or slightly richer sites in the Rocky Mountain foothills of British Columbia and Alberta. It has a purer overstory of *Pinus contorta* and greater constancy of *Vaccinium membranaceum*, *Arnica cordifolia* and *Rubus pedatus* in the understorey.

CNVC00118 [*Pinus contorta* / *Vaccinium vitis-idaea* – *Arctostaphylos uva-ursi* / *Cladina* spp.] occurs on dry, nutrient-poor sites in the same range. It has a purer overstory of *Pinus contorta* and an understorey dominated by *Vaccinium vitis-idaea* and *Arctostaphylos uva-ursi*, with greater prevalence of *Cladina* lichens.

CNVC00119 [*Pinus contorta* (*Picea glauca*) / *Shepherdia canadensis* / *Geocaulon lividum* / *Pleurozium schreberi*] occurs on mesic, nutrient-poor to medium boreal sites in British Columbia and Yukon. *Pinus contorta*, sometimes with *Picea glauca*, is dominant in the overstorey and *Shepherdia canadensis* dominates the understorey.

CNVC00128 [*Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi* (*Hylocomium splendens*)] is a similar condition that occurs on comparable boreal sites from northeastern Alberta to Manitoba, east of the range of *Pinus contorta* (see Comments).

CNVC00323 [*Pinus banksiana* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi* (*Hylocomium splendens*)] is a similar condition that occurs on slightly drier boreal sites from northeastern Alberta to Manitoba, east of the range of *Pinus contorta*. *P. banksiana* is codominant in these stands (see Comments).

Related United States National Vegetation Classification Associations:

Relationships with Other Classifications:

Comments

Pinus contorta here refers to var. *latifolia* (lodgepole pine).

Where CNVC00120 occurs at higher elevations (i.e., above 650 mASL) in northern Alberta, *P. contorta* may form fertile hybrids with *P. banksiana* that are recognized by intermediate cone characters; ecologically, the hybrid pine (*P. x murraybanksiana*) occupies comparable sites. Stands containing hybrid pine with similar understoreys on comparable sites are classified as CNVC00120 in northwestern Alberta (e.g., Caribou Mountains and west). Such stands at higher elevations in the Birch Mountains are classified either to CNVC00128 [*Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi* (*Hylocomium splendens*)] or CNVC00323 [*Pinus banksiana* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi* (*Hylocomium splendens*)].



Pinus contorta* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi
CNVC00120

Source Information

Number of source plots for CNVC00120: 903

Number of source plots for 120a typic: 317

Number of source plots for 120b *Rhododendron groenlandicum*: 492

Number of source plots for 120c *Alnus viridis*: 94

Information Sources:

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

Date of Concept: March, 2012

Date of Description: August, 2017

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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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Pinus contorta* – *Picea mariana* / *Vaccinium vitis-idaea* / *Pleurozium schreberi
CNVC00120

Characterization References (cont'd):

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Nealis, V.G.; Cooke, B. J. 2014. Risk assessment of the threat of mountain pine beetle to Canada's boreal and eastern pine forests. *Nat. Resour. Can., Can. Counc. For. Min., Forest Pest Working Group, CA.*

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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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