



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

<http://cnvc-cnvc.ca>

Forest / Forêt

Association CNVC00103

***Picea glauca* – *Abies balsamea* / *Rosa acicularis* / *Aralia nudicaulis***

**White Spruce – Balsam Fir / Prickly Rose / Wild Sarsaparilla**

**Épinette blanche – Sapin baumier / Rosier aciculaire / Aralie à tige nue**

**Subassociations:** 103a *typic*, 103b *Viburnum edule*, 103c *inops*

**CNVC Alliance:** CA00025 *Picea glauca* – *Abies balsamea* – *Populus tremuloides* / *Rosa acicularis* / *Aralia nudicaulis*

**CNVC Group:** CG0011 Central Boreal Mesic-Moist Trembling Aspen – White Spruce Forest

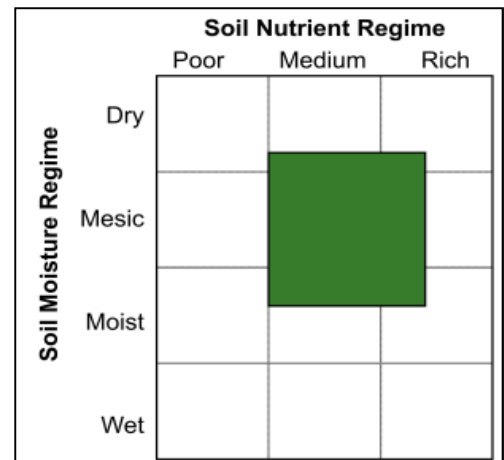


Source: P. LeBlanc

## Type Description

**Concept:** CNVC00103 is a boreal coniferous forest Association that ranges from Alberta to Ontario. It has a moderately closed to closed canopy dominated by white spruce (*Picea glauca*) and/or balsam fir (*Abies balsamea*). The shrub layer is usually moderately developed but varies depending on the patchiness of shrubs. Regenerating balsam fir is typically dominant, with lower abundance of squashberry (*Viburnum edule*) and prickly rose (*Rosa acicularis*). The sparse to well-developed herb layer commonly includes twinflower (*Linnaea borealis*), bunchberry (*Cornus canadensis*), naked mitrewort (*Mitella nuda*), wild sarsaparilla (*Aralia nudicaulis*), dwarf raspberry (*Rubus pubescens*) and wild lily-of-the-valley (*Maianthemum canadense*). The moss and lichen layer varies from poorly to well developed, depending on subassociation. Stairstep moss (*Hylocomium splendens*) usually dominates, with lower abundance of red-stemmed feathermoss (*Pleurozium schreberi*) and knight's plume moss (*Ptilium crista-castrensis*). CNVC00103 occurs in a region with a subhumid continental boreal climate. It is most common on mesic to moist, nutrient-medium to rich sites. It is a late seral condition that tends to occur as small patches in areas that have escaped fire for a long period. Insect outbreaks and windthrow are the primary natural disturbances. The canopy gaps or large patches that result from these disturbances can promote self-replacement of this Association by the release of balsam fir regeneration. Three subassociations are distinguished: *typic*, *Viburnum edule* and *inops*.

**Vegetation:** CNVC00103 is a coniferous forest Association with a moderately closed to closed canopy of *Picea glauca* and/or *Abies balsamea*. *Populus tremuloides* and/or *Betula papyrifera* may be present in the canopy. The shrub layer is usually moderately developed but can vary from sparse to well developed, depending on the patchiness of shrubs. Regenerating *A. balsamea* is usually dominant, with lower abundance of *Viburnum edule* and *Rosa acicularis*. The herb layer is sparse to moderately developed but compared to other Associations in the same region, typically includes low abundance of a large number of species, including *Linnaea borealis*, *Cornus canadensis*, *Mitella nuda*, *Aralia nudicaulis*, *Rubus pubescens* and *Maianthemum canadense*. Moss layer development is variable; it can be sparse to well developed. *Hylocomium splendens* is usually dominant, with lower abundance of *Pleurozium schreberi* and *Ptilium crista-castrensis*. Compared to the *typic* subassociation, the *Viburnum edule* subassociation has higher overall cover in the shrub, herb and moss layers, with more abundant *V. edule* and often more *Mertensia paniculata*. The *inops* subassociation has slightly lower cover in the tree layer, less *A. balsamea* and *V. edule* in the shrub layer and lower cover in the herb and moss and lichen layers. In this subassociation, dry-site species, such as *Juniperus communis* and *Arctostaphylos uva-ursi*, are more likely to occur and feathermosses are much less abundant.





***Picea glauca* – *Abies balsamea* / *Rosa acicularis* / *Aralia nudicaulis* CNVC00103**

**Type Description (cont'd)**

**Environment:** CNVC00103 occurs in a subhumid continental boreal climate. It is most frequently found on mesic to moist, nutrient-medium to rich sites. Stands are usually on level sites or gentle slopes and occur on a wide range of topopositions. Soils are typically deep, but textures and parent materials are variable (morainal, fluvial and lacustrine deposits). Mor humus forms are typical.

Site conditions vary among subassociations. The *typic* mainly occurs on level sites and is the most circum-mesic, nutrient-medium of the three subassociations. Soils are developed in morainal, lacustrine or fluvial materials. The *Viburnum edule* subassociation is common on level to moderate slopes and has slightly moister and richer conditions, with soils that are usually fine loams or clays. The *inops* subassociation is drier and not as rich. It occurs on level to gentle slopes, usually on water-shedding, crest or upper-slope topopositions. These stands occur more frequently on shallow soils, sometimes over bedrock.

Regional fire cycles are intermediate (100-270 years) within the range of CNVC00103. Stands are found most frequently on sites that have escaped fire for an extended period, such as on islands or in topographic breaks near rivers or lakes.

**Dynamics:** CNVC00103 is a self-perpetuating, late successional forest Association that develops only in the prolonged absence of fire. Natural disturbance processes are primarily insect outbreaks, windthrow, or natural mortality of individual or small groups of trees by disease and other factors. Outbreaks of spruce budworm (*Choristoneura fumiferana*) occur periodically across the range of this Association, causing canopy mortality of *Abies balsamea* and sometimes *Picea glauca*. Following these gap or patch disturbances, stands tend to recover rapidly through the release of abundant *A. balsamea* in the understory.

When fires do occur, *P. glauca* and *A. balsamea* are usually eliminated. Instead, the pioneer species *Populus tremuloides* and *Betula papyrifera* are likely to form the initial post-fire stand on these sites because they are adapted to disturbance (e.g., CNVC00094 [*Populus tremuloides* / *Rosa acicularis* – *Viburnum edule*]). *P. glauca* often recolonizes at the same time as *P. tremuloides*, but *P. glauca* grows more slowly, so it usually requires several decades to attain canopy height. If seed sources are available, the stand is likely to return to *P. glauca* and *A. balsamea* dominance over time, typically with intermediate stages characterized by mixedwoods (e.g., CNVC00093 [*Picea glauca* – *Abies balsamea* – *Betula papyrifera* – *Populus tremuloides* / *Rosa acicularis* / *Aralia nudicaulis*]). A fire-free interval of at least 120 years is usually necessary for the development of the closed conifer canopy of CNVC00103.

**Range:** CNVC00103 occurs in the boreal region of west-central Canada from Alberta, east of the Rocky Mountain foothills, to north of Lake Nipigon in northwestern Ontario. It occurs on the boreal plains in Alberta, Saskatchewan and Manitoba, and on the Precambrian Shield in Saskatchewan, Manitoba and Ontario. The *typic* subassociation is described from Saskatchewan and Ontario, the *Viburnum edule* subassociation is described only from Alberta and the *inops* subassociation is only documented in eastern Saskatchewan.

**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, Manitoba, Ontario, Saskatchewan

**Terrestrial Ecozones and Ecoregions of Canada:** Boreal Plains: Boreal Transition, Mid-Boreal Lowland, Mid-Boreal Uplands, Peace Lowland, Wabasca Lowland, Western Boreal; Boreal Shield: Big Trout Lake, Churchill River Upland, Lac Seul Upland

**Rowe's Forest Regions and Sections of Canada:** Boreal: Central Plateau, Hay River, Manitoba Lowlands, Mixedwood, Northern Coniferous, Upper Churchill

**NAAEC CEC Ecoregions of North America (Levels I & II):** Northern Forests: Boreal Plains, Softwood Shield

**Nature Conservancy of Canada Ecoregions:** Boreal Plains, Boreal Shield

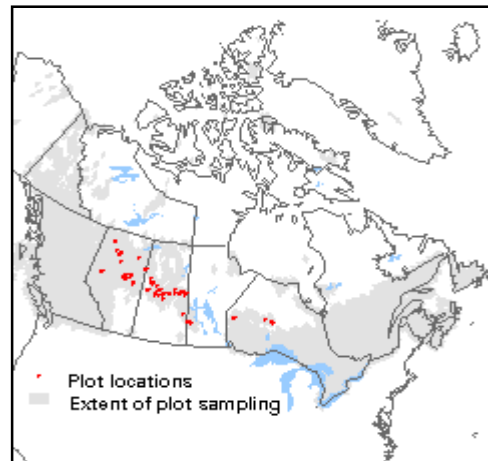
**Natural Regions and Subregions of Alberta:** Boreal Forest: Central Mixedwood, Lower Boreal Highlands

**Ecozones and Ecoregions of Saskatchewan:** Boreal Plain: Boreal Transition, Mid-Boreal Lowland, Mid-Boreal Upland; Boreal Shield: 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-1, 2W-3, 3S-1, 3S-2, 3S-3, 3S-4



## Corresponding Types and Associations

<b>103a typic</b>	Saskatchewan	BP13	White spruce - balsam fir / feathermoss: Fresh sandy clay loam
	Ontario	BTr5-7	<i>Picea glauca</i> - <i>Abies balsamea</i> / <i>Viburnum edule</i> / <i>Rubus pubescens</i> / <i>Hylocomium splendens</i>
<b>103b Viburnum edule</b>	Alberta	NN/BH/D/03/03	Sw / balsam fir
		NN/BH/E/01/02	Sw / rose / fern
		NN/BM/D/03/04	Sw / balsam fir / feather moss
		NN/BM/E/03/03	Sw / balsam fir / fern
<b>103c inops</b>	Saskatchewan	BS11	White spruce - balsam fir / feathermoss: Fresh sand



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Vegetation Summary\*

Species Name <sup>†</sup>	Association CNVC00103 97 plots		Subassociation 103a <i>typic</i> 50 plots		Subassociation 103b <i>Viburnum edule</i> 28 plots	
	% Cover <sup>±</sup>	% Presence <sup>^</sup>	% Cover <sup>±</sup>	% Presence <sup>^</sup>	% Cover <sup>±</sup>	% Presence <sup>^</sup>
	<b>Overstory Trees</b>					
<i>Picea glauca</i>	30	94	32	90	35	96
<i>Abies balsamea</i>	25	89	28	86	22	93
<i>Populus tremuloides</i>	15	58	19	62	5	50
<i>Betula papyrifera</i>	11	46	13	50	5	46
<i>Populus balsamifera</i>	10	25	12	38	4	18
<i>Picea mariana</i>	13	13	11	10	12	4
<b>Tree Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)<sup>‡</sup></b>	<b>(33 46 63 85 100)</b>		<b>(33 47 69 94 100)</b>		<b>(36 47 60 75 85)</b>	
<b>Understory Woody Shrubs and Regenerating Trees</b>						
<i>Abies balsamea</i>	14	92	11	92	25	100
<i>Viburnum edule</i>	5	74	2	70	10	100
<i>Rosa acicularis</i>	3	68	3	66	5	71
<i>Betula papyrifera</i>	2	47	3	52	2	32
<i>Populus tremuloides</i>	1	46	1	48	4	43
<i>Picea glauca</i>	4	38	5	26	2	39
<i>Rubus idaeus</i>	3	32	1	24	2	46
<i>Ribes triste</i>	1	30	< 1	34	3	32
<i>Ribes oxycanthoides</i>	1	29	< 1	34	2	14
<i>Ribes lacustre</i>	1	27	< 1	20	2	43
<i>Populus balsamifera</i>	1	19	< 1	18	1	18
<i>Vaccinium myrtilloides</i>	2	16	1	18	2	7
<i>Lonicera involucrata</i>	8	13	< 1	4	9	39
<i>Alnus viridis</i>	9	12	12	12	5	7
<i>Juniperus communis</i>	8	7	3	2	-	-
<b>Shrub Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)<sup>‡</sup></b>	<b>(3 7 26 40 63)</b>		<b>(3 5 20 25 52)</b>		<b>(21 27 44 60 69)</b>	
<b>Understory Herbs and Dwarf Shrubs</b>						
<i>Linnaea borealis</i>	4	91	2	90	10	100
<i>Cornus canadensis</i>	5	86	3	90	8	100
<i>Mitella nuda</i>	2	68	1	84	5	79
<i>Aralia nudicaulis</i>	5	66	3	70	9	61
<i>Rubus pubescens</i>	3	65	2	70	5	82
<i>Maianthemum canadense</i>	1	63	1	62	1	68
<i>Lysimachia borealis</i>	1	58	1	78	1	21
<i>Mertensia paniculata</i>	3	47	2	48	4	64
<i>Petasites frigidus</i>	1	39	1	52	2	39
<i>Viola renifolia</i>	1	37	< 1	42	2	36
<i>Orthilia secunda</i>	1	36	1	28	1	39
<i>Pyrola asarifolia</i>	1	29	1	30	2	21



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**Vegetation Summary (cont'd)\***

Species Name <sup>†</sup>	Association CNVC00103		Subassociation 103a <i>typic</i>		Subassociation 103b <i>Viburnum edule</i>	
	% Cover <sup>±</sup>	% Presence <sup>^</sup>	% Cover <sup>±</sup>	% Presence <sup>^</sup>	% Cover <sup>±</sup>	% Presence <sup>^</sup>
<i>Lycopodium annotinum</i>	2	28	1	32	4	29
<i>Equisetum sylvaticum</i>	1	26	1	20	1	46
<i>Goodyera repens</i>	1	24	1	18	1	36
<i>Poaceae</i>	2	22	2	26	-	-
<i>Galium boreale</i>	1	22	< 1	24	2	21
<i>Pyrola chlorantha</i>	1	22	< 1	22	1	21
<i>Chamerion angustifolium</i>	1	21	1	10	1	25
<i>Actaea rubra</i>	2	18	3	12	1	32
<i>Fragaria virginiana</i>	1	18	1	20	2	21
<i>Gymnocarpium dryopteris</i>	1	18	1	16	1	32
<i>Galium trifidum</i>	1	16	0	6	2	46
<i>Geocaulon lividum</i>	1	16	1	6	1	7
<i>Calamagrostis canadensis</i>	3	15	-	-	3	54
<i>Galium tricorutum</i>	< 1	14	< 1	28	-	-
<i>Arctostaphylos uva-ursi</i>	3	11	2	4	-	-
<i>Polypodium sibiricum</i>	1	7	-	-	-	-
<i>Campanula</i> sp.	< 1	4	-	-	-	-
<b>Herb Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)<sup>‡</sup></b>	<b>(3 6 23 33 50)</b>		<b>(2 5 16 21 32)</b>		<b>(17 24 45 54 93)</b>	
<b>Bryophytes and Lichens</b>						
<i>Hylocomium splendens</i>	18	96	13	100	36	100
<i>Pleurozium schreberi</i>	13	96	11	100	22	89
<i>Ptilium crista-castrensis</i>	9	85	4	82	20	100
<i>Cladonia</i> sp.	2	68	2	78	3	29
<i>Sanionia uncinata</i>	1	48	1	60	1	7
<i>Peltigera</i> sp.	1	39	1	60	-	-
<i>Parmelia sulcata</i>	1	37	1	64	-	-
<i>Ptilidium pulcherrimum</i>	1	35	1	36	1	18
<i>Pylaisia polyantha</i>	1	34	1	40	1	14
<i>Eurhynchium pulchellum</i>	2	33	1	34	7	18
<i>Plagiomnium cuspidatum</i>	1	32	< 1	42	3	21
<i>Brachythecium salebrosum</i>	1	32	1	40	1	21
<i>Pohlia nutans</i>	1	30	< 1	16	1	18
<i>Mnium spinosum</i>	1	28	1	24	1	29
<i>Dicranum polysetum</i>	1	28	< 1	24	1	14
<i>Evernia mesomorpha</i>	1	28	1	44	-	-
<i>Dicranum</i> sp.	1	27	1	28	-	-
<i>Hypogymnia physodes</i>	1	25	1	38	-	-
<i>Polytrichum juniperinum</i>	1	23	1	20	4	14
<i>Brachythecium campestre</i>	1	20	1	26	1	4
<i>Usnea lapponica</i>	1	18	1	32	-	-
<i>Cladina mitis</i>	4	16	1	10	1	4
<i>Oncophorus wahlenbergii</i>	1	15	1	22	-	-
<i>Usnea subfloridana</i>	1	15	1	26	-	-
<i>Vulpicida pinastri</i>	1	15	1	22	-	-
<i>Amblystegium serpens</i>	1	14	1	22	1	4
<i>Peltigera canina</i>	1	13	< 1	14	2	21
<i>Polytrichum</i> sp.	1	13	1	12	-	-





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**Vegetation Summary (cont'd)\***

Species Name <sup>†</sup>	Association CNVC00103		Subassociation 103a <i>typic</i>		Subassociation 103b <i>Viburnum edule</i>	
	% Cover <sup>‡</sup>	% Presence <sup>^</sup>	% Cover <sup>‡</sup>	% Presence <sup>^</sup>	% Cover <sup>‡</sup>	% Presence <sup>^</sup>
<i>Dicranum flagellare</i>	< 1	13	< 1	26	-	-
<i>Ramalina dilacerata</i>	1	12	1	24	-	-
<i>Ceratodon purpureus</i>	1	11	1	6	1	4
<i>Brachythecium</i> sp.	1	10	< 1	4	1	11
<i>Sciuro-hypnum oedipodium</i>	< 1	10	< 1	12	-	-
<i>Cladina rangiferina</i>	1	8	1	4	1	4
<i>Ptilidium ciliare</i>	1	8	1	4	1	4
<i>Cynodontium strumiferum</i>	1	4	-	-	-	-
<i>Cladina stellaris</i>	< 1	4	-	-	-	-
<b>Bryo-Lichen Stratum Cover</b>						
<b>(P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)<sup>‡</sup></b>	<b>(13 22 48 77 92)</b>		<b>(15 24 40 52 80)</b>		<b>(48 66 79 98 100)</b>	

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

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

<sup>‡</sup> average percent cover of a species within the plots in which it occurs (i.e., characteristic cover)

<sup>^</sup> percent frequency occurrence for a species within the total plots

<sup>‡</sup> P<sub>x</sub> = X<sup>th</sup> percentile (e.g., P<sub>10</sub> = 10<sup>th</sup> percentile)



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Vegetation Summary (cont'd)\*

Species Name <sup>†</sup>	Subassociation	
	103c <i>inops</i>	
	19 plots	
	% Cover <sup>‡</sup>	% Presence <sup>^</sup>
<b>Overstory Trees</b>		
<i>Picea glauca</i>	20	100
<i>Abies balsamea</i>	20	89
<i>Populus tremuloides</i>	18	58
<i>Betula papyrifera</i>	15	37
<i>Populus balsamifera</i>	-	-
<i>Picea mariana</i>	15	37
<b>Tree Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)<sup>‡</sup></b>	<b>(18 37 55 70 90)</b>	
<b>Understory Woody Shrubs and Regenerating Trees</b>		
<i>Abies balsamea</i>	5	79
<i>Viburnum edule</i>	< 1	47
<i>Rosa acicularis</i>	1	68
<i>Betula papyrifera</i>	1	58
<i>Populus tremuloides</i>	< 1	47
<i>Picea glauca</i>	5	68
<i>Rubus idaeus</i>	7	32
<i>Ribes triste</i>	1	16
<i>Ribes oxycanthoides</i>	1	37
<i>Ribes lacustre</i>	< 1	21
<i>Populus balsamifera</i>	< 1	21
<i>Vaccinium myrtilloides</i>	3	26
<i>Lonicera involucrata</i>	-	-
<i>Alnus viridis</i>	7	21
<i>Juniperus communis</i>	9	32
<b>Shrub Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)<sup>‡</sup></b>	<b>(3 6 17 25 43)</b>	
<b>Understory Herbs and Dwarf Shrubs</b>		
<i>Linnaea borealis</i>	3	79
<i>Cornus canadensis</i>	3	53
<i>Mitella nuda</i>	< 1	11
<i>Aralia nudicaulis</i>	3	63
<i>Rubus pubescens</i>	1	26
<i>Maianthemum canadense</i>	1	58
<i>Lysimachia borealis</i>	1	58
<i>Mertensia paniculata</i>	1	21
<i>Petasites frigidus</i>	5	5
<i>Viola renifolia</i>	< 1	26
<i>Orthilia secunda</i>	1	53
<i>Pyrola asarifolia</i>	1	37



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**Vegetation Summary (cont'd)\***

Species Name <sup>†</sup>	Subassociation 103c <i>inops</i>	
	Cover <sup>‡</sup> %	Presence <sup>^</sup> %
<i>Lycopodium annotinum</i>	1	16
<i>Equisetum sylvaticum</i>	< 1	11
<i>Goodyera repens</i>	1	21
Poaceae	1	42
<i>Galium boreale</i>	< 1	16
<i>Pyrola chlorantha</i>	1	21
<i>Chamerion angustifolium</i>	< 1	42
<i>Actaea rubra</i>	1	11
<i>Fragaria virginiana</i>	1	5
<i>Gymnocarpium dryopteris</i>	-	-
<i>Galium trifidum</i>	-	-
<i>Geocaulon lividum</i>	1	58
<i>Calamagrostis canadensis</i>	-	-
<i>Galium tricorutum</i>	-	-
<i>Arctostaphylos uva-ursi</i>	3	47
<i>Polypodium sibiricum</i>	1	37
<i>Campanula</i> sp.	< 1	21
<b>Herb Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)<sup>‡</sup></b>	<b>(2 3 12 13 38)</b>	
<b>Bryophytes and Lichens</b>		
<i>Hylocomium splendens</i>	2	79
<i>Pleurozium schreberi</i>	5	95
<i>Ptilium crista-castrensis</i>	< 1	68
<i>Cladonia</i> sp.	2	100
<i>Sanionia uncinata</i>	1	79
<i>Peltigera</i> sp.	1	42
<i>Parmelia sulcata</i>	1	21
<i>Ptilidium pulcherrimum</i>	1	58
<i>Pylaisia polyantha</i>	1	47
<i>Eurhynchium pulchellum</i>	1	53
<i>Plagiomnium cuspidatum</i>	1	21
<i>Brachythecium salebrosum</i>	1	26
<i>Pohlia nutans</i>	1	84
<i>Mnium spinosum</i>	1	37
<i>Dicranum polysetum</i>	1	58
<i>Evernia mesomorpha</i>	1	26
<i>Dicranum</i> sp.	1	63
<i>Hypogymnia physodes</i>	1	26
<i>Polytrichum juniperinum</i>	1	42
<i>Brachythecium campestre</i>	1	26
<i>Usnea lapponica</i>	1	5
<i>Cladina mitis</i>	7	53
<i>Oncophorus wahlenbergii</i>	1	21
<i>Usnea subfloridana</i>	1	11
<i>Vulpicida pinastri</i>	1	21
<i>Amblystegium serpens</i>	1	11
<i>Peltigera canina</i>	-	-
<i>Polytrichum</i> sp.	1	37





***Picea glauca* – *Abies balsamea* / *Rosa acicularis* / *Aralia nudicaulis* CNVC00103**

**Vegetation Summary (cont'd)\***

Species Name <sup>†</sup>	Subassociation 103c <i>inops</i>	
	% Cover <sup>‡</sup>	% Presence <sup>^</sup>
<i>Dicranum flagellare</i>	-	-
<i>Ramalina dilacerata</i>	-	-
<i>Ceratodon purpureus</i>	1	37
<i>Brachythecium</i> sp.	1	26
<i>Sciuro-hypnum oedipodium</i>	1	21
<i>Cladina rangiferina</i>	1	26
<i>Ptilidium ciliare</i>	1	26
<i>Cynodontium strumiferum</i>	1	21
<i>Cladina stellaris</i>	< 1	21
<b>Bryo-Lichen Stratum Cover</b>		
<b>(P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)<sup>‡</sup></b>	<b>(10 12 22 28 49)</b>	

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

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

<sup>‡</sup> average percent cover of a species within the plots in which it occurs (i.e., characteristic cover)

<sup>^</sup> percent frequency occurrence for a species within the total plots

<sup>‡</sup> P<sub>x</sub> = X<sup>th</sup> percentile (e.g., P<sub>10</sub> = 10<sup>th</sup> percentile)



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

<http://cnvc-cnvc.ca>

Forest / Forêt

Association CNVC00103

*Picea glauca* – *Abies balsamea* / *Rosa acicularis* / *Aralia nudicaulis*

White Spruce – Balsam Fir / Prickly Rose / Wild Sarsaparilla

Épinette blanche – Sapin baumier / Rosier aciculaire / Aralie à tige nue

## Site / Soil Characteristics

	Association CNVC00103 97 plots	Subassociation 103a <i>typic</i> 50 plots	Subassociation 103b <i>Viburnum edule</i> 28 plots
<b>Elevation Range (min–mean–max meters)</b>	274–491–900 missing data (7)	274–467–633 missing data (10)	310–646–900 missing data (4)
<b>Slope Gradient (% frequency)</b>	moderately steep (4) moderate (7) gentle (20) <b>level (67)</b> missing data (2)	moderately steep (4) moderate (4) gentle (12) <b>level (80)</b> missing data (0)	moderately steep (7) moderate (18) gentle (32) <b>level (36)</b> missing data (7)
<b>Aspect (% frequency)</b>	north (15) <b>east (28)</b> south (11) west (24) level (19) missing data (3)	north (12) east (30) south (10) west (16) <b>level (32)</b> missing data (0)	north (25) east (11) south (11) <b>west (36)</b> level (7) missing data (11)
<b>Meso Toposition (% frequency)</b>	<b>crest / upper (36)</b> mid (23) lower / toe (14) depression (1) level (23) missing data (3)	crest / upper (26) mid (24) lower / toe (20) depression (2) <b>level (28)</b> missing data (0)	crest / upper (25) mid (25) lower / toe (14) depression (0) level (25) missing data (11)
<b>Moisture Regime (% frequency)</b>	very dry (5) dry (12) <b>mesic (57)</b> moist (22) wet (1) missing data (3)	very dry (0) dry (12) <b>mesic (68)</b> moist (20) wet (0) missing data (0)	very dry (0) dry (0) <b>mesic (46)</b> moist (39) wet (4) missing data (11)
<b>Nutrient Regime (% frequency)</b>	poor (4) medium (15) rich (6) missing data (74)	poor (0) medium (0) rich (0) missing data (100)	poor (14) <b>medium (54)</b> rich (21) missing data (11)



***Picea glauca* – *Abies balsamea* / *Rosa acicularis* / *Aralia nudicaulis* CNVC00103**

**Site / Soil Characteristics (cont'd)**

	Association CNVC00103	Subassociation 103a <i>typic</i>	Subassociation 103b <i>Viburnum edule</i>
<b>Soil Parent Material (% frequency)</b>			
	bedrock (2)	bedrock (0)	bedrock (0)
	colluvium (1)	colluvium (0)	colluvium (4)
	eolian (4)	eolian (4)	eolian (7)
	<b>moraine / till (38)</b>	moraine / till (30)	<b>moraine / till (43)</b>
	fluvial (18)	fluvial (26)	fluvial (7)
	glaciofluvial (6)	glaciofluvial (4)	glaciofluvial (14)
	lacustrine (20)	lacustrine (30)	lacustrine (7)
	glaciolacustrine (3)	glaciolacustrine (2)	glaciolacustrine (7)
	organic (3)	organic (0)	organic (0)
	missing data (5)	missing data (4)	missing data (11)
<b>Soil Rooting Zone Substrate (% frequency)</b>			
	non-soil (3)	non-soil (0)	non-soil (4)
	sandy (4)	sandy (2)	sandy (11)
	coarse loamy (1)	coarse loamy (2)	coarse loamy (0)
	fine loamy (13)	fine loamy (2)	<b>fine loamy (43)</b>
	silty (2)	silty (0)	silty (7)
	clayey (7)	clayey (0)	clayey (25)
	organic (3)	organic (0)	organic (0)
	missing data (66)	missing data (94)	missing data (11)
<b>Root Restricting Depth (% frequency)</b>			
	0 – 20 cm (7)	0 – 20 cm (2)	0 – 20 cm (0)
	21 – 99 cm (4)	21 – 99 cm (2)	21 – 99 cm (0)
	<b>≥ 100 cm (57)</b>	<b>≥ 100 cm (90)</b>	<b>≥ 100 cm (0)</b>
	missing data (32)	missing data (6)	missing data (100)
<b>Humus Form (% frequency)</b>			
	<b>mor (74)</b>	<b>mor (94)</b>	mor (25)
	moder (2)	moder (2)	moder (4)
	mull (1)	mull (2)	mull (0)
	peatymor (1)	peatymor (2)	peatymor (0)
	missing data (21)	missing data (0)	missing data (71)



Forest / Forêt

Association CNVC00103

*Picea glauca* – *Abies balsamea* / *Rosa acicularis* / *Aralia nudicaulis*

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Épinette blanche – Sapin baumier / Rosier aciculaire / Aralie à tige nue

### Site / Soil Characteristics (cont'd)

Subassociation

103c *inops*

19 plots

#### Elevation Range (min–mean–max meters)

284–316–346

missing data (5)

#### Slope Gradient (% frequency)

moderately steep (0)

moderate (0)

gentle (21)

**level (79)**

missing data (0)

#### Aspect (% frequency)

north (11)

**east (47)**

south (16)

west (26)

level (0)

missing data (0)

#### Meso Topoposition (% frequency)

**crest / upper (79)**

mid (16)

lower / toe (0)

depression (0)

level (5)

missing data (0)

#### Moisture Regime (% frequency)

very dry (26)

dry (32)

**mesic (42)**

moist (0)

wet (0)

missing data (0)

#### Nutrient Regime (% frequency)

poor (0)

medium (0)

rich (0)

missing data (100)



***Picea glauca* – *Abies balsamea* / *Rosa acicularis* / *Aralia nudicaulis* CNVC00103**

**Site / Soil Characteristics (cont'd)**

Subassociation  
103c *inops*

**Soil Parent Material (% frequency)**

bedrock (11)  
colluvium (0)  
eolian (0)  
**moraine / till (53)**  
fluvial (11)  
glaciofluvial (0)  
lacustrine (11)  
glaciolacustrine (0)  
organic (16)  
missing data (0)

**Soil Rooting Zone Substrate (% frequency)**

non-soil (11)  
sandy (0)  
coarse loamy (0)  
fine loamy (0)  
silty (0)  
clayey (0)  
organic (16)  
missing data (74)

**Root Restricting Depth (% frequency)**

0 – 20 cm (32)  
21 – 99 cm (16)  
**≥ 100 cm (53)**  
missing data (0)

**Humus Form (% frequency)**

**mor (95)**  
moder (0)  
mull (0)  
peatymor (0)  
missing data (0)



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### Additional Characteristics

Species of High Conservation Concern:

Non-native Species:

Management Issues:

### Type Statistics

Internal Similarity:

Confidence:

Strength:

### Related Concepts

Similar CNVC Associations:

CNVC00093 [*Picea glauca* – *Abies balsamea* – *Betula papyrifera* – *Populus tremuloides* / *Rosa acicularis* / *Aralia nudicaulis*] is a similar mixedwood Association that occurs on comparable sites in the same range (see Dynamics).

CNVC00256 [*Picea glauca* – *Abies balsamea* / *Streptopus lanceolatus* / *Pleurozium schreberi*] occurs in southeastern Manitoba and Ontario on comparable boreal sites. It has less *Viburnum edule*, *Rosa acicularis* and *Hylocomium splendens* and more *Picea mariana*, *Acer spicatum*, *Clintonia borealis* and *Pleurozium schreberi*.

CNVC00263 [*Picea glauca* – *Populus tremuloides* / *Rosa acicularis* / *Aralia nudicaulis*] is a similar mixedwood Association that occurs on comparable sites in the same range but lacks *Abies balsamea*.

Related United States National Vegetation Classification Associations:

**Relationships with Other Classifications:** In southwestern Manitoba, CNVC00103 partially matches the concepts of ES 34 White Spruce - Balsam Fir Mixedwood on Fresh Fine Loamy Soil and ES 52 White Spruce - Balsam Fir - Trembling Aspen Mixedwood on Moist Fine Loamy to Clayey Soil in Arnup et al. 2006.

### Comments

In the subhumid climate of CM496a [Central Boreal Forest], short to intermediate fire cycles limit the occurrence of *Abies balsamea* on the landscape to fire-sheltered locations, such as islands or topographic breaks near rivers or lakes.

The Saskatchewan ecosite BS11, which is included in CNVC00103, includes some stands that are more similar to the mixedwood condition of CNVC00093 [*Picea glauca* – *Abies balsamea* – *Betula papyrifera* – *Populus tremuloides* / *Rosa acicularis* / *Aralia nudicaulis*].

### Source Information

Number of source plots for CNVC00103: 97

Number of source plots for 103a typic: 50

Number of source plots for 103b *Viburnum edule*: 28

Number of source plots for 103c inops: 19





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## *Picea glauca* – *Abies balsamea* / *Rosa acicularis* / *Aralia nudicaulis* CNVC00103

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**Concept Authors:** L. Allen, K. Baldwin, K. Chapman, M. McLaughlan, P. Uhlig, M. Wester

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

**Date of Concept:** November, 2011

**Date of Description:** March, 2016

#### Classification References:

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***Picea glauca* – *Abies balsamea* / *Rosa acicularis* / *Aralia nudicaulis* CNVC00103**

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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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