



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

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## Alaskan-Yukon North American Boreal Forest & Woodland Forêts et terres boisées boréales nord américaines d'Alaska et du Yukon

Macrogroup M156

### Boreal Forest & Woodland

D014 North American Boreal Forest & Woodland

M179 North American Northern Boreal Woodland

**M156 Alaskan-Yukon North American Boreal Forest & Woodland**

CM156a Low Montane Alaskan-Yukon Boreal Forest

CM156b High Montane Alaskan-Yukon Boreal Woodland

M495 Eastern North American Boreal Forest

M496 West-Central North American Boreal Forest



### Concept

M156 describes upland boreal forests and woodlands of northwestern North America, ranging from northern British Columbia into Yukon, Northwest Territories and Alaska. Forest canopies can be evergreen coniferous, broad-leaved cold-deciduous or a conifer – broad-leaved mixture. Stands of M156 become patchy and more open with increased elevation, where they often occur as tree islands or widely spaced trees in a shrubland matrix. On wind-exposed sites, trees develop characteristic krummholtz forms in response to physical damage by extreme cold and blowing snow and ice crystals. These forests and woodlands are maintained on the landscape by stand-replacing fire, with most parts of the range experiencing short (<100 years) to intermediate (100-270 years) regional fire cycles. Dominant tree species in most of the Canadian range include white spruce (*Picea glauca*), black spruce (*P. mariana*), trembling aspen (*Populus tremuloides*), lodgepole pine (*Pinus contorta* var. *latifolia*) and, at higher elevations, subalpine fir (*Abies lasiocarpa*). Understories range from dense, species-rich shrub and herb conditions to sparse shrub and herb layers with continuous feathermoss and/or lichen ground cover. Common understory species include willows (*Salix* spp.), shrub birches (*Betula nana* and/or *B. glandulosa*), black crowberry (*Empetrum nigrum*), common Labrador tea (*Rhododendron groenlandicum*), fireweed (*Chamerion angustifolium*), lingonberry (*Vaccinium vitis-idaea*), twinflower (*Linnaea borealis*), Arctic lupine (*Lupinus arcticus*), Altai fescue (*Festuca altaica*), common bearberry (*Arctostaphylos uva-ursi*), northern comandra (*Geocaulon lividum*), reindeer (*Cladina* spp.) and clad (*Cladonia* spp.) lichens, and stairstep moss (*Hylocomium splendens*).

M156 occurs within a mostly subhumid continental boreal climate, with long cold winters and short cool summers. Mean annual temperatures range from about -1°C to -6°C. Annual precipitation varies between approximately 300 mm and 800 mm, depending on latitude, longitude and elevation. M156 forests and woodlands occur from valley bottom to treeline in most of Yukon (up to 1450 mASL) but, in northern British Columbia, southeastern Yukon and southwestern Northwest Territories, they are found at elevations above approximately 800-1100 mASL. Regional geologic and topographic features of the Cordilleran physiographic region produce an array of local site conditions. Except for some areas in western Yukon and southwestern Northwest Territories, all parts of the range experienced late Pleistocene glaciation. Soils are mostly Brunisols and Luvisols developed in glacial surficial materials, although Cryosols occur on cold moist sites in the northern part of the range.

Two subtypes distinguish low elevation boreal forests (CM156a [Low Montane Alaskan-Yukon Boreal Forest]) and higher elevation boreal woodlands (CM156b [High Montane Alaskan-Yukon Boreal Woodland]).



Open forest dominated by lodgepole pine (*Pinus contorta* var. *latifolia*), with white spruce (*Picea glauca*), trembling aspen (*Populus tremuloides*) and willows (*Salix* spp.), on terraces in the Wheaton River valley, Yukon. Note the subalpine transition on surrounding mountain slopes.

Source: Yukon Government



Open stand of black spruce (*Picea mariana*) with a sparse understory of willows (*Salix* spp.), glandular birch (*Betula glandulosa*) and common Labrador tea (*Rhododendron groenlandicum*); ground cover is a mosaic of lichens (especially *Cladonia/Cladina* spp.) and feathermosses. Klondike Plateau region, Yukon.

Source: Yukon Government



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## Vegetation

### Physiognomy and Structure

M156 includes upland forests and woodlands, with the latter occurring on very dry or cold sites and at the climatic limits of closed forest (i.e., higher elevations and latitudes). Forest canopies can be evergreen coniferous, cold-deciduous broad-leaved ("hardwood") or a conifer-hardwood mixture, depending on regional climate, local site conditions, seed/propagule availability at time of establishment and disturbance history. Treed stands become patchy and more open with increasing elevation (or in valleys where cold air ponding is significant), often occurring as tree islands or widely spaced trees in a shrubland matrix. On wind-exposed sites, trees develop characteristic krummholtz shapes in response to physical damage by extreme cold and blowing snow and ice crystals. Understory structure varies from dense to sparse, and is usually dominated by cold-deciduous broad-leaved shrubs and conifer regeneration. Most species exhibit one or more adaptation traits to disturbance, in some cases specific to fire. The moss layer is typically well developed, especially under conifer canopies. These forests and woodlands are subject to regular stand replacement by wildfire and seldom reach ages >150 years; stands are often even-aged. Post-disturbance stand structure is usually simple but two-storied structure can develop over time in the absence of fire. Two subtypes distinguish low elevation forests (CM156a [Low Montane Alaskan-Yukon Boreal Forest]) and higher elevation boreal forests and woodlands (CM156b [High Montane Alaskan-Yukon Boreal Woodland]). Boreal riparian and wetland forests and woodlands within the range of M156 are described by M299 [North American Boreal Conifer Poor Swamp] and M300 [North American Boreal Flooded & Rich Swamp Forest].

### Floristics

The main tree species in the Canadian range of M156 are *Picea glauca*, *Populus tremuloides*, *Pinus contorta* (see Comments), *Abies lasiocarpa* (see Comments) and *Picea mariana*. *P. tremuloides* and the *Picea* species occur throughout the full North American range (including Alaska), whereas *P. contorta* and *A. lasiocarpa* are absent from the Alaskan and northern Canadian portions of the range. Other important tree species include *Betula neoalaskana* (see Comments) and *Populus balsamifera*. Tree species are distributed on the landscape in response to both environmental and historic factors. Site moisture and nutrient status, together with fire frequency, are important determinants of stand composition. All of the major tree species, except *A. lasiocarpa*, are adapted to regenerate following stand-replacing fire, forming both pure and mixed stands.

*Picea glauca* occurs throughout the full range of M156, establishing immediately following fire or any other disturbance that exposes mineral seedbeds, wherever there is an adequate seed supply. *P. glauca* can also seed into existing stands of *P. tremuloides*, *P. contorta* or *B. neoalaskana*, persisting in the understory due to its shade tolerance and eventually growing into the main canopy. In these cases, if fire is absent for >100 years (approximately), it dominates uneven-aged stands with variable species mixes.

*Pinus contorta* and *Populus tremuloides* are fire-successional species in the Canadian range of M156. *P. tremuloides* is characteristic of warm aspects, mostly occurring at elevations below approximately 900 mASL (i.e., subtype CM156a [Low Montane Alaskan-Yukon Boreal Forest]). In southern parts of the range, *P. contorta* is normally the most successful early seral species on dry to mesic sites where it often forms extensive even-aged stands. On some low elevation sites, *P. contorta* can compete with *P. tremuloides*, resulting in mixed *P. contorta* – *P. tremuloides* stands.

*Abies lasiocarpa* is a shade tolerant, late seral species that is prevalent at higher elevations where wildfires are less common. Within its range, it is characteristic of the open forests and woodlands that are described by subtype CM156b [High Montane Alaskan-Yukon Boreal Woodland]. CM156b forests and woodlands are dominated by *P. glauca* and/or *A. lasiocarpa*; at lower elevations (i.e., in CM156a forests), fire cycles are generally too short to allow *A. lasiocarpa* to persist on the landscape.

*Picea mariana* is predominant on cool and moist sites, but it also occurs in association with *Picea glauca*, *Pinus contorta* or *Betula neoalaskana* on a variety of sites. When it is dominant, *P. mariana* can form either even-aged or uneven-aged stands, depending on site characteristics and stand history (usually time since the last fire).

*Populus balsamifera* is most common on floodplains (partly described in M300 [North American Boreal Flooded & Rich Swamp Forest]), but can also occur in upland forests, typically on moist, nutrient-rich sites. *Betula neoalaskana* occurs primarily in mixed conifer-hardwood stands on cool slopes.

Understory species composition combines widely distributed boreal species (e.g., *Rhododendron groenlandicum*, *Vaccinium vitis-idaea*, *Chamerion angustifolium*, *Geocaulon lividum* and *Mertensia paniculata*) with species that are more characteristic of arctic and boreal alpine conditions (e.g., *Lupinus arcticus*, *Empetrum nigrum*, *Arctous rubra* and *Festuca altaica*). Many common species in forests of M496 [West-Central North American Boreal Forest] are infrequent or absent from M156, including *Vaccinium myrtilloides*, *Rubus pubescens*, *Leymus innovatus*, *Maianthemum canadense*, *Aralia nudicaulis* and *Ptilium crista-castrensis*.



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### Floristics (cont'd)

*Salix* spp., *Vaccinium vitis-idaea*, *Cladina* spp. and *Hylocomium splendens* occur in forests and woodlands of both subtypes. Species that are more prevalent in CM156a include *Rosa acicularis*, *Shepherdia canadensis*, *Chamerion angustifolium*, *Linnaea borealis* and *Arctostaphylos uva-ursi*. At higher elevations (CM156b), *Betula nana* and/or *B. glandulosa*, *Rhododendron groenlandicum*, *Vaccinium uliginosum*, *Festuca altaica*, *Empetrum nigrum* and *Nephroma arcticum* are more common.

### Dynamics

Environmental site characteristics, plant species autecology and seed/propagule availability, and disturbance history (i.e., type, severity and frequency) influence secondary succession trends within the forests of M156. Stand-replacing fires, usually caused by lightning, are the most widespread form of disturbance; regional fire cycles are generally short (<100 years) to intermediate (100-270 years), although they can be longer at higher elevations. Fires vary considerably in size, with large fires possible in any part of the range despite modern fire suppression practices. Burn severity is variable within each fire, so a spatial mosaic of burned and residual patches is typical on the post-fire landscape. At broader scales, especially for subtype CM156a [Low Montane Alaskan-Yukon Boreal Forest], early to mid-seral (approximately <120 years) stands are prevalent on the landscape while late seral stands (approximately >120 years) generally cover less than 30% of the landscape. At higher elevations (CM156b [High Montane Alaskan-Yukon Boreal Woodland]), fire cycles are longer and there is a greater proportion of late seral stands. Anthropogenic disturbance is uncommon, except near settlements; forest harvesting is not a major factor in these forests.

Site moisture and nutrient status are important determinants of post-disturbance succession. On moist, nutrient-rich sites, intense competition from shrubs and herbs immediately following fire can limit the availability of microsites suitable for the germination and growth of conifers; root or stump-regenerating deciduous species, such as *Populus* spp. and *Betula neoalaskana*, are less affected by competition. On mesic to dry sites, post-burn conditions are usually suitable for seed germination and growth of *Picea* spp. and, within its range, *Pinus contorta*. *P. contorta* is normally the most successful early seral species on very dry sites. *P. tremuloides* is most common as an early seral species on warm circum-mesic sites at lower elevations (CM156a). If seed sources are available, *Picea glauca* and *P. mariana* may seed in from adjacent unburned areas during the mid- to late seral stages and over time (usually more than 120 years) grow into the main canopy, eventually becoming dominant as early seral species decline. In CM156b forests and woodlands, *P. glauca* and *Abies lasiocarpa* are the main tree species because of the lower frequency of stand-replacing fire.

A variety of diseases and insects are endemic to these forests. Typically, mortality is limited to individual or small groups of trees within stands, but occasional broad-scale outbreaks are capable of creating changes in tree species dominance at both the stand and landscape levels. Tomentosus root disease (*Inonotus tomentosus*) is widespread in spruce and pine forests of M156, causing mortality of young trees and increasing susceptibility of older trees to windthrow and insect attack. Aspen trunk rot (*Phellinus tremulae*) causes extensive decay in *Populus tremuloides*.

Periodic outbreaks of spruce beetle (*Dendroctonus rufipennis*) cause widespread mortality in mature spruce forests. Western balsam bark beetle (*Dryocoetes confusus*) feeds on *Abies lasiocarpa*. Several budworm species (eastern spruce budworm [*Choristoneura fumiferana*], fir-spruce budworm [*C. orae*], two-year cycle budworm [*C. biennis*], western black-headed budworm [*Acleris gloverana*]) are native defoliators of *Picea glauca* and *A. lasiocarpa* that can cause mortality to mature and regenerating trees, and increase susceptibility to other insects or diseases. Aspen serpentine leafminer (*Phyllocnistis populiella*) is a common defoliator of *P. tremuloides* that rarely causes mortality, but at outbreak levels, can increase susceptibility to other insects or diseases.



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### Environment

#### Climate

M156 forests develop within the mostly subhumid continental boreal climate of northwestern Canada, characterized by long, cold winters and short, cool summers. Prevailing westerly air flows and orographic effects from the Coast and St. Elias Mountains create climatic variability within the range; parts of west-central Yukon are relatively drier, and some southern areas have greater precipitation and slightly warmer winters.

Mean annual temperatures vary from  $-1^{\circ}\text{C}$  to  $-6^{\circ}\text{C}$ . The growing season is short, averaging between 450 and 1000 growing degree days above  $5^{\circ}\text{C}$  (GDD). Mean annual precipitation varies from approximately 300 to 800 mm, depending upon latitude, longitude and elevation ( $>1000$  mm occurs at some higher elevations in northwestern British Columbia). In all parts of the range, over half of the annual precipitation falls as rain, often during summer thunderstorms. Drought is a regular occurrence, especially for forests of subtype CM156a [Low Montane Alaskan-Yukon Boreal Forest], affecting their productivity and exacerbating disturbance by fire, insects and disease.

#### Physiography, Geology, Topography and Soils

M156 forests and woodlands are found in north-central portions of the Cordilleran physiographic region of western Canada. In Yukon and British Columbia (BC), they occur in the Pelly, Omineca, Cassiar and northern Rocky Mountains, plus the southern windward slopes and valleys of the Ogilvie, Selwyn and Wernecke Mountains. M156 also occurs on the Stikine and Yukon Plateaux of northwestern BC and central Yukon, and the Liard Lowland and the Liard and Hyland Plateaux of southeastern Yukon, southwestern Northwest Territories (NWT) and northeastern BC. In western Yukon, M156 describes all forests and woodlands below elevational treeline (approximately 1200 to 1450 mASL). In northern BC, southeastern Yukon and southwestern NWT, M156 forests and woodlands occur above 800-1100 mASL.

Geology and topography within the range of M156 is highly diverse. In the Cordilleran physiographic region, the terrain is a complex mixture of high mountains (up to 2500 mASL) with intervening plateaux, hill systems, valleys, trenches, basins, etc. The geology of the Cordillera within the range of M156 is mostly faulted and folded Paleozoic, Mesozoic or Tertiary sedimentary, often carbonate-rich, rocks. The Eastern System of the Cordillera (e.g., the Rocky Mountains and associated foothills) underwent little or no metamorphic or volcanic activity. In the Interior System some volcanism and igneous intrusions occurred (e.g., the Omineca Mountains); in these areas, geology is predominantly of crystalline igneous and metamorphic rocks.

Except for some areas in western Yukon and southwestern NWT, the entire range of M156 was affected by late Pleistocene glaciation and surficial landscape expression is dominated by glacial features and bedrock-controlled terrain. In mountainous areas, the predominant parent material is glacial till, usually occurring as blankets and shallow veneers overlying bedrock; fluvial and glaciofluvial materials occur on valley bottoms. In areas with lower relief, deeper till and glaciolacustrine or glaciofluvial deposits cover more extensive areas. Mineral soils are typically Brunisols (coarser textures) and Luvisols (finer textures), with Gleysols and some shallow peat veneers occurring on moist, poorly drained sites. Discontinuous permafrost (Cryosolic soils) is common in northern portions of the range, especially at higher elevations and on steep cool aspects or on cold, moist sites where mineral soils are overlain by thick moss. Although peatlands dominated by Organic soils are common in poorly drained landscape depressions within the range of M156, vegetation on these sites is primarily described by M299 [North American Boreal Conifer Poor Swamp].



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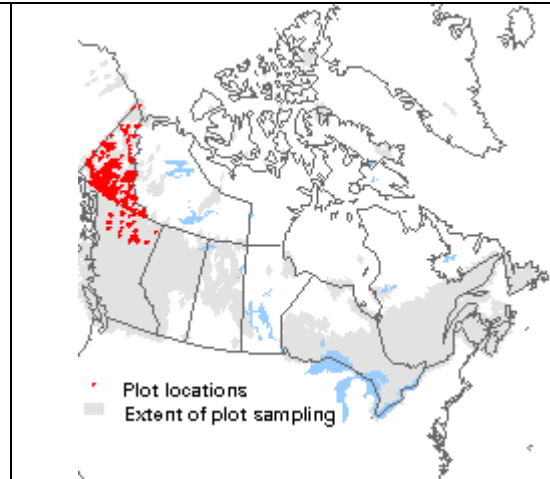
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### Distribution and Geographic Range

M156 includes the upland boreal forests and woodlands of most of Yukon, and the higher elevations of northern British Columbia and a small area in southwestern Northwest Territories. The Canadian range is the eastern portion of the global range of northwestern North American boreal forests and woodlands, extending west into Alaska.



### Related Concepts

M156 includes upland forests and woodlands that have been described in provincial/territorial publications for much of the Boreal Low and all of the Boreal High bioclimatic zones in Yukon; the Spruce – Willow – Birch biogeoclimatic zone in British Columbia; and the Level III Boreal Cordillera Mid-Boreal ecoregion of the Northwest Territories.

Currently, USNVC M156 [Alaskan-Yukon North American Boreal Forest] describes upland boreal, subboreal and montane forests and woodlands of Alaska. Ecological relationships between boreal forests and woodlands of northwestern Canada and those of Alaska are not yet defined.

Boreal riparian and wetland forests and woodlands within the range of M156 are described by M299 [North American Boreal Conifer Poor Swamp] and M300 [North American Boreal Flooded & Rich Swamp Forest].

### Comments

M156 describes all upland boreal forests and woodlands of western and central Yukon, and the high-elevation boreal forests and woodlands of British Columbia, southeastern Yukon and a small part of southwestern Northwest Territories. They are characterized by general dominance of *Picea glauca* and/or *Picea mariana*, with *Abies lasiocarpa* common in higher elevation woodlands and *Populus tremuloides* on warm aspects at low elevations. In most of the Canadian range, *Pinus contorta* var. *latifolia* is an important early seral species. Boreal upland forests of west-central Canada, described by M496 [West-Central North American Boreal Forest], are distinguished from those of M156 by higher overall importance of *P. tremuloides*, a generally greater diversity of understory species and, further east, the presence of *Abies balsamea* and *Pinus banksiana*. The dominant species of tree birch in M156 is *Betula neoalaskana*, whereas it is *B. papyrifera* in M496. North of the range of M156, M179 [North American Northern Boreal Woodland] describes northern boreal upland treed communities dominated by *P. glauca* and *Picea mariana* that exhibit woodland physiognomy, typically with ground cover dominated by lichens rather than feathermosses. High montane and subalpine forests south of M156, characterized by *Picea engelmannii* (and *A. lasiocarpa*) are described by M020 [Rocky Mountain Subalpine-High Montane Forest].

*Abies lasiocarpa* here refers to both *A. lasiocarpa* (subalpine fir) and *A. bifolia* (Rocky Mountain alpine fir), as well as their hybrids, as recognized by VASCAN.

*Pinus contorta* here refers to variety *latifolia* (lodgepole pine); *P. contorta* var. *yukonensis* occurs occasionally in higher elevation woodlands.

*Betula neoalaskana* is the dominant species of tree birch in M156 although *B. papyrifera* occurs occasionally, especially in southeastern portions of the range.



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### Source Information

**Number of Source Plots for M156:** 1673 (Canadian National Vegetation Classification. 2015. CNVC Master Database [VPro13/MSAccess 2010 format]. Natural Resources Canada, Sault Ste. Marie, ON.)

#### Information Sources (data):

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Environment Yukon. 2015. Yukon Biological Information System (YBIS). Env. Yukon, Whitehorse, YT. (1533 plots)

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

**Date of Concept:** October, 2017

**Date of Description:** April, 2019

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

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## Alaskan-Yukon North American Boreal Forest & Woodland Forêts et terres boisées boréales nord américaines d'Alaska et du Yukon

Macrogroup M156

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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.

**Suggested Citation:** Baldwin, K.; Meidinger, D.; Chapman, K. Alaskan-Yukon North American Boreal Forest & Woodland [online]. Sault Ste. Marie, Ontario, Canada: Canadian National Vegetation Classification. April 2019; generated May-27-2019; cited **ENTER DATE ACCESSED**. 10 p. Canadian National Vegetation Classification Macrogroup: M156. Available from <http://cnvc-cnvc.ca>. System Requirements: Adobe Acrobat Reader v. 7.0 or higher. ISSN 1916-3266.





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## Alaskan-Yukon North American Boreal Forest & Woodland

Macrogroup M156

Forêts et terres boisées boréales nord américaines d'Alaska et du Yukon

### Comparison of Vegetation Characteristics for Boreal Forest Macrogroups

Lifeform	Species Name	n=2170	n=1673	n=6851	n=15705	Species Common Name
		M179 Northern Woodland	M156 Alaskan- Yukon	M496 West- Central	M495 Eastern	
Tree	<i>Larix laricina</i>	■■■				tamarack
	<i>Abies lasiocarpa</i>		****			subalpine fir
	<i>Picea glauca</i>	****	■■■■■	■■■■■	■■■■■	white spruce
	<i>Populus tremuloides</i>		■■■■■	■■■■■	■■■■■	trembling aspen
	<i>Pinus banksiana</i> + <i>P. contorta</i>		■■■■■	■■■■■	****	jack & lodgepole pines
	<i>Picea mariana</i>	■■■■■	****	■■■■■	■■■■■	black spruce
	<i>Betula papyrifera</i> + <i>B. neoalaskana</i>			****	■■■■■	paper & Alaska birches
	<i>Abies balsamea</i>				■■■■■	balsam fir
Shrub	<i>Vaccinium uliginosum</i>	■■■	***			bog bilberry
	<i>Betula</i> spp.	■■■	■■■■■			shrub birches
	<i>Salix</i> spp.	■■■	■■■	***	■■■	shrub willows
	<i>Rhododendron groenlandicum</i>	■■■■■	■■■■■	■■■	■■■■■	common Labrador tea
	<i>Rosa acicularis</i>		■■■	■■■		prickly rose
	<i>Viburnum edule</i>			■■■		squashberry
	<i>Alnus viridis</i>	****		■■■■■	****	green alder
	<i>Vaccinium myrtilloides</i>			■■■	■■■	velvet-leaved blueberry
	<i>Vaccinium angustifolium</i>	■■■			■■■	early lowbush blueberry
	<i>Sorbus decora</i> + <i>S. americana</i>				■■■	showy & American mountain-ashes
	<i>Kalmia angustifolia</i>				■■■■■	sheep laurel
	<i>Acer spicatum</i>				■■■■■	mountain maple
Herb/ Dwarf Shrub	<i>Arctous rubra</i>		***			red bearberry
	<i>Festuca altaica</i>		***			northern rough fescue
	<i>Lupinus arcticus</i>		■■■			arctic lupine
	<i>Empetrum nigrum</i>	■■■	■■■■■			black crowberry
	<i>Geocaulon lividum</i>	**	■■■■■			northern comandra
	<i>Arctostaphylos uva-ursi</i>		■■■■■	***		common bearberry
	<i>Mertensia paniculata</i>		**	■■■		tall bluebells
	<i>Vaccinium vitis-idaea</i>	■■■	■■■■■	■■■■■		lingonberry
	<i>Chamerion angustifolium</i>	**	■■■	■■■■■		fireweed
	<i>Linnaea borealis</i>	**	■■■■■	■■■■■	■■■	twinline
	<i>Cornus canadensis</i>	■■■■■		■■■■■	■■■■■	bunchberry
	<i>Petasites frigidus</i>			■■■		arctic sweet coltsfoot
	<i>Calamagrostis canadensis</i>			■■■■■		bluejoint reedgrass
	<i>Leymus innovatus</i>			■■■■■		downy lymegrass
	<i>Rubus pubescens</i>			■■■■■	***	dwarf raspberry
	<i>Maianthemum canadense</i>			■■■	■■■■■	wild lily-of-the-valley
	<i>Aralia nudicaulis</i>			***	■■■■■	wild sarsaparilla
	<i>Clintonia borealis</i>				■■■■■	yellow clintonia
	<i>Gaultheria hispidula</i>	■■■			■■■■■	creeping snowberry
	<i>Lysimachia borealis</i>				■■■	northern starflower
<i>Coptis trifolia</i>	**			■■■	goldthread	
<i>Eurybia macrophylla</i>				***	large-leaved aster	
Moss/Lichen	<i>Cladonia</i> spp. + <i>Cladina</i> spp.	■■■■■	■■■■■	■■■■■	■■■■■	clad + reindeer lichens
	<i>Hylocomium splendens</i>	****	■■■■■	■■■■■	■■■■■	stairstep moss
	<i>Pleurozium schreberi</i>	■■■■■	■■■■■	■■■■■	■■■■■	red-stemmed feathermoss
	<i>Ptilium crista-castrensis</i>	■■■	■■■■■	■■■■■	■■■	knight's plume moss

#### Legend

Constancy:	Black bar >= 50%	Cover:	5 bars >= 25%	2 bars >= 1%
	Grey bar >= 30%		4 bars >= 10%	1 bar <= 1%
	Asterisk >= 20%		3 bars >= 3%	



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## Alaskan-Yukon North American Boreal Forest & Woodland

Macrogroup M156

Forêts et terres boisées boréales nord américaines d'Alaska et du Yukon

### Comparison of Vegetation Characteristics for Macrogroup Subtypes in M156

Layer	Species Name	n=1064		n=609	
		CM156a Low Boreal Forest	CM156b High Boreal Forest	CM156a Low Boreal Forest	CM156b High Boreal Forest
Tree	<i>Populus tremuloides</i>	■■■■■			
	<i>Pinus contorta</i> var. <i>latifolia</i>	■■■■		****	
	<i>Picea glauca</i>	■■■■■		■■■■■	
	<i>Picea mariana</i>	****		****	
	<i>Abies lasiocarpa</i>			■■■■■	
Shrub	<i>Shepherdia canadensis</i>	■■■■			
	<i>Rosa acicularis</i>	■■■		**	
	<i>Salix</i> spp.	■■■		■■■■■	
	<i>Rhododendron groenlandicum</i>	****		■■■■	
	<i>Betula nana</i> + <i>B. glandulosa</i>			■■■■■	
	<i>Vaccinium uliginosum</i>			■■■	
Herb/ Dwarf Shrub	<i>Anticlea elegans</i>	*			
	<i>Calamagrostis purpurascens</i>	***			
	<i>Geocaulon lividum</i>	■■■			
	<i>Arctostaphylos uva-ursi</i>	■■■■■			
	<i>Lupinus arcticus</i>	■■		**	
	<i>Mertensia paniculata</i>	**		**	
	<i>Linnaea borealis</i>	■■■		***	
	<i>Chamerion angustifolium</i>	■■		■■	
	<i>Vaccinium vitis-idaea</i>	■■■		■■■	
	<i>Empetrum nigrum</i>	***		■■■	
	<i>Cornus canadensis</i>			■■■	
	<i>Festuca altaica</i>			■■■	
	<i>Petasites frigidus</i>			**	
	Moss/Lichen	<i>Hylocomium splendens</i>	■■■■■		■■■■■
<i>Cladonia</i> spp. + <i>Cladina</i> spp.		■■■		■■■■■	
<i>Pleurozium schreberi</i>		****		■■■■■	
<i>Nephroma arcticum</i>				■■■	

#### Legend

Constancy:	Black bar >= 50%	Cover:	5 bars >= 25%	2 bars >= 1%
	Grey bar >= 30%		4 bars >= 10%	1 bar <= 1%
	Asterisk >= 20%		3 bars >= 3%	