



Forest / Forêt

Association CNVC00014

Pseudotsuga menziesii* (*Abies grandis* - *Thuja plicata*) / *Mahonia nervosa* - *Gaultheria shallon

Douglas-fir (Grand Fir - Western Red Cedar) / Dull Oregon-grape - Salal

Douglas de Menzies (Sapin grandissime - Thuya géant) / Mahonie nervuré - Salal

Subassociations: none

CNVC Alliance: not yet determined

CNVC Group: not yet determined

Type Description

Concept: CNVC00014 occurs on zonal and near-zonal sites within the Georgia Basin of coastal southern British Columbia and adjacent Washington, USA. Known sites in British Columbia occur at elevations up to 250 mASL, on (mostly gentle) middle to upper slopes, where sandy loamy soils are common. The canopy of this coniferous association is typically dominated by Douglas-fir (*Pseudotsuga menziesii*), with a well-developed shrub layer dominated by dull Oregon-grape (*Mahonia nervosa*) and/or salal (*Gaultheria shallon*), a sparse herb layer, and a well-developed moss layer dominated by Oregon beaked moss (*Eurhynchium oreganum*).

Vegetation: The coniferous canopy of CNVC00014 can range from moderately open to closed. The overstory is dominated by *Pseudotsuga menziesii*, typically intermixed with low to moderate cover of *Abies grandis* and *Thuja plicata*. *Mahonia nervosa* and/or *Gaultheria shallon* dominate the well-developed shrub layer, often with *Holodiscus discolor*. *Rosa gymnocarpa*, *Lonicera ciliosa*, *Vaccinium parvifolium*, *Symphoricarpos albus*, and *Symphoricarpos hesperius* often are present with low cover. The sparse herb layer typically includes low cover of *Rubus ursinus*, *Trientalis borealis*, *Polystichum munitum*, *Pteridium aquilinum*, *Linnaea borealis*, and *Festuca subulata*. The well-developed moss layer is dominated by high cover of *Eurhynchium oreganum*, often with low to moderate cover of *Rhytidadelphus triquetrus* and *Hylocomium splendens*.

Environment: CNVC00014 once formed extensive forests within its range, occurring on mesic and near-mesic sites, at elevations up to 250 mASL within the Georgia Basin of coastal British Columbia. It occurs on (mostly gentle) middle to upper slopes on all aspects. Parent materials are mostly morainal, occasionally colluvial or marine. Soils are mostly sandy loams with some gravelly, sandy and silt loamy textures. Sites have a mesic soil moisture regime and poor to medium nutrient regime.

Dynamics: This is a late-successional (mature and climax) climatic forest association. Stands originated from infrequent stand-replacing fires (perhaps every few hundred years or more) and occasionally windthrow. Within the established community, small canopy gaps result from the death of single trees or small groups of trees due to root-rots, bark beetles or windthrow. Stand-maintaining surface fires, both aboriginal- and lightning-caused, were more frequent (perhaps every 50-100 years) prior to European settlement. These low intensity surface fires likely resulted in a moderately open overstory and pulses of understory regeneration, creating multi-aged stands consisting of sequences of age cohorts within the overstory and understory layers. This association is typically found in existing forests where stand origin was likely high-severity forest fires, and stand development was subsequently modified by low-severity surface fires.



Pseudotsuga menziesii (Abies grandis -Thuja plicata) / Mahonia nervosa - Gaultheria shallon
CNVC00014

Type Description (cont'd)

Range: CNVC00014 is found in the lowlands of the Georgia Basin of coastal southern British Columbia and adjacent Washington, USA. In British Columbia this includes eastern Vancouver Island, the Gulf Islands and pockets along the south coast of mainland British Columbia.

Conservation Status (NatureServe)

Global Conservation Rank: G2

National Conservation Rank: not yet determined

Subnational Conservation Rank: S2 (BC)



Canadian National Vegetation Classification (CNVC)
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Distribution

Countries: Canada

Provinces / Territories / States: British Columbia

Ecozones and Ecoregions of Canada: Pacific Maritime: Eastern Vancouver Island, Georgia - Puget Basin

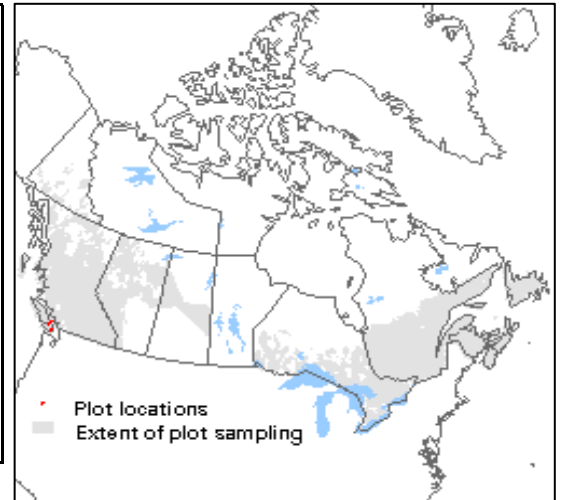
Rowe's Forest Regions and Sections: Coast: Strait of Georgia

Commission for Environmental Cooperation Ecological Regions of North America: Marine West Coast Forests

The Nature Conservancy (USA) and Nature Conservancy of Canada Ecoregions: Puget Trough

Biogeoclimatic Ecosystem Classification of British Columbia (zones and subzones): CDF mm

Ecoregion Classification System of British Columbia (ecosections): Nanaimo Lowland, Southern Gulf Islands, Strait of Georgia



Corresponding Types and Associations

CNVC00014

British Columbia

Pseudotsuga menziesii - *Mahonia nervosa*



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Vegetation Summary*

Species Name†	Association CNVC00014	
	83 plots	
	% Cover	% Presence
Overstory Trees		
<i>Pseudotsuga menziesii</i>	66	96
<i>Abies grandis</i>	21	69
<i>Thuja plicata</i>	28	53
<i>Acer macrophyllum</i>	6	36
<i>Cornus nuttallii</i>	11	34
Tree Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)‡	(65 70 75 80 90)	
Understory Woody Shrubs and Regenerating Trees		
<i>Mahonia nervosa</i>	36	96
<i>Gaultheria shallon</i>	35	87
<i>Rosa gymnocarpa</i>	2	82
<i>Holodiscus discolor</i>	25	72
<i>Vaccinium parvifolium</i>	2	60
<i>Lonicera ciliosa</i>	1	60
<i>Symphoricarpos albus</i>	3	46
<i>Symphoricarpos hesperius</i>	16	43
<i>Amelanchier alnifolia</i>	1	40
<i>Rhamnus purshiana</i>	1	34
<i>Lonicera hispidula</i>	1	31
<i>Salix sitchensis</i>	3	24
Shrub Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)‡	(10 30 58 90 95)	
Understory Herbs and Dwarf Shrubs		
<i>Rubus ursinus</i>	4	90
<i>Trientalis borealis</i> ssp. <i>latifolia</i>	3	87
<i>Polystichum munitum</i>	2	78
<i>Pteridium aquilinum</i>	4	72
<i>Festuca subulata</i>	1	66
<i>Linnaea borealis</i>	5	57
<i>Achlys triphylla</i>	5	46
<i>Galium triflorum</i>	1	41
<i>Bromus vulgaris</i>	1	36
<i>Melica subulata</i>	2	33
<i>Goodyera oblongifolia</i>	1	29
<i>Festuca occidentalis</i>	0	29
<i>Lathyrus nevadensis</i>	1	28
<i>Adenocaulon bicolor</i>	1	22



***Pseudotsuga menziesii* (*Abies grandis* - *Thuja plicata*) / *Mahonia nervosa* - *Gaultheria shallon*
 CNVC00014**

Vegetation Summary (cont'd)*

Species Name [†]	Association CNVC00014	
	% Cover	% Presence
Herb Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(3 9 38 70 85)	
Bryophytes and Lichens		
<i>Eurhynchium oregonum</i>	29	98
<i>Rhytidiadelphus triquetrus</i>	11	51
<i>Hylocomium splendens</i>	11	49
Bryo-Lichen Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(3 5 36 60 88)	

* 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

[‡] P_x = Xth percentile (e.g., P₁₀ = 10th percentile)



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Site / Soil Characteristics

Association

CNVC00014

83 plots

Elevation Range (min–mean–max meters)

9–70–244

missing data (25)

Slope Gradient (% frequency)

very steep (1)

steep (8)

moderately steep (8)

moderate (22)

gentle (31)

level (8)

missing data (20)

Aspect (% frequency)

north (19)

east (27)

south (17)

west (14)

level (10)

missing data (13)

Meso Toposition (% frequency)

mid (2)

level (1)

missing data (96)

Moisture Regime (% frequency)

dry (16)

mesic (77)

moist (5)

missing data (2)

Nutrient Regime (% frequency)

poor (20)

medium (60)

rich (16)

missing data (4)



Pseudotsuga menziesii (Abies grandis -Thuja plicata) / Mahonia nervosa - Gaultheria shallon
CNVC00014

Site / Soil Characteristics (cont'd)

Association
CNVC00014

Soil Parent Material (% frequency)

colluvium (2)
marine (1)
missing data (96)

Soil Rooting Zone Substrate (% frequency)

non-soil (2)
sandy (14)
coarse loamy (64)
fine loamy (10)
silty (1)
clayey (1)
missing data (7)

Root Restricting Depth (% frequency)

0 – 20 cm (1)
21 – 99 cm (34)
≥ 100 cm (6)
missing data (59)

Humus Form (% frequency)

mor (2)
moder (43)
mull (46)
missing data (8)



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Additional Characteristics

Species of High Conservation Concern: Reported habitat for spotted owl (*Strix occidentalis*) (G3 [NatureServe], S1 [BC CDC], E [COSEWIC]); Townsend's big-eared bat (*Corynorhinus townsendii*) (G4 [NatureServe], S3 [BC CDC]).

Non-native Species:

Management Issues:

Type Statistics

Internal Similarity:

Confidence:

Strength:

Related Concepts

Similar CNVC Associations: CNVC00010 *Thuja plicata* - *Pseudotsuga menziesii* - *Abies grandis* / *Mahonia nervosa* / *Polystichum munitum* - *Achlys triphylla*

Related United States National Vegetation Classification Associations: CEG002845 *Pseudotsuga menziesii* - (*Abies grandis* - *Thuja plicata*) / *Mahonia nervosa* - *Gaultheria shallon* Forest

Relationships with Other Classifications:

Comments

CNVC00014 is distinguished from the similar CNVC00010 [*Thuja plicata* - *Pseudotsuga menziesii* - *Abies grandis* / *Mahonia nervosa* / *Polystichum munitum* - *Achlys triphylla*] by the low cover of *Polystichum munitum* and greater dominance of *Pseudotsuga menziesii*.

Source Information

Number of source plots for CNVC00014: 83

Information Sources: British Columbia Ministry of Forests and Range, Research Branch BECMaster database, October 2007 (83 plots)

Concept Authors: D. Meidinger, C. Chappell, C. Cadrin, G. Kittel, C. McCain, K. Boggs, J. Kagan, G. Cushon, A. Banner and T. DeMeo

Description Authors: D. Meidinger, K. Iverson, C. Cadrin and K. Baldwin

Date of Concept: November, 2005

Date of Description: March, 2011



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Source Information (cont'd)

Classification References:

British Columbia Ministry of Forests and Range, Research Branch. 2007. Vegetation classification hierarchy: BECMaster database (October 2007). B.C. Min. For., Victoria, BC.

Meidinger, D.; Chappell, C.; Cadrin, C.; Kittel, G.; McCain, C.; Boggs, K.; Kagan, J.; Cushon, G.; Banner, A.; DeMeo, T. 2005. International vegetation classification of the Pacific Northwest: International correlation of temperate coastal forest plant associations of Oregon, Washington, British Columbia and Alaska. Contributors: B.C. Ministry of Forests, USDA Forest Service, B.C. Conservation Data Centre, Alaska Natural Heritage Program, Washington Natural Heritage Program, Oregon Natural Heritage Information Center.

Characterization References:

British Columbia Conservation Data Centre. 2007. B.C. Species and Ecosystems Explorer. B.C. Min. of Environ. Victoria, BC. Available: <http://www.env.gov.bc.ca/cdc/access.html> (accessed August 18, 2008).

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Green, R.N.; Klinka, K. 1994. A field guide to site identification and interpretation for the Vancouver Forest Region. B.C. Min. For., Res. Branch, Victoria, BC. Land Manage. Handb. No. 28. 285 p.

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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: Meidinger, D.; Iverson, K.; Cadrin, C.; Baldwin, K. *Pseudotsuga menziesii (Abies grandis -Thuja plicata) / Mahonia nervosa - Gaultheria shallon* [online]. Sault Ste. Marie, Ontario, Canada: Canadian National Vegetation Classification. March, 2011; generated Apr-20-2011; cited ENTER DATE ACCESSED. 9 p. Canadian National Vegetation Classification Association: CNVC00014. Available from <http://cnvc-cnvc.ca>. System Requirements: Adobe Acrobat Reader v. 7.0 or higher. ISSN 1916-3266.