



Forest / Forêt

Association CNVC00025

Picea sitchensis* - *Tsuga heterophylla* / *Eurhynchium oreganum

Sitka Spruce - Western Hemlock / Oregon Beaked Moss

Épinette de Sitka - Pruche de l'Ouest / Kindbergie de l'Oregon

Subassociations: none

CNVC Alliance: not yet determined

CNVC Group: not yet determined

Type Description

Concept: CNVC00025 is an endemic, coniferous forest association that occurs in wet, hypermaritime climates on old beachplains along shorelines of eastern Haida Gwaii (Queen Charlotte Islands) British Columbia. Sites supporting this association occur at low elevations (0 to 20 mASL) where there is exposure to salt spray. These communities occur on level sites, typically with mesic soil moisture regimes and rich soil nutrient regimes. The canopy is characterized by Sitka spruce (*Picea sitchensis*), with moderate cover of western hemlock (*Tsuga heterophylla*). The poorly developed shrub layer consists almost entirely of regenerating western hemlock. The herb layer is sparse with a few scattered species of low cover. The continuous, well-developed moss layer is dominated by Oregon beaked moss (*Eurhynchium oreganum*), lanky moss (*Rhytidiadelphus loreus*), and staircase moss (*Hylocomium splendens*).

Vegetation: The canopy of CNVC00025 can be open or closed, and is characterized by high cover of *Picea sitchensis*, with moderate cover of *Tsuga heterophylla*. Intense browsing by the introduced Sitka black-tailed deer impacts both the abundance and diversity of species in the understory shrub and herb strata. The poorly developed shrub layer is dominated by moderate cover of regenerating *Tsuga heterophylla*. The very poorly developed herb layer occasionally has low cover of *Blechnum spicant*, *Moneses uniflora*, *Maianthemum dilatatum*, and *Listera caurina*. The continuous, well-developed moss layer is characterized by high cover of *Eurhynchium oreganum*, *Rhytidiadelphus loreus*, and *Hylocomium splendens*, with low cover of *Plagiothecium undulatum*.

Environment: CNVC00025 occurs in wet, hypermaritime climates on old beachplains along shorelines of eastern (leeward) Haida Gwaii (Queen Charlotte Islands). Sites supporting this association occur at low elevations (0 to 20 mASL) where there is exposure to salt spray. Level sites with mesic to moist soil moisture regimes and medium to rich soil nutrient regimes are characteristic. Parent materials are usually marine but are sometimes eolian. Soils are typically sandy and generally demonstrate podzolization in the soil horizons.

Dynamics: CNVC00025 are late successional (mature and climax) edaphic forest communities. Natural disturbance patterns include windthrow, root disease or insect-caused mortality, all of which may result in small gaps. Historically, fire was likely a very rare occurrence, occurring approximately every 4000 years on average. Old stands exhibit gap dynamics and an all-aged structure.

Range: CNVC00025 is found near the coast on the leeward (eastern) side of the Queen Charlotte Ranges on Haida Gwaii (Queen Charlotte Islands) of British Columbia. This is a Canadian endemic association.



Picea sitchensis - *Tsuga heterophylla* / *Eurhynchium oregonum* CNVC00025

Conservation Status (NatureServe)

Global Conservation Rank: GNR

National Conservation Rank: not yet determined

Subnational Conservation Rank: no applicable rank



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

<http://cnvc-cnvc.ca>

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Distribution

Countries: Canada

Provinces / Territories / States: British Columbia

Ecozones and Ecoregions of Canada: Pacific Maritime: Queen Charlotte Ranges

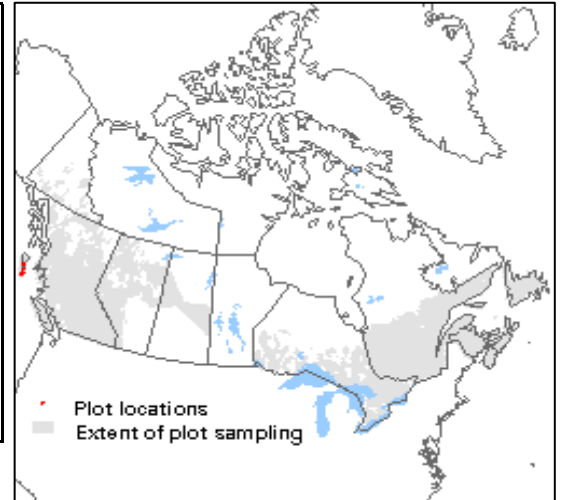
Rowe's Forest Regions and Sections: Coast: Queen Charlotte Islands

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

The Nature Conservancy (USA) and Nature Conservancy of Canada Ecoregions: S.E.
Alaska - B.C. Coastal Forest and Mountains

Biogeoclimatic Ecosystem Classification of British Columbia (zones and subzones):
CWH wh

Ecoregion Classification System of British Columbia (ecosections): Skidegate Plateau



Corresponding Types and Associations

CNVC00025

British Columbia

CWH wh 1 /14

Picea sitchensis - *Tsuga heterophylla* - *Thuja plicata* -
Gaultheria shallon



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Vegetation Summary*

Species Name†	Association CNVC00025	
	7 plots	
	% Cover	% Presence
Overstory Trees		
<i>Picea sitchensis</i>	49	100
<i>Tsuga heterophylla</i>	23	100
<i>Alnus rubra</i>	6	57
<i>Thuja plicata</i>	11	29
Tree Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)‡	(42 48 66 84 90)	
Understory Woody Shrubs and Regenerating Trees		
<i>Tsuga heterophylla</i>	20	71
<i>Menziesia ferruginea</i>	5	43
<i>Vaccinium parvifolium</i>	4	43
<i>Picea sitchensis</i>	3	43
<i>Vaccinium alaskaense</i>	2	29
<i>Gaultheria shallon</i>	2	29
<i>Thuja plicata</i>	2	29
Shrub Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)‡	(0 5 15 19 34)	
Understory Herbs and Dwarf Shrubs		
<i>Listera caurina</i>	1	43
<i>Moneses uniflora</i>	1	43
<i>Maianthemum dilatatum</i>	1	43
<i>Blechnum spicant</i>	3	29
<i>Dryopteris expansa</i>	1	29
<i>Goodyera oblongifolia</i>	1	29
<i>Calypso bulbosa</i>	0	29
<i>Luzula parviflora</i>	0	29
Herb Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)‡	(1 2 3 3 6)	
Bryophytes and Lichens		
<i>Eurhynchium oregonum</i>	38	100
<i>Rhytidiadelphus loreus</i>	27	71
<i>Hylocomium splendens</i>	26	71
<i>Plagiothecium undulatum</i>	4	71
<i>Rhizomnium glabrescens</i>	16	43
<i>Peltigera polydactylon</i>	5	43
<i>Dicranum</i> sp.	1	43
<i>Peltigera membranacea</i>	8	29
<i>Polytrichastrum alpinum</i> var. <i>alpinum</i>	5	29
<i>Calypogeja trichomanis</i>	0	29



***Picea sitchensis* - *Tsuga heterophylla* / *Eurhynchium oreganum* CNVC00025**

Vegetation Summary (cont'd)*

Species Name [†]	Association CNVC00025	
	% Cover	% Presence
Bryo-Lichen Stratum Cover (P ₁₀ P ₂₅ Mean P ₇₅ P ₉₀) [‡]	(58 70 76 91 98)	

* 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
CNVC00025
7 plots

Elevation Range (min–mean–max meters)

1–5–15

Slope Gradient (% frequency)

gentle (14)
level (71)
missing data (14)

Aspect (% frequency)

east (14)
level (57)
missing data (29)

Meso Toposition (% frequency)

crest / upper (29)
lower / toe (29)
level (43)

Moisture Regime (% frequency)

mesic (71)
moist (14)
missing data (14)

Nutrient Regime (% frequency)

medium (29)
rich (71)



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Site / Soil Characteristics (cont'd)

Association
CNVC00025

Soil Parent Material (% frequency)

eolian (14)
marine (57)
missing data (29)

Soil Rooting Zone Substrate (% frequency)

sandy (71)
coarse loamy (14)
missing data (14)

Root Restricting Depth (% frequency)

21 – 99 cm (14)
≥ 100 cm (14)
missing data (71)

Humus Form (% frequency)

mor (57)
missing data (43)



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Additional Characteristics

Species of High Conservation Concern: Reported habitat for marbled murrelet (*Brachyramphus marmoratus*) (G3G4 [NatureServe], S2B, S4N [BC CDC], T [COSEWIC]); ancient murrelet (*Synthliboramphus antiquus*) (G4 [NatureServe], S2S3B, S4N [BC CDC], SC [COSEWIC]).

Non-native Species:

Management Issues:

Type Statistics

Internal Similarity:

Confidence: high

Strength:

Related Concepts

Similar CNVC Associations: CNVC00026 *Tsuga heterophylla* - *Picea sitchensis* / *Rhytidiadelphus loreus* - *Hylocomium splendens*

Related United States National Vegetation Classification Associations: CEG002790 *Picea sitchensis* - *Tsuga heterophylla* - *Thuja plicata* / *Gaultheria shallon* Forest

Relationships with Other Classifications:

Comments

CNVC00025 is floristically similar to CNVC00026 [*Tsuga heterophylla* - *Picea sitchensis* / *Rhytidiadelphus loreus* - *Hylocomium splendens*] but that association has greater cover of *Tsuga heterophylla* relative to *Picea sitchensis*, and occurs on high-bench fluvial sites along major rivers, whereas CNVC00025 is found on old beachplains influenced by salt spray.

Source Information

Number of source plots for CNVC00025: 7

Information Sources: British Columbia Ministry of Forests and Range, Research Branch BECMaster database, October 2007 (7 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 12, 2008).

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

British Columbia Ministry of Water, Land and Air Protection. 2004b. Marbled Murrelet in: Accounts and measures for managing identified wildlife. B.C. Min. Water, Land and Air Prot., Victoria, BC. 52 p.

British Columbia Ministry of Water, Land and Air Protection. 2004c. Ancient Murrelet in: Accounts and measures for managing identified wildlife. B.C. Min. Water, Land and Air Prot., Victoria, BC. 52 p.

Dorner, B.; Wong, C. 2003. Natural disturbance dynamics on the North Coast. Background report for North Coast LRMP, Integrated Land Management Bureau, Gov. British Columbia. 51 p.

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.

Lertzman, K.; Gavin, D.; Hallett, D.; Brubaker, L.; Lepofsky, D.; Mathewes, R. 2002. Long-term fire regime estimated from soil charcoal in coastal temperate rainforests. *Conservation Ecology* 6:5.

NatureServe. 2007. NatureServe Explorer: An online encyclopedia of life [web application]. Version 6.2. NatureServe. Arlington, VA, USA. Available: <http://www.natureserve.org/explorer> (accessed November 26, 2007).

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.

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