



Forest / Forêt

Association CNVC00024

Picea sitchensis* / *Rubus spectabilis* - *Malus fusca* / *Carex obnupta

Sitka Spruce / Salmonberry - Pacific Crab Apple / Slough Sedge

Épinette de Sitka / Ronce remarquable - Pommier du Pacifique / *Carex* voilé

Subassociations: none

CNVC Alliance: not yet determined

CNVC Group: not yet determined

Type Description

Concept: CNVC00024 is an endemic, coniferous forest association that occurs along the backshores of estuaries and tidal sloughs of coastal British Columbia. Soils are usually loamy or sandy and are usually derived from fluvial materials, often with a thin organic cap. Salt input and wet soils limit productivity. Sitka spruce (*Picea sitchensis*) dominates the overstory of these communities, with low cover of western red cedar (*Thuja plicata*). The overstory is open, with canopy individuals growing on elevated mounds. Moderate to high cover of salmonberry (*Rubus spectabilis*) and Pacific crab apple (*Malus fusca*), together with moderate cover of salal (*Gaultheria shallon*) characterize the shrub layer. The herb layer is usually well-developed and dominated by high cover of slough sedge (*Carex obnupta*) and moderate cover of yellow skunk cabbage (*Lysichiton americanus*). The moderately well-developed moss layer consists mostly of beaked mosses (*Eurhynchium praelongum*, *E. oregonum*) and dotted leafy moss (*Rhizomnium punctatum*).

Vegetation: *Picea sitchensis* dominates the overstory of CNVC00024, with low cover of *Thuja plicata* and often *Tsuga heterophylla*. The overstory is open, with canopy individuals growing on elevated mounds. Moderate to high cover of *Rubus spectabilis* and *Malus fusca*, together with moderate cover of *Gaultheria shallon* characterize the shrub layer. *Lonicera involucrata* and *Vaccinium parvifolium* are often present. The herb layer is usually well-developed and dominated by high cover of *Carex obnupta* and moderate to low cover of *Lysichiton americanus*, *Maianthemum dilatatum* and *Blechnum spicant*. The moderately well-developed moss layer consists primarily of *Eurhynchium praelongum* with low to moderate cover of *Rhizomnium punctatum* and *E. oregonum*.

Environment: CNVC00024 communities occur along the backshores of estuaries and tidal sloughs of coastal British Columbia. These are level, wet, nutrient poor sites with high water tables that fluctuate according to tidal and seasonal patterns. Brackish water influences vegetation development and a mounded soil surface supports tree growth. Gleyed soils are characteristic, developing from marine and fluvial parent materials. Soils are usually loamy or sandy, often with a thin organic cap. Soil moisture regimes are usually wet. The salt input creates a hypereutrophic environment, limiting soil productivity.

Dynamics: CNVC00024 are late successional (mature and climax) edaphic forest communities. Natural disturbance is primarily windthrow resulting in small gaps and an all-aged stand structure. Flooding associated with major flood events in associated riparian systems may also occur. Other small gaps may result from insect-caused mortality or root rot. Fire is very unlikely in these communities.



***Picea sitchensis* / *Rubus spectabilis* - *Malus fusca* / *Carex obnupta* CNVC00024**

Type Description (cont'd)

Range: CNVC00024 occurs at very low elevations in the coastal areas of British Columbia; on the mainland from the Fraser River to Prince Rupert, and on western and northern Vancouver Island. This association is a Canadian endemic.

Conservation Status (NatureServe)

Global Conservation Rank: no applicable rank

National Conservation Rank: not yet determined

Subnational Conservation Rank: no applicable rank



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Distribution

Countries: Canada

Provinces / Territories / States: British Columbia

Ecozones and Ecoregions of Canada: Pacific Maritime: Coastal Gap, Lower Mainland, Northern Coastal Mountains, Pacific Ranges, Western Vancouver island

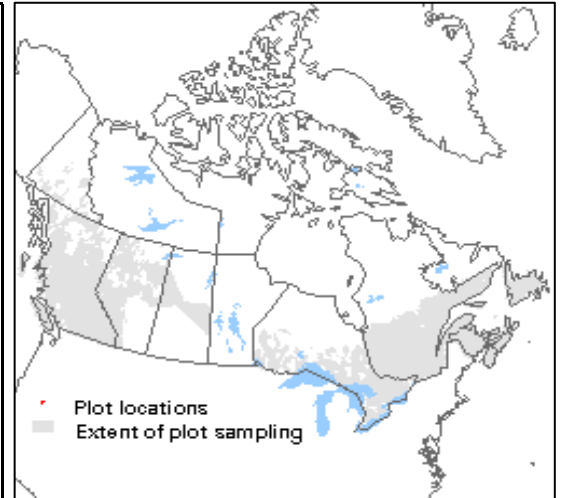
Rowe's Forest Regions and Sections: Coast: Northern Pacific Coast, Southern Pacific Coast

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

The Nature Conservancy (USA) and Nature Conservancy of Canada Ecoregions: North Cascades, Northwest Coast, Puget Trough, S.E. Alaska - B.C. Coastal Forest and Mountains

Biogeoclimatic Ecosystem Classification of British Columbia (zones and subzones): CWH vh, CWH vm

Ecoregion Classification System of British Columbia (ecosections): Central Pacific Ranges, Fraser Lowland, Kitimat Ranges, Nahwitti Lowland, Nass Mountains, Northern Island Mountains, Northern Pacific Ranges, Outer Fjordland, Southern Pacific Ranges, Windward Island Mountains



Corresponding Types and Associations

CNVC00024	British Columbia	CWH vh 1 /18	<i>Picea sitchensis</i> - <i>Carex obnupta</i>
		CWH vm 1 /14d	<i>Picea sitchensis</i> - <i>Carex obnupta</i>



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Vegetation Summary*

Species Name†	Association CNVC00024	
	11 plots	
	% Cover	% Presence
Overstory Trees		
<i>Picea sitchensis</i>	43	100
<i>Thuja plicata</i>	12	73
<i>Tsuga heterophylla</i>	6	55
<i>Alnus rubra</i>	7	27
<i>Malus fusca</i>	3	27
Tree Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)‡	(40 51 58 65 65)	
Understory Woody Shrubs and Regenerating Trees		
<i>Rubus spectabilis</i>	21	100
<i>Picea sitchensis</i>	4	100
<i>Gaultheria shallon</i>	12	91
<i>Tsuga heterophylla</i>	3	91
<i>Malus fusca</i>	25	82
<i>Vaccinium parvifolium</i>	2	73
<i>Lonicera involucrata</i>	4	64
<i>Thuja plicata</i>	2	64
<i>Menziesia ferruginea</i>	2	45
<i>Vaccinium ovalifolium</i>	2	45
<i>Salix hookeriana</i>	7	36
<i>Alnus rubra</i>	5	36
<i>Vaccinium ovatum</i>	4	36
<i>Rosa nutkana</i>	4	36
Shrub Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)‡	(40 48 63 75 80)	
Understory Herbs and Dwarf Shrubs		
<i>Carex obnupta</i>	26	100
<i>Maianthemum dilatatum</i>	7	100
<i>Blechnum spicant</i>	4	91
<i>Lysichiton americanus</i>	11	82
<i>Athyrium filix-femina</i>	9	64
<i>Polystichum munitum</i>	3	64
<i>Tiarella trifoliata</i>	3	64
<i>Galium triflorum</i>	3	64
<i>Streptopus amplexifolius</i>	2	55
<i>Oenanthe sarmentosa</i>	4	45
<i>Trautvetteria caroliniensis</i>	10	36
<i>Viola glabella</i>	4	36
<i>Vicia americana</i>	1	36
<i>Trisetum canescens</i>	1	36



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Vegetation Summary (cont'd)*

Species Name [†]	Association CNVC00024	
	% Cover	% Presence
<i>Coptis aspleniifolia</i>	4	27
<i>Cornus canadensis</i>	4	27
<i>Adiantum aleuticum</i>	3	27
<i>Angelica genulflexa</i>	3	27
<i>Polypodium glycyrrhiza</i>	3	27
<i>Veratrum viride</i>	3	27
<i>Luzula parviflora</i>	1	27
Herb Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(30 40 55 70 75)	
Bryophytes and Lichens		
<i>Rhizomnium punctatum</i>	6	91
<i>Eurhynchium praelongum</i>	14	82
<i>Eurhynchium oregonum</i>	9	73
<i>Plagiochila porelloides</i>	3	64
<i>Hookeria lucens</i>	2	64
<i>Fontinalis neomexicana</i>	4	55
<i>Rhytidiadelphus loreus</i>	6	45
<i>Pellia neesiana</i>	4	45
<i>Leucolepis acanthoneuron</i>	3	45
<i>Conocephalum conicum</i>	3	45
<i>Calypogeja trichomanis</i>	1	36
<i>Hylocomium splendens</i>	4	27
<i>Plagiothecium undulatum</i>	3	27
Bryo-Lichen Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(18 28 40 60 70)	

* 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

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CNVC00024

11 plots

Elevation Range (min–mean–max meters)

2–40–204

Slope Gradient (% frequency)

level (100)

Aspect (% frequency)

level (100)

Meso Toposition (% frequency)

missing data (100)

Moisture Regime (% frequency)

missing data (100)

Nutrient Regime (% frequency)

missing data (100)



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Site / Soil Characteristics (cont'd)

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Soil Parent Material (% frequency)

missing data (100)

Soil Rooting Zone Substrate (% frequency)

sandy (55)
fine loamy (27)
organic (9)
missing data (9)

Root Restricting Depth (% frequency)

missing data (100)

Humus Form (% frequency)

missing data (100)



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

<http://cnvc-cnvc.ca>

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Additional Characteristics

Species of High Conservation Concern: Reported habitat for grizzly bear (*Ursus arctos horribilis*) (G4 [NatureServe], S3 [BC CDC], SC [COSEWIC]); spotted owl (*Strix occidentalis*) (G3 [NatureServe], S1 [BC CDC], E [COSEWIC]); marbled murrelet (*Brachyramphus marmoratus*) (G3G4 [NatureServe], S2B, S4N [BC CDC], T [COSEWIC]); Pacific water shrew (*Sorex bendirii*) (G4 [NatureServe], S1S2 [BC CDC], E [COSEWIC]); dotted leafy moss (*Rhizomnium punctatum*) (G5 [NatureServe], S1S3 [BC CDC]).

Non-native Species:

Management Issues:

Type Statistics

Internal Similarity:

Confidence: high

Strength:

Related Concepts

Similar CNVC Associations:

Related United States National Vegetation Classification Associations: CEG002780 *Picea sitchensis* / *Malus fusca* / *Carex obnupta* Forest

Relationships with Other Classifications:

Comments

CNVC00024 is similar to a swamp association known from adjacent Washington State and southward - *Picea sitchensis* / *Carex obnupta* / *Lysichiton americanus* (CEGL000400).

No plot locations are shown on the distribution map because none of the constituent plots for this association have known geocoordinates.

Source Information

Number of source plots for CNVC00024: 11

Information Sources: British Columbia Ministry of Forests and Range, Research Branch BECMaster database, October 2007 (11 plots)

Concept Authors: K. Klinka, J. Pojar, 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: 1991, 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:

Banner, A.; MacKenzie, W.; Haeussler, S.; Thomson, S.; Pojar, J.; Trowbridge, R. 1993. A field guide to site identification and interpretation for the Prince Rupert Forest Region. B.C. Min. For., Res. Branch, Victoria, BC. Land Manage. Handb. No. 26.

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 November 26, 2007).

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

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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.

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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