



Forest / Forêt

Association CNVC00023

Populus balsamifera* ssp. *trichocarpa* - *Picea sitchensis* - *Acer macrophyllum* / *Oplopanax horridus* - *Rubus spectabilis* / *Maianthemum dilatatum

Black Cottonwood - Sitka Spruce - Big-leaved Maple / Devil's Club - Salmonberry / Two-leaved False Soloman's Seal

Peuplier de l'Ouest - Épinette de Sitka - Érable à grandes feuilles / Bois piquant - Ronce remarquable / Maïanthème dilaté

Subassociations: none

CNVC Alliance: not yet determined

CNVC Group: not yet determined

Type Description

Concept: CNVC00023 occurs on rich, moist high fluvial benches on the floodplains of larger streams and rivers along the southern mainland coast of British Columbia. On average, flooding occurs every 5 or more years. Soils are derived from fluvial materials and have a fluctuating water table. This endemic, mixed coniferous and deciduous forest association has a multi-layered overstory consisting of big-leaved maple (*Acer macrophyllum*), black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) and Sitka spruce (*Picea sitchensis*), often with red alder (*Alnus rubra*). The well-developed shrub layer is dominated by salmonberry (*Rubus spectabilis*), vine maple (*Acer circinatum*), and devil's club (*Oplopanax horridus*). The herb layer is characterized by two-leaved false Soloman's seal (*Maianthemum dilatatum*) with Hooker's fairybells (*Prosartes hookeri*), common lady fern (*Athyrium filix-femina*), and mountain sweet-cicely (*Osmorhiza berteroi*). The poorly developed moss layer consists primarily of leafy mosses (*Mnium* spp.).

Vegetation: The multi-layered overstory of CNVC00023 has moderate to high cover of *Acer macrophyllum*, *Populus balsamifera* ssp. *trichocarpa* and *Picea sitchensis*, and low to moderate cover of *Alnus rubra* and/or *Thuja plicata*. The well-developed shrub layer has moderate cover of *Rubus spectabilis* and *Acer circinatum*, low to high cover of *Oplopanax horridus*, low to moderate cover of *Ribes bracteosum* and *Symphoricarpos albus*, and low cover of *Sambucus racemosa*. Often there is low to moderate cover of *Rubus parviflorus*. Sites with lower cover of *Acer circinatum* tend to have higher cover of *Oplopanax horridus*, *Rubus spectabilis*, and *Ribes bracteosum*. The herb layer is characterized by low to high cover of *Maianthemum dilatatum* with moderate cover of *Prosartes hookeri*, low to moderate cover of *Athyrium filix-femina*, *Osmorhiza berteroi*, and *Dryopteris expansa*, and low cover of *Galium triflorum*, *Lactuca muralis*, *Maianthemum stellatum*, *Claytonia sibirica*, and *Dicentra formosa*. The poorly developed moss layer consists primarily of *Mnium* spp. and occasionally other bryophytes.

Environment: CNVC00023 occurs on rich, moist, high fluvial benches on the floodplains of larger streams and rivers. Flood events occur, on average, every 5 or more years. Deposition of sediments and of deciduous litter results in soils with rich humus forms and high nutrient availability. Fluctuating water tables are typical of these sites and soil moisture regime is usually moist during the growing season, although wetter in the winter. Soils are derived from coarse fluvial materials and are well drained. These riparian communities are found at low elevations.



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Type Description (cont'd)

Dynamics: CNVC00023 is a mid-successional edaphic forest association. Natural disturbance patterns include flooding every few years. Flooding may cause the mortality of some trees but is generally a stand-maintaining disturbance. Small gaps result from windthrow, root-rot, or insect-caused mortality. Flooding and windthrow together result in an all-aged stand structure. Geomorphological disturbances, such as debris flows and torrents, might rarely cause stand-replacing events. Historically, fire was likely a very rare occurrence, occurring approximately every 4000 years on average. Current communities on these high-bench fluvial sites show evidence of considerable anthropogenic disturbance - likely selective harvesting.

Range: CNVC00023 occurs at low elevations of river valleys along the mainland coast of southern British Columbia as far north as Knight Inlet, and in the lower Fraser River valley southwest of the Chilliwack River. This association is a Canadian endemic.

Conservation Status (NatureServe)

Global Conservation Rank: G1G2

National Conservation Rank: not yet determined

Subnational Conservation Rank: S1S2



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: Pacific Ranges

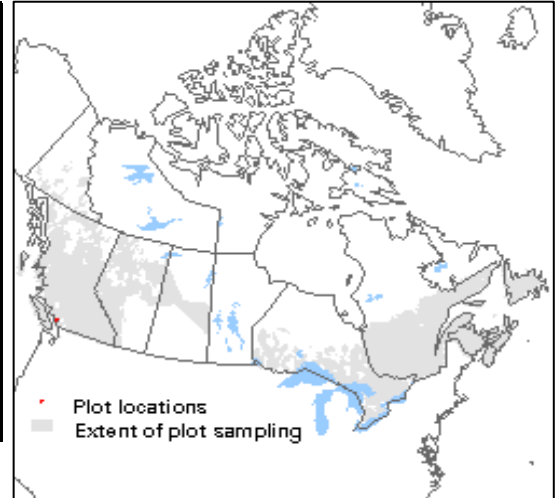
Rowe's Forest Regions and Sections: Coast: Southern Pacific Coast

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

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

Ecoregion Classification System of British Columbia (ecosections): Southern Pacific Ranges



Corresponding Types and Associations

CNVC00023

British Columbia

CWH dm /08

Picea sitchensis - Rubus spectabilis



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Vegetation Summary*

Species Name [†]	Association CNVC00023	
	9 plots	
	% Cover	% Presence
Overstory Trees		
<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>	29	100
<i>Picea sitchensis</i>	34	89
<i>Acer macrophyllum</i>	28	89
<i>Alnus rubra</i>	16	67
<i>Acer circinatum</i>	49	44
<i>Thuja plicata</i>	25	44
<i>Abies grandis</i>	4	22
<i>Tsuga heterophylla</i>	0	22
Tree Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(79 80 85 90 92)	
Understory Woody Shrubs and Regenerating Trees		
<i>Oplopanax horridus</i>	32	78
<i>Acer circinatum</i>	26	78
<i>Rubus spectabilis</i>	19	78
<i>Sambucus racemosa</i>	3	67
<i>Thuja plicata</i>	3	67
<i>Symphoricarpos albus</i>	29	56
<i>Ribes bracteosum</i>	14	56
<i>Rubus parviflorus</i>	9	56
<i>Picea sitchensis</i>	5	56
<i>Acer macrophyllum</i>	19	44
<i>Lonicera involucrata</i>	0	44
<i>Ribes divaricatum</i>	4	33
<i>Cornus stolonifera</i>	0	33
<i>Abies grandis</i>	0	22
<i>Rhamnus purshiana</i>	0	22
Shrub Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(58 65 71 80 80)	
Understory Herbs and Dwarf Shrubs		
<i>Prosartes hookeri</i>	15	100
<i>Athyrium filix-femina</i>	8	100
<i>Osmorhiza berteroi</i>	6	100
<i>Dryopteris expansa</i>	4	100
<i>Polystichum munitum</i>	1	89
<i>Maianthemum dilatatum</i>	37	78



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Vegetation Summary (cont'd)*

Species Name [†]	Association CNVC00023	
	% Cover	% Presence
<i>Galium triflorum</i>	1	78
<i>Lactuca muralis</i>	1	78
<i>Maianthemum stellatum</i>	4	67
<i>Claytonia sibirica</i>	1	67
<i>Dicentra formosa</i>	5	56
<i>Tiarella trifoliata</i>	7	44
<i>Equisetum arvense</i>	5	44
<i>Circaea alpina</i>	5	44
<i>Gymnocarpium dryopteris</i>	2	44
<i>Bromus vulgaris</i>	1	44
<i>Streptopus lanceolatus</i>	3	33
<i>Viola</i> sp.	2	33
<i>Dryopteris filix-mas</i>	2	33
<i>Tiarella trifoliata</i> var. <i>unifoliata</i>	1	33
<i>Streptopus amplexifolius</i>	0	33
<i>Clintonia uniflora</i>	8	22
<i>Cinna latifolia</i>	2	22
<i>Asarum caudatum</i>	1	22
<i>Aruncus dioicus</i>	0	22
<i>Festuca subuliflora</i>	0	22
<i>Vulpia bromoides</i>	0	22
Herb Stratum Cover (P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(54 65 69 80 90)	
Bryophytes and Lichens		
<i>Mnium</i> sp.	14	78
<i>Rhytidiadelphus triquetrus</i>	1	33
<i>Rhytidiadelphus loreus</i>	1	22
<i>Eurhynchium praelongum</i>	0	22
Bryo-Lichen Stratum Cover		
(P₁₀ P₂₅ Mean P₇₅ P₉₀)[‡]	(1 5 14 15 34)	

* 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
CNVC00023
9 plots

Elevation Range (min–mean–max meters)

9–23–37

Slope Gradient (% frequency)

missing data (100)

Aspect (% frequency)

missing data (100)

Meso Topoposition (% frequency)

missing data (100)

Moisture Regime (% frequency)

moist (100)

Nutrient Regime (% frequency)

missing data (100)



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Site / Soil Characteristics (cont'd)

	Association CNVC00023
Soil Parent Material (% frequency)	missing data (100)
Soil Rooting Zone Substrate (% frequency)	missing data (100)
Root Restricting Depth (% frequency)	missing data (100)
Humus Form (% frequency)	missing data (100)



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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]); western screech-owl (*Megascops kennicottii kennicottii*) (G5T4 [NatureServe], S3 [BC CDC], SC [COSEWIC]); Keen's long-eared myotis (*Myotis keenii*) (G2G3 [NatureServe], S2 [BC CDC], DD [COSEWIC]); spotted owl (*Strix occidentalis*) (G3 [NatureServe], S1 [BC CDC], E [COSEWIC]).

Non-native Species:

Management Issues:

Type Statistics

Internal Similarity:

Confidence: high

Strength:

Related Concepts

Similar CNVC Associations:

Related United States National Vegetation Classification Associations: C EGL002788 *Picea sitchensis* - *Acer macrophyllum* / *Oplopanax horridus* - *Rubus spectabilis* / *Maianthemum dilatatum* Forest

Relationships with Other Classifications:

Comments

Source Information

Number of source plots for CNVC00023: 9

Information Sources: British Columbia Ministry of Forests and Range, Research Branch BECMaster database, October 2007 (9 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, 2007).

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

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(COSEWIC) Committee on the Status of Endangered Wildlife in Canada. 2002. COSEWIC assessment and update status report on the Western Screech-owl *Otus kennicottii* in Canada. Ottawa. COSEWIC. vi + 31 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.

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