5.0 SITE SERIES OF THE VANCOUVER FOREST REGION

This section presents all site series currently recognized in the Vancouver Forest Region. Site series are organized into **general sites** and **special sites,** and are presented according to biogeoclimatic subzone or variant. For each biogeoclimatic unit, the site series are portrayed on an edatopic grid (modified grids for special sites), which is accompanied by a vegetation summary table of selected species thought to best characterize the site series. The vegetation tables are derived from sample plot data used to develop the classification. Site series based on limited data (fewer than four plots) are footnoted. The information presented here can be used for identifying site series by following the environmental and vegetation analysis described in Section 3.0. A list of the edatopic grids is shown in Table 21.

5.1 Site Classification

5.1.1 General sites

Site series are displayed on two-dimensional edatopic grids that show the relationship to soil moisture and nutrient regime classes. A blank space on a grid indicates that that site series has not been sampled and recognized for that combination of SMR and SNR. The divisions between site series usually fall on boundaries between SMR and SNR classes, but occasionally a boundary between two site series occurs in the middle of a class (e.g., grid no. 9, site series 01 and 11). This indicates some overlap between the site series in relation to that class (e.g., on Grid No. 9 site series 01 ranges from 4-5 SMR, and site series 11 ranges from 5-6).

It is important to recognize that the classification system cannot cover all possible sites that occur in the landscape. Users are bound to encounter sites that do not appear to "fit" well on the edatopic grid. For these sites, describe the vegetation and environmental features, including climate, soil moisture, and soil nutrients. An understanding of these factors, silvics of tree species, and the ecological effects of management practices is necessary for developing prescriptions.

5.1.2 Special sites

Special sites are shown on modified "grids" that reflect the unique environmental features of the site. For example, floodplain sites are characterized by *bench heights*, strongly fluctuating water table sites are characterized by *summer and winter water regimes*, and shoreline/ocean spray sites are characterized by *coastal landforms and moisture regime*.

FLOODPLAIN SITES

Floodplain sites border streams and rivers, and are formed from sediments deposited during flooding events. These sites are still under the influence of periodic flooding, that distinguishes them from inactive fluvial deposits that are no longer flooded because of downcutting of the river. They are flat benches varying in width from narrow strips along streams to broad floodplains along major rivers. Three types of floodplain sites are recognized, based on the relative bench height:

<u>High bench sites</u>

- The highest and most infrequently flooded (>5 year return interval) portion of a floodplain. Growing season flooding is of short duration.
- Soils are sorted silts, sandy loams, or sands, usually coarser at depth. A surface capping of finer sediments is often present. Forest floor is present with developing horizons, but generally only a few centimetres thick.
- Mature stands dominated by conifers that are sometimes restricted to elevated microsites (look for Cw or Ss stumps in logged areas). Successional stands are dominated by red alder, cottonwood, or bigleaf maple.

<u>Medium bench sites</u>

- The intermediate height, frequently flooded (at least every 5 years, often annually) portion of a floodplain. Duration of growing season flooding significantly longer than on high bench sites.
- Soils are mainly sorted silts and sands, with coarser gravels at depth. Forest floor is thin and poorly developed, often comprised of just litter. Evidence of recent mineral and organic deposits present.

- Mature stands are dominated by deciduous species. Conifers are absent or restricted to elevated microsites.

Low bench sites

- The lowest height, annually flooded portion of a floodplain. Flooding is of long duration during the growing season.
- Soils can be coarse gravels and sands adjacent to high-energy streams, or deep saturated loams and silts adjacent to low-energy streams. Forest floors are absent or comprised of fresh litter.
- Stands are dominated by cottonwood and alder, and typically include willows.

SITES WITH STRONGLY FLUCTUATING WATER TABLE

The soil moisture regime at these sites varies significantly over the year because of a strongly fluctuating water table. Soils are saturated during the winter months due to a combination of flat topography, dense, poorly drained soil layers, and fine textures. During the growing season, the water table drops, leaving an aerated rooting zone of varying depth.

Some of their characteristics are:

- Occur on flat, fine-textured marine deposits (e.g., on east Vancouver Island).
- Soils have an obvious gleyed layer.
- Microtopography is often strongly mounded; the depth of aerated soil can vary over a relatively short distance.
- After logging, these sites are dominated by red alder with small amounts of cottonwood, bigleaf maple, trembling aspen, and sporadic conifer regeneration.

The depth to gleying in the soil, and thus the degree of wetness during the winter and summer months determine the three sites recognized in the CWHxm and CWHdm subzones:

Cw - Salmonberry (summer fresh / winter very moist)

- gleying > 35 cm deep
- salmonberry and swordfern abundant; red-osier dogwood, black twinberry, and slough sedge rare.

Cw - Black twinberry (summer moist / winter wet)

- gleying 20-35 cm deep
- red-osier dogwood, black twinberry present but not abundant; slough sedge dominated depressions present but not extensive; Pacific crab apple rare.

Cw - Slough sedge (summer very moist / winter very wet)

- gleying < 20 cm deep
- slough sedge dominated depressions extensive; red-osier dogwood and Pacific crab apple abundant; vanilla-leaf and bracken fern rare.

SHORELINE AND OCEAN SPRAY SITES

These sites are strongly influenced by blowing ocean spray because of their proximity to the ocean in areas of high winds. They are recognized on the outer coast of Vancouver Island, the mainland, and the Queen Charlotte Islands (CWHvh, CWHwh subzones). Sitka spruce dominates these sites because of its tolerance of salt spray.

Recognized shoreline and ocean spray sites include:

Rocky headland - rock outcrops with shallow, discontinuous soil, exposed to the sea and affected by ocean spray.

Old beachplain - sites bordering the ocean, formed of sediments deposited by wave action, which are usually sorted and consist of sand or gravel.

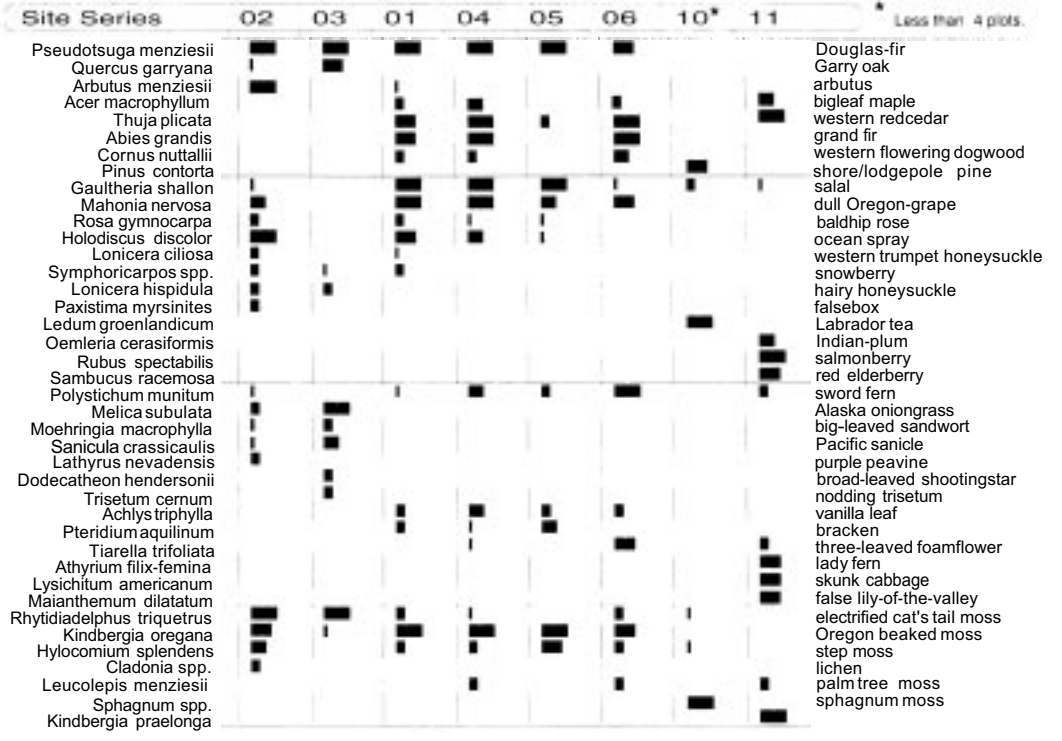
Marine terrace and scarp - flat terraces and associated steep erosional scarps adjacent to the sea, formed by ancient wave action during deglaciation.

Fluctuating brackish water - estuaries and tidal sloughs where brackish water influences vegetation composition.

5.2 Site Classification Grids and Vegetation Summary Tables

TABLE 21. Index of site classification grids

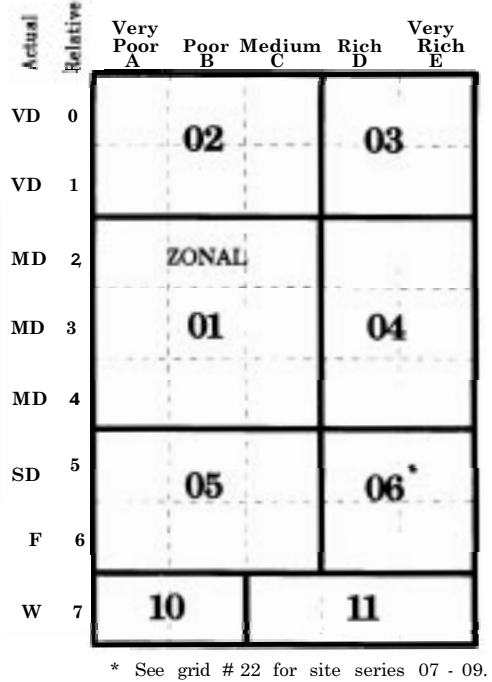
Grid no.	Site category	Biogeoclimatic unit
1	General	CDFmm
2	General	CWHdm
3	General	CWHds1
4	General	CWHds2
5	General	CWHmm1
6	General	CWHmm2
7	General	CWHms1
8	General	CWHms2
9	General	CWHvh1
10	General	CWHvh2
11	General	CWHvm1
12	General	CWHvm2
13	General	CWHwh1
14	General	CWHwh2
15	General	CWHws2
16	General	CWHxm
17	General	ESSFmw
18	General	IDFww
19	General	MHmm1
20	General	MHmm2
21	General	MHwh
22	Special - Floodplains	CDFmm
23	Special - Floodplains	CWHdm,CWHds1,CWHxm
24	Special - Floodplains	CWHds2
25	Special - Floodplains	CWHmm1
26	Special - Floodplains	CWHms1,CWHms2
27	Special - Floodplains	CWHwh1
28	Special - Floodplains	CWHvh1,CWHvh2
29	Special - Floodplains	CWHvm1
30	Special - Floodplains	CWHws2
31	Special - Fluctuat water table	CDFmm
32	Special - Fluctuat. water table	CWHdm, CWHxm
33	Special - Shoreline/ocean spray	CWHwh,CWHvh


Site Series
02
03
01
04
05
06
10*
11
* Less than 4 plots.
TREE LAYER
SHRUB LAYER
HERB LAYER
MOSS LAYER
Pseudotsuga menziesii
Douglas-fir
Quercus garryana
Garry oak
Arbutus menziesii
arbutus
Acer macrophyllum
bigleaf maple
Thuja plicata
western redcedar
Abies grandis
grand fir
Cornus nuttallii
western flowering dogwood
Pinus contorta
shore/lodgepole pine
Gaultheria shallon
salal
Mahonia nervosa
dull Oregon-grape
Rosa gymnocarpa
baldhip rose
Holodiscus discolor
ocean spray
Lonicera ciliosa
western trumpet honeysuckle
Symphoricarpos spp.
snowberry
Lonicera hispidula
hairy honeysuckle
Paxistima myrsinites
falsebox
Ledum groenlandicum
Labrador tea
Oemleria cerasiformis
Indian-plum
Rubus spectabilis
salmonberry
Sambucus racemosa
red elderberry
Polystichum munitum
sword fern
Melica subulata
Alaska oniongrass
Moehringia macrophylla
big-leaved sandwort
Sanicula crassicaulis
Pacific sanicle
Lathyrus nevadensis
purple peavine
Dodecatheon hendersonii
broad-leaved shootingstar
Trisetum cernum
nodding trisetum
Achlys triphylla
vanilla leaf
Pteridium aquilinum
bracken
Tiarella trifoliata
three-leaved foamflower
Athyrium filix-femina
lady fern
Lysichitum americanum
skunk cabbage
Maianthemum dilatatum
false lily-of-the-valley
Rhytidiadelphus triquetrus
electrified cat's tail moss
Kindbergia oregana
Oregon beaked moss
Hylocomium splendens
step moss
Cladonia spp.
lichen
Leucolepis menziesii
palm tree moss
Sphagnum spp.
sphagnum moss
Kindbergia praelonga

Grid No. 1

CDFmm — Moist Maritime CDF Subzone

Soil Nutrient Regime



* See grid # 22 for site series 07 - 09.

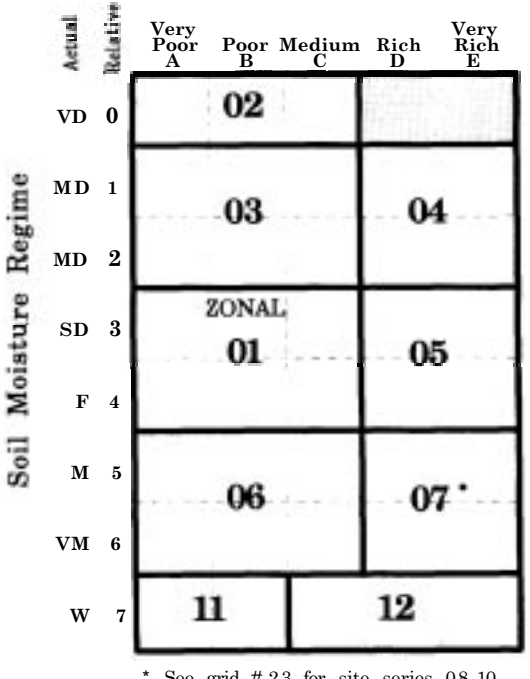
Site Series	
01	Fd - Salal
02	FdPl - Arbutus
03	Fd - Oniongrass
04	FdBg - Oregon grape
05	CwFd - Kindbergia
06	CwBg - Foamflower
10	Pl - Sphagnum
11	Cw - Skunk cabbage

Site Series
02
03
04*
05
01
06
07
11
12
* Less than 4 plots
TREE LAYER
SHRUB LAYER
HERB LAYER
MOSS LAYER
Thuja plicata
Tsuga heterophylla
Pseudotsuga menziesii
Pinus contorta
Acer macrophyllum
Alnus rubra
Gaultheria shallon
Vaccinium parvifolium
Holodiscus discolor
Arctostaphylos columbiana
Pseudotsuga menziesii
Mahonia nervosa
Acer circinatum
Rubus spectabilis
Vaccinium alaskaense
Oplopanax horridus
Ledum groenlandicum
Pteridium aquilinum
Festuca occidentalis
Polystichum munitum
Dryopteris expansa
Tiarella trifoliata
Athyrium filix-femina
Blechnum spicant
Cornus canadensis
Lysichitum americanum
Maianthemum dilatatum
Hylocomium splendens
Kindbergia oregana
Pleurozium schreberi
Rhacomitrium canescens
Cladina spp.
Rhytidiadelphus triquetrus
Plagiothecium undulatum
Rytidiadelphus loreus
Plagiomnium insigne
Leucolepis menziesii
Kindbergia praelonga
Sphagnum spp.
Conocephalum conicum
western redcedar
western hemlock
Douglas-fir
shore/lodgepole pine
bigleaf maple
red alder
salal
red huckleberry
ocean-spray
hairy manzanita
Douglas-fir
dull Oregon-grape
vine maple
salmonberry
Alaskan blueberry
devil's club
Labrador tea
bracken
western fescue
sword fern
spiny wood fern
three-leafed foamflower
lady fern
deer fern
bunchberry
skunk cabbage
false lily-of-the-valley
step moss
Oregon beaked moss
red-stemmed feather moss
grey frayed-cap moss
lichen
electrified cat's-tail moss
flat moss
lanky moss
coastal leafy moss
palm tree moss
sphagnum moss
alligator-skin liverwort

Grid No. 2

CWHdm — Dry Maritime CWH Subzone

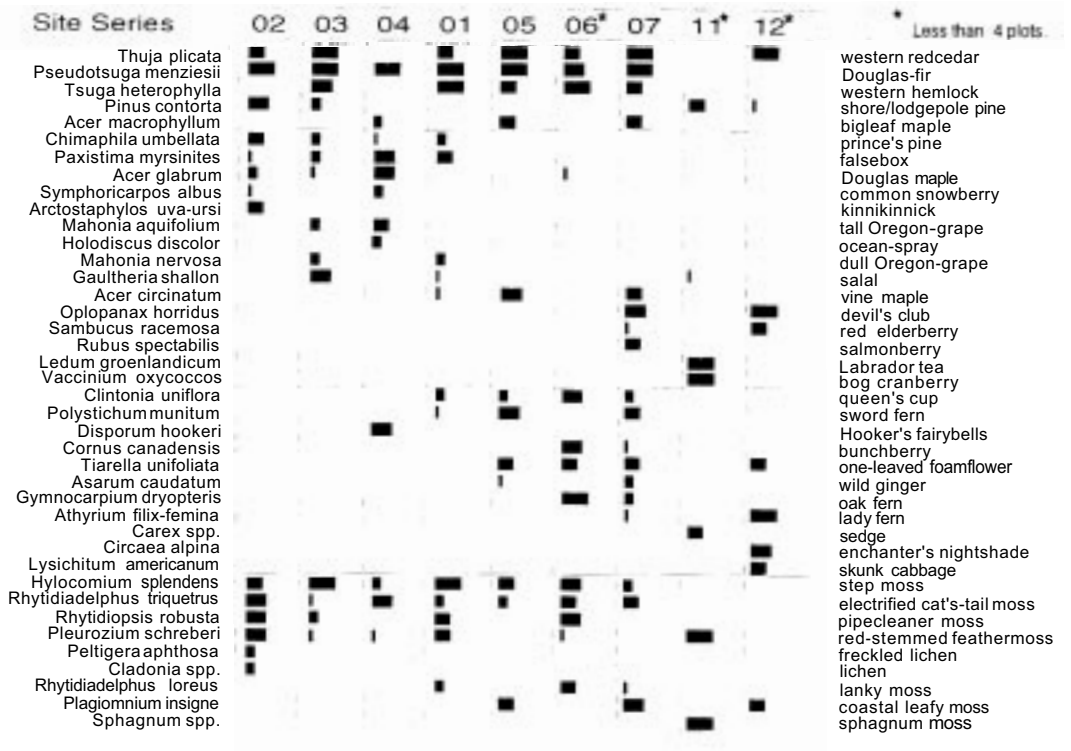
Soil Nutrient Regime



* See grid # 23 for site series 08-10.

Site Series

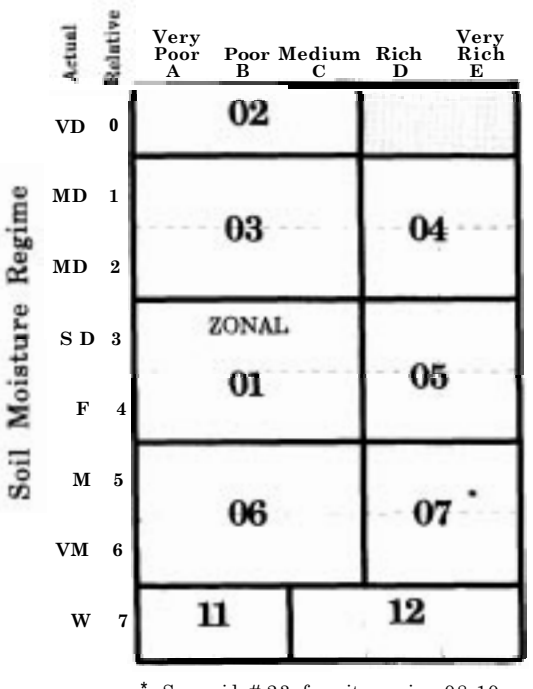
- **01** Hw - Flat moss
- **02** FdPl - Cladina
- **03** FdHw - Salal
- **04** Fd - Sword fern
- **05** Cw - Sword fern
- **06** HwCw - Deer fern
- **07** Cw - Foamflower
- **11** Pl - Sphagnum
- **12** CwSs - Skunk cabbage


Site Series
02
03
04
01
05
06*
07
11*
12*
* Less than 4 plots
TREE LAYER
SHRUB LAYER
HERB LAYER
MOSS LAYER
Thuja plicata
Pseudotsuga menziesii
Tsuga heterophylla
Pinus contorta
Acer macrophyllum
Chimaphila umbellata
Paxistima myrsinites
Acer glabrum
Symphoricarpos albus
Arctostaphylos uva-ursi
Mahonia aquifolium
Holodiscus discolor
Mahonia nervosa
Gaultheria shallon
Acer circinatum
Oplopanax horridus
Sambucus racemosa
Rubus spectabilis
Ledum groenlandicum
Vaccinium oxycoccos
Clintonia uniflora
Polystichum munitum
Disporum hookeri
Cornus canadensis
Tiarella unifoliata
Asarum caudatum
Gymnocarpium dryopteris
Athyrium filix-femina
Carex spp.
Circaea alpina
Lysichitum americanum
Hylocomium splendens
Rhytidiadelphus triquetrus
Rhytidiopsis robusta
Pleurozium schreberi
Peltigera aphthosa
Cladonia spp.
Rhytidiadelphus loreus
Plagiomnium insigne
Sphagnum spp.
western redcedar
Douglas-fir
western hemlock
shore/lodgepole pine
bigleaf maple
prince's pine
falsebox
Douglas maple
common snowberry
kinnikinnick
tall Oregon-grape
ocean-spray
dull Oregon-grape
salal
vine maple
devil's club
red elderberry
salmonberry
Labrador tea
bog cranberry
queen's cup
sword fern
Hooker's fairybells
bunchberry
one-leaved foamflower
wild ginger
oak fern
lady fern
sedge
enchanter's nightshade
skunk cabbage
step moss
electrified cat's-tail moss
pipecleaner moss
red-stemmed feathermoss
freckled lichen
lichen
lanky moss
coastal leafy moss
sphagnum moss

Grid No. 3

CWHdsl — Southern Dry Submaritime CWH Variant

Soil Nutrient Regime



* See grid # 23 for site series 08-10

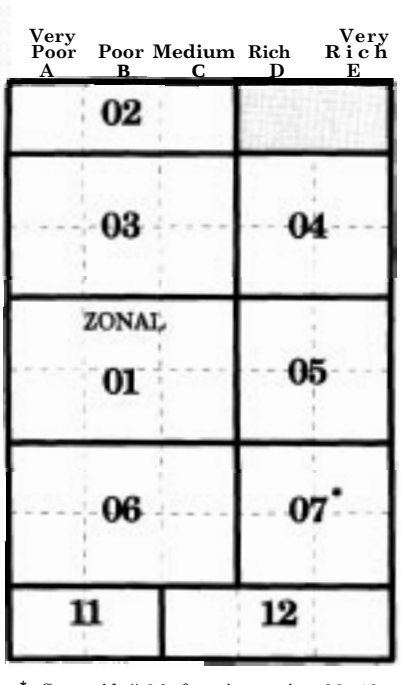
Site Series	
01	HwFd - Cat's-tail moss
02	FdPl - Kinnikinnick
03	FdHw - Falsebox
04	Fd - Fairybells
05	Cw - Solomon's-seal
06	Hw - Queen's cup
07	Cw - Devil's club
11	Pl - Sphagnum
12	CwSs - Skunk cabbage

Site Series
02
03
04
01
05
06*
07
11*
12*
* Less than 4 plots
TREE LAYER
Thuja plicata
Pseudotsuga menziesii
Tsuga heterophylla
Betula papyrifera
Pinus contorta
Picea sitchensis
SHRUB LAYER
Acer glabrum
Chimaphila umbellata
Paxistima myrsinites
Vaccinium membranaceum
Arctostaphylos uva-ursi
Mahonia aquifolium
Rubus parviflorus
Oplopanax horridus
Cornus stolonifera
Ledum groenlandicum
Vaccinium oxycoccos
Viburnum edule
Lonicera involucrata
HERB LAYER
Disporum hookeri
Trientalis latifolia
Clintonia uniflora
Tiarella unifoliata
Cornus canadensis
Streptopus roseus
Dryopteris expansa
Gymnocarpium dryopteris
Tiarella trifoliata
Athyrium filix-femina
Lysichitum americanum
MOSS LAYER
Hylocomium splendens
Rhytidiadelphus triquetrus
Rhytidiopsis robusta
Pleurozium schreberi
Kindbergia oregana
Peltigera aphthosa
Cladonla spp.
Rhytidiadelphus loreus
Plagiomnium insigne
Sphagnum spp.
western redcedar
Douglas-fir
western hemlock
paper birch
shore/lodgepole pine
Sitka spruce
Douglas maple
prince's pine
falsebox
black huckleberry
kinnikinnick
tall Oregon-grape
thimbleberry
devil's club
red-osier dogwood
Labrador tea
bog cranberry
highbush-cranberry
black twinberry
Hooker's fairybells
broad-leaved starflower
queen's cup
one-leaved foamflower
bunchberry
rosy twistedstalk
spiny wood fern
oak fern
three-leaved foamflower
lady fern
skunkcabbage
step moss
electrified cat's-tail moss
pipecleaner moss
red-stemmed feathermoss
Oregon beaked moss
freckled lichen
lichen
lanky moss
coastal leafy moss
sphagnum moss

Grid No. 4

CWHds2 Central Dry Submaritime CWH Variant

Soil Nutrient Regime



* See grid # 23 for site series 08-10.

Site Series

01 HwFd - Cat's-tail moss

02 FdPl - Kinnikinnick

03 FdHw - Falsebox

04 Fd - Fairybells

05 Cw - Solomon's-seal

06 Hw - Queen's cup

07 Cw - Devil's club

11 Pl - Sphagnum

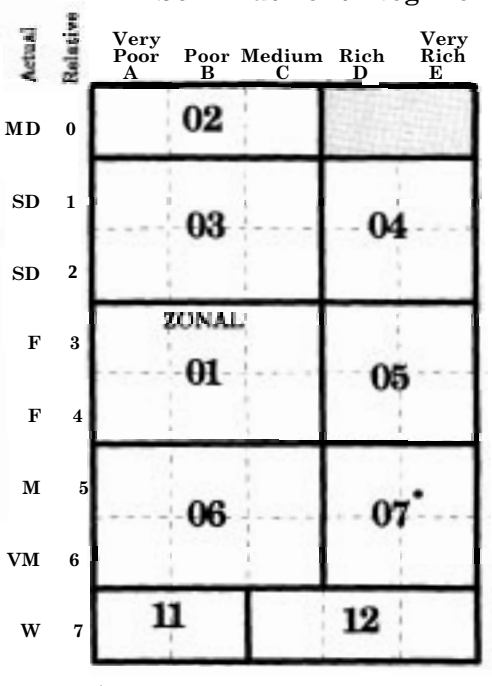
12 CwSs - Skunk cabbage

Site Series
02
03
04
01
05
06*
07
11*
12
* Less than 4 plots
TREE LAYER
SHRUB LAYER
HERB LAYER
MOSS LAYER
Tsuga heterophylla
Thuja plicata
Pseudotsuga menziesii
Pinus contorta
Abies amabilis
Vaccinium parvifolium
Vaccinium alaskaense
Gaultheria shallon
Vaccinium membranaceum
Mahonia nervosa
Vaccinium ovalifolium
Menziesia ferruginea
Rubus spectabilis
Oplopanax horridus
Cornus canadensis
Achlys triphylla
Tiarella trifoliata
Polystichum munitum
Rubus pedatus
Streptopus streptopoides
Blechnum spicant
Athyrium filix-femina
Gymnocarpium dryopteris
Smilacina stellata
Coptis aspleniifolia
Adiantum pedatum
Veratrum viride
Lysichitum americanum
Carex spp.
Hylocomium splendens
Rhytidiadelphus loreus
Rhytidiopsis robusta
Cladina spp.
Pleurozium schreberi
Kindbergia oregana
Plagiothecium undulatum
Plagiomnium insigne
Leucolepis menziesii
Sphagnum spp.
Pellia neesiana
western hemlock
western redcedar
Douglas-fir
shore/lodgepole pine
amabilis fir
red huckleberry
Alaskan blueberry
salal
black huckleberry
dull Oregon-grape
oval-leaved blueberry
false azalea
salmonberry
devil's club
bunchberry
vanilla-leaf
three-leaved foamflower
sword fern
five-leaved bramble
small twistedstalk
deer fern
lady fern
oak fern
star-flowered false Sol.'s-seal
fern-leaved goldthread
maidenhair fern
Indian hellebore
skunk cabbage
sedge
step moss
lanky moss
pipecleaner moss
lichen
red-stemmed feathermoss
Oregon beaked moss
flat moss
coastal leafy moss
palm tree moss
sphagnum moss
shiny liverwort

Grid No. 5

CWHmml — Submontane Moist Maritime CWH Variant

Soil Nutrient Regime



* See grid # 25 for site series 08 - 10.

Site Series

01 HwBa - Pipecleaner moss

02 FdHw - Salal

03 HwCw - Salal

04 CwHw - Sword fern

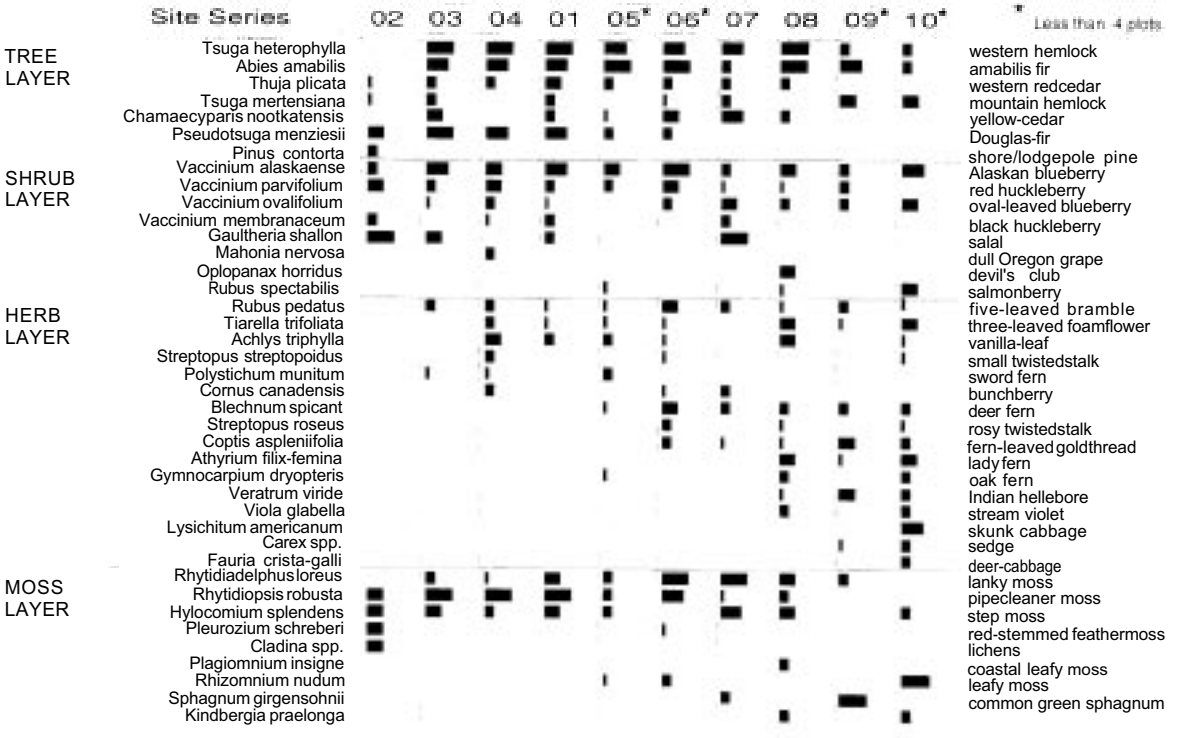
05 BaCw - Foamflower

06 HwBa - Deer fern

07 BaCw - Salmonberry

11 Pl - Sphagnum

12 CwSs - Skunk cabbage


Site Series
02
03
04
01
05*
06*
07
08
09*
10*
* Less than 4 plots
TREE LAYER
SHRUB LAYER
HERB LAYER
MOSS LAYER
Tsuga heterophylla
western hemlock
Abies amabilis
amabilis fir
Thuja plicata
western redcedar
Tsuga mertensiana
mountain hemlock
Chamaecyparis nootkatensis
yellow-cedar
Pseudotsuga menziesii
Douglas-fir
Pinus contorta
shore/lodgepole pine
Vaccinium alaskaense
Alaskan blueberry
Vaccinium parvifolium
red huckleberry
Vaccinium ovalifolium
oval-leaved blueberry
Vaccinium membranaceum
black huckleberry
Gaultheria shallon
salal
Mahonia nervosa
dull Oregon grape
Oplopanax horridus
devil's club
Rubus spectabilis
salmonberry
Rubus pedatus
five-leaved bramble
Tiarella trifoliata
three-leaved foamflower
Achlys triphylla
vanilla-leaf
Streptopus streptopoidus
small twistedstalk
Polystichum munitum
sword fern
Cornus canadensis
bunchberry
Blechnum spicant
deer fern
Streptopus roseus
rosy twistedstalk
Coptis aspleniifolia
fern-leaved goldthread
Athyrium filix-femina
lady fern
Gymnocarpium dryopteris
oak fern
Veratrum viride
Indian hellebore
Viola glabella
stream violet
Lysichitum americanum
skunk cabbage
Carex spp.
sedge
Fauria crista-galli
deer-cabbage
Rhytidiadelphus loreus
lanky moss
Rhytidiopsis robusta
pipecleaner moss
Hylocomium splendens
step moss
Pleurozium schreberi
red-stemmed feathermoss
Cladina spp.
lichens
Plagiomnium insigne
coastal leafy moss
Rhizomnium nudum
leafy moss
Sphagnum girgensohnii
common green sphagnum
Kindbergia praelonga

Grid No. 6

CWHmm2 — Montane Moist Maritime CWH Variant

Soil Nutrient Regime

Soil Moisture Regime	Actual	Relative	Very Poor A	Poor B	Medium C	Rich D	Very Rich E
	MD	0		02			
	SD	1		03		04	
	SD	2					
	F	3		ZONAL 01		05	
	F	4					
	M	5		06		08	
	VM	6		07			
	W	7	09			10	

Site Series

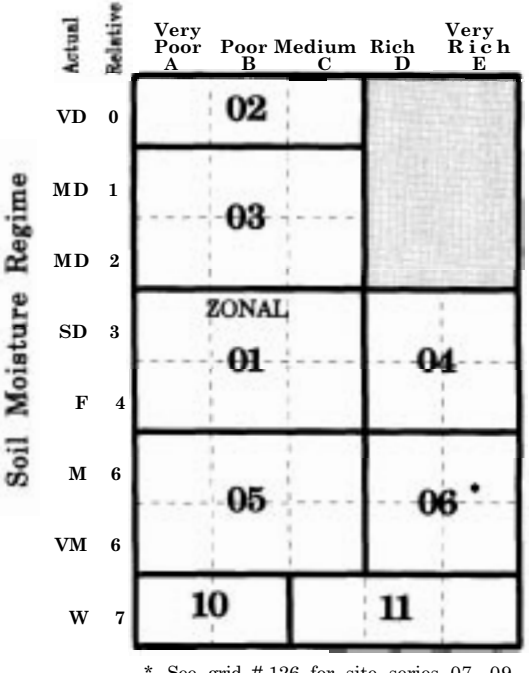
01 HwBa - Pipecleaner moss
02 FdHw - Salal
03 HwCw - Salal
04 CwHw - Sword fern
05 BaCw - Foamflower
06 HwBa - Deer fern
07 CwYc- Goldthread
08 BaCw - Salmonberry
09 Pl - Sphagnum
10 CwSs - Skunk cabbage

Site Series
02
03
01
04
05
06
10*
11
* Less than 4 plots
TREE LAYER
SHRUB LAYER
HERB LAYER
MOSS LAYER
Tsuga heterophylla
Pseudotsuga menziesii
Abies amabilis
Thuja plicata
Pinus contorta
Abies lasiocarpa
Picea sitchensis
Menziesia ferruginea
Vaccinium membranaceum
Vaccinium alaskaense
Paxistima myrsinites
Chimaphila umbellata
Arctostaphylos uva-ursi
Mahonia nervosa
Vaccinium ovalifolium
Acer circinatum
Rubus parviflorus
Oplopanax horridus
Rubus spectabilis
Ledum groenlandicum
Vaccinium oxycoccos
Cornus canadensis
Clintonia uniflora
Orthilia secunda
Smilacina stellata
Rubus pedatus
Tiarella unifoliata
Gymnocarpium dryopteris
Streptopus roseus
Athyrium filix-femina
Eriophorum chamissonis
Lysichitum americanum
Equisetum arvense
Pleurozium schreberi
Hylocomium splendens
Rhytidiopsis robusta
Rhytidiadelphus loreus
Cladonia spp.
Plagiomnium insigne
Sphagnum spp.
western hemlock
Douglas-fir
amabilis fir
western redcedar
shore/lodgepole pine
subalpine fir
Sitka spruce
false azalea
black huckleberry
Alaskan blueberry
falsebox
prince's pine
kinnikinnick
dull Oregon-grape
oval-leaved blueberry
vine maple
thimbleberry
devil's club
salmonberry
Labrador tea
bog cranberry
bunchberry
queen's cup
one-sided wintergreen
star-flowered false Sol.'s-seal
five-leaved bramble
one-leaved foamflower
oak fern
rosy twistedstalk
lady fern
Chamisso's cotton-grass
skunk cabbage
common horsetail
red-stemmed feathermoss
step moss
pipecleaner moss
lanky moss
lichens
coastal leafy moss
sphagnum moss

Grid No. 7

CWHmsl Southern Moist Submaritime CWH Variant

Soil Nutrient Regime



* See grid # 126 for site series 07 - 09.

Site Series

01 HwBa - Step moss

02 FdPl - Kinnikinnick

03 FdHw - Falsebox

04 BaCw - Oak fern

05 HwBa - Queen's cup

06 BaCw - Devil's club

10 Pl - Sphagnum

11 CwSs - Skunk cabbage

Site Series
02
03
01
04
05
06
10*
11
Less than 4 plots.
TREE LAYER
SHRUB LAYER
HERB LAYER
MOSS LAYER
Tsuga heterophylla
Abies amabilis
Thuja plicata
Pseudotsuga menziesii
Pinus contorta
Picea engelmannii
Picea sitchensis
Abies lasiocarpa
Menziesia ferruginea
Vaccinium alaskaense
Vaccinium membranaceum
Paxistima myrsinites
Chimaphila umbellata
Arctostaphylos uva-ursi
Vaccinium ovalifolium
Rubus spectabilis
Oplopanax horridus
Ledum groenlandicum
Vaccinium oxycoccos
Cornus canadensis
Clintonia uniflora
Orthilia secunda
Rubus pedatus
Streptopus roseus
Dryopteris expansa
Tiarella trifoliata
Gymnocarpium dryopteris
Athyrium filix-femina
Tiarella unifoliata
Carex spp.
Lysichitum americanum
Equisetum arvense
Hylocomium splendens
Rhytidiopsis robusta
Pleurozium schreberi
Rhytidiadelphus loreus
Cladonia spp.
Plagiomnium insigne
Rhizomnium glabrescens
Sphagnum spp.
western hemlock
amabilis fir
western redcedar
Douglas-fir
shore/lodgepole pine
Engelmann spruce
Sitka spruce
subalpine fir
false azalea
Alaskan blueberry
black huckleberry
falsebox
prince's pine
kinnikinnick
oval-leaved blueberry
salmonberry
devil's club
Labrador tea
bog cranberry
bunchberry
queen's cup
one-sided wintergreen
five-leaved bramble
rosy twistedstalk
spiny wood fern
three-leaved foamflower
oak fern
lady fern
one-leaved foamflower
sedge
skunk cabbage
common horsetail
step moss
pipecleaner moss
red-stemmed feathermoss
lanky moss
lichen
coastal leafy moss
large leafy moss
sphagnum moss

Grid No. 8

CWHms2 — Central Moist Submaritime CWH Variant

Soil Nutrient Regime

* See grid # 26 for site series 07 - 09

Site Series

01 HwBa - Step moss

02 FdPl - Kinnikinnick

03 FdHw - Falsebox

04 BaCw - Oak fern

05 HwBa - Queen's cup

06 BaCw - Devil's club

10 Pl - Sphagnum

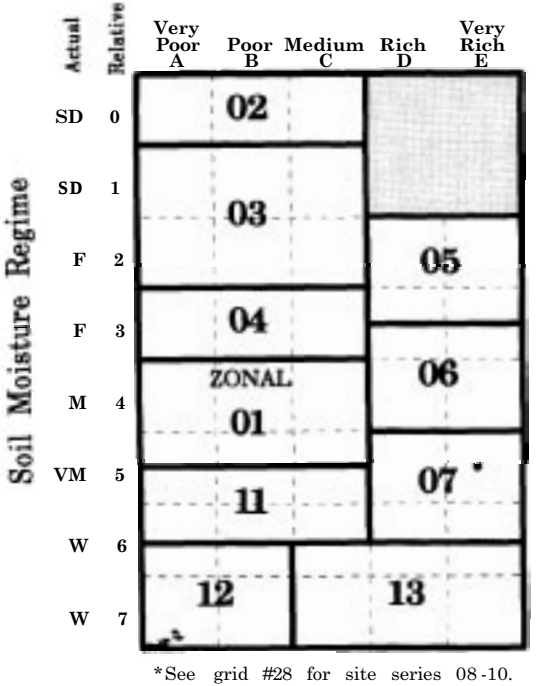
11 CwSs - Skunk cabbage


Site Series
02
03
04
05
01
06
07
11
12
13
TREE LAYER
Thuja plicata
Tsuga heterophylla
Chamaecyparis nootkatensis
Pinus contorta
Picea sitchensis
Abies amabilis
SHRUB LAYER
Gaultheria shallon
Vaccinium parvifolium
Menziesia ferruginea
Vaccinium alaskaense
Vaccinium ovalifolium
Vaccinium ovatum
Juniperus communis
Rubus spectabilis
Ledum groenlandicum
HERB LAYER
Blechnum spicant
Maianthemum dilatatum
Cornus canadensis
Empetrum nigrum
Polystichum munitum
Tiarella trifoliata
Athyrium filix-femina
Dryopteris expansa
Gymnocarpium dryopteris
Stachys cooleyae
Coptis aspleniifolia
Calamagrostis nutkaensis
Lysichitum americanum
Carex spp.
MOSS LAYER
Hylocomium splendens
Rhytidiadelphus loreus
Kindbergia oregana
Cladina spp.
Rhacomitrium lanuginosum
Rhizomnium glabrescens
Sphagnum girgensohnii
Pellia neesiana
Leucolepis menziesii
Plagiomnium insigne
Sphagnum spp.
western redcedar
western hemlock
yellow-cedar
shore/lodgepole pine
Sitka spruce
amabilis fir
salal
red huckleberry
false azalea
Alaskan blueberry
oval-leaved blueberry
evergreen huckleberry
common juniper
salmonberry
Labrador tea
deer fern
false lily-of-the-valley
bunchberry
crowberry
sword fern
three-leaved foamflower
lady fern
spiny wood fern
oak fern
Cooley's hedge-nettle
fern-leaved goldthread
Pacific reedgrass
skunk cabbage
sedge
step moss
lanky moss
Oregon beaked moss
lichens
hoary rock moss
large leafy moss
common green sphagnum
shiny liverwort
palm tree moss
coastal leafy moss
sphagnum moss

Grid No. 9

CWHvh1 Southern Very Wet Hypermaritime CWH Variant

Soil Nutrient Regime



*See grid #28 for site series 08-10.

Site Series

01 CwHw - Salal

02 PlYc - Rhacomitrium

03 CwYc - Salal

04 HwSs - Lanky moss (steep slopes)

05 CwSs - Sword fern (steep slopes)

06 CwSs - Foamflower

07 CwSs - Devil's club

11 CwYc - Goldthread

12 PlYc - Sphagnum

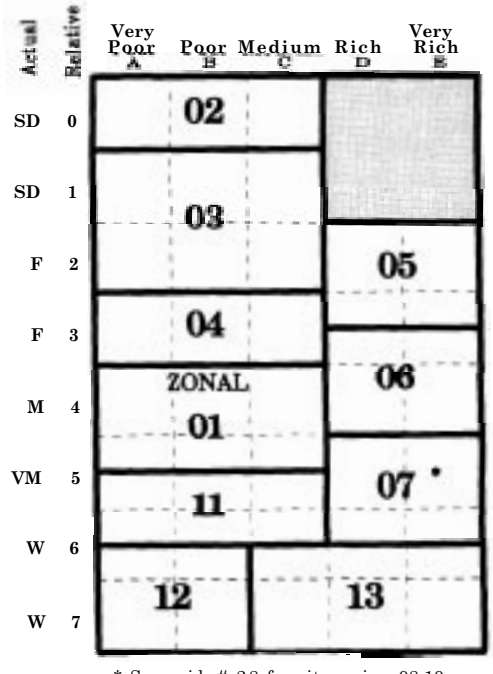
13 CwSs - Skunk cabbage

Site Series
02
03
04
05
01
06
07
11
12
13
TREE LAYER
Thuja plicata
Tsuga heterophylla
Chamaecyparis nootkatensis
Pinus contorta
Picea sitchensis
Abies amabilis
SHRUB LAYER
Gaultheria shallon
Vaccinium parvifolium
Menziesia ferruginea
Vaccinium alaskaense
Juniperus communis
Vaccinium ovalifolium
Rubus spectabilis
Oplopanax horridus
Ledum groenlandicum
Kalmia microphylla
Blechnum spicant
HERB LAYER
Maianthemum dilatatum
Cornus canadensis
Calamagrostis nutkaensis
Empetrurn nigrum
Dryopteris expansa
Polystichum munitum
Tiarella trifoliata
Athyrium filix-femina
Gymnocarpium dryopteris
Coptis aspleniifolia
Lysichitum americanum
Fauria crista-galli
Carex spp.
MOSS LAYER
Hylocomium splendens
Rhytidiadelphus loreus
Kindbergia oregana
Cladina spp.
Rhacomitrium lanuginosum
Rhizomnium glabrescens
Sphagnum girgensohnii
Pellia neesiana
Leucolepis menziesii
Sphagnum spp.
western redcedar
western hemlock
yellow-cedar
shore/lodgepole pine
Sitka spruce
amabilis fir
salal
red huckleberry
false azalea
Alaskan blueberry
common juniper
oval-leaved blueberry
salmonberry
devil's club
Labrador tea
western bog-laurel
deer fern
false lily-of-the-valley
bunchberry
Pacific reedgrass
crowberry
spiny wood fern
sward fern
three-leaved foamflower
lady fern
oak fern
fern-leaved goldthread
skunk cabbage
deer-cabbage
sedge
step moss
lanky moss
Oregon beaked moss
lichen
hoary rock moss
large leafy moss
common green sphagnum
shiny liverwort
palm tree moss
sphagnum moss

Grid No. 10

CWHvh2 Central Very Wet Hypermaritime CWH Variant

Soil Nutrient Regime



* See grid # 28 for site series 08-10.

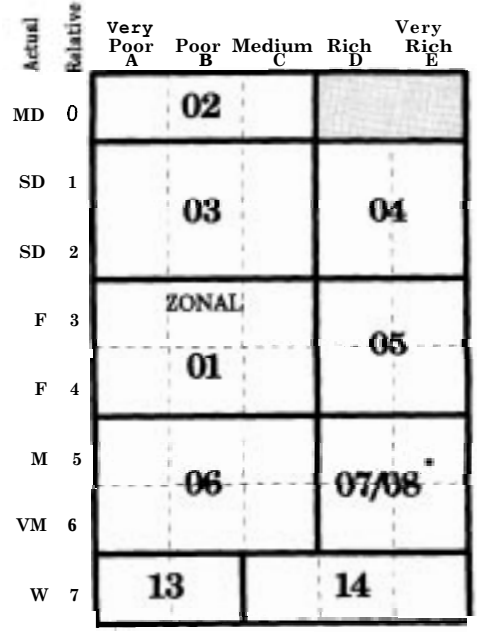
Site	Series
01	CwHw - Salal
02	PlYc - Rhacomitrium
03	CwYc - Salal
04	HwSs - Lanky moss (steep slopes)
05	CwSs - Sword fern (steep slopes)
06	CwSs - Foamflower
07	CwSs - Devil's club
11	CwYc - Goldthread
12	PlYc - Sphagnum
13	CwSs - Skunk cabbage

[a] "Salal phase" dominated by Cw, Hw, salal, Alaskan blueberry and red huckleberry. [b] More abundant in southern portion. [c] More abundant in northern portion.

Grid No. 11

CWHvm1 Submontane Very Wet Maritime CWH Variant

Soil Nutrient Regime



* See grid # 29 for site series 09 - 11; Site series 08 in northern portion of variant; 12 rare in region.

Site Series

**
01 HwBa - Blueberry

02 HwPl - Cladina

03 HwCw - Salal

04 CwHw - Swordfern

05 BaCw - Foamflower

**
06 HwBa - Deer fern

07 BaCw - Salmonberry

08 BaSs - Devil's club

13 Pl - Sphagnum

14 CwSs - Skunk cabbage

** A nutrient-very poor to poor "salal phase" of site series 01 and 06 occurs in subdued terrain on the west coast and north end of Vancouver Island. It is denoted with an "s" modifier to the site series number (e.g. 01s).

[a] More abundant in southern portion.

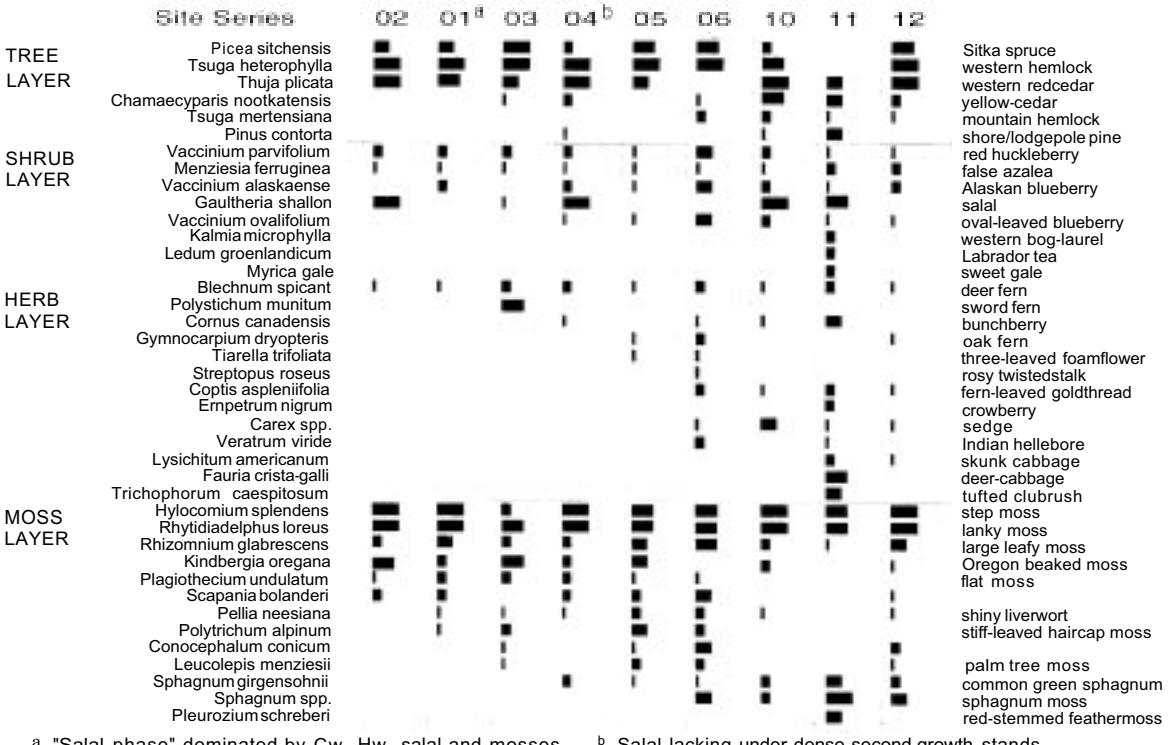
Grid No. 12

CWHvm2 — Montane Very Wet Maritime CWH Variant

Soil Nutrient Regime

Soil Moisture Regime	Actual	Relative	Very Poor A	Poor B	Medium C	Rich D	Very Rich E
MD	0			02			
SD	1			03		04	
SD	2						
F	3		ZONAL			05	
F	4			01			
M	5			06		07/08	
VM	6			09			
W	7		10			11	

Site	Series
01	HwBa - Blueberry
02	HwPl - Cladina
03	HwCw - Salal
04	CwHw - Sword fern
05	BaCw - Foamflower
06	HwBa - Deer fern
07	BaCw - Salmonberry
08	BaSs - Devil's club
09	CwYc - Goldthread
10	Pl - Sphagnum
11	CwSs - Skunk cabbage

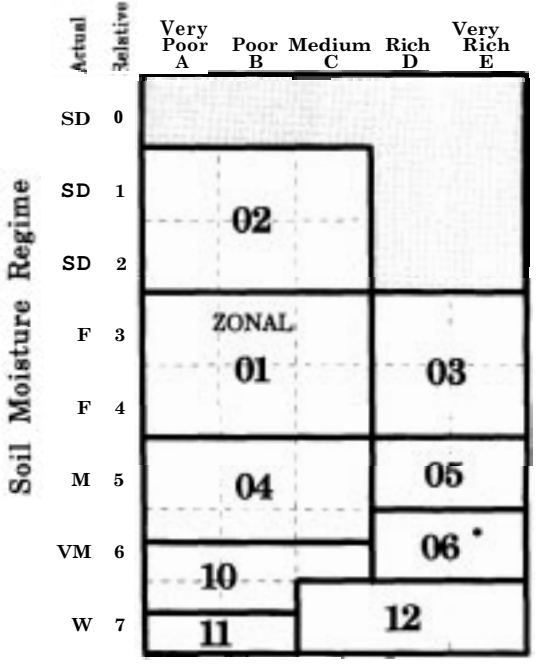


[a] "Salal phase" dominated by Cw, Hw, salal and mosses. [b] Salal lacking under dense second-growth stands.

Grid No. 13

CWHwh1 Submontane Wet Hypermaritime CWH Variant

Soil Nutrient Regime



Site Series	
** 01	HwSs - Lanky moss
02	CwSs - Salal
03	CwSs - Sword fern
04	CwHw - Salal
05	CwSs - Foamflower
06	CwSs - Conocephalum
10	CwYc - Goldthread
11	PlYc - Sphagnum
12	CwSs - Skunk cabbage

** A nutrient-very poor to poor "salal phase" of site series 01 occurs in subdued terrain on the Queen Charlotte Lowlands and the eastern Skidegate Plateau. It is denoted with an "s" modifier to the site series number (e.g. 01s).

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