

1. Title

ECOSYSTEM UNITS OF PRINCESS ROYAL ISLAND

Prince Rupert Forest Region

Portion of Map Sheets 103A/10, 103A/11, 103A/14, 103A/15, 103H/02, 103H/3, 103H/6, 103H/7 (1:50,000)

July 1996

2. Introduction

The objective of this project was to map ecosystem units of Princess Royal Island at a scale of 1:50,000 in portions of map sheets 103A/10, 103A/11, 103A/14, 103A/15, 103H/02, 103H/3, 103H/6, 103H/7. This mapping is to support interpretations regarding wildlife use in the project area.

Princess Royal Island is located in a group of islands which lie along the northern coast of British Columbia. The northern end of the island is located near the entrance to Douglas Channel, approximately 80 km south of Kitimat. Prince Rupert is situated approximately 140 km northwest along the mainland coast. The island is approximately 2200 km² in area.

The area mapped at 1:50,000 is located within the Hecate Lowland (HEL) and Kitimat Ranges (KIR) ecoregions of the Coastal Gap Ecoregion. The biogeoclimatic units found in the HEL ecoregion include the Central Variant of the Coastal Western Hemlock Very Wet Hypermaritime subzone (CWHvh2) and the Windward Variant of the Mountain Hemlock Wet Hypermaritime subzone (MHwh1). The CWHvh2 is common on the outer coast in the south half the Prince Rupert Forest Region; on PRI it is located on the western side of the Island (Banner et al., 1993). It is found at elevations ranging from 0m to 600m. Scrubby, poor forests, bog forests and wetlands are common on rolling terrain, while productive forests generally occur on steeper, better drained sites. The major tree species in the CWHvh2 are western redcedar, yellow cedar, western hemlock, shore pine, and Sitka spruce. The Windward Variant of the Mountain Hemlock Wet Hypermaritime subzone is located at high elevations (>600m) above the CWHvh2 in the Hecate Lowlands. Mountain hemlock and yellow-cedar are the dominant tree species in the MHwh1. Forested areas are commonly interrupted by significant areas of krummholz forest, heathland and rock.

Biogeoclimatic units found in the KIR ecoregion include the Submontane Variant of the Coastal Western Hemlock Very Wet Maritime subzone (CWHvm1), Montane Variant of the Coastal Western Hemlock Very Wet Maritime subzone (CWHvm2), and the Windward Variant of the Mountain Hemlock Moist Maritime subzone (MHmm1). The CWHvm1 is found on the valley bottoms and lower mountain slopes on the eastern/northeastern side of the island at elevations below 350m. Common tree species include western redcedar, western hemlock and amabilis fir. Yellow-cedar and shore pine are common on poor sites in this subzone. The CWHvm2 occurs above the CWHvm1 between the elevations of 350 to about 800m. As in the CWHvm1, western redcedar, western hemlock and amabilis fir are the common tree species with yellow-cedar and mountain hemlock increasing in abundance in the upper elevations and near the transition to the CWHvm1. Avalanche tracks are common in both the CWHvm variants. The Windward Variant of the Mountain Hemlock Moist Maritime subzone (MHmm1) is located above the CWHvm2 (approx. >800m). Mountain hemlock, western hemlock, amabilis fir and yellow cedar are the dominant tree species in this subzone. Krummholz, heathland, and rock frequently occur on the mountain ridges and upper slopes while avalanche tracks are common across steeper sections of the subzone.

Field work was conducted in August and September, 1995. Mapping was completed according to the methodology outlined in Standards for Terrestrial Ecosystem Mapping in British Columbia (Resources Inventory Committee, 1995) at survey intensity level 4. Bioterrain units form the basic framework for the ecosystem mapping. The ecosystem mapping is based on the three level ecosystem classification framework, which includes ecoregion units, biogeoclimatic units and ecosystem units. Ecosystem units are developed from the site series defined within the existing Ministry of Forests biogeoclimatic ecological classification system (Prince Rupert Forest Region) with the addition of site modifiers and structural stage. Site modifiers further defined the physical conditions of the ecosystem unit while structural stage defines the current development stage of the plant community.

3. Map Label Format

Ecoregion unit labels

HEL, KIR

Biogeoclimatic unit labels CWHvh2, CWHvm1, CWHvm2, MHwh1, MHmm1

Biogeoclimatic unit label

CWHvm1

zone

subzone variant

Pure map unit (polygon contains a single ecosystem unit):

Site series

Site modifier

ABs7

Structural Stage

Complex map unit (polygon contains up to three ecosystem units):

Site series

Percent of polygon occupied

4HMkv7 - 3HMks7 - 3SFks7

Site modifier

Structural stage

Map Symbols

BP Buildings (human settlement)

LA Lake

RO Rock outcrop

RP Road, unpaved

4. Map Boundaries

Ecosystem Unit

Biogeoclimatic Unit

Ecosystem (Polygon)Unit

5. Ecosection Units

HEL - Hecate Lowland Ecosection

KIR - Kitimat Ranges Ecosection

6. Biogeoclimatic Units and Map Symbol

CWHvh2 - Coastal Western Hemlock Very Wet Hypermaritime, Central Variant

CWHvm1 - Coastal Western Hemlock Very Wet Maritime, Submontane Variant

CWHvm2 - Coastal Western Hemlock Very Wet Maritime, Montane Variant

MHwh1 - Mountain Hemlock Wet Hypermaritime, Windward Variant

MHmm1 - Mountain Hemlock Wet Hypermaritime, Windward Variant

7. Ecosystem Units

Map Symbol	Site Series	Name	Description	Site Modifiers & Structural Stage	Dominant Plants
CWHvh2					
AL	CWHvh2/10	Dr - Lily-of-the-valley	Low fluvial bench - prolonged annual flooding; subhygric, permesotrophic	AL5	red alder, salmonberry, false lily-of-the-valley, foamflowers, ferns, skunk cabbage
HM	CWHvh2 - 4	HwSs - Lanky moss	Typic is deep, medium-textured mineral soil, steep slopes (colluvial). Submesic, mesotrophic. Also found on morainal soils, inactive fluvial deposits and on Folisols on steep lithic sites.	HMk7, HMw7, HMsw7, HMvw7, HMBw7, HMks7, HMkv7, HMBk7, HMBh7, HMhs7, HMj7	western hemlock, western redcedar, Sitka spruce, Alaskan blueberry, deer fern, step and lanky mosses
				HMsw6, HMks6, HMkv6	western hemlock, western redcedar, Sitka spruce, Alaskan blueberry, deer fern, step and lanky mosses

Map Symbol	Site Series	Name	Description	Site Modifiers & Structural Stage	Dominant Plants
				HMks5, HMkv5, HMj5	western hemlock, western redcedar, Alaskan blueberry, deer fern, step and lanky mosses
				HMsw4	western hemlock, western redcedar, deer fern, step and lanky mosses
				HMks3b, HMvw3b	western hemlock, western redcedar, Alaskan blueberry, deer fern
				HMkv3a, HMks3a	western hemlock, western redcedar, Alaskan blueberry, deer fern
HS	CWHvh2/01	CwHw - Salal	Typic is deep, medium-textured, mineral soil on gentle slopes; mesic moisture regimes, submesotrophic - mesotrophic nutrient regime. Thick surface organic horizons are common. Lithic and peaty phases are also found. Also found on shallow soils (gentle slopes), hummocky terrain and steep aspects with organic veneers and shallow soils.	HS7, HSs7, HSv7, HSB7, HSKs7, HSKv7, HSvw7, HSbk7, HSsw7, HSBw7, HSbh7, HShs7, HShv7	western redcedar, yellow-cedar, western hemlock, salal, deer fern, bunchberry
				HSs6, HSsw6, HSKv6	western redcedar, yellow-cedar, western hemlock, salal, deer fern, bunchberry
				HSs5	western redcedar, yellow-cedar, western hemlock, salal, deer fern, bunchberry
				HSsw3a	salal, deer fern, bunchberry
LR	CWHvh2/02	PIYc - Rhacomitrium	Typic is shallow soils, gentle to moderate slopes; located on knolls, ridgecrests. Very xeric, oligotrophic sites. Poor tree productivity, often stunted, open canopies (tall shrub structure). Note: Tall shrub structure is equivalent to old growth.	LRb7, LRbk7, LRbw7, LRbh7	shore pine, yellow-cedar, common juniper, crowberry, lignonberry, tufted clubbrush, hoary rock moss
				LRv3b, LRb3b, LRkv3b, LRvw3b, LRbk3b, LRbw3b, LRbh3b, LRhv3b	shore pine, yellow-cedar, common juniper, crowberry, lignonberry, tufted clubbrush, hoary rock moss
LS	CWHvh2/12	PIYc - Sphagnum	Bog woodland/wetland typically found on organic deposits in undulating terrain. Subhydric; oligotrophic - submesotrophic sites. Also occurs on poorly drained mineral soils and steep aspects.	LS7, LSs7	shore pine, yellow-cedar, western redcedar, salal, crowberry, sedges, tufted clubbrush, deer cabbage, sphagnum
			Tree layers are typically scrubby and sparse. Note: tall shrub structure is equivalent to old growth.	LS3b, LSs3b, Lsv3b, Lsb3b, Lsbh3b, LSsw3b, Lskv3b, Lsvw3b	shore pine, yellow-cedar, western redcedar, salal, crowberry, sedges, tufted clubbrush, deer cabbage, sphagnum
RC	CWHvh2/13	CwSs - Skunk cabbage	Typic is deep mineral soils; subhydric, permesotrophic sites. poorly drained, level or depressional sites. Common on fluvial sites with organic surface horizon.	RC7, RCp7	western redcedar, yellow-cedar, western hemlock, salal, blueberries, deer fern, skunk cabbage
RF	CWHvh2/05	CwSs - Sword fern	Typic is deep, base rich soils, steep slopes; subxeric, permesotrophic sites. Also occurs on moderately sloping and hummocky terrain with shallow soils.	RFj7, RFjs7, RFhs7	western hemlock, western redcedar, Sitka spruce, sword fern, spiny wood fern
				RFjs5, RFhs5	Western hemlock, western redcedar, Sitka spruce, sword fern, spiny wood fern
				RFbh3b, RFhv3b	Western hemlock, western redcedar, Sitka spruce, sword fern, salmonberry, nodding trisetum
				RFjs1b, RFhs1b	deer fern, sword fern

Map Symbol	Site Series	Name	Description	Site Modifiers & Structural Stage	Dominant Plants
RS	CWHvh2/03	CwYc - Salal	Typic is shallow soils found on gently sloping knolls, ridgecrests & upper slopes; subxeric, submesotrophic. Very shallow mineral soils or Folisols. Also occurs on steep slopes onFolisols.	RSb7, RSbh7, RSbw7, RSbk7, RShv7	western hemlock, western redcedar, yellow-cedar, salal, deer fern
				RSbw3b	western hemlock, western redcedar, salal, deer fern
SA	CWHvh2/51	Sitka alder avalanche track	Steep avalanche tracks; subhygric, permesotrophic sites.	SAk3a, SAw3a, SAs3a, SAsw3a, SAkv3a, SAVw3a	salmonberry, Devil's club, lady fern
SD	CWHvh2/07	CwSs - Devil's club	Typic is deep soils, gentle to moderate slopes receiving seepage; subhygric, permesotrophic. Also occurs on steep slopes, very shallow to shallow soils. Productive forests.	SD7, SDs7, SDK7, SDw7, SDks7, SSsw7, SDKv7, SDvw7	western hemlock, amabilis fir, Sitka spruce, salmonberry, Devil's club, foamflower, ferns
SF	CWHvh2/06	CwSs - Foamflower	Typic is deep, medium-textured, rich soils on steep, colluvial slopes. Mesic, permesotrophic sites. Also occurs on shallow soils and morainal material and inactive fluvial deposits.	SFk7, SFw7, SFsw7, SFks7, SFkv7, SFj7	western hemlock, western redcedar, Sitka spruce, amabilis fir, Alaskan blueberry, low coverage of foamflowers & variety of ferns
				SFj6, SFks6, SFsw6	western hemlock, western redcedar, Sitka spruce, amabilis fir, Alaskan blueberry, low coverage of foamflowers & variety of ferns
				SFj5, SFk5, SFks5, SFsw5	western hemlock, western redcedar, red alder, Alaskan blueberry, ferns
				SFks3a	western hemlock, western redcedar, red alder, salmonberry
SL	CWHvh2/08	Ss - Lily of-the-valley	Floodplain - high fluvial bench site; subhygric, permesotrophic. Productive forests.	SL7	western hemlock, Sitka spruce, salmonberry, spiny wood fern, sword fern, foamflowers
				SL6	western hemlock, Sitka spruce, salmonberry, spiny wood fern, sword fern, foamflowers
				SL5	western hemlock, Sitka spruce, salmonberry, spiny wood fern, sword fern, foamflowers
				SL2	yarrow, tufted hairgrass
SS	CWHvh2/14	Ss - Salal	Found in shoreline areas on exposed, rocky headlands. Subxeric, mesotrophic sites. Shallow mineral and folic soils.	SSs7, SSb7	western hemlock, western redcedar, Sitka spruce, salal, false lily-of-the-valley
ST	CWHvh2 - 9	Ss - Trisetum	Floodplain - middle fluvial bench; subhygric; permesotrophic. Deep soils.	ST7	western hemlock, Sitka spruce, lady fern, foamflowers, nodding trisetum, hairy wildrye
				ST5	western hemlock, Sitka spruce, lady fern, foamflowers, nodding trisetum, hairy wildrye, P. enchanter's nightshade
TM	CWHvh2/33	Tufted hairgrass meadow	Estuarine meadow; hygric, permesotrophic.	TM2	yarrow, lovage, great burnet, tufted hairgrass, meadow barley
TS	CWHvh2 - 32	Tufted clubrush - Sphagnum	Slope/blanket bog, typically occurs on poorly drained, organic material on gentle slopes; subhydric, oligotrophic. Also occurs on shallow mineral and organic soils and shallow to very shallow soils on steep, exposed slopes.	TS3a, TSs3a, TSv3a, TSb3a, TSvw3a, TSsw3a, TSks3a, TSkv3a, TSbk3a, TSbw3a	western redcedar, yellow-cedar, shore pine, sweet gale, Labrador tea, tufted clubrush, beak-sedge, sphagnum, hoary rock moss

Map Symbol	Site Series	Name	Description	Site Modifiers & Structural Stage	Dominant Plants
			Edaphic ecosystem unit with low shrub (dwarf trees) or herb structure.	TS2, TSs2, TSb2, TSv2, TSvw2, TSsw2	tufted clubrush, pale sedge, many-flowered sedge, sweet gale, Labrador tea, beak-sedge, sphagnum, hoary rock moss
YG	CWHvh2/11	CwYc - Goldthread	Typic is organic bog forest on gentle slopes; hygric; submesotrophic sites. Also occurs on mineral soils, sites with shallow soils (mineral and organic venners) and hummocky or steep terrain.	YG7, YGb7, YGs7, YGbw7, YGb7, YGsw7, YGks7, YGvw7, YGkv7, YGhs7, YGhv7	western redcedar, yellow-cedar, shore pine, western hemlock, salal, fern-leaved goldthread, Pacific reedgrass, hellebore, sedges, sphagnums
CWHvm1					
AB	CWHvm1/01	HwBa - Blueberry	Typic is gentle slopes on deep, medium-textured soils. Mesic, mesotrophic sites. Also occurs on shallow soils, Folisols and steep slopes.	AB7, ABs7, ABks7, ABkv7, ABsw7, ABvw7, ABbw7, ABbk7	western hemlock, amabilis fir, salal, Alaskan blueberry, deer fern, bunchberry, five-leaved bramble
				ABks7, ABkv6, ABsw6	western hemlock, amabilis fir, Alaskan blueberry, deer fern, bunchberry, five-leaved bramble
				ABks5, ABkv5	western hemlock, amabilis fir, Alaskan blueberry, deer fern, bunchberry, five-leaved bramble
				ABks4	western hemlock, amabilis fir, Alaskan blueberry, deer fern, bunchberry, five-leaved bramble
				AB3b, ABks3b, ABvw3b	western hemlock, amabilis fir, Alaskan blueberry, salmonberry, bunchberry, deer fern
				AB3a, ABvw3a, ABks3a, ABsw3a, ABkv3a	Alaskan blueberry, salmonberry, western hemlock, bunchberry, deer fern
AD	CWHvm1/08	BaSs - Devil's club	Typic is gently sloping receiving area with deep soil; subhygric, permesotrophic sites. Also occurs on steep slopes with deep to shallow soils.	AD7, ADw7, ADk7, ADks7, ADsw7, ADn7	western hemlock, amabilis fir, Sitka spruce, Devil's club, salmonberry, foamflowers, oak fern, spiny wood fern
AF	CWHvm1/05	BaCw - Foamflower	Typic is steep slopes with deep soils. Submesic-mesic, permesotrophic sites. Also occurs on steep sites with shallow soils and on gently sloping sites.	AFj7, AFk7, AFw7, AFks7, AFsw7, AFvw7, AFkv7	western hemlock, amabilis fir, western redcedar, Alaskan blueberry, foamflowers, lady fern, oak fern, spiny wood fern
				AFw6, AFk6, AFsw6, AFks6, AFj6	western hemlock, amabilis fir, western redcedar, Alaskan blueberry, foamflowers, lady fern, oak fern, spiny wood fern
				AFk5, AFks5, AFsw5	western hemlock, amabilis fir, western redcedar, Alaskan blueberry, foamflowers, lady fern, oak fern, spiny wood fern
				AFks4, AFsw4	western hemlock, amabilis fir, western redcedar, foamflowers,
				AFj3b	salmonberry, Alaskan blueberry, western hemlock, amabilis fir, western redcedar, foamflowers, lady fern
				AFsw3a	salmonberry, Alaskan blueberry, western hemlock, amabilis fir, western redcedar, foamflowers, lady fern

Map Symbol	Site Series	Name	Description	Site Modifiers & Structural Stage	Dominant Plants
BS	CWHvm1/32	Beaked sedge - Sphagnum	Poor fen located on level, water collecting sites with organic soils; subhydryc, mesotrophic. Also occurs on shallow organic veneers.	BS2, BSs2	swamp laurel, beaked sedge, Sitka sedge, skunk cabbage, lady fern, great burnet, buckbean
HD	CWHvm1/06	HwBa - Deer fern	Typic is deep soils, on steep slopes with seepage. Subhygric, mesotrophic sites. Also occurs on Folisols (lithic sites), shallow soils on steep sites, and gently sloping areas.	HDk7, HDw7, HDsw7, HDks7, HDbk7, HDbw7, HDjs7, HDj7	western hemlock, western redcedar, amabilis fir, salal, deer fern, fern-leaved goldthread
				HDks6, HDbk6, HDjs6	western hemlock, western redcedar, amabilis fir, salal, deer fern, fern-leaved goldthread
				HDj5	red alder, western hemlock, western redcedar, salmonberry, salal, deer fern
				HDj3a	salmonberry, western hemlock, western redcedar, salal, deer fern
HF	CWHvm1/00	Hardhack fen	Shrubby fen located in level, water collecting sites; subhydryc, permesotrophic. Organic soils.	HF3a	hardhack, sweet gale, highbush cranberry, beaked sedge, skunk cabbage
HS	CWHvm1/03	HwCw - Salal	Typic is shallow mineral soil over rock on gentle upper slope/crest position. Xeric, submesotrophic sites. Also occurs on Folisols, very shallow soils and steep slopes.	HSv7, HSkv7, HShv7, HSbk7, HSbh7, HSbw7, HSrv7	western redcedar, western hemlock, salal, deer fern bunchberry
				HSkv5	western redcedar, western hemlock, salal, deer fern, bunchberry
LC	CWHvm1/02	HwPl - Cladina	Typic is gentle slopes, with shallow mineral soils and organic veneers over rock; very xeric, oligotrophic. Tall shrub structure (3b) is equivalent in age to stage 7.	LCb7	shore pine, western redcedar, western hemlock, salal, rock mosses, reindeer lichens
				LCb3b	shore pine, western redcedar, western hemlock, salal, rock mosses, reindeer lichens
LS	CWHvm1/13	Pl - Sphagnum	Typic is bog woodland with poorly drained, organic soils. Subhydryc, oligotrophic. Forests are sparse and scrubby.	LS3b, LSs3b	shore pine, western redcedar, yellow-cedar, salal, Labrador tea, fern-leaved goldthread, skunk cabbage
RC	CWHvm1/14	CwSs - Skunk cabbage	Typic is deep, wet, mineral soils, level sites; subhydryc, permesotrophic sites. Also found on wet organic soils.	RC7, RCp7	western hemlock, western hemlock, red alder, Sitka spruce, salal, salmonberry, foamflowers, lady fern, skunk cabbage
SA	CWHvm1/51	Sitka alder avalanche track	Typic is steeply sloping avalanche track; subhygric, permesotrophic sites.	SAk3a, SAw3a, SASw3a, SAKs3a	Sitka alder, salmonberry, stink currant, cow parsnip, lady fern, Oak fern, bluejoint, hairy wildrye
SC	CWHvm1/00	Ss - Pacific crabapple	Typic is deep soils, estuarine location; subhygric, permesotrophic sites.	SC7	Sitka spruce, Pacific crabapple, Nootka rose, beach lovage, false lily-of-the-valley, Pacific reed grass,
SS	CWHvm1/09	Ss - Salmonberry	Floodplain - high fluvial bench; subhygric-hygric, permesotrophic sites. Deep soils. Also mapped on organic veneers over fluvial deposits. Productive forests.	SS7, SSp7	western hemlock, amabilis fir, Sitka spruce, Devil's club, salmonberry, foamflowers, lady fern
TS	CWHvm1/31	Tufted clubrush - Sphagnum	Typic is non-forested bog on deep, organic soils; subhydryc, oligotrophic sites. Also occurs on shallow soils. Herb or low shrub structure.	TS3a, TSs3a	shore pine yellow-cedar, tufted clubrush, beak-sedge, narrow-leaved cottongrass, sphagnum
				TS2, TSs2, TSv2	shore pine yellow-cedar, tufted clubrush, white-beak rush, sedges, sphagnum

Map Symbol	Site Series	Name	Description	Site Modifiers & Structural Stage	Dominant Plants
YG	CWHvm1/12	CwYc - Goldthread	Typic is bog forest, on poorly drained, organic soils. Hygric, submesotrophic sites. Also occurs on shallow soils (mineral and organic veneers), and steep slopes.	YG7, YGs7, YGv7, YGb7, YGbh7, YGks7, YGsw7	western hemlock, western redcedar, yellow-cedar, Alaskan blueberry, fern-leaved goldthread, bunchberry, common green sphagnum
CWHvm2					
AB	CWHvm2/01	HwBa - Blueberry	Typic is deep, medium-textured soil on gentle slopes. Mesic, mesotrophic sites. More commonly occurs on organic veneers (Folisols), shallow soils, and steep slopes in project area.	ABs7, ABks7, ABsw7, ABkv7, ABvw7, ABbk7, ABbw7	western hemlock, amabilis fir, Alaskan & oval-leaved blueberry, five-leaved bramble
				ABsw6, ABks6, ABkv6, ABvw6, ABbk6, ABbw6	western hemlock, amabilis fir, Alaskan & oval-leaved blueberry, five-leaved bramble
				ABks5, ABkv5, ABbw5	western hemlock, amabilis fir, Alaskan & oval-leaved blueberry, five-leaved bramble
				ABsw4, ABks4	western hemlock, amabilis fir, five-leaved bramble
				ABks3b, ABkv3b, ABvw3b, ABbw3b, ABbk3b	western hemlock, amabilis fir, Alaskan blueberry, fireweed
				ABks3a, ABsw3a, ABkv3a	Alaskan blueberry, salmonberry, western hemlock, amabilis fir, fireweed
AD	CWHvm2/08	BaSs - Devil's club	Typic is deep soils, on gently sloping, water receiving sites. Subhygric, permesotrophic sites. Mapped on steep, lower slopes.	ADw7, ADk7	western hemlock, amabilis fir, Sitka spruce, Devil's club, salmonberry, foamflowers, ferns
AF	CWHvm2/05	BaCw - Foamflower	Typic is deep soils on steep slopes; submesic-mesic, permesotrophic sites. Also occurs on shallow soils and gentle slopes.	AFk7, AFsw7, AFks7, AFvw7, AFj7	western hemlock, amabilis fir, western redcedar, Sitka spruce, Alaskan & oval-leaved blueberry, foamflowers, oak fern, spiny wood fern
				AFks6, AFsw6, AFj6	western hemlock, amabilis fir, western redcedar, Sitka spruce, Alaskan & oval-leaved blueberry, foamflowers, oak fern, spiny wood fern
				AFks5	red alder, western hemlock, western redcedar, Alaskan & oval-leaved blueberry, foamflowers, spiny wood fern
				AFsw4	western hemlock, western redcedar, Alaskan & oval-leaved blueberry, foamflowers, spiny wood fern
BS	CWHvm2/32	Beaked sedge - Sphagnum	Poor fen with organic soils; subhydic, mesotrophic, water collecting sites. Localized in valley bottoms.	BS2	swamp laurel, beaked sedge, buckbean, skunk cabbage, great burnet
HD	CWHvm2/06	HwBa - Deer fern	Typic is deep soils on steep slopes with seepage; subhygric, mesotrophic sites. Also occurs on shallow soils and organic veneers (Folisols).	HDw7, HDk7, HDsw7, HDbw7, HDbk7	western hemlock, western redcedar, yellow-cedar, amabilis fir, salal, deer fern, fern-leaved goldthread
				HDk6, HDsw6	western hemlock, western redcedar, yellow-cedar, amabilis fir, salal, deer fern, fern-leaved goldthread

Map Symbol	Site Series	Name	Description	Site Modifiers & Structural Stage	Dominant Plants
LC	CWHvm2/02	HwPl - Cladina	Stunted, open forests on gently sloping ridge crests, upper slopes with shallow soils. Very shallow mineral and organic (Folisols) soils. Very xeric, submesotrophic sites.	LCb7, LCbw7, LCbk7, LCbh7, LCv7, LCvw7	shore pine, yellow-cedar, mountain hemlock, mountain-heathers, reindeer lichens,
			Also occurs on steep slopes and hummocky terrain. Tall shrub structure is equivalent to structural stage 7.	LCb3b, LCv3b, LCbw3b, LCbk3b, LCbh3b	shore pine, yellow-cedar, mountain hemlock, mountain-heathers, reindeer lichens,
MK	CWHvm2/00	Mountain hemlock krummholz	Very shallow mineral soils or Folisols on upper slopes and crests; subxeric-submesic, submesotrophic sites. Also on steep slopes. Occurs at upper elevations of the subzone. Conifers are dwarfed.	MKb3a, MKv3a, MKbw3a, MKbk3a	yellow-cedar, swamp-laurel, dwarf blueberry, bog blueberry, crowberry, deer cabbage.
RC	CWHvm2/11	CwYc - Skunk cabbage	Swamp forest. Typic is deep soils on level to gently sloping areas. Subhydic, permesotrophic sites. Also occurs on organic soils.	RC7, RCp7	western hemlock, western redcedar, yellow-cedar, salmonberry, foamflowers, skunk cabbage
SA	CWHvm2/51	Sitka alder avalanche track	Steeply sloping avalanche track; subhygic-hygric, permesotrophic sites. Also occurs on very shallow to shallow soils and gentle slopes.	SAk3a, SAw3a, SASw3a, SAKs3a, SAVw3a SAKv3a, SAj3a	Sitka alder, salmonberry, oak fern, lady fern, foamflowers
TS	CWHvm2/31	Tufted clubrush - Sphagnum	Typic is non - forested bog on organic soils; subhydic, submesotrophic sites. Also occurs on very shallow to shallow soils. Low shrub or herb structural stages.	TS3a, TSs3a, TSv3a,	yellow-cedar, mountain hemlock, deer cabbage, tufted clubrush, narrow-leaved cottongrass
				TS2, TSs2, TSv2	deer cabbage, tufted clubrush, narrow-leaved cottongrass, sedges
YG	CWhvm2/09	CwYc - Goldthread	Bog forests. Typic is deep, organic soil occurring on valley bot toms; hygic, submesotrophic sites. Also occurs on shallow soils and steep slopes.	YG7, YGs7, YGsw7	yellow-cedar, western hemlock, mountain hemlock, Alaskan & oval-leaved blueberry, fern-leaved goldthread, skunk cabbage
MHwh1					
HM	MHwh1/00	Heather meadow	Typic is ridge crests and upper slopes on organic veneers; xeric-mesic, submesotrophic sites. Also occurs on shallow mineral soils and steep slopes	HMb2, Hmbk2, HMBw2, HMks2, HMsw2, HMkv2	pink mountain-heather, white mountain-heather, crowberry, dwarf blueberry, bog blueberry, partridgefoot
MB	MHwh1/01	HmSs - Blueberry	Typically found on steep, colluvial slopes; submesic, submesotrophic sites. Also occurs on shallow - very shallow soil.	MBsw7, MBvw7, MBkv7, HMks7	yellow-cedar, mountain hemlock, western hemlock, Alaskan and oval-leaved blueberry, fern-leaved goldthread
MK	MHwh1/00	Mountain hemlock krummholz	Exposed ridge crests and upper slopes with shallow, organic (Folisol) soils. Xeric-subxeric, submesotrophic sites. Also occurs on steep slopes and very shallow mineral soils.	MKb3a, MKbk3a, MKbw3a, MKvw3a, MKbh3a	mountain hemlock, yellow-cedar, white mountain-heather, crowberry, dwarf blueberry, bog blueberry, tufted clubrush
MM	MHwh1/02	HmYc - Mountain-heather	Exposed sites, on steep, upper slopes, and ridge crests with shallow soil. Very xeric-xeric, submesotrophic sites. Folisols or very shallow, coarse mineral soils. Tall shrub structure is equivalent to structural stage 7.	MMbk7, MMbw7, MMkv7, MMvw7	mountain hemlock, yellow-cedar, western redcedar, Alaskan & oval-leaved blueberry, mountain-heathers, Pacific reedgrass
				MMbk3b, MMbw3b, MMbh3a, MMb3b	mountain hemlock, yellow-cedar, western redcedar, Alaskan & oval-leaved blueberry, mountain-heathers, Pacific reedgrass

Map Symbol	Site Series	Name	Description	Site Modifiers & Structural Stage	Dominant Plants
YG	MHwh1/04	HmYc - Goldthread	Typic is shallow soil on steep slopes with seepage; subhygric, submesotrophic. Also occurs on organic veneers (Folisols) or very shallow mineral soils.	YGsw7, YGks7, YGbk7, YGbw7, YGkv7, YGvw7	mountain hemlock, yellow-cedar, Alaskan & oval-leaved blueberry, five-leaved bramble, fern-leaved goldthread
SA	MHwh1/51	Sitka alder avalanche	Steeply sloping avalanche tracks with shallow soils. Subhygric-hygric, permesotrophic sites.	SAks3a, SAsw3a, SAKv3a, Savw3a	Sitka alder, salmonberry, lady fern, oak fern, hairy wildrye
MHmm1					
AB	MHmm1/04	HmBa - Bramble	Typic is deep, colluvial soils on steep slopes with seepage; subhygric, mesotrophic sites. Mapped on shallow to very shallow soils.	ABsw7, ABks7, ABvw7	mountain hemlock, amabilis fir, Alaskan & oval-leaved blueberry, copperbush, five-leaved bramble, twistedstalks
HM	MHmm1/00	Heather meadow	Typic is upper slopes and ridge crests with very shallow soils (Folisols or mineral). Very xeric - submesic, oligotrophic sites. Also occurs on steep slopes.	HMb2, HMbw2, HMBk2, HMBh2, HMks2, HMsw2, HMvw2	mountain-heathers, crowberry, bog blueberry, deer cabbage, black alpine sedge, tufted hairgrass
MB	MHmm1/01	HmBa - Blueberry	Typic is deep soils (colluvium) on steep slopes; subxeric-mesic, mesotrophic sites. Also occurs on organic veneers (Folisols) and shallow soils.	MBsw7, MBks7, MBvw7, MBkv7, MBbw7, MBbk7	mountain hemlock, amabilis fir, Alaskan & oval-leaved blueberry, five-leaved bramble
				MBks3b, MBbh3b	mountain hemlock, amabilis fir, Alaskan & oval-leaved blueberry, five-leaved bramble
MK	MHmm1/00	Mountain hemlock krummholz	Typic is very shallow soils on exposed upper slopes and crests; xeric - submesic, oligotrophic sites. Occurs on organic veneers (Folisols) and very shallow mineral soils. Also occurs on steep slopes.	MKb3a, MKbk3a, MKbw3a, MKbh3a, MKvw3a, MKkv3a	mountain hemlock, yellow-cedar, bog blueberry, dwarf blueberry, crowberry, deer cabbage, reindeer lichens
MM	MHmm1/02	HmBa - Mountain-heather	Exposed sites; steep slopes with shallow organic soils (Folisols). Very xeric - xeric, submesotrophic sites. Also occurs on hummocky terrain.	MMbk7, MMbw7, MMbh7	yellow-cedar, mountain hemlock, copperbush, Alaskan & oval-leaved blueberry, mountain-heathers, deer cabbage
				MMbk3b, MMbw3b,	yellow-cedar, mountain hemlock, copperbush, Alaskan & oval-leaved blueberry, mountain-heathers, deer cabbage
MO	MHmm1/03	BaHm - Oak fern	Typic is deep soils on steep, colluvial slopes; subxeric - mesic, permesotrophic sites. Mapped on very shallow and shallow soils.	MOSw7, MOks7, MOkv7, MOvw7	mountain hemlock, amabilis fir, Alaskan blueberry, Sitka alder, five-leaved bramble, ferns
SA	MHmm1/51	Sitka alder avalanche track	Steeply sloping avalanche track; subhygric - hygric, permesotrophic sites.	SAks3a, SAVw3a	Sitka alder, salmonberry, Sitka valerian, lady fern, twistedstalks
All BGC Zones					
RO		Rock outcrop	steep rock outcrop; sparsely vegetated	j, k, w	

8. Site Modifiers

- h hummocky terrain
- j gentle slopes (less than 35% slope)
- k cool, northerly or easterly aspect (285 - 135 degrees, slopes greater than 35%)
- n fan (colluvial or fluvial) or cone
- r ridge or crest
- h warm, southerly or westerly aspect (135 - 285 degrees, slopes greater than 35%)
- b foliolitic LFH over bedrock, less than 10 cm mineral soil

- p peaty soil
- s shallow soil (25-100cm to bedrock)
- v very shallow soil (less than 25cm mineral soil over bedrock)

9. Structural Stages

Symbol	Description
1a	Non-vegetated: less than 5% vegetation cover
1b	Sparse: less than 10% vegetative cover
2	Herb: early successional stage disclimax or climax, dominated by herbaceous vegetation (tree cover <10%, herbs cover >25% or >=33% total cover)
3a	Low Shrub: early successional stage disclimax or climax communities dominated by shrub cover <2m in height (tree cover <10%, shrub cover >25% or >= 33% of total cover)
3b	Tall Shrub: early successional stage disclimax or climax communities dominated by shrub cover 2 to 10 m in height (tree cover <10%, shrub cover >25% or >= 33% of total cover)
4	Pole/Sapling: Trees > 10 m tall that have over topped the shrub and herb layers. Stands are typically dense.
5	Young Forest: Self thinning is usually evident and the forest canopy has begun differentiation into distinct layers (40-80 yrs).
6	Mature Forest: Trees that were established after the last disturbance have matured and a second cycle of shade tolerant trees may have established (80 - 250 yrs).
7	Old Forest: Old structurally complex stands (>250 yrs).

10. Sample Location

Princess Royal Island is unsettled, undeveloped and is not assessable by road. Sampling was largely completed through use of a helicopter. Logging roads occur at limited locations near Chapple Inlet, Drake Inlet and in two northern drainages. Some limited sampling was completed via logging roads in the Chapple Inlet area and by boat in Chapple, Racey and Surf Inlets.

A small number of buildings and an inhabitant are found at Butedale on the northeast side of the island. A number of unsettled Indian Reserves also occur throughout the island. Logging has occurred at several locations, most notably at Whalen Lake, Chapple Inlet, in northern drainages, and at scattered locations along the northwest and eastern coast line. Some historic logging also occurred at a few locations around the island.

P1 - Detailed Plot One

11. Data Sources

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12. Credits

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