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ECOLOGICAL RESERVES COLLECTION
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PRELIMINARY INVENTORY OF VASCULAR PLANTS AND THEIR HABITATS IN
NORTHWESTERN PORT CHANAL, QUEEN CHARLOTTE ISLANDS (ECOLOGICAL
RESERVE #45).

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During a 3-day field trip (28 Jun - 1 Jul 1982) to the Port Chanal Ecological Reserve (ER #45), the flora of the peninsula at the northwestern section of the reserve was surveyed in several habitats (coastal and gravel beach, blanket bog, Yellow Cedar scrub forest, Western Hemlock/Red Cedar forest and aquatic). The species list (Table 1) is only partially complete, due to the short period of time spent in the area, but may be useful as a preliminary inventory of these habitats. Representative plants of 28 species were collected, under permit from the Ecological Reserves Unit, and will be housed in the Queen Charlotte Islands Museum Herbarium, Skidegate, where they are available for loan to other institutions. Duplicates of several collections will be sent to Dr. T.C. Brayshaw, B.C. Provincial Museum, for identification.

Habitat description

The area surveyed is located at elevations less than 500 feet on the peninsula between Port Chanal and Nesto Inlet. The coastline is rugged, with rock bluffs, reefs and surge channels making the area relatively inaccessible by boat. There is a well-developed coastal rock plant community, subject to saltspray, as well as gravel beach, sheltered from surf yet exposed at times to tidal inundation. Mature stands of Sitka Spruce were not noted, apart from a thin fringe of forest bordering the ocean in areas where there is protection from wind. Western Hemlock/Red Cedar forest occurs in a band close to the ocean at elevations less than 100 feet and in

small stands bordering parts of the larger lakes. The habitat is characterized by a dense canopy and a mat of Rhytidiadelphus loreus and Hylocomium splendens on the forest floor. Blanket bog appears to cover the largest area on the peninsula, at elevations usually greater than 200 feet, on gently sloping land. The vegetative mat is thin throughout the habitat, with rocky outcrops common. Yellow cedar scrub forest forms continuous stands sporadically throughout the peninsula, especially at elevations less than 200 feet and on the eastern edge of the peninsula. The aquatic plant community is most diverse in the 2 largest lakes (temporarily named Krajina Lake and Menyanthes Lake) but is well-developed in most of the smaller lakes and ponds of the blanket bog. Beaver (Castor canadensis), an exotic species on the Queen Charlottes, is notably absent from the peninsula. This is unusual, since all lakes in Athlow Bay and Port Louis to the north have beaver dams and active lodges. Small lakes and ponds in these areas have been altered considerably by beaver work. Where the shores are forested, the water has moved as much as 7 m into the forest; the lakes proper are inaccessible due to debris, fallen trees and a thick layer of ooze in flooded areas. In a lake at the head of Seal Inlet, south of Port Chanal, no aquatic plants were observed, probably a result of extremely rapid increase in water level from damming and the resultant decreased penetration of light to the lake bottom. I have made field trips with T.E. Reimchen to approximately 75% of the lakes and ponds on Graham Island; Port Chanal peninsula is one of the few areas that have not yet been colonized by beaver. Its value as a benchmark for assessing changes

in vegetation and fish populations due to beaver alteration is crucial. The aquatic systems should be regularly monitored for invasion of beaver into the reserve.

Comparison of blanket bog (ER #45) and raised bog (ER #52) habitats

Blanket bog, found on the flanks of the Queen Charlotte Ranges primarily on the west coast, differs in several characteristics from the raised bog of the northeastern lowlands of Graham Island. Blanket bog forms a thin mantle of vegetation with frequent outcrops of rock on contoured terrain; raised bog has a thick mat of perennially wet Sphagnum moss and is found in extensive tracts on low-lying flat land. A comparison of the plant species of the Fort Chanal blanket bog and the Drizzle Lake (ER #52) raised bog (Sheila Douglas, "Vascular plants of Drizzle Lake Ecological Reserve: species list and habitat description", Report to Ecological Reserves Unit, November 1981) shows that the two types of bog differ little in species composition. Plants that are common or abundant in both habitats include Pinus contorta, Chamaecyparis nootkaensis, Agrostis aequivalvis, Eriophorum angustifolium, Scirpus cespitosus, Empetrum nigrum, Cornus unalaschkensis, Nuphar luteum, Andromeda polifolia, Kalmia polifolia, Ledum palustre ssp. groenlandicum, Loiseleuria procumbens, Vaccinium uliginosum, Gentiana douglasiana and Apargidium boreale. No quantitative measure has yet been made on species abundance, yet the most conspicuous plants of the blanket bog are Dodecatheon jeffreyi, Cassiope lycopodioides ssp. cristabilosa, Empetrum nigrum, Scirpus cespitosus and Luetkea pectinata. At Drizzle Lake, Empetrum nigrum, Scirpus cespitosus and Vaccinium spp. predominate. There

are several species found in the blanket bog that are absent from the Drizzle Lake bog and from other raised bogs that I have surveyed in Naikoon Provincial Park, Graham Island; Geum calthifolium, Luetkea pectinata, Cassiope lycopodioides ssp. crispilosa, Erigeron peregrinus and Senecio cymbalaroides ssp. moresbiensis are elements of both blanket bog and montane heath plant communities.

TABLE 1. Vascular plant species and their habitats in north-western Port Chanal (E.R. 45). Nomenclature follows Calder and Taylor (Flora of the Queen Charlotte Islands, 1968) except where listed. Abundance of species in habitat: 1 = Uncommon - not a conspicuous plant in the community OR not commonly found in the habitat; 2 = Common - generally found in the habitat and often a conspicuous element. * = species collected.

Habitats: A - Coastal rock and gravel beach
 B - Blanket bog
 C - Yellow cedar scrub forest
 D - Hemlock/cedar forest
 E - Aquatic

Species	Habitat				
	A	B	C	D	E
Lycopodiaceae					
<u>Lycopodium clavatum</u>			2		
<u>L. selago</u>			2	1	
Selaginellaceae					
* <u>Selaginella wallacei</u>		2			
Isoetaceae					
<u>Isoetes echinospora</u> ssp. <u>muricata</u>					2
Polypodiaceae					
<u>Adiantum pedatum</u> ssp. <u>aleuticum</u>			1	1	
<u>Blechnum spicant</u>			2	1	
Taxaceae					
<u>Picea sitchensis</u>				1	
<u>Pinus contorta</u>		2	1	1	
<u>Tsuga heterophylla</u>			1	2	
<u>T. mertensiana</u>			1		

	A	B	C	D	E
Cupressaceae					
<u>Chamacyparis nootkatensis</u>		2	2		
<u>Juniperus communis</u>		1			
<u>Thuja plicata</u>			1	2	
Graminae					
* <u>Agrostis aequivalvis</u>		2	1		
* <u>Calamagrostis</u> sp.	2				
Cyperaceae					
* <u>Carex obnupta</u>			1		
<u>C. pauciflora</u>			2		
<u>C. phyllomanica</u>			1		
<u>C. pluriflora</u>			1		
<u>Eriophorum angustifolium</u>		2			
<u>Scirpus cespitosus</u>		2			
* <u>S. subterminalis</u> L.					2
Araceae					
<u>Lysichiton americanum</u>			1		
Juncaceae					
<u>Juncus oreganus</u>					2
Liliaceae					
<u>Fritillaria camschatcensis</u>	2				
<u>Maianthemum dilatatum</u>			1	1	
<u>Streptopus amplexifolius</u>	1		1	1	
<u>Tofieldia glutinosa</u>		1			
<u>Veratrum eschscholtzii</u>			2		

	A	B	C	D	E
Iridaceae					
* <u>Sisyrinchium littorale</u>	1				
Orchidaceae					
<u>Listera caurina</u>				1	
<u>L. cordata</u>				2	
Betulaceae					
<u>Alnus crispa</u>	2	1	1		
Carophyllaceae					
* <u>Sagina maxima</u>	2				
Nymphaceae					
<u>Nuphar luteum</u> ssp. <u>polysepalum</u>					2
Ranunculaceae					
<u>Aquilegia formosa</u>	1				
<u>Coptis asplenifolia</u>		1	2		
<u>Ranunculus occidentalis</u>	1				
Droseraceae					
<u>Drosera rotundifolia</u>	1	1			
Crassulaceae					
* <u>Sedum roseum</u>	2				
Saxifragaceae					
<u>Tiarella trifoliata</u>				1	
Rosaceae					
* <u>Amelanchier florida</u>			1		
** <u>Geum</u> sp.		1			
* <u>Luetkea pectinata</u>		2			
<u>Potentilla villosa</u>	2				

	A	B	C	D	E
<u>Pyrus fusca</u>	1				
<u>Rubus chamaemorus</u>		1			
<u>R. pedatus</u>			2		
<u>Sanguisorba officianalis</u> <u>ssp. microcephala</u>		1			
Callitrichaceae					
<u>Callitriche heterophylla</u> <u>ssp. bolanderi</u>					2
Empetraceae					
<u>Empetrum nigrum</u>		2			
Cornaceae					
<u>Cornus unalaschkensis</u>		2	1		
Pyrolaceae					
<u>Monesis uniflora</u> ssp. <u>reticulata</u>				2	
Ericaceae					
<u>Andromeda polifolia</u>		2			
* <u>Cassiope lycopodioides</u> ssp. <u>crispilosa</u>	2	2			
<u>Gaultheria shallon</u>	2		2		
<u>Kalmia polifolia</u>		2			
<u>Ledum palustre</u> ssp. <u>groenlandicum</u>	1	2	2		
<u>Loiseleuria procumbens</u>		2			
<u>Menziesia ferruginea</u>			2	2	
<u>Vaccinium alaskense</u>			2		
<u>V. caespitosum</u>		2			
<u>V. oxycoccus</u>		2			

	A	B	C	D	E
<u>V. parvifolium</u>			1	2	
<u>V. uliginosum</u>		2			
<u>V. vitus-idaea</u>			1		
Primulaceae					
<u>Dodecatheon jeffreyi</u>		2			
<u>Trientalis europaea</u>	1	1			
Gentianaceae					
<u>Gentiana douglasiana</u>		2			
Menyanthaceae					
<u>Fauria crista-galli</u>		2			
* <u>Menyanthes trifoliata</u>					2
Lentibulariaceae					
* <u>Pinguicula vulgaris</u> ssp. <u>macroceras</u>	2	2	1		
* <u>Utricularia intermedia</u> (?)					2
<u>U. vulgaris</u>					1
Plantaginaceae					
* <u>Plantago maritima</u>	2				
Rubiaceae					
<u>Linnaea borealis</u> ssp. <u>longiflora</u>			1		
<u>Lonicera involucrata</u>			1		
Campanulaceae					
<u>Campanula alaskana</u>	2				

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
Compositae					
<u>Anaphalis margaritaceae</u>	1				
<u>Apargidium boreale</u>		2			
* <u>Erigeron peregrinus</u>	2	2			
<u>Prenanthes alata</u>	2				
* <u>Senecio cymbalaroides</u> ssp. <u>moresbiensis</u>		1			

ATHLOW BAY

GRAHAM PRO



53° 35'

132° 55'