

ORIGINAL PURPOSE To protect one of the few known occurrences of adder's-tongue fern in British Columbia

OVERVIEW

Date established:	4 May 1978	Location:	Beside Highway 4 in Sutton Pass, 25 km W of Port Alberni
ORC #:	3090	Latitude:	49°16'N
Map number:	92 H/3	Longitude:	125°21'W

Total Area:	5 ha	Elevation:	215-235 m
Land:	4 ha		
Lake:	1 ha		

Access: Access via Highway 4.

Biogeoclimatic Zone: Coastal Western Hemlock (CWH)
Biogeoclimatic Variants: CWHmm1 Submontane Moist Maritime; CWHvm1 Submontane Very Wet Maritime
Ecosections: Leeward Island Mountains; Windward Island Mountains
Region: Vancouver Island
Management Area: Arrowsmith

COMPOSITION

Physical: The reserve lies in a narrow valley bottom in a pass between the Taylor and Kennedy river drainages, surrounded by peaks of the Vancouver Island ranges. A small pond dammed by an ancient rockslide lies near the middle of the reserve, and is subject to pronounced seasonal variations in water level and areal extent. It is normally lowest in late summer, when much bare gravel and mud may be exposed, but even then can rise considerably in response to heavy rainfall.

Biological: The reserve contains typical western hemlock-western redcedar forest and associated plants, as well as areas logged and/or cleared for the highway right-of-way, but the plant associations of greatest interest are the herb and shrub types which occur as concentric rings around most of the pond. It is here that the strange unfernlike adder's-tongue fern, with its snake-like fruiting parts and tiny netveined leaves may be found.

Herbaceous communities between the pond edge and shrub zone are dominated by a mosaic of aquatic sedges and spear-leaved buttercup, by adder's-tongue fern, by slough sedge or by tufted hairgrass. Plants commonly growing with the adder's-tongue fern are marsh violet, spear-leaved buttercup, marsh speedwell and St. John's-wort. The shrubby zone between the herbaceous community and the forest is dominated by willows.

The adder's-tongue fern occurs mainly on moist sites at the margin of the shrub zone. Fluctuations in the pond level are probably critical for maintaining the herbaceous zone and preventing shrubs from advancing. This action allows small herbs adapted to seasonal flooding, like the adder's-tongue fern, to survive with

minimal competition for light.

MANAGEMENT CONCERNS

SIGNIFICANT SPECIES	BC LIST STATUS	COSEWIC STATUS	CF PRIORITY
alpine anemone	Blue listed		3
corrupt spleenwort	Blue listed		2
northern adder's-tongue	Blue listed		3
smooth willowherb	Blue listed		3

THREATS

Climate Change:

With precipitation projected to increase, adder's-tongue fern may do well, as it is adapted to moist areas, and protected from shrub-colonization due to the periodic flooding of the pond. Future temperatures, though, may be too high to prolong the presence of necessary moisture and to continue flooding the pond.

RESEARCH OPPORTUNITIES

One of only four or five known British Columbia localities of the adder's-tongue fern is in this reserve.

SCIENTIFIC NAMES OF SPECIES MENTIONED IN THE SUTTON PASS ER ACCOUNT

Flora

adder's-tongue, northern (*Ophioglossum pusillum*)

anemone, alpine (*Anemone drummondii* var. *drummondii*)

hairgrass, tufted (*Deschampsia cespitosa*)

hemlock, western (*Tsuga heterophylla*)

redcedar, western (*Thuja plicata*)

sedge, slough (*Carex obnupta*)

speedwell, marsh (*Veronica scutellata*)

spleenwort, corrupt (*Asplenium adulterinum*)

St. John's-wort, western (*Hypericum scouleri*)

violet, marsh (*Viola palustris* var. *palustris*)

willowherb, smooth (*Epilobium glaberrimum* ssp. *fastigiatum*)

Fauna

None mentioned