

MISTY LAKE

ER #140

ORIGINAL PURPOSE To protect the habitat of the endemic Misty Lake “Lake” Stickleback and provide opportunities for biological research.

OVERVIEW

Date established:	30 April 1996	Location:	12 km NW of Port McNeill
Date amended (boundary revision):	20 May 2004	Latitude:	50°35'N
ORC #:	9744	Longitude:	127°15'W
Map number:	92 L/11		
Total Area:	73 ha	Elevation:	200 m
Land:	73 ha		

Access: Access via the N side of the Island Hwy, 3 km E of the Port Alice road junction.

Biogeoclimatic Zone: Coastal Western Hemlock (CWH)
Biogeoclimatic Variant: CWH vm 1 Submontane Very Wet Maritime
Ecosection: Nahwitti Lowland
Region: Vancouver Island
Management Area: Cape Scott

COMPOSITION

Physical: Misty Lake Ecological Reserve is situated in a forested landscape typical of the Nahwitti lowland. The land is poorly drained through a network of small streams and wetlands flowing to the Keogh River. The reserve includes all of Misty Lake, sections of the inlet and outlet streams and a portion of the riparian forest surrounding the lake. The lake is shallow (maximum depth of 6.7 metres) oligotrophic and turbid due to organic staining.

Biological: The lake is surrounded by forest land of mostly western redcedar and hemlock, with some scattered shore pine. Stands to the south, west and north are in various stages of succession after logging. The small forested belt included in the reserve on the east side of the lake has old growth characteristics.

Misty Lake contains the endemic Misty Lake stickleback, a highly divergent parapatric (adjacent to) lake-stream pair of threespine stickleback. Other species of fish found in this lake include: Cutthroat Trout, Coho Salmon, Dolly Varden, Prickly Sculpin, Rainbow Trout.

MANAGEMENT CONCERNS

SIGNIFICANT SPECIES	BC LIST STATUS	COSEWIC STATUS	CF PRIORITY
Misty Lake Stickleback	Red listed	Endangered (2006)	1

THREATS

Climate Change:	Changes in the lake's water temperature, levels, and overall quality, resulting from changes in hydrology and surface temperature, may impact the stickleback's spawning success, as they are dependent on littoral areas during the spawning season.
Forestry:	Insufficient buffer zone increases wind-throw risk within reserve.
Transportation corridor:	A highway rest stop is located inside the reserve and results in damaged aquatic vegetation and sedimentation.

RESEARCH OPPORTUNITIES	The reserve is an ideal site for studies in parallel evolution, the Misty Lake Stickleback, and other similarly divergent species of threespine stickleback found on Haida Gwaii, Queen Charlotte Islands.
-------------------------------	--

ER WARDEN ACTIVITIES	<ul style="list-style-type: none"> • Monitor/report illegal activities where observed • Survey fauna present in ER • Identify and map distribution of aquatic plants • Monitor for invasive species (control or eradicate where possible)
-----------------------------	---

SCIENTIFIC NAMES OF SPECIES MENTIONED IN THE MISTY LAKE ER ACCOUNT

Flora

hemlock (*Tsuga sp.*)
 pine, shore (*Pinus contorta var. contorta*)
 western redcedar (*Thuja plicata*)

Fauna

Dolly Varden (*Salvelinus malma*)
 Salmon, Coho (*Oncorhynchus kisutch*)
 Sculpin, Prickly (*Cottus asper*)
 Stickleback, Misty Lake "Lake" (*Gasterosteus sp. 18*)
 Stickleback, Threespine (*Gasterosteus aculeatus*)
 Trout, Rainbow (*Oncorhynchus mykiss*)
 Trout, Cutthroat *clarkii* subspecies (*Oncorhynchus clarkii clarkii*)