

**ORIGINAL PURPOSE** To protect a population of the very rare Austin's phantom orchid

#### OVERVIEW

<b>Date established:</b>	10 Dec. 1986	<b>Location:</b>	Thornton Road, 3 km SE of Vedder Crossing
<b>ORC #:</b>	3116		
<b>Map number:</b>	92 H/4	<b>Latitude:</b>	49°05'N
		<b>Longitude:</b>	121°56'W

<b>Total Area:</b>	3 ha	<b>Elevation:</b>	300 m
<b>Land:</b>	3 ha		

**Access:** Access by road from Vedder Crossing

**Biogeoclimatic Zone:** Coastal Western Hemlock (CWH)  
**Biogeoclimatic Variant:** CWH dm CWH Dry Maritime  
 CWH xm1 CWH Eastern Very Dry Maritime  
**Ecosection:** Fraser Lowland  
**Region:** Lower Mainland  
**Management Area:** South Fraser

#### COMPOSITION

**Physical:** The reserve is located on a ridge formed by remnants of a major body of inter- and post-glacial outwash. The southern one third has steep, eroding slopes facing the Chilliwack River valley and the remainder slopes gently towards the Fraser Valley to the north. Surface soils are loamy and rich.

**Biological:** This small reserve contains second-growth red alder-bigleaf maple forest with paper birch and bitter cherry occurring occasionally. In the southern portion a few coniferous trees project above the deciduous tree canopy. Vine maple is present. The orchids occupy a variety of forest and forest-margin habitats in the northern, gently sloping two thirds of the reserve.

The phantom orchid is very likely the rarest orchid in British Columbia and among the rarest of plants in all of Canada. The term phantom is indeed descriptive of this plant which is rare throughout its range, has ghost-like white blooms, and shows inexplicable variations in abundance in any one area. In B.C., this species is known to occur only at a few sites in the Fraser Valley, and on Salt Spring Island. The fleshy roots, bract-like leaves, stems, and blooms, except for a touch of yellow at the centre of each flower, are all waxy white. Within the reserve, records kept by the late Mrs. Katherine Tye show that between 1964 and 1978 the orchid population varied from none (one year) to over 100, with an average of about 35 plants per year.

**Cultural** Phantom orchid at this site were discovered by Mrs. Tye in 1964 and watched over carefully by her until her death in 1987. The reserve consists of lands donated by Mrs. Tye and additional land purchased by the Nature Trust of British Columbia.

## MANAGEMENT CONCERNS

SIGNIFICANT SPECIES	BC LIST STATUS	COSEWIC STATUS	CF PRIORITY
phantom orchid	Red listed	Threatened (2000)	2
Oregon Forestsnail	Red listed	Endangered (2002)	1
fox sedge	Blue listed		2

## THREATS

<b>Climate Change:</b>	The phantom orchid is extremely rare, and since blooming only occurs in specific conditions, novel conditions as a result of climate change may affect the distribution, life history and/or reproductive success of the orchid.
<b>Loss of species-at-risk:</b>	The reserve did not preserve all of the population of the phantom orchid and the areas adjacent to the reserve no longer have orchids present.
<b>Non-native species:</b>	Spread of Chervil weed could impact the orchid population.
<b>Urban and/or rural development:</b>	Two sides of the reserve are surrounded by residential development, increasing ease of access.

## RESEARCH OPPORTUNITIES

Baseline information on the phantom orchid is found in an article by Ron Long in *Davidsonia*, 10(2): 30-33.

## ER WARDEN ACTIVITIES

- Monitor/report illegal activities where observed
- Survey fauna present in ER
- Monitor for invasive plants (control or eradicate where possible)

## SCIENTIFIC NAMES OF SPECIES MENTIONED IN THE KATHERINE TYE (VEDDER CROSSING) ER ACCOUNT

### Flora

alder, red (*Alnus rubra*)  
birch, paper (*Betula papyrifera* var. *commutata* and var. *papyrifera*)  
cherry, bitter (*Prunus emarginata*)  
maple, bigleaf (*Acer macrophyllum*)  
maple, vine (*Acer circinatum*)  
orchid, phantom (*Cephalanthera austinae*)  
sedge, fox (*Carex vulpinoidea*)

### Fauna

Forestsnail, Oregon (*Allogona townsendiana*)