

OAK BAY ISLANDS

ER #94

ORIGINAL PURPOSE To protect vulnerable nesting seabirds, uncommon meadow communities showy and rare early spring wildflowers, and representative shallow-water marine habitats

OVERVIEW

Date established:	26 July 1979	Location:	The reserve has three units, the largest (Great Chain Island and Chain Islets) being 2 km E of Oak Bay;
Date amended (boundary expansion):	28 March 1991		Jemmy Jones Island is 2.5 km N of Great Chain Island in Baynes Channel; Alpha Island, part of the Chatham-Discovery Group, is 5.5 km E of Oak Bay
ORC #:	3094		
Map number:	92 B/6	Latitude:	48°25'N
Marine chart number:	3423	Longitude:	123°16'W

Total Area:	232 ha	Elevation:	-9-15 m
Land:	11 ha		
Marine:	221		

Access: Accessible by boat.

Biogeoclimatic Zone:	Coastal Douglas-Fir (CDF)
Biogeoclimatic Variant:	CDFmm Moist Maritime
Ecosection:	Strait of Georgia
Region:	Vancouver Island
Management Area:	Saanich/Southern Gulf Islands

COMPOSITION

Physical: Islands and islets comprise about seven ha of the reserve, the remainder being subtidal. The islands are low, rounded and composed of Saanich grano-diorite bedrock. The three largest islands have a mantle of marine glacial drift upon which thin soils have developed, those in meadow situations being of sandy loam texture. Bedrock exposures are common and predominate around the shorelines. Shoreline features include a few steep faces, rocky outcrops, boulders, crevices, wave-cut chasms and small gravel beaches. At least 30 exposed rocky reefs occur in the Chain Islets area. Significant climatic features are frequent strong winds and a cool-summer Mediterranean climate.

Biological: The islands are treeless. The three largest, particularly Great Chain and Alpha, support a fairly continuous herbaceous cover, interrupted occasionally by shrub thickets and bedrock outcrops. Eight vegetation types have been described, their distribution being primarily determined by distance from shore, soil depth and moisture regime. Shrub stands dominated by baldhip rose and tall Oregon-grape occupy sheltered inland locations. Prominent species in meadows are the great camas, bracken, dune wildrye, fern-leaved desert-parsley and western buttercup. Also present is a vernal sward dominated by silver and early hairgrass, field chickweed and clover. Lance-leaved

stonecrop, early hairgrass and prickly-pear cactus occur on soil pockets between rock outcrops and sea plantain, entire-leaved gumweed and thrift are found on rock outcrops receiving salt spray. The lichens *Xanthoria candelaria*, *Parmelia conspersa* and *Ochrolechia* spp. form an association on bare rock. Another lichen, *Haemotoma lapponicum*, is very rare. Local sites enriched by river otter and seabird droppings and food remains have distinctive plant species.

Sixty-three species of vascular plants have been recorded on Alpha Island, an area of less than one ha. Of those, at least 18 are in bloom by mid-April, among them showy stands of camas, golden paintbrush, sea blush and chocolate lily. Many plants listed as rare in British Columbia occur in the reserve, the more prominent being golden Indian paintbrush, California buttercup and snakeroot sanicle.

Intertidal communities are typical of the Victoria area; barnacles and seaweeds of the genera *Enteromorpha* and *Fucus* are common. The extensive subtidal area has not been studied, but species occurrence is probably similar to nearby Ten Mile Point Ecological Reserve.

Great Chain Island is one of the three largest seabird rookeries in the Gulf of Georgia, recently supporting nearly 600 pairs of double-crested cormorants, 400 pairs of pelagic cormorants and over 5000 pairs of glaucous-winged gulls. Double-crested cormorants were not known to nest here prior to 1976 and pelagic cormorants have steadily increased from the 70 pairs counted in 1960 to a total of over 2000 individuals. A few pigeon guillemots and black oystercatchers also nest. Song sparrows are common land birds and nest in shrub stands. A variety of marine birds occur seasonally among the reefs and islands. About 50 harbour seals regularly haul out in summer, mainly on the smaller reefs. Mink and river otter occur; other land mammals are apparently absent.

Cultural: This area was traditional bulb harvesting territory of the Songhees First Nations.

MANAGEMENT CONCERNS

SIGNIFICANT SPECIES	BC LIST STATUS	COSEWIC STATUS	CF PRIORITY
baldhip rose			6
beach sand-spurry			4
Black Oystercatcher			5
bracken fern			2
Brandt's Cormorant	Red listed		1
brittle prickly-pear cactus			6
California buttercup	Red listed	Endangered (2008)	1
chocolate lily			6
Dall's Porpoise		Not At Risk (1989)	4
Double-crested Cormorant	Blue listed	Not At Risk (1978)	4

THREATS

Climate Change:	These small, low-lying islands may be subject to habitat loss due to the raised sea levels and increased storm activity that is projected to occur. Raised sea surface temperature is also projected to occur, and may affect the life cycles of marine life, subsequently affecting the life cycles and reproductive success of the protected seabird populations.
Geological processes:	Natural wave action is eroding the shoreline features and First Nation's shell middens.
Non-native species:	Aggressively invasive carpet burweed is predicted to occur.
Recreation:	Marine vessels and people engaging in wildlife viewing disrupt the marine mammal and bird behaviour due to noise and proximity.
Transportation:	There is a threat of an oil spill from tankers and cargo ships travelling in the shipping lane.

RESEARCH OPPORTUNITIES

Gull population dynamics have been studied on Great Chain Island by staff of the British Columbia Provincial Museum. Reports are available on cormorant surveys at Chain Islands and on the vegetation of Alpha Island. Surveys of marine life are needed.

SCIENTIFIC NAMES OF SPECIES MENTIONED IN THE OAK BAY ISLANDS ER ACCOUNT

Flora

burweed, carpet (*Soliva sessilis*)
buttercup, California (*Ranunculus californicus*)
buttercup, western (*Ranunculus occidentalis* var. *occidentalis*)
cactus, brittle prickly-pear (*Opuntia fragilis*)
camas, great (*Camassia leichtlinii* ssp. *suksdorfii*)
chickweed, field (*Cerastium arvense*)
desert-parsley, fern-leaved (*Lomatium dissectum*)
fern, bracken (*Pteridium aquilinum*)
gumweed, Puget Sound (*Grindelia integrifolia*)
hairgrass, early (*Aira praecox*)
hairgrass, silver (*Aira caryophyllea*)
lichen (*Xanthoria candelaria*)
lichen (*Haemotoma lapponicum*)
lichen (*Ochrolechia* spp.)
lichen (*Parmelia conspersa*)
lily, chocolate (*Fritillaria affinis*)
Oregon-grape, tall (*Mahonia aquifolium*)
paintbrush, golden (*Castilleja levisecta*)
plantain, sea (*Plantago maritima* ssp. *juncooides*)
rose, baldhip (*Rosa gymnocarpa*)
sand-spurry, beach (*Spergularia macrotheca* ssp. *macrotheca*)
sanicle, snake-root (*Sanicula arctopoides*)
seablush (*Plectritis congesta*)

stonecrop, lance-leaved (*Sedum lanceolatum*)
thrift (*Armeria maritima*)
wildrye, dune (*Leymus mollis* ssp. *mollis*)

Fauna

Cormorant, Brandt's (*Phalacrocorax penicillatus*)
Cormorant, Double-crested (*Phalacrocorax auritus*)
Cormorant, Pelagic (*Phalacrocorax pelagicus*)
Guillemot, Pigeon (*Cepphus columba*)
Gull, Glaucous-winged (*Larus glaucescens*)
Mink, American (*Neovison vison*)
Otter, Northern River (*Lontra canadensis*)
Oystercatcher, Black (*Haematopus bachmani*)
Porpoise, Dall's (*Phocoenoides dalli*)
Seal, Harbour (*Phoca vitulina*)
Sparrow, Song (*Melospiza melodia*)