

January 30 2014 – Baynes Island Ecological Reserve site visit report

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A monitoring visit was organized to coincide with low water levels and the eagle season. We had a good turnout with dry overcast weather. Thanks so much to BC Parks: Kendra Wood, Senior Ranger and Katy Chambers, Area Supervisor, and Quest co-op student Jake Smith; BC Ministry of Forests Lands and Natural Resource Operations Murray Watts and Don Petrocco; Jim from Squamish Search And Rescue (SAR) our captain, and the generous donation of the boat and volunteer time.



Baynes Island Ecological Reserve boundary (in orange shading) and aerial image.

Integrity and condition of the protected area

One objective of the visit was to determine whether the boundary of the island still was within the protected area boundary, which it was for the most part. Changes due to river fluctuations, erosion and deposition indicated that the east and north part of the island could be connected to Tantalus Provincial Park adjacent and upland during very low water levels, that over time the channel between the east and west sections of Baynes Island ER was widening, and vegetated sections of the island may end up outside the PA boundary in the south and east eventually as alluvial material gets deposited. The channel of the Squamish River that bisects Baynes Island continues to erode substantial sections of the land and there is a large log jam comprised of many medium to large logs. The very high water levels of 2003 were thought to have contributed significantly. There are large areas of cobble and gravel beach, especially at low water.



Log jam formed by erosion on the west bank of the eastern section of Baynes Island ER

Ecosystems and condition

The ER is on record as having significant black cottonwood stands that were of interest and this was a major reason for its establishment. Currently, there are some large individuals and groves of cottonwood, but they do not comprise a dominant or even a substantial part of the ecology of the island today. There are other large broadleaf trees that form part of a dynamic mixed ecosystem, including red alder and bigleaf maple – alder is especially common and regeneration is abundant. There are patches throughout of conifers, and there are germinants, seedlings and saplings of western redcedar, grand fir, Sitka spruce, western hemlock, and scattered Douglas-fir throughout the island. There were a few very large western redcedar (~2 m diameter).

The island is in good condition ecologically, has no signs of human damage, and supports several ecosystem types characterized by different plant associations, structural condition, and proportions of species. The western section of the island has more contiguous upland-type cover of mature conifers and is less obviously disturbed by floodplain dynamics.

Two invasive species were observed, and would be easy to eradicate with little effort: there were a few vines of himalayan blackberry near the beaver pond on the west part of the island, and sporadic observations of Canada thistle, both of which are common colonizers of disturbed areas.



Large cottonwood tree



Open mixed forest with shrubby understory

Wildlife use

Don Petrocco did a bird survey and compiled a species list (see appendix). Other volunteers observed and documented signs of other wildlife (see appendix). The resident Roosevelt elk herd was apparent, as were signs of severe cedar browse by blacktail deer. Bear had made claw marks up the boles of trees, and wolf tracks and scat were evident on the sandy beaches. A substantial beaver dam created a pond at the lower reaches of a creek on the western part of the island. There were numerous bald eagles perching on mature trees, and a resident great blue heron was actively defending its territory.

Plant species

Winter isn't really the ideal time to survey for plants, but we still collected an inventory of whatever species could be identified with certainty, thanks to Kendra Wood for data collection. Returning later in the year should provide a more comprehensive list.



Bear claw marks on alder tree



Beaver dam



The Squamish River looking downstream from Baynes Island ER

Appendix – species inventory January 30 2014

Trees & tall shrubs

grand fir	<i>Abies grandis</i>
vine maple	<i>Acer circinatum</i>
bigleaf maple	<i>Acer macrophyllum</i>
red alder	<i>Alnus rubra</i>
Sitka spruce	<i>Picea sitchensis</i>
black cottonwood	<i>Populus trichocarpa</i> syn. <i>Populus balsamifera</i> ssp. <i>trichocarpa</i>
Douglas-fir	<i>Pseudotsuga menziesii</i>
cascara	<i>Rhamnus purshiana</i>
Scouler willow	<i>Salix scouleriana</i>
western redcedar	<i>Thuja plicata</i>
western hemlock	<i>Tsuga heterophylla</i>

Shrubs

red osier dogwood	<i>Cornus stolonifera</i>
devil's club	<i>Oplopanax horridus</i>
salmonberry	<i>Rubus spectabilis</i>

Herbaceous Plants

pussytoes	<i>Antennaria</i> sp.
spleenwort	<i>Asplenium</i> sp.
springbeauty / wild potato	<i>Claytonia lanceolata</i>
bleeding heart	<i>Dicentra formosa</i>
fireweed	<i>Epilobium angustifolium</i>
scouring rush	<i>Equisetum fluviatile</i>
large leaved avens	<i>Geum macrophyllum</i>
common rush	<i>Juncus effusus</i>
wall-lettuce	<i>Lactuca muralis</i>
small-flowered wood rush	<i>Luzula (probably) parviflora</i>
reed canary grass	<i>Phalaris arundinacea</i>
small-flowered bulrush	<i>Scirpus microcarpus</i>

Ferns and fern-allies

maidenhair fern	<i>Adiantum pedatum</i>
lady fern	<i>Athyrium filix-femina</i>
licorice fern	<i>Polypodium glycyrrhiza</i>
sword fern	<i>Polystichum munitum</i>

Mosses & Lichens

Oregon beaked moss	<i>Eurhynchium oregonum</i>
slender beaked moss	<i>Eurhynchium praelongum</i>
hypnum moss	<i>Hypnum circinale</i>
cat's tail moss	<i>Isothecium stoloniferum</i>
palm tree moss	<i>Leucolepis menziesii</i>
pelt lichen	<i>Peltigera</i> sp.
red-stemmed feathermoss	<i>Pleurozium schreberi</i>

Juniper haircap moss	<i>Polygonum juniperum</i>
knight's plume moss	<i>Ptilium crista-castrensis</i>
rock moss	<i>Racomitrium</i> sp.
lanky moss	<i>Rhytidiadelphus loreus</i>
Methuselah's beard	<i>Usnea longissima</i>

Invasive plants

Canada thistle	<i>Cirsium arvense</i>
Himalayan blackberry	<i>Rubus discolor</i>

Mammals

wolf (tracks, sign)	<i>Canis lupus</i>
beaver (dam, cut trees)	<i>Castor canadensis</i>
Roosevelt elk (tracks, rub trees, sign)	<i>Cervus canadensis roosevelti</i>
blacktail deer (browse, sign)	<i>Odocoileus hemonius hemonius</i>
black bear (rub trees, claw marks ~2.5 m up trunk)	<i>Ursus americanus</i>

Birds

Great Blue Heron (territorial resident)	<i>Ardea herodias</i>
Bufflehead	<i>Bucephala albeola</i>
Common Goldeneye	<i>Bucephala clangula</i>
Brown Creeper	<i>Certhia americana</i>
American Dipper	<i>Cinclus mexicanus</i>
American crow	<i>Corvus brachyrhynchos</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
glaucous-winged gull	<i>Larus glaucescens</i>
Hooded Merganser	<i>Lophodytes cucullatus</i>
Common Merganser	<i>Mergus merganser</i>
Kinglet	<i>Regulus</i> sp.
Woodpecker (sign)	??