

The Pacific Flyway

The north-south routes migrating birds follow along the west coast of North and South America are referred to collectively as the Pacific Flyway.

Boundary Bay, a major stop over in the spring and fall, can count 50 different species of shorebirds numbering in the hundreds of thousands. To travel between wintering grounds in South or Central America and nesting areas north in the high Arctic, shorebirds, waterfowl and songbirds stop to rest and feed, gaining the energy and fat needed to fly to the next point which may be thousands of kilometres away.



Western Sandpiper

Did you know?

Much of the world's population of **Western Sandpiper** fly from the Yukon Delta to Boundary Bay making their way to wintering grounds in Panama Bay, Central America and as far south as Peru. Boundary Bay is famous for this tiny shorebird, which weighs just 25 gms and measures 10 cm long.

Rufous Hummingbirds fly between Mexico and BC, moving north with the flowering red currant in spring. Some continue as far as southern Alaska. Hummingbirds can travel 50 km in a day, for a distance of over 2000 km each way.



BirdLife International initiated the Important Bird Area Program to identify, protect and monitor a network of vital habitats for conservation of bird populations and biodiversity worldwide. The IBA Program is now in 200 countries with 11,000 designated IBAs.

IBA site designation is scientific rather than legal and does not concur with formal boundaries. Strict scientific criteria must be met for a site to be listed on the IBA database. 600 sites have been designated in Canada and of 271 sites nominated in British Columbia, 84 have been approved as Important Bird Areas.

The Western Hemisphere Shorebird Reserve Network designated the Fraser River estuary as a "Site of Hemispheric Importance" in 2004, one of an international series of protected areas linking key sites for shorebirds.

Monitoring and Research is essential to determine whether sites are providing healthy habitat for birds and if bird populations remain stable. The Canadian Wildlife Service and Simon Fraser University conduct studies on Western Sandpiper, Dunlin, Harlequin Duck, Snow Geese and Brant.

Local Community Involvement: Friends of Semiahmoo Bay Society leads the Birds on the Bay program, stewards nest boxes and conducts habitat surveys and restoration projects in Boundary Bay. Local birders participate in the Breeding Bird Survey, Beached Bird Survey, Christmas Bird Count, Nocturnal Owl Survey and Raptor counts.



www.birdsonthebay.ca

RESOURCES

- American Birding Association www.americanbirding.org
- BC Field Ornithologists www.bcfo.ca
- BC Nature www.bcnature.ca
- Bird Life International www.birdlife.org
- Bird Studies Canada www.bsc-eoc.org
- Centre for Wildlife Ecology <http://www.sfu.ca/biology/wildberg/>
- Cornell Lab of Ornithology www.birds.cornell.edu
- Georgia Basin Habitat Atlas www.georgiabasin.net
- Important Bird Areas of Canada www.ibacanada.ca
- Bird Life International www.birdlife.org
- National Audubon Society www.audubon.org
- Nature Vancouver www.naturevancouver.ca
- North Cascades Audubon Society www.northcascadesaudubon.org
- Reifel Migratory Bird Sanctuary www.reifelbirdsantuary.com
- Western Hemisphere Shorebird Reserve Network www.manomet.org/WHSRN/
- Wild Bird Trust of BC www.wildbirdtrust.org



Friends of Semiahmoo Bay Society is a non-profit, stewardship group working in conservation, education and restoration in Boundary Bay and the Fraser River delta. You can be involved, register to volunteer at www.birdsonthebay.ca.

Thank you Project Partners, Sponsors and Community Volunteers. Together we can make a real difference.

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BOUNDARY BAY A Special Place



Great Blue Heron

CANADA'S TOP RATED
IMPORTANT BIRD AREA

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BOUNDARY BAY, Sturgeon Bank and Robert's Bank make up the Fraser River Estuary Important Bird Area, officially designated in October 2001. As the top rated IBA in Canada (Important Bird Area BC017), it exceeds global, continental and national standards for the diversity and numbers of birds supported.

Key species found in Boundary Bay that meet IBA criteria are: Western Grebe, Red-necked Grebe, Great Blue Heron ssp. *fannini*, Trumpeter Swan, Snow Goose, Northern Pintail, American Wigeon, Mallard, Black-bellied Plover, Western Sandpiper, Dunlin, Glaucous-winged Gull and Barn Owl.



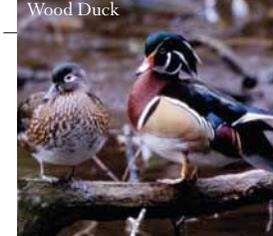
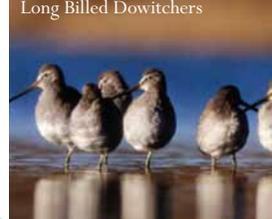
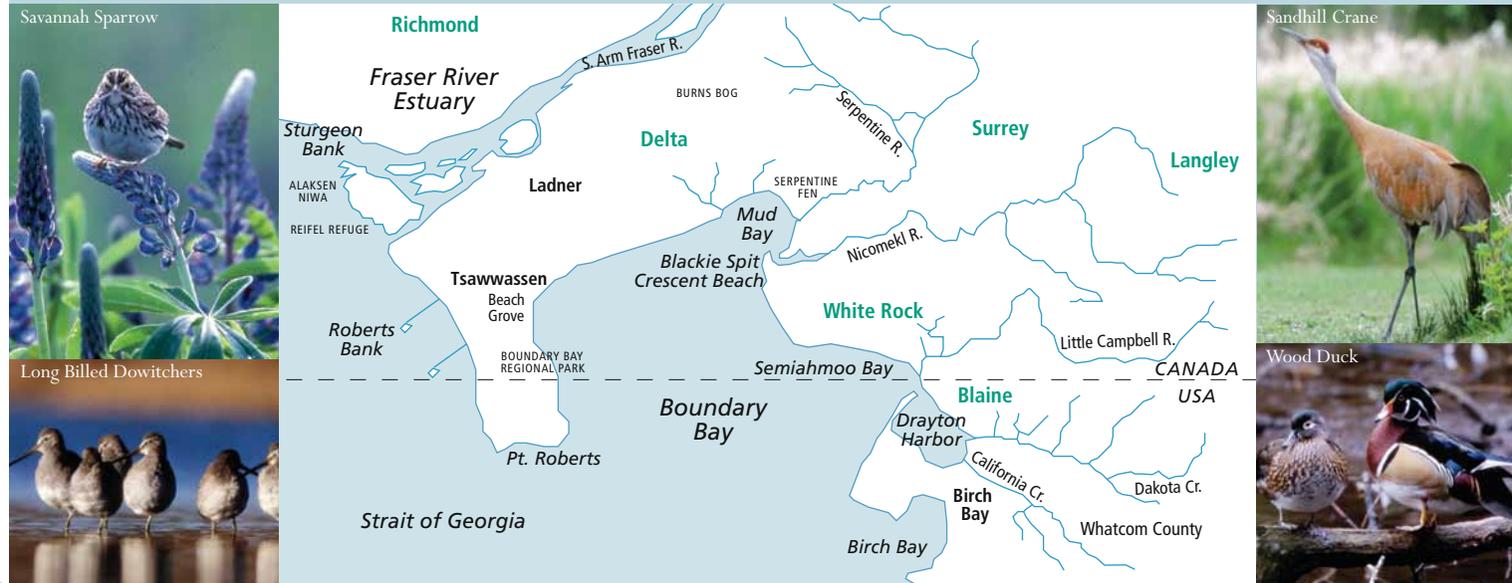
Hooded Merganser

Why so special?

The Fraser River Estuary is habitat to millions of birds migrating along the Pacific Flyway.

- The Estuary and adjacent uplands support over 333 different species of birds.
- It supports one of Canada's highest numbers and diversity of wintering waterfowl, more than 100,000 utilize Boundary Bay with an additional estimated 50,000 Brant.
- Boundary Bay supports one of Canada's largest winter populations of raptors with 22 species recorded. Raptors are attracted to populations of voles and wintering songbirds utilizing the grasslands and salt marshes of the Bay.
- A key Canadian nesting population of Barn Owls is concentrated in the Fraser River Delta. Notable heronries of Great Blue Heron ssp. *fannini* are adjacent to Boundary Bay.
- 18 species of gulls are recorded in Boundary Bay.

BOUNDARY BAY and WATERSHED



Facts about Boundary Bay

Boundary Bay's **four major habitat zones** include expansive eelgrass beds, mudflats and salt marshes that provide habitat to a myriad of macro-algae, epiphytic micro-algae, marine invertebrates and fish that in turn feed many species. Deep waters beyond low tide provide habitat for birds, fish and marine mammals.

Boundary Bay's watershed includes **rare and endangered ecosystems** – Coastal Douglas-fir forest and a wet domed peat bog. Important but threatened natural habitats are mixed conifer/deciduous forests, old fields, hedgerows, farmland, wetlands, wild salmon and nutrient bearing streams and estuaries.

Dozens of **bird species** can be seen in deep waters and along the rocky shore feeding on fish, crab, mussels and other marine life.

Eelgrass beds form the rich food base for fish, shellfish and waterfowl in shallow waters. Waterfowl and shorebirds feed on the many sea invertebrates and eggs attached to the ribbon like leaves and the eelgrass blades themselves.

The **mud flats and beaches** have over 130 different micro organisms that shorebirds probe for with their long beaks. **Sandy gravel beaches** are critical spawning habitat for 'forage fish'; at high tide sand lance and surf smelt swim in and lay their eggs.

Little of the **original salt marshes** remain in Boundary Bay due to dyking. They occur where marine waters wash the shores of the

bay and special salt tolerant plants, such as salicornia, arrowgrass and saltgrass are found. Invasive English cordgrass, *Spartina anglica* now threatens the intertidal mud flats and remaining salt marshes.

The **estuaries** of Boundary Bay's many tidal rivers and creeks provide biologically rich habitat for wildlife. Watercourses are fringed by marshes with plants tolerant of the brackish water.

Upland forests provide important habitat for songbirds, woodpeckers, hawks and owls. During spring and fall, dozens of warblers migrate through the woodlands; songbirds from the mountains winter in pond side bushes.

Much of the **original freshwater marshes** of the Fraser Delta have been drained and dyked. Remaining cattail marshes are alive in spring with nesting birds.

In winter, **grassy fallow fields and flooded crop fields** substitute for original marshes. Thousands of waterfowl descend on the fields every winter. Voles populate old fields and are crucial food for wintering raptors. The shrubby hedgerows of the Fraser Delta are home to dozens of species of birds.

Burns Bog lies between the Fraser River and Boundary Bay. One third of the water in the bog drains into the bay and many shorebirds fly into the bog at high tide or in stormy weather. Greater Sandhill Cranes arrive to nest in the bog each year.

Is Boundary Bay protected?

Birds have migrated to Boundary Bay for 10,000 years to feed and rest during long journeys; others winter here. As remaining natural areas are developed, where will the birds go? Legal protection in the IBA is patchy. The Alaksen National Wildlife Area is officially designated a Ramsar Site, meaning it is a wetland of global importance. It includes the Reifel Migratory Bird Sanctuary. Boundary Bay and Sturgeon Bank have provincial protection as Wildlife Management Areas but currently are not designated by the provincial government as Ramsar sites although they meet the criteria -30 fold for waterfowl and 60 fold for shorebirds.



Short Eared Owl

What you can do to make a difference

- Birds need peace and quiet. Enjoy the beach away from the tidal area where the birds are feeding. If they are tired or hungry on their long journey they will fall into the sea and perish.
- Keep dogs on a leash and away from birds on mudflats, beaches and fields. Pick up your pets feces.
- Learn about healthy living with nature and ways to prevent pollution.
- Look but leave – shells, eelgrass, sea weed, drift wood; all contribute to the food web.
- Carry a bag and pick up litter when walking the beach.
- Learn about gardening for wildlife and how to help protect natural areas.
- Volunteer with a local stewardship group; you can make a difference.