

Is there a Wetland in your neighbourhood?



Wetlands are places where land and water meet. You'll find characteristics of both terrestrial and aquatic ecosystems in these "half-way" worlds.

Here's a cross section of some of the unique and important wetlands found in the Lower Fraser Valley.

1 Richmond Nature Park

Wetland type: bog

Importance:

- Unique plants, survivors of the ice age, are able to live in these acidic, nutrient-poor soils.

2 Boundary Bay

Wetland type: tidal flats and salt marsh

Importance:

- Extensive tidal flats, eelgrass beds, salt marshes, warm shallow waters and adjacent farmland are part of this wetland complex. It is an internationally significant feeding and resting area for migratory waterfowl. No other place in British Columbia supports as many migratory and wintering birds.

3 Widgeon Creek Valley

Wetland type: tidal freshwater marsh

Importance:

- Redheads and Ring-necked Ducks, uncommon in the Lower Mainland, are found here. This is the largest freshwater marsh in southwestern B.C.

4 Nicomen Slough

Wetland type: floodplain marsh

Importance:

- Trumpeter and Tundra Swans join other waterfowl in the Nicomen Island area each winter.

5 Fraser River - west of Laidlaw

Wetland type: cottonwood floodplain forest

Importance:

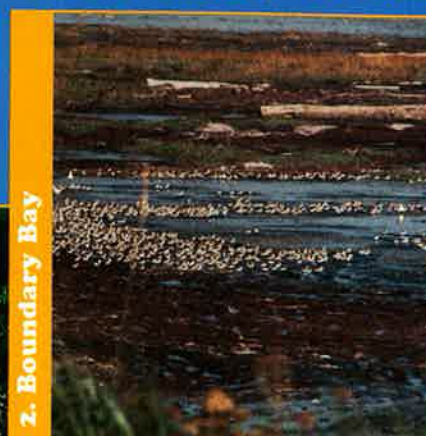
- Cottonwood trees that grow on gravel bars in the river provide nesting and roosting sites for eagles and other birds. Their roots help bind the soil and promote the development of stable islands.

For more information refer to Canadian Wildlife Service Technical Report No. 146, *Wetlands of the Fraser Lowland*, 1989; *An Inventory*. Ward P., Moore K., and Kistritz R. Pacific and Yukon Region 1992.

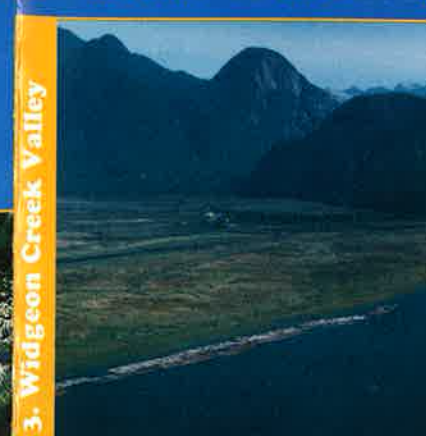
Lower Fraser Valley wetlands are home to millions of amazing plants and animals.



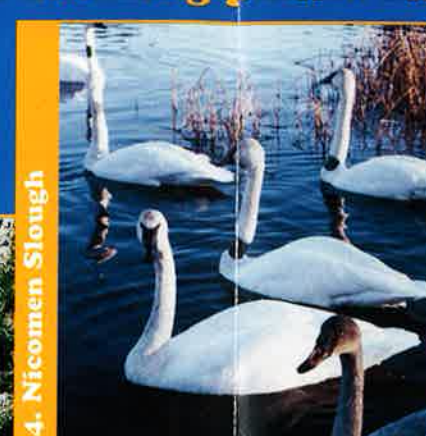
1. Richmond Nature Park



2. Boundary Bay



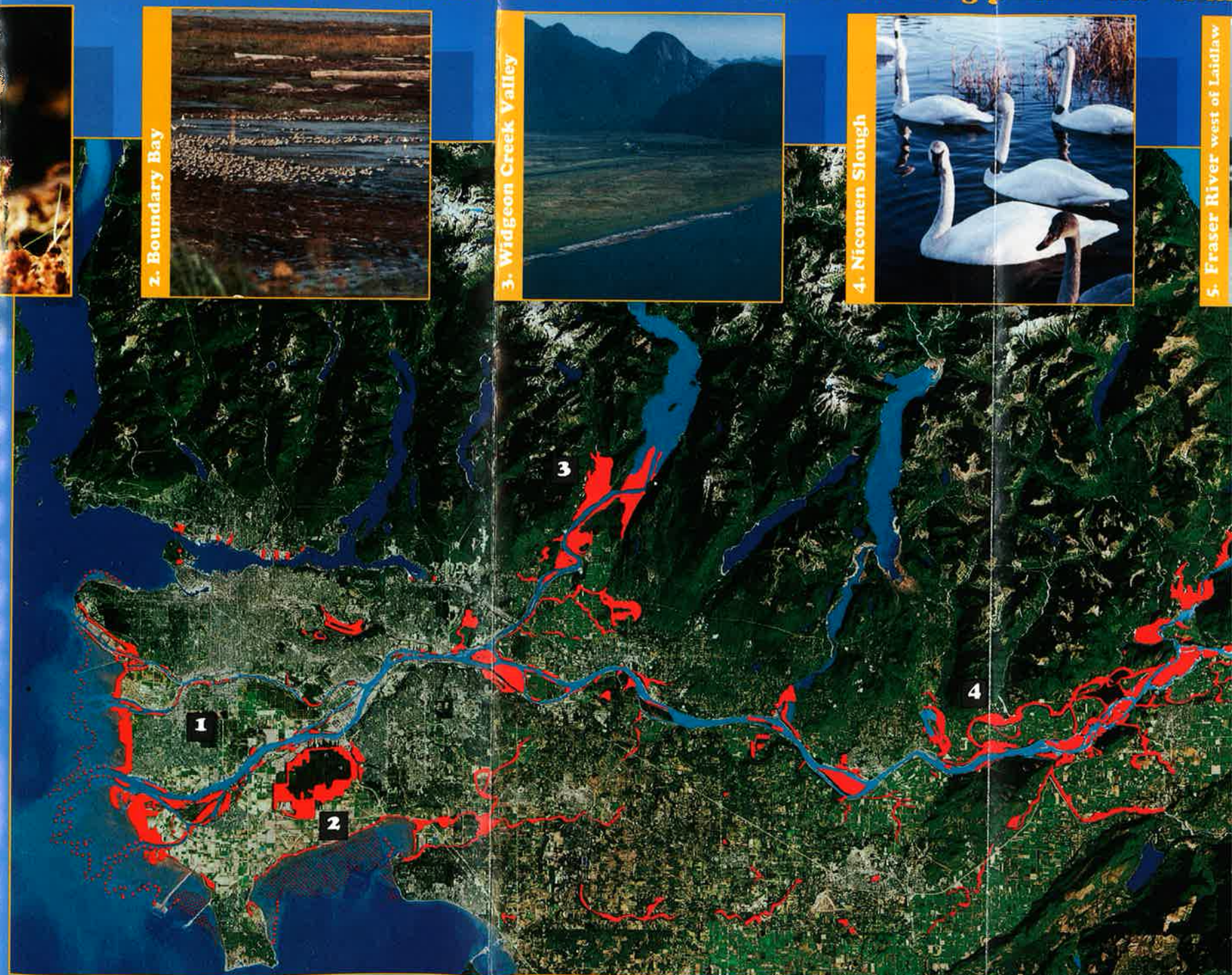
3. Widgeon Creek Valley



4. Nicomen Slough



5. Fraser River west of Laidlaw



Lower Fraser Valley wetlands are home to millions of amazing plants and animals.



2. Boundary Bay



3. Widgeon Creek Valley



4. Nicomen Slough



5. Fraser River west of Ladlaw



BVAEP Vancouver, Env. Can. Lib./Bib.



36 011 380

Lower Fraser Valley Facts:

- An average of four million salmon swim through the mouth of the Fraser River annually. This river is the largest producer of salmon on the Pacific coast of North America.

- The Fraser River delta is a critical wintering and stopover site for millions of migratory birds. In winter, this area supports more waterfowl, shorebirds and birds of prey than anywhere else in Canada.

- The Lower Fraser Valley contains some of the most productive agricultural land in British Columbia.

- The Lower Fraser Valley encompasses Canada's third largest metropolitan area.

- 13.6% of the Lower Fraser Valley is wetland.

The Pacific Flyway is a migratory route between northern breeding grounds and southern wintering areas.

Millions of migratory birds stop in B.C.'s Lower Fraser Valley each year.

are able to live in these

marshes, warm shallow of this wetland complex. and resting area for British Columbia ing birds.

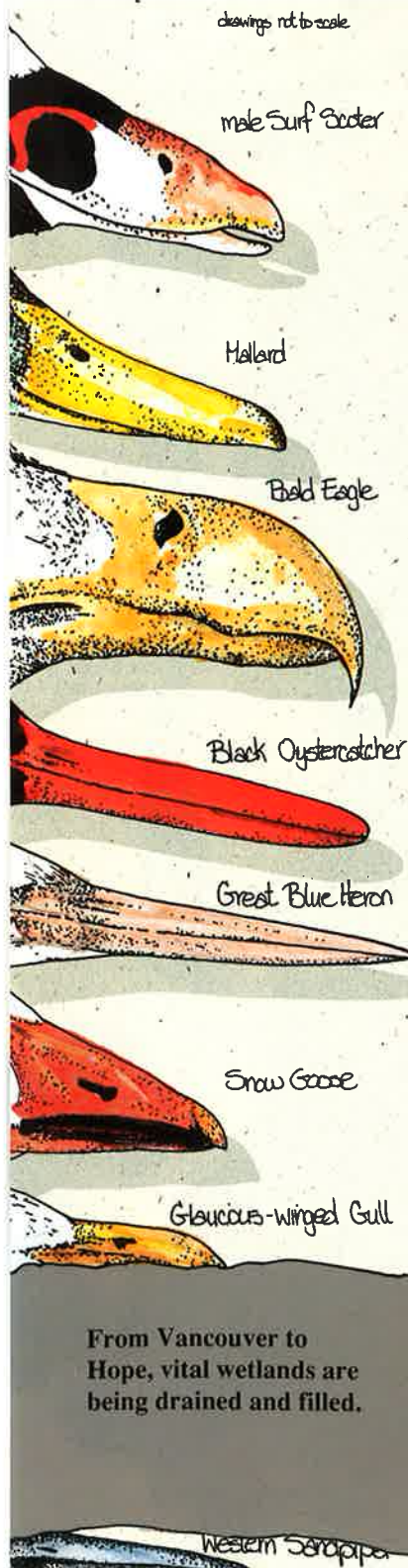
common in the Lower largest freshwater marsh in

her waterfowl in the

rest

bars in the river provide and other birds. Their roots development of stable islands.

Technical Report No. 146. Wetlands Moore K., and Kistritz R. Pacific and



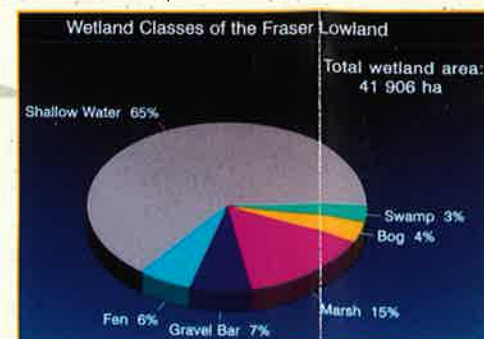
There are lots and lots and lots and lots of reasons to fall in love with Lower Fraser Valley Wetlands!

Each part of this wonderfully complex ecosystem is intimately connected to the others.

- Millions of birds from 20 countries in three continents depend on the Lower Fraser Valley for food and shelter each year.

- Wetland birds have different beak shapes and lengths, each specialized for handling particular kinds of food. Abundant and available food is one reason the Lower Fraser Valley is such a hot spot for birds.

- Swamps, marshes, fens, bogs, gravel bars and shallow water - you'll find all these important wetland types in the Lower Fraser Valley.



Wetlands in your neighbourhood, the Lower Fraser Valley, support internationally and nationally significant wildlife populations. These wetlands are being destroyed by the rapid growth of Greater Vancouver and outlying cities. Most of the



- Snow Geese can fly 2,700 km in 2 1/2 days! The 40,000 Snow Geese that gather annually on the Fraser River delta migrate from Siberia's Wrangel Island.

- People and killer whales need eelgrass beds such as those in Boundary Bay. Why? Herring and salmon of course. Herring, an important food source for salmon and marine mammals, lay their eggs on eelgrass leaves. Young salmon spend time in eelgrass beds too! Here they find both protection and food.

- Wetlands act like giant sponges; they quickly absorb water. By storing and slowly releasing rainfall and spring run-off wetlands reduce flooding.

- Bacteria, fungi, and other microscopic

invertebrates can be found in a square metre of tidal flat wetlands. When the tide is in, fish feast on them. When the tide is out, it's the shorebirds' turn.

- Bugs that walk on water? Hairy pads on the bottom of pond skaters' feet repel water and prevent them from sinking.

- Migrating waterbirds and birds of prey use farmland for food and shelter. Farmland is an integral component of the Lower Fraser Valley wetland complex.

- Carried on fur, feathers or feet? Blown by the wind? Laid here by their parents? Wetland plants and animals

impact on wildlife since animals in this area use farmland as additional places to forage, hunt, rest and hide.

The features that make this part of Canada so appealing to wildlife are also attractive to people. Right now, more than

organisms are the wetland's hidden heroes. They break down dead plant and animal material and create food for many smaller organisms. These heroes are part of a gigantic food web.

- Hundreds of marine

have many different ways of moving from one wetland to another.

- Bogs help prevent global warming by trapping carbon dioxide - a greenhouse gas. In a bog's acidic environment, plant material containing carbon forms peat instead of breaking down and releasing carbon dioxide.

- Duckweed floats thanks to air pockets within its leaves. During the winter these plants sink to the bottom then rise to the surface again in the spring.

- Cattails are familiar plants that actually change wetlands! Particles trapped between their roots eventually become soil which fills in the wetland.

- Terror of the pond! Dragonfly larvae spend several years underwater hunting aquatic insects, tadpoles and small fish. Eventually they emerge from the water and transform into winged, adult dragonflies. Adult dragonflies can consume their own weight in mosquitoes and gnats in several hours.

- What's in winter mud? Buds and roots of plants, eggs, dormant insect larvae, frogs and worms all waiting for spring.
- Duck potatoes! Broad-leaved arrowhead's starchy tubers are a favourite food of ducks, geese, swans and muskrats. Native people used these tubers much like a potato.

- Plants that eat bugs? Sundews get their nutrients in a unique



way. These carnivorous plants attract and catch insects with drops of red, sticky fluid that cover their hairy leaves.

- Dungeness crabs have soft shells when they are mating and

moulting. Estuary mud offers protection during these vulnerable life stages.

- Like kidneys, wetlands remove wastes (including pesticides and fertilizers) from polluted waters.

- Beavers create their own wetlands by damming streams. These mammals develop habitat for other wetland wildlife at the same time.

- Wherever there's water you'll find dabbling ducks tipping their rear ends up to search for seeds, snails, weeds and algae. Many dabbling ducks come to the coast in the winter to avoid frozen ponds.

- Diving at speeds of 280 kph, Peregrine Falcons are the world's fastest birds. Birds of prey winter in the Lower Fraser Valley

where they hunt fish, rodents and smaller migrating birds.

- Sphagnum moss can absorb 100 times its own weight in water and has antibiotic properties too. Found in bogs, this "peat moss"

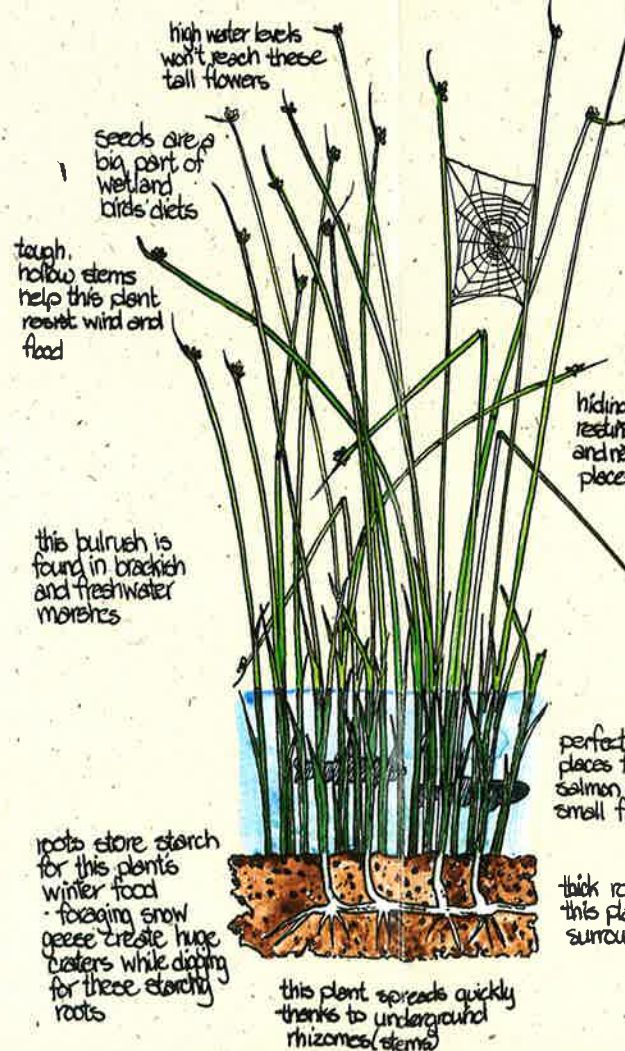
is used for fuel, insulation, conditioning soil and as a surgical dressing for burn treatment.

- What has long legs and stands motionless hunting for food? Great Blue Herons. These birds use the Lower Fraser Valley wetlands extensively. Heron nesting colonies are found in trees and are very susceptible to human disturbance.

- Pea-soupy wetland water is filled with millions of cyclops, daphnia and seed shrimp, each no

larger than a speck of dust. They eat even tinier microorganisms and in turn become food for larger animals.

- Webbed feet and water repellent fur



From Vancouver to Hope, vital wetlands are being drained and filled.

organisms are the wetland's hidden heroes. They break down dead plant and animal material and create food for many smaller organisms. These heroes are part of a gigantic food web.

- Hundreds of marine

vertebrates can be found in a metre of tidal flat lands.

When the tide is out, it's the birds' turn.

Animals that walk on water? They use pads on the bottom of their feet to repel water and prevent them from sinking.

Migrating waterbirds and their prey use farmland for food and shelter. Farmland is an integral component of the Lower Fraser Valley wetland complex.

Carried on fur, feathers or... Blown by the wind? Here by their parents? Land plants and animals

have many different ways of moving from one wetland to another.

- Bogs help prevent global warming by trapping carbon dioxide - a greenhouse gas. In a bog's acidic environment, plant material containing carbon forms peat instead of breaking down and releasing carbon dioxide.

- Duckweed floats thanks to air pockets within its leaves. During the winter these plants sink to the bottom then rise to the surface again in the spring.

- Cattails are familiar plants that actually change wetlands! Particles trapped between their roots eventually become soil which fills in the wetland.

- Terror of the pond! Dragonfly larvae spend several years underwater hunting aquatic insects, tadpoles and small fish.

Eventually they emerge from the water and transform into winged, adult dragonflies. Adult dragonflies can consume their own weight in mosquitoes and gnats in several hours.

- What's in winter mud? Buds and roots of plants, eggs, dormant insect larvae, frogs and worms all waiting for spring.
- Duck potatoes! Broad-leaved arrowhead's starchy tubers are a favourite food of ducks, geese, swans and muskrats. Native people used these tubers much like a potato.

- Plants that eat bugs? Sundews get their nutrients in a unique



way. These carnivorous plants attract and catch insects with drops of red, sticky fluid that cover their hairy leaves.

- Dungeness crabs have soft shells when they are mating and

moulting. Estuary mud offers protection during these vulnerable life stages.

- Like kidneys, wetlands remove wastes (including pesticides and fertilizers) from polluted waters.

- Beavers create their own wetlands by damming streams. These mammals develop habitat for other wetland wildlife at the same time.

- Wherever there's water you'll find dabbling ducks tipping their rear ends up to search for seeds, snails, weeds and algae. Many dabbling ducks come to the coast in the winter to avoid frozen ponds.

- Diving at speeds of 280 kph, Peregrine Falcons are the world's fastest birds. Birds of prey winter in the Lower Fraser Valley

where they hunt fish, rodents and smaller migrating birds.

- Sphagnum moss can absorb 100 times its own weight in water and has antibiotic properties too. Found in bogs, this "peat moss"

is used for fuel, insulation, conditioning soil and as a surgical dressing for burn treatment.

- What has long legs and stands motionless hunting for food? Great Blue Herons. These birds use the Lower Fraser Valley wetlands extensively. Heron nesting colonies are found in trees and are very susceptible to human disturbance.

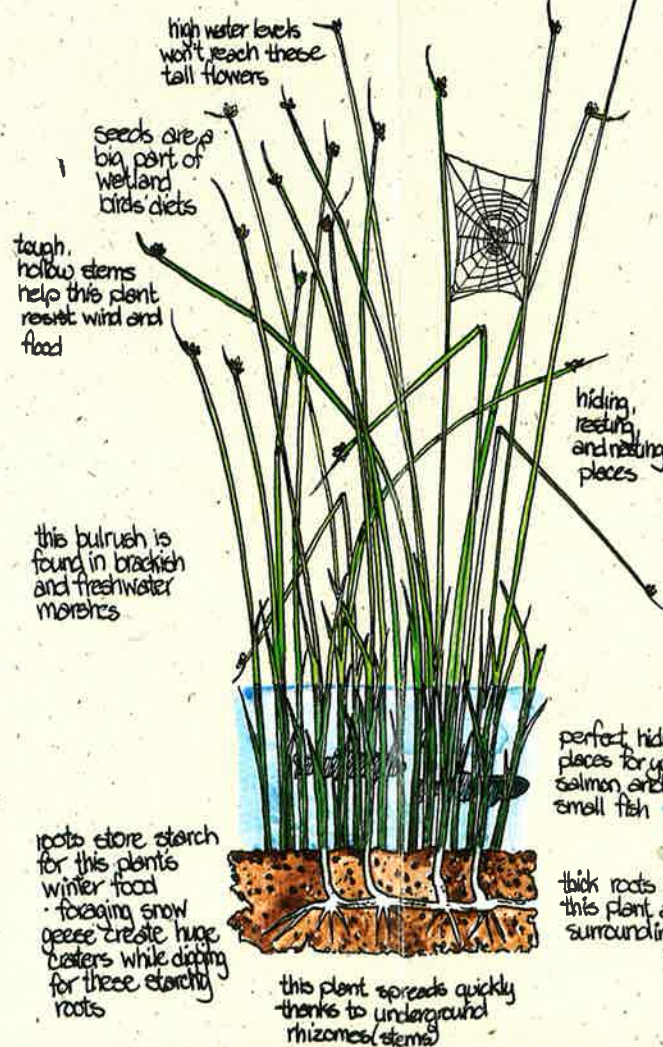
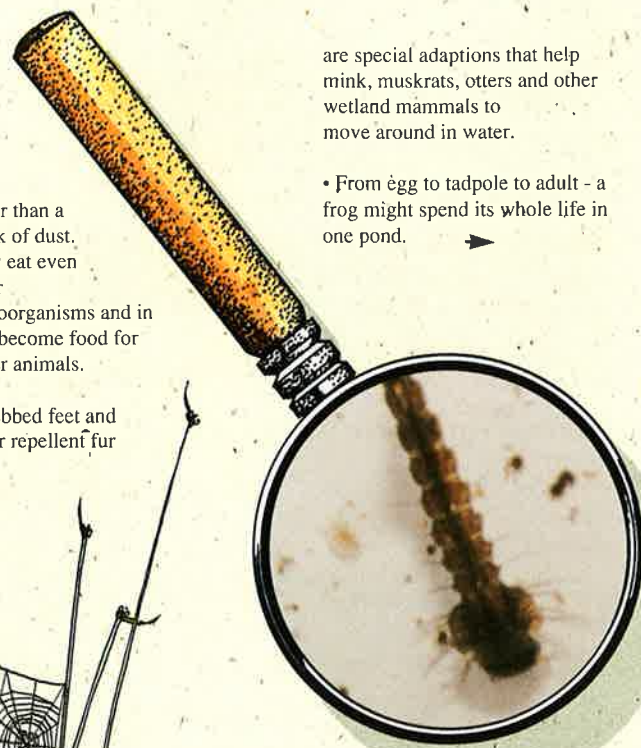
- Pea-soupy wetland water is filled with millions of cyclops, daphnia and seed shrimp, each no

larger than a speck of dust. They eat even tinier microorganisms and in turn become food for larger animals.

- Webbed feet and water repellent fur

are special adaptations that help mink, muskrats, otters and other wetland mammals to move around in water.

- From egg to tadpole to adult - a frog might spend its whole life in one pond.



- Did you know that a mosquito larva lives underwater and uses a built-in snorkel near its rear to breathe? Many insects start out in water but take to the air as adults.

- You'll see something new each time you visit a wetland. Wetlands change from season to season and from year to year.

- Estuaries form where rivers meet the ocean. They are vital to salmon survival; young salmon live in estuaries while their

bodies slowly adjust to salt water conditions.

- Wetlands are among the most important places on earth. They are a vital part of our global ecosystem.

Canadian Wetland Facts:

- Canada has an estimated 24% of the world's wetlands.
- 204 of Canada's 578 bird species require wetlands.
- 42 of Canada's endangered,

threatened, and rare plants and animals depend on wetlands.

- 1/2 of southern Canada's wetlands have disappeared in the last 200 years as a result of human activities.



Wetland conservation depends on all of us.

Here's what you can do:

- Join or support wetland conservation groups especially those in your neighbourhood.
- Encourage local planners to incorporate wetland protection into official city plans.
- Buy Wildlife Habitat Canada Conservation Stamps. Migratory bird hunters must purchase these stamps with their hunting license. Non-hunters can buy them too. The money generated is used to purchase, restore, and improve wetlands. The stamps are available at selected postal outlets and philatelic centres.
- Be careful what you dump down drains. Household wastes eventually enter the natural water systems. Many cleaners and solvents are deadly to fish.

Environment Canada is:

- helping to protect approximately 1500 km² of coastal B.C. and U.S. wetlands under the Pacific Coast Joint Venture of the North American Waterfowl Management Plan.
- working with the provincial government, non-government groups, and individuals to protect wetland and farmland habitats in the Lower Fraser Valley.
- working with Fisheries and Oceans (under the federal Green Plan) on a major clean-up, pollution control, and habitat restoration and enhancement program in the Fraser River basin.

For more information:

Contact the Canadian Wildlife Service, P.O. Box 340 Delta, B.C. (604) 946-8546 or visit the Vancouver Aquarium, Canada's Pacific National Aquarium, in Stanley Park.



A Vancouver Aquarium / Canadian Wildlife Service co-production