

An aerial photograph of a landscape featuring a river at the top, agricultural fields in the middle, and a residential area on the right. The text 'Roberts Bank Migratory Bird Information' is overlaid in white. Labels 'Fraser River' and 'MUSQUEAM 4' are visible on the image.

Roberts Bank Migratory Bird Information

OLIVER BUSBY, R.P.BIO, P.AG

Agenda

- ▶ Pacific Flyway Summary
- ▶ Fraser River Delta
- ▶ Roberts Bank
 - ▶ Importance of Roberts Bank
 - ▶ Common Species
 - ▶ Rare Species
- ▶ Issues

MUSQUEAM 4

41b St

A little bit about me

- ▶ Raised in Vancouver and lived in Delta for 35 years
- ▶ Have worked as a biologist for 35 years
 - ▶ Assisted with management of foreshore areas for the Province for ~ 20years
 - ▶ Assisted with numerous studies for graduate students & projects on foreshore research

Pacific Flyway

North America has 4 main flyways



Pacific Flyway

Extends from Alaska to Patagonia

Migratory birds use the flyway twice per year to travel between breeding grounds in the spring and over wintering grounds, following food sources and milder weather

Includes key stopover sites that provide food and shelter for migrating birds

Used by over 300 bird species

Fraser River Delta

A key feature of the Pacific Flyway

- a. Approximately 32,000 ha of intertidal and sandflats*
- b. Area is used by an estimated 5 million migratory birds according to Delta Farmland & Wildlife Trust*
- c. Designated “Canada’s top important bird area, a key biodiversity area, RAMSAR site” and many more accolades.*
- d. Provides essential habitat for a wide variety of fish and marine species*



Roberts Bank & Westham Island

- ▶ Extends from Fraser River main stem south to Point Roberts, Washington
- ▶ Extensive mudflats and marsh habitat

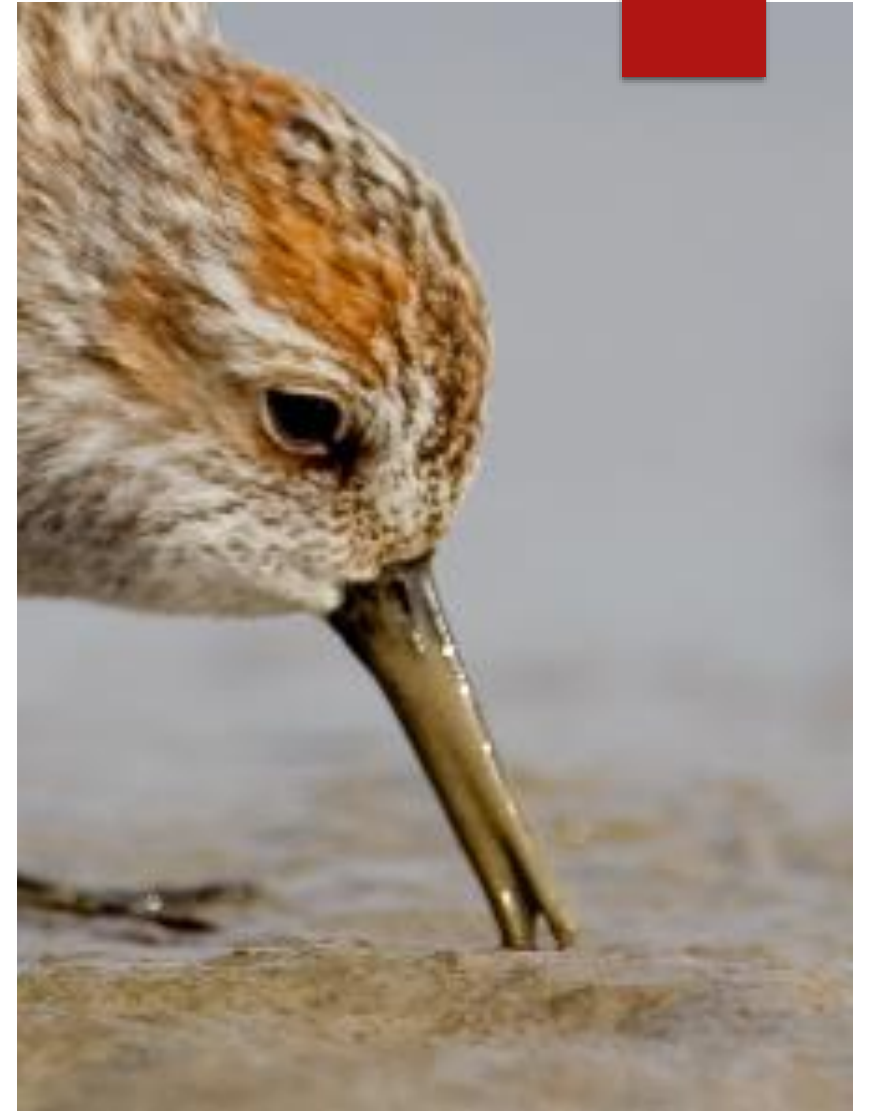


Biofilm

Is an energy rich food made from dense fatty acids

- ▶ Used by shorebirds during their migration and is estimated to account for 50% of daily energy budget

Shorebirds are key forage species for several species of raptor, including peregrine falcons



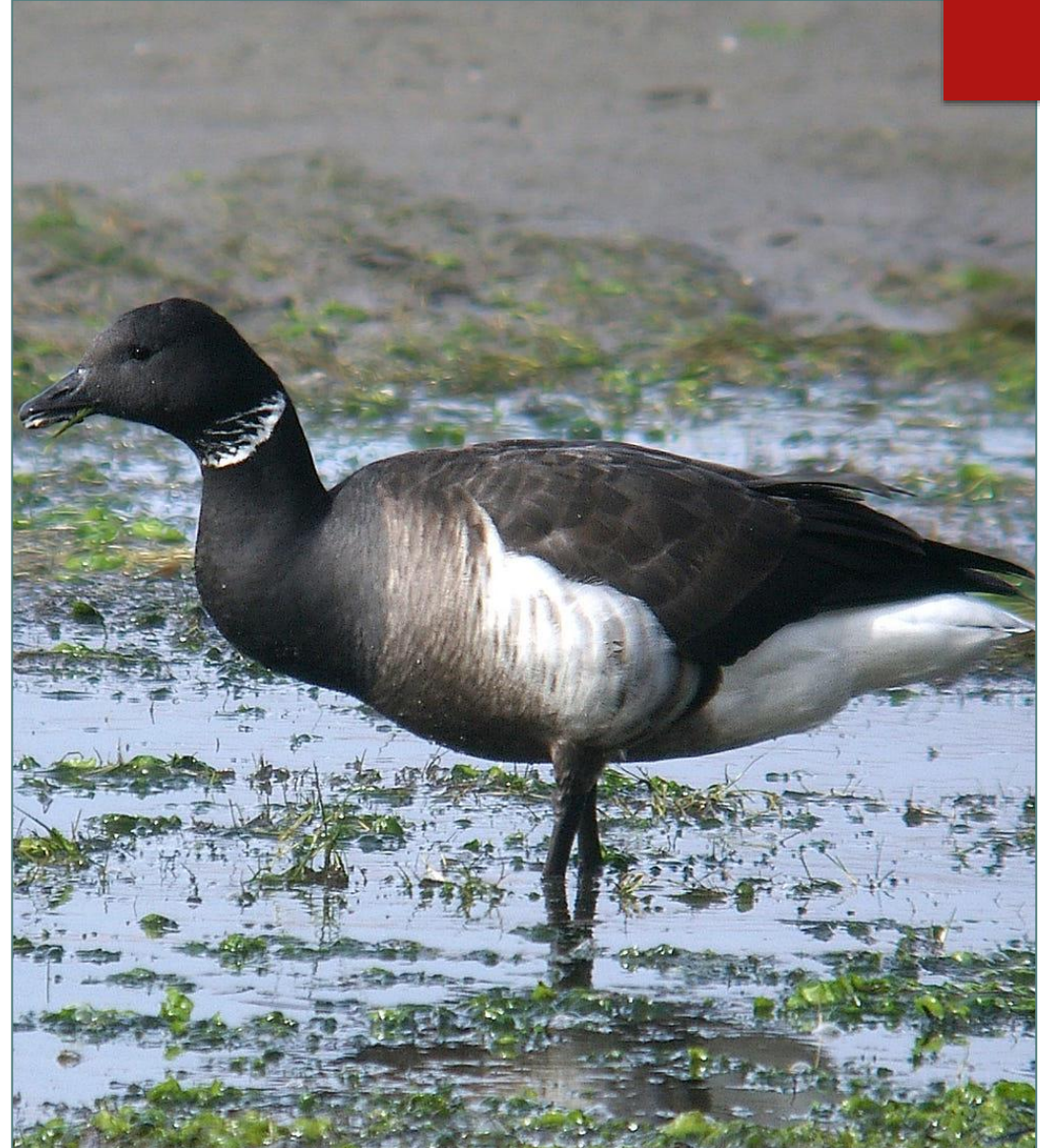
Key Species: Western Sandpiper

- ▶ One of the most common shorebirds in the Western Hemisphere
- ▶ Migrates between wintering areas in North and South America and nesting sites in western Alaska and southern Siberia
- ▶ Nearly the entire population passes through stopover sites in BC
 - ▶ An estimated 42-64% of the global population stops at Roberts Bank
- ▶ Stable population since 1970s



Key Species: Brant

- ▶ Long distance migrants, travels up to 5,000 km
 - ▶ Breeds in grassy wetlands of Alaska and Canadian Arctic
 - ▶ Overwinters along west coast from BC to Mexico
- ▶ Population is stable, but vulnerable to habitat loss
- ▶ Identified as a priority for conservation in five of Canada's Bird Conservation Regions





Key Species: Surfbird

- ▶ Spend most of their lives within a few metres of the ocean shoreline
- ▶ Breeds in rocky tundra in Alaska and the Yukon
- ▶ One of the longest and narrowest wintering ranges of any North American bird
 - ▶ Coastal shoreline from Alaska to southern Chile, covering nearly 17,500 km
- ▶ One of the longest migratory pathways, includes nearly the full length of the Pacific flyway

Key Species: Barn Swallow

- ▶ Migrate from Central and South America in the winter to breeding grounds throughout North America
- ▶ 76% population decline in Canada between 1970 to 2009, largely stable from 2009- 2019
 - ▶ Threats include declining insect populations, increasing frequency of severe weather
- ▶ Blue-listed (Special Concern) in BC





Current Issues

Highly Pathogenic Avian Influenza (HPAI)

Since December 2014, cases of HPAI confirmed in Pacific, Central, and Mississippi flyways

- ▶ *Found in wild birds and poultry*
- ▶ *Research suggests that flyways play a key role in disease transmission*

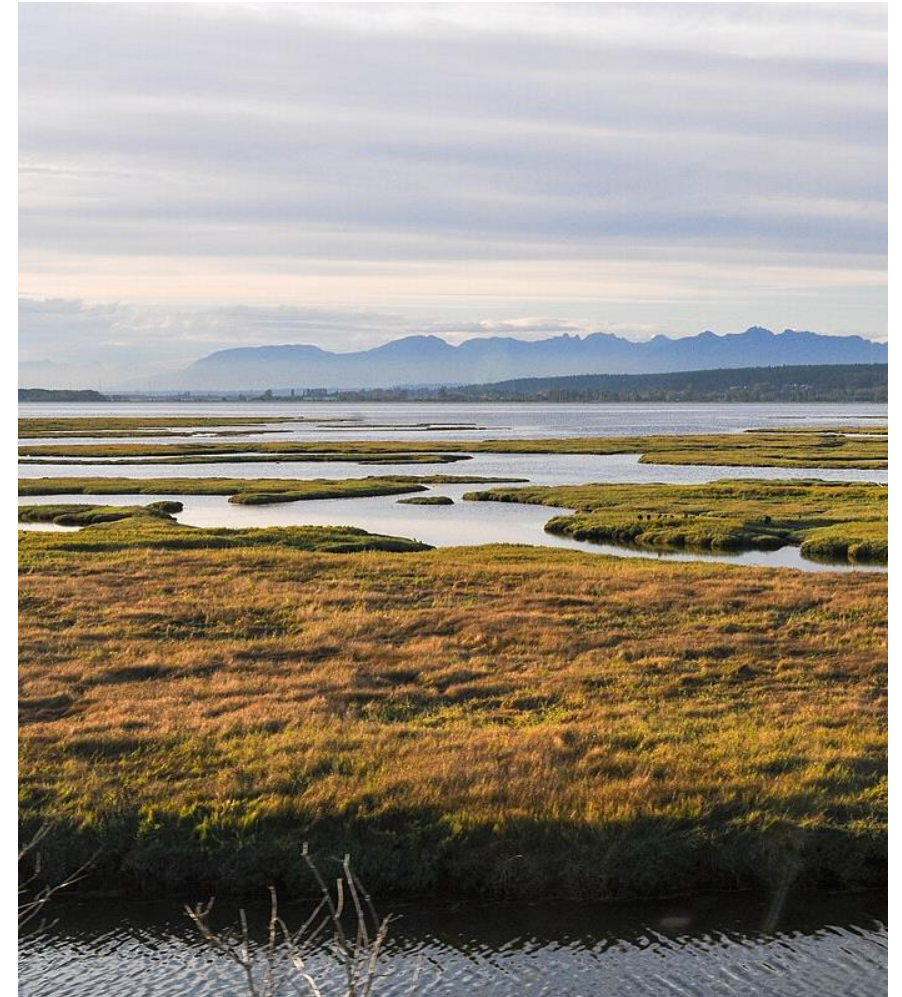
New H5N1 virus detected in the Pacific flyway in March 2023

- ▶ *H5N1 is highly contagious and has a near 100% fatality rate*
- ▶ *Impact to Pacific flyway is still developing and ongoing*

Climate Change

Extreme weather conditions impacts resource and habitat for migrating birds:

- ▶ Recent droughts in California restricts food and water for migrating waterfowl
 - ▶ Increased risk of disease outbreaks among crowded birds
- ▶ Sea level rise causes loss of coastal habitats, including estuarine beaches, tidal flats, and brackish marshes





Unexpected Consequences

CLIMATE CHANGE HAS CHANGED SPECIES USE



Questions?