



Western Sandpipers/Bécasseaux d'Alaska Photo: Jason Puddifoot

Tell our federal government: for Western Sandpipers, Roberts Bank is irreplaceable

BY JAMES CASEY

Slime. Poop. And an extreme close-up of a bird tongue.

What do these things have in common? They are all clues that helped solve the mystery behind one of nature's stunning spectacles: the annual appearance of giant flocks of Western Sandpipers at Roberts Bank, in British Columbia's Fraser River Delta.

Collectively, the birding community has long known the Fraser Delta, also called the Fraser Estuary, is important for shorebirds. In 1987, Dr. Robert Butler and R. Wayne Campbell published the seminal paper "The birds of the Fraser River delta: populations,



ecology and international significance," estimating 1.2 million shorebirds rely on this special place. But the question remained of why so many forage on the mudflats. Researchers got to work trying to determine why this estuary attracts so many of these birds on their annual migration along the Pacific Flyway.

Key to this question was a photo of a Western Sandpiper tongue

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taken way back in 1994 in the Scanning Electron Microscopy facility in Moncton, New Brunswick. The photo revealed that a Western Sandpiper's tongue is covered with hundreds of microscopic barbs, which it uses

to slurp slime off of the mud – a finding that wasn't published until 2005! It seemed that, unlike some other shorebirds, Western Sandpipers evolved to eat slime instead of invertebrates. But that wasn't the whole story.

It took a bit more lab work than field work, but eventually scientists figured out that under certain conditions, the slime or biofilm (microscopic zooplankton bound

together by a mucus substance) is rich in polyunsaturated fatty acids (PUFAs). Ornithologists around the globe have been slowly teasing out the role these PUFAs play in enabling long distance migration. PUFAs, it turns out, enhance the



Photo: Alex Harris

a site is internationally important and being able to protect it from harm are two different things in the Canadian regulatory context.

Canadian law does very little to protect migratory bird habitat, especially stopover habitat. Within the *Migratory Bird Convention Act*, there are prohibitions on destroying nests and dumping pollutants, but nothing on prohibiting damage to important feeding areas for migratory birds. However, in the treaty with the United States that is foundational to this act, we Canadians have committed to maintaining and protecting the habitat necessary to conserve migratory bird populations. And conservation science has demonstrated stopover sites are necessary to migratory birds.

Unfortunately, Canada, through the Vancouver Fraser Port Authority, is proposing to build a 177-hectare island on Roberts Bank. This project, known as Roberts Bank Terminal 2, is intended to enable an increase in container trade with Asia. Those proposing the project seem unwilling to avoid the Fraser Estuary's significant and sensitive habitat. As such, it is now necessary to convince the Minister of Environment and Climate Change and the cabinet of the Liberal government that the Fraser Estuary is the wrong place to build a new shipping terminal.

The scientists at Environment and Climate Change Canada took the knowledge of why Roberts Bank is so necessary to migrating shorebirds to the Federal Environmental Assessment process, which took place from 2016 until 2019. They told the Federal Review Panel that, because of the way the Roberts Bank Terminal 2 project is



Western Sandpiper/Bécasseau d'Alaska Photo: Jason Puddifoot

ability of birds to metabolize fat and sugars so that they can travel greater distances. Western Sandpipers, and certain other shorebirds, have evolved to slurp “slime” so they can fly thousands of kilometres to their winter breeding grounds!

In 2011, my friends here at Birds Canada picked up bird poop to contribute another piece of the puzzle. Since sandpiper droppings are tiny, my colleagues spent hours gingerly scraping only the top half of the droppings to ensure the samples weren't contaminated by the sediment below. This work, though unglamorous, paid off.

With results from the sampling and from bird counts, they – along with collaborators at the University of Saskatchewan, the Port and Airport Research Institute, and Pacific Wildlife Foundation – were able to identify an area known as Roberts Bank as the most important part of the Delta for Western Sandpipers' biofilm foraging.

Because of its critical importance to shorebirds, the Fraser Delta has received special recognition. The Estuary was designated a Western Hemisphere Shorebird Reserve Network Site of Hemispheric Importance in 2005. But, knowing

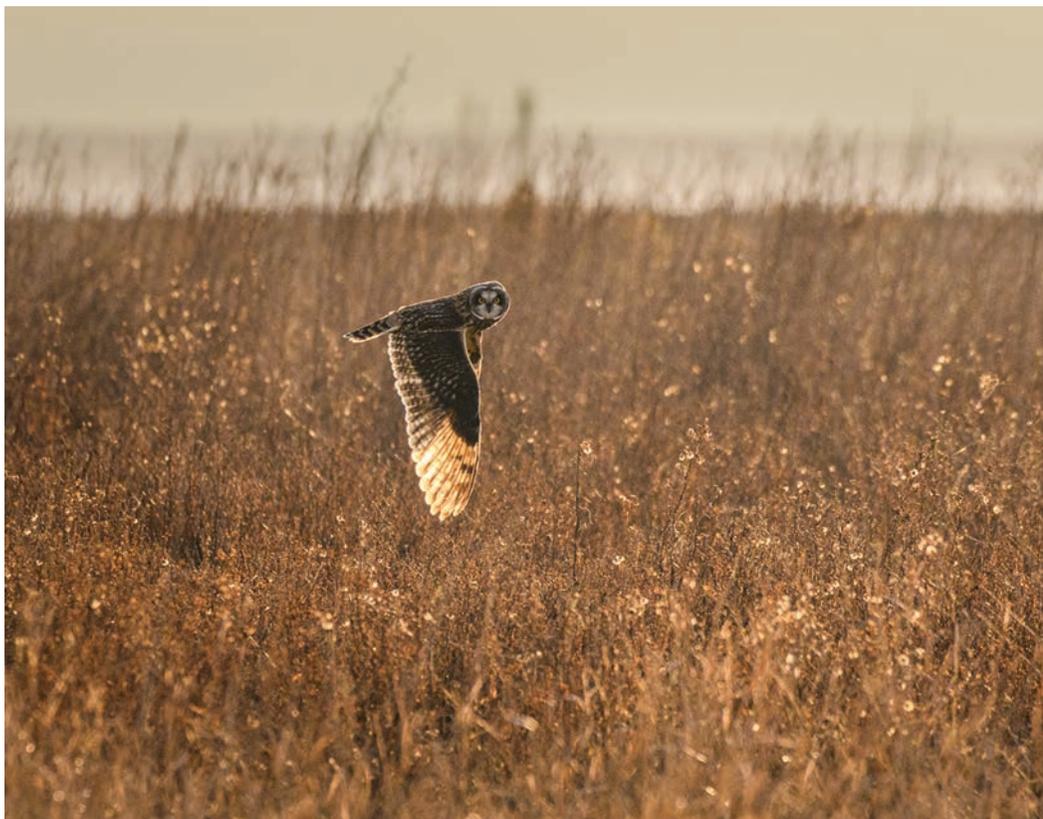
designed, it will alter the production of PUFAs within the biofilm found at Roberts Bank Terminal 2 and lead to unmitigable species-level impacts on Western Sandpiper. However, the Vancouver Fraser Port Authority argued against this finding, and the panel concluded it was unable to decide one way or the other whether the project would have significant adverse impacts on Western Sandpipers. This indecision remains unaddressed despite the scale of potential impact.

Western Sandpiper is not the only species threatened by the project. Given that the Federal Review Panel found that it will have significant adverse effects on Chinook Salmon, Southern Resident Killer Whales, and a number of community values, it seems like there is as strong a case as any for saying “no” to this particular project. Indeed, a number of parties have all highlighted how this is the wrong place for the terminal. These parties include: the cities of Delta and Richmond; local grassroots conservation groups, such as the Delta Naturalists and Against Port Expansion; provincial-scale groups, such as BC Nature and the Raincoast Foundation; and international groups, such as Audubon and BirdLife International. Despite this, the Government of Canada continues to push for the development of this habitat-destroying infrastructure.

How is this possible? Don't we have laws in place to protect our environment from these kind of impacts? Sort of. The decision is now left to the discretion of the Minister of Environment and Climate Change. Once the science has been gathered, the



Orca/épaulard Photo: Tom Middleton



Short-eared Owl/Hibou des marais Photo: Yuri Chufour

laws reviewed, and the economics weighed, the choice at the end of the day is a political decision. This is why it is so important that you as bird lovers speak up.

This winter is our last chance to turn the tide against the proposed Terminal 2 project. Please raise your voice for birds. Contact your

MP to tell them that you expect them to support parliamentary petition e-2828 calling for the Government of Canada to reject the proposed Terminal 2 project. You can do this by visiting e-activist.com/page/66669.

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