

walk quietly

**ts'ekw'unshun
kws
qututhun**

*walking with respect and honour
along the shore*

a guided walk at Hwlhits'um
Canoe Pass / Brunswick Point
Ladner, British Columbia

1 Hwlhits'um
Brunswick Point / Canoe Pass
49.068130, -123.151835
Chief Jim Hornbrook, Hwlitsum First Nation, with Jared Qwustenuxun Williams, Cowichan knowledge holder

2 yuxwule'
Bald Eagle
49.068143, -123.15331
James Casey, Birds Canada, Fraser River Estuary specialist

3 smuqw'a'
Great Blue Heron
49.068143, -123.153311
Lindsey Wilson, Hwlitsum First Nation knowledge holder

4 wool'
Tule / Soft-stemmed Bulrush
49.067755, -123.155135
Jared Qwustenuxun Williams, Welcome Song

5 qw'uqw'sutsun'
swallow
49.066080, -123.158180
Kim Trainor, Douglas College, poet, with Hazel Fairbairn, Douglas College, composer

6 stth'e'qun
cattail
49.064564, -123.157777
Jared Qwustenuxun Williams, Story of Hwlumelhtsu (Lamalchi Bay)

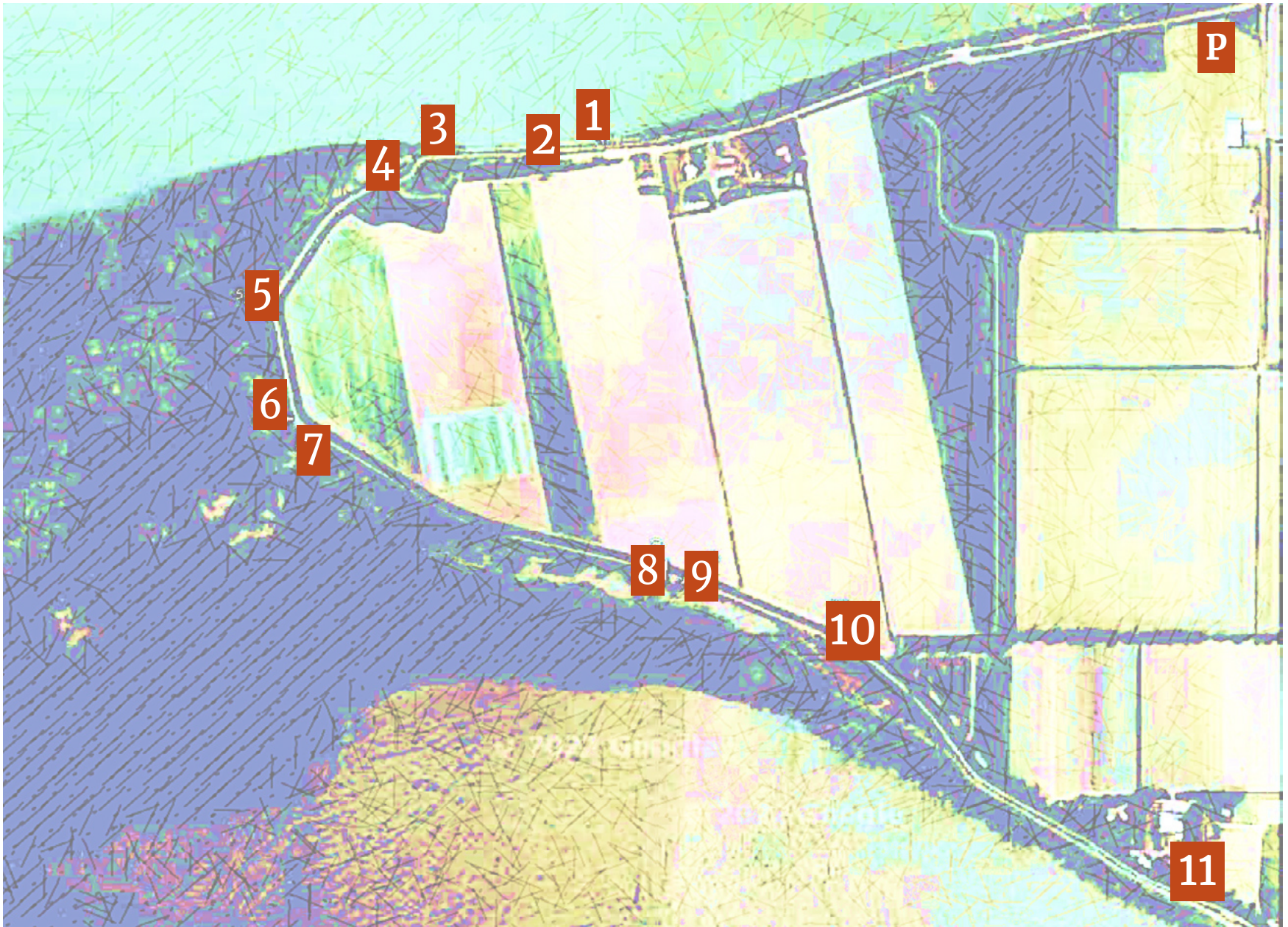
7 (s)xumxum'
horsetail
49.064423, -123.157649
Bill Angelbeck, Douglas College, archeologist / anthropologist

8 qel'qulhp
Nootka Rose
49.062469, -123.150804
Amy-Claire Huestis, KPU, artist

9 sxwut'ts'uli
Hummingbird
49.062413, -123.150568
Tristan Douglas, UBC, biologist

10 tsiitmuhw
Great Horned Owl
49.061676, -123.147911
Bruce Miller, UBC, anthropologist

11 qu'qee-ye'
Western Sandpiper
49.058223, -123.141223
Amie MacDonald, Birds Canada, biologist



[map: guided walk at Hwlhitsu'um](#)
(Brunswick Point / Canoe Pass)

key: see previous page

walk quietly

ts'ekw'unshun
kws qututhun

walking with respect and honour along the shore

A guided walk at Hwlhits'um
(Canoe Pass / Brunswick Point)
Ladner, British Columbia



COHAB PRESS



We humbly acknowledge this project takes place on the ancestral and present-day lands of the Coast Salish Peoples, including the Hul'qumi'num Mustimuhw (Hul'qumi'num Treaty Group of seven Coast Salish Nations), scəwáθən (Tsawwassen), and xʷməθkʷəyəm (Musqueam). This project is in participation and consultation with the Hwlitsum First Nation, and works to build ties with all whose lands it touches.

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walk quietly

walk quietly / ts'ekw'unshun kws qututhun is a community-guided walk located at the end of River Road West in Ladner, British Columbia. It tells the story of Hwlhitsu'm (Brunswick Point / Canoe Pass) from the diverse and complex perspectives of scientists, artists, anthropologists, and Indigenous Peoples.

Curated by Amy-Claire Huestis and Kim Trainor, the walk links specific spots on the dike trail at Hwlhitsu'm to the many contributions found on the walkquietly.ca website. Follow the trail and listen, watch, and learn about this special place.

We are grateful to Hwlhitsu'm First Nation, Richmond Art Gallery, Kwantlen Polytechnic University, Birds Canada, Douglas College, and Metro Vancouver Parks for their partnership and support.

Dunlin, image: Simon Shutter



ts'ekw'unshun kws qututhun

walking with respect and honour along
the shore

When asked how to say, “walk quietly,” or “walk softly,” Cowichan Elder, Dr. Luschiim Arvid Charlie provided this phrase and its definition to Jared Qwustenuxun Williams, who wrote:

“Walking with respect and honour along the shore. He even broke it down further talking about how ts'ekw'un is the root word meaning to treat something with love, care, and respect. He used the word in reference to family, friends, and the earth. So I think it fits perfectly as the suffix shun refers to the foot or walking.”

[WATCH: VIDEO](#)

[Hul'q'umi'num' — ts'ekw'unshun kws
qututhun](#)

Jared Qwustenuxun Williams,
Hul'q'umi'num' language teacher and
Cowichan knowledge holder



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Hul'q'umi'num'

Hul'q'umi'num' is the language spoken by the Hul'q'umi'num Mustimuhw (Hul'q'umi'num Treaty Group of seven Coast Salish Nations), which includes the Hwlitsum First Nation and the Cowichan Tribes. It was the language spoken here, at Hwlhits'um village. Hwlitsum knowledge holders say that the last time Hul'q'umi'num' was spoken here by their people was three generations ago, as a result of the impact of the residential school system and colonization. Language speaker and Cowichan knowledge holder Jared Qwustenuxun William has generously worked in consultation with Elder Dr. Luschiim Arvid Charlie and Hwlitsum First Nation to bring Hul'q'umi'num' into this guided walk. Qwustenuxun helps us to learn key words and phrases along the walk, and teaches us about people and place.

Jared Qwustenuxun Williams, video still: Williams



Hul'q'umi'num' words at Hwlhits'um Jared Qwustenuxun Williams

iii steep 'o'eli 'ul siiem nu siiye'yu — Is everyone doing well? my respected friends.

Hwlhits'um — Hwlitsum First Nation (place for harvesting reeds)

Hwlmelhtsu — Lamalchi Bay

(s)xumxum' — horsetail

stth'e'qun — cattail

wool' — Tule (Soft-stemmed Bulrush) Scirpus lacustris

qel'qulhp — Nootka Rose

yuxwule' — Bald Eagle

qwuni — seagull

smuqw'a' — Great Blue Heron

qu'qee-ye' — sandpiper

qw'uqw'sutsun' — swallow

sxwsut'tsuli — hummingbird

tsiitmuhw — Great Horned Owl

'exu — Canada Goose

hwlmelhtsu — Lamalchi Bay (this name means look out place)

huy steep q'u — thank you (plural)

siiem nu siiye'yu — my respected friends

[WATCH: VIDEO](#)

[Hul'q'umi'num' — words at Hwlhits'um](#)

Jared Qwustenuxun Williams,
Hul'q'umi'num' language teacher and
Cowichan knowledge holder



how to walk quietly

Attend to nature. Listen. Walk with gentle footsteps. Commune with your more-than-human kin.

Stay on the dike trail. The marsh habitat is delicate, and it is for birds who hunt and nest here.

Keep your dog on a leash. Dogs disturb the birds and their nests.

Stay far away from the birds. Take photos from the dike trail.

No drones. The airspace is for birds and flying creatures. Drones are used here only with permits.

Please walk quietly in this important place for birds—Roberts Bank is an integral part of the Pacific Flyway, and a vital part of the Key Biodiversity Area that is the Fraser River Estuary. The Western Hemisphere Shorebird Reserve Network has designated the Estuary as one of 22 sites of critical hemispheric importance for migratory birds.

There are many species-at-risk who live in Roberts Bank and stop here on their migratory routes. Please protect their habitat and take care near them.

Birds nest in the grasses and on the ground in the marsh and along the trail. These included Spotted Towhees, Marsh Wrens, Killdeer, Northern Harriers, and Red-winged Blackbirds.



Red-winged Blackbird eggs in their nest, image: Jessica Bolser/USFWS, Wikimedia Commons





mukw'stem 'l' utunu tumuhw 'o' shiihukw'tul

everything on the earth is interconnected

[WATCH: VIDEO](#)

Hul'q'umi'num' — mukw'stem 'l' utunu
tumuhw 'o' shiihukw'tul



Jared Qwustenuxun Williams,
Hul'q'umi'num' language teacher and
Cowichan knowledge holder

Looking toward Vancouver Island and the Southern Gulf Islands from Hwlhitsu'm
image: Simon Shutter

Hwlhits'um

Brunswick Point



[LISTEN: AUDIO RECORDING](#)

Chief Jim Hornbrook
of Hwlitsum First Nation,
with Jared Qwustenuxun Williams

49.068130, -123.151835



Since time immemorial

Chief Jim Hornbrook

Qwustenuxun: iii steep 'o' 'eli 'ul siiem nu siiye'yu — Is everyone doing well? my respected friends.

Chief Jim Hornbrook: Here at Brunswick Point, we are looking out to the tidal estuary where the Fraser River's fresh water and the Salish Sea's saltwater meet. A diverse ecosystem that is the gateway to some of the world's largest salmon runs. The tidal marshland and surrounding area provide valuable rearing ground for sea-bound salmon but also are an intricate spot on the Pacific Flyway. The Estuary and surrounding uplands are ideal for migrating and local birdlife to rest, feed and nest. The Creator provided the river delta with its sloughs, waterways and marshland, a unique ecosystem able to support all the necessities of life. Prior to contact, the vast area teeming with substance supported many Coast Salish communities. Living their way of life, as part of the ecosystem, at one with the Mother Earth.

The Hwlitsum people are descendants of the greater Hul'q'umi'num Must-imuhw (Hul'q'umi'num' language speakers). Hul'q'umi'num' is a Coast Salish dialect spoken by the Indigenous people from the Lower Vancouver Island area that borders the Salish Sea. Prior to contact, as part of their seasonal harvesting cycle, since time immemorial the Hwlitsum people would travel to and occupy their ancestral summer harvesting and fishing camp here at Brunswick Point. Our ancestors were warriors who stood up to the authorities when they didn't like the way First Nations lands were being taken over by settlers. Our continued resistance to colonization led to the British Navy bombing and burning our winter village at Lamalchi Bay in 1863. Some of our people sought refuge with family in the intertwined greater Coast Salish community. Some preferred the safety of our ancestral summer village at Brunswick Point. A vantage point where you could see anyone coming from any direction. Remember, this was a time when Indian Agents ruled the territories enforcing the discriminatory policies of the day like the Indian Act and mandatory attendance of Indigenous children to residential school.

The colonization of the area in the late 1800's, the implementation of the Indian Act, the creation of Indian Reserves, dramatically affected our way of life. As did the industrialization of the salmon fishery which began with the advent of canning. Salmon became a commodity, one caught and sold for profit. First Nations people traditionally caught fish for food, social, and ceremonial purposes. Discriminatory policies, the Indian Act, and the Fisheries Act limited First Nations capacity to engage meaningfully in any developing commercial fishery.

Jim Hornbrook at Hwlhits'um (Brunswick Point), image: Amy-ClaireHuestis



Being salmon people and fishers, our ancestors were attracted by the socio-economics of the developing commercial salmon fishery. When a cannery was built near the site of our ancestral summer fishing camp—the remnants are still visible today—our people saw opportunity for housing, employment and security outside of the Indian Act's reserve system. As such we chose to live our Indigenous way of life outside of the Indian Act, off reserve. One of the sacrifices our ancestors made was the ability to freely speak our language. Over time much has changed, there was a viable community here until the early 1970's.

Since time immemorial our people have sustained our Indigenous way of life here gathering substance then and we still do today. Although the area has been scarred due to industrialization, the Hwiltsum people have always been a fixture in Canoe Pass. Just because it is not reserve land does not mean First Nations people have not existed here.

I speak to the wisdom of our ancestors, that has been learned through our oral history and passed down through the generations. Pursuant to our laws and spiritual beliefs we are charged with special rights and responsibilities as custodians of our ancestral and traditional lands.

On behalf of our ancestors, elders, and all the Hwiltsum people as custodians of our territory, welcome all to share the natural beauty of the area we have called home since time immemorial.

below, Jim Hornbrook hunting at Canoe Pass, image: Bruce Miller
right, Bald Eagle, image: Simon Shutter



yuxwule'

Bald Eagle

[LISTEN: AUDIO INTERVIEW](#)

James Casey, Fraser River Estuary specialist, Birds Canada



49.068143, -123.153311



Brunswick Point, Key Biodiversity Area along the Pacific Flyway

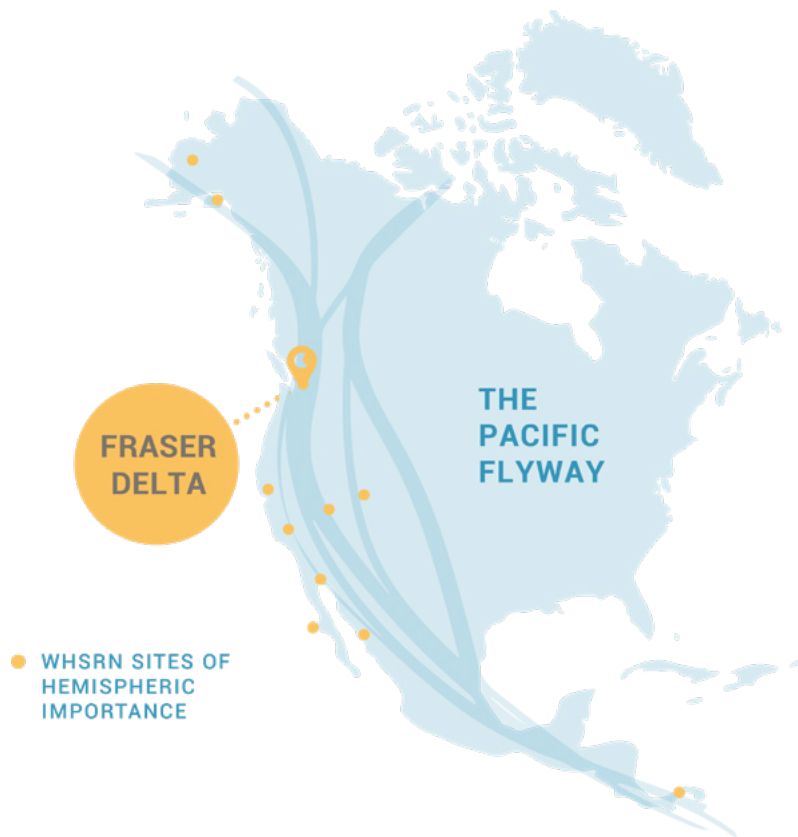
James Casey in conversation with Amy-Claire Huestis

Recorded at Canoe Pass, June 2022

Amy-Claire: This site gives us the chance to experience the mystery of migration, and Birds Canada is working hard to understand more about migration ecology. What have we learned about how migratory birds are using this place that we call Hwlhitsu'm, or She-shem-qun, Brunswick Point, or largely Roberts Bank?

James: This area of Brunswick Point is globally significant to a range of bird species. It's





above, The Pacific Flyway and Western Hemisphere Shorebird Reserve Sites of Hemispheric Importance, illustration: Alice Sun

right, Killdeer, image: Simon Shutter

a Western Hemisphere Shorebird Reserve Network site in terms of over a million shorebirds that rely on the site. It's also an important bird area for the hundreds of thousands, or tens of thousands, depending on the species you're looking at, geese and waterfowl that are overwintering here. We're recently discovered the importance of this site for migratory shorebirds such as Western Sandpiper which are stopping over here as part of their long distance migration to feed on a substance known as biofilm and what's in that biofilm is essential fatty acids such as omega fatty acids that you would add to your diet as a supplement. These birds are relying on these fatty acids to power their long-distance migrations and making this a really key site in the global context.

Amy-Claire: So they're coming here to eat the biofilm that we find right here at Brunswick Point.

James: So the thing that's exciting about this site is particular influences of the Fraser River on the marine system of the Salish Sea so that you have mixing of freshwater and saltwater that's triggering productions of these higher levels of these essential fatty acids. Here we still have that natural connectivity between the river and the sea that allows for this remarkable productivity.

Amy-Claire. Wow. Let's imagine I'm one of the 500,000 Western Sandpipers that come to this place in the spring. What's it like for me?

James: Well, I mean first off, remember, you're going to be exhausted. Western Sandpipers are a long distance migrant. They've made a long-distance flight from Peru or the Bay of California or even the eastern shores of the US all the way up to this site, and they're hungry and tired and they see these big mud flats which are extremely rare, I mean less than 2 percent of BC's coast is estuarine habitat and none of it as big as these mud flats off the delta that we have. So they see this and they're like, oh this is a great opportunity to finally settle down and find some more food to power what is a big jump for them. So they come down to the delta and find a place that is nice and big and open, so they can see any particular predators such as the Peregrine Falcons that might threaten them, and they have this very rich source of fatty acids that allow this next big long jump to the Copper River Delta in Alaska.

Amy-Claire: It's so neat to get a sense of how the Fraser River Estuary fits into a connected global network for birds and that we're just one stop on a journey. So we talked about the birds that are traveling through, but there are birds that nest here too.

James: Right. So I mean the intertidal marsh habitats are great nesting sites for things like Marsh Wrens and then we also have some shorebird species as well that use the delta and the Brunswick Point area as nesting habitat. So Killdeer are an example of a ground-nester that will be nesting either on the agriculture lands or even sometimes along the dike.



Amy-Claire: So let's imagine I'm a nesting Killdeer at Brunswick Point. What's it like for me?

James: Extremely stressful for a nesting Killdeer or any nesting bird this time of year. They're really trying their best not to be discovered in terms of other birds or other sources of predation, from racoons, from rats or from other mammals. So the Killdeer or ground-nester is relying heavily on camouflage. And so their eggs blend into the ground extremely well and the birds themselves also blend in extremely well and so every time there's something that goes by they will freeze and hope they don't get noticed by what's going by. If you get too close to a nesting site for a Killdeer you'll start to see a broken wing display from the nesting adult as they attempt to lure you away from their nest.

Amy-Claire: What can we do to help the Killdeer or other birds that are using this site, as we walk here?

James: If you see a nesting bird, keep your distance, be respectful, and let them have a lot of space as they try to raise their young. If you come back to the same nest time and time again it starts to cue predators that there might be something of interest there so try to stay away as much as possible. Also keep your pets under control. Keep your dog on a leash and train your cat to be on a leash and if you don't feel you can do that keep your cats in doors. Because they're a major threat to nesting birds as well.

Amy-Claire: I've heard you say that it's up to the community to act together to ensure the continued existence of this place. Let's start with the individual person. How can an individual person walk quietly here and help this place?

James: Well, walking quietly I think is the first step in that journey of protecting this place as an individual. Being aware and learning about the site is a key step in that journey. Take a moment to reflect on the enjoyment and the peace and the calm that come from this site and share that with others as well.

right, Great Blue Heron, image: Simon Shutter

smuqw'a'

Great Blue Heron

[WATCH: VIDEO](#)

Lindsey Wilson, knowledge holder,
Hwiltsum First Nation



49.068143, -123.153311



This is my sacred place

Lindsey Wilson in conversation with Amy-Claire
Huestis and Bruce Granville Miller

Video Transcript 1 / Canoe Pass, July 2022

Amy-Claire: Where was the cannery housing?

Lindsey: So, the big cannery was there, so, over here - I'll get you pictures as well cause I got pictures of like my Grandpa on the dock, Granny and Grandpa in front of the cannery. But they were right up there, right?



Amy-Claire: They were up here in the trees?

Lindsey: Up there. Yep, right along there, there

was cannery houses just along the other side and then these pilings here was where the big cannery was on. OK? The big cannery. Like the big shed and then there was like a big flat dock here where they had bluestone tanks on it. Bluestone tanks were the big tanks where we washed our nets in. And then right here there was boatways, so you could haul your boats up, right? and then work on 'em. And actually when I was a kid living here, I was about 3 or something, or 4, and I actually fell between the boatways and I landed in the mud and Jerris's dad came down and rescued me. I jokingly telling Jerris, yeah, pretty lucky it was low water 'cause I landed in the mud [laughs]. But we have a very very strong connection to here, and with all due respect to everybody, our Tsawwassen cousins included, this is Wilson territory, for lack of a better term. Right? This is where it was.

Bruce Miller: You and Jerris are mud brothers.

Lindsey: There you go. Right? We used to run up and down the river with our pellet guns shooting helldivers,¹ trapping muskrats, hunting ducks and of course fishing. And all the brothers, the older brothers like Grandpa and Uncle Frank we all had our places where we anchored before the opening across there. Grandpa was in a wheelchair so we'd wheel him down, he'd sat in his steering wheel. And Uncle Rock was a young strapping young buck around 20. I was around 12. We all fished together. Granny. Yep. So this is what they call Brunswick Point now. We didn't call it Brunswick Point we just called it the Brunswick. This is Canoe Pass.

Andy and Rose Wilson at their spot at the Brunswick Cannery, Canoe Pass, Image: Wakie Clifton



Lindsey Wilson, image: Amy-Claire Huestis

When I went to the Aboriginal Leadership development course our teacher Kirsten Mikkelsen, she's from UVIC and there was a part of the course and they wanted us to submit our sacred place and now as I reflect on it, this is our, this is my sacred place. Not only Canoe Pass, but like right here. And I've had such a connection. My cousin Danny, Terry's son, I was tied up to that piling, just tied up there, and the tide was flooding in like it is now and he says, yeah I seen Lindsey tied up to the piling with a big tear in his eye. Because this is where all the stories were shared with us, Grandpa's stories, right?

¹ grebes.

Video Transcript 2 / Canoe Pass, July 2022

Lindsey: So, we reverted to was our summer camp right? and then we stayed, right?. This is where we stayed. Fishing for sockeye. it was all dispersed, all from the residential schools, the bombing and then the residential schools, right? And then like I said it was law that natives could not fish and make money to provide for their families so we had to say we weren't Indians.

Amy-Claire: You said you weren't Indians.

Lindsey: We weren't Indians. So we could fish and provide for our families.

Bruce Miller: They passed a law saying the Indians of Vancouver Island could not come down on the Fraser to fish but the irony was they weren't recognized so they could continue. So in some respects they were able to continue traditional activities longer than the Cowichan.

Amy-Claire: The wisest decision and the way to earn a living was to not have status as an Indigenous person.

Lindsey: Yeah if you were a Native, you weren't allowed to fish and sell your product. That was the law. The late Ernie Rice told us the same thing happened over in Malahat. You couldn't work at the mill in Saanich Inlet to provide so you had to say you weren't Native.

above, Tule (soft-stemmed bulrush). According to Luschiim, this plant has spiritual significance, image: R. A. Nonenmacher, Wikimedia Commons
below, Jared Qwustenuxun Williams, image: Amy-Claire Huestis



wool'

Tule (soft-stemmed bulrush)

[WATCH: VIDEO](#)

Jared Qwustenuxun Williams,
Hul'q'umi'num' language teacher
and Cowichan knowledge holder



49.067755, -123.155135



Welcome song

Jared Qwustenuxun Williams

Video transcript: recorded at Hwlhitsu'm, August 2022

I just want to raise my hands up to you today and to say welcome to Hwlhitsu'm. I want to share a song with you today. This is what we call a welcome song. Here we go, siem.

Song

I just want to acknowledge that in yesteryear out here on the water there would be all these visitors here. All these other canoes would all have to arrive here. How would you know if they were here to visit or if they were here for war? If they were to sing this one song you knew they were here to visit, they weren't here for war. We had all these different songs so that whoever was here on the beach would know why you were here. So that's why I wanted to share this with you. So huy tseep q'u siem, huy tseep q'u.

qw'uqw'sutsun'

swallow

5



[WATCH: POETRY FILM](#)

Kim Trainor, poet,
with Hazel Fairbairn,
composer



49.066080, -123.158180

Hwlhits'um | signs

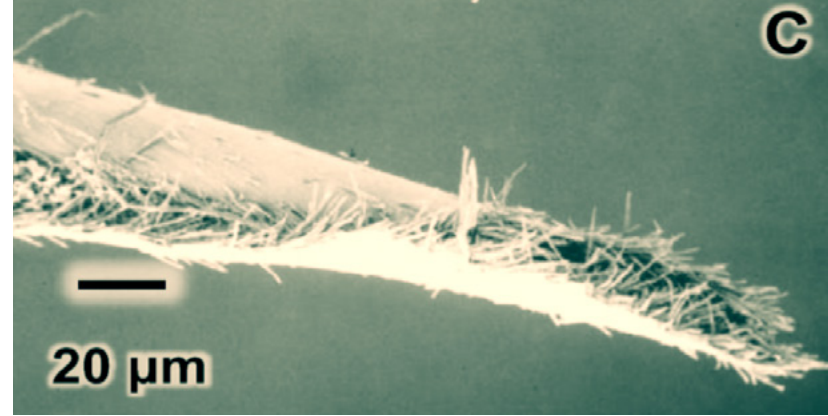
Kim Trainor

The Dunlin returned in early December and spoke to me in signs. Algorithms of blue. Murmurations. Fingerprints. Wingtips canted in flight. Blue peals and hieroglyphs. Fleet. Theirs is an emergent property governed by separation, alignment, extension, and fear. There is a formula for complexity and there are words in Hul'q'umi'num'.

*Mukw'stem 'l' utunu tumuhw 'o' shiilhukw'tul –
Everything on the earth is interconnected.*

The Fraser's silted tongue
Thickens with blooms of phytoplankton as it enters the Salish Sea.
Milky bluegreen, sweet and salt, sunlight and glass. Sea arrow-grass.
Tawny cotton-grass. Tule and common cattail. *Sth'e'qun.*
Saxewul. Grasses whispering. *Lhelhuqum'. T'it'ulum'.* Grass is singing.

We returned in late spring, in the month of ripening
and took a boat through Porlier Pass to Lamalchi Bay
on Penelakut to see where the gunboats had fired
on Lamalchi, driving them east through Active Pass
to Hwlhits'um, where they became
the swish of cutting reeds.



Western Sandpiper tongue, video still from 'Hwlhits'um | signs': Kim Trainor

At the charred pilings
of the Brunswick cannery, Lindsey idled the boat, said,
*We're close close close to this place....coming every night
in summer to catch chinook, tides high on summer nights.*
Later, Bill would tell us there was oral history of Canoe Pass,
that newcomers had to sing the song of Hwlitsum
to be granted passage. *There's the blue net shed that used to be
green.* Dark pilings like a serpent's ravaged teeth.
*The last place we could speak our own language was right here,
Canoe Pass, out on the water at night, where no one could hear.*
Swallows feeding on the wing. Qw'uqw'sutsun'.

We have changed the course of the river, its mouth skewered
with dikes and terminal causeways. The fish can't get through,
the resident orcas are thinned to extinction, the runs of chinook
and sockeye are low. There's no sturgeon anymore.

River rises from green mud and spits a bloom
of tiny creatures, glass-walled diatoms, wandering phytoplankton that ride
the cold salt water, balance of sweet and salt. Diatoms spin sunlight
into threads of polysaturated fatty acids, a woven matt of biofilm
as sandpipers touch down and feed with keratinous bristled tongues,
gathering energy for their long flight north to breeding grounds
on the Copper River Delta in Alaska. Salmon smolts hide in the plume, a refuge
from predators, adjust to salinity and temperature, and again, on their return.
Tiny plankton to copepod to sculpin, crustacean, loon, grebe, Blue Heron.

You see, everything is connected.

Mukw'stem 'l' utunu tumuhw 'o' shiilhukw'tul.

We always come back to this place.

“Everything is interconnected”: Creating the soundscape for ‘Hwlhits’um | signs’

Hazel Fairbairn

Hwlitsum knowledge holder Lindsey Wilson looked out over Brunswick Point and said to us, “people come here and say it is beautiful, but without knowing the history, the tides, the people, they don’t know what they are looking at.” With this one sentence he offered us a glimpse into a deeper, slower and more profound relationship with the rhythm of the land.

This soundscape for “Hwlhits’um | signs” attempts to evoke this tiny glimpse of the history, the haunting, the breath of the tides, the complex inter-connection and overlapping experience of the land and all its inhabitants, over time. Without us being aware of it, sound informs us about our environment; it connects us, helps us to empathize, tells us when to be bold, when to be cautious; what we can choose in all of this, is which voices we listen to.

Working from the line *Mukw’stem ‘l’ utunu tumuhw ‘o’ shiilhukw’tul*—“Everything is interconnected,” the soundscape for “Hwlhits’um | signs” weaves together filter-swept field recordings made at Brunswick Point, MIDI data captured from the bioelectric activity of plants—used to trigger samples of birds and voices—with melodic fragments and electronica generated from spectrographs of maps and images from the film.

Video still from ‘Hwlhits’um | signs’: Kim Trainor

Hwlhits’um | signs



**Deep gratitude to Hwlitsum knowledge holder Lindsey Wilson for taking us on a boat ride to trace the traditional path of Hwlitsum from Canoe Pass to Lamalchi Bay and back again, and for sharing his memories with us of this place. And also to Jared Qwustenuxun Williams for a beautiful day at Brunswick Point in August 2022, for teaching us the names and pronunciation of plants and birds, for singing a song of welcome, and for his generous permission to use the phrase “ Mukw’stem ‘l’ utunu tumuhw ‘o’ shiilhukw’tul” in our work for “walk quietly.” Huy tseep q’u siem. kt*



[WATCH: VIDEO](#)

Hul’q’umi’num’ — (s)xumxum’ , saxwul
(cattails and grasses)

Jared Qwustenuxun Williams

above, Cattails were harvested at Hwlitsum for mats, rope, and houses. According to Luschiim, the name Hwlits’um means “place for harvesting reeds,” image: Simon Shutter

stth'e'qun

cattail



[WATCH: VIDEO](#)

Jared Qwustenuxun Williams,
Hul'q'umi'num' language teacher
and Cowichan knowledge holder

49.064564, -123.157777



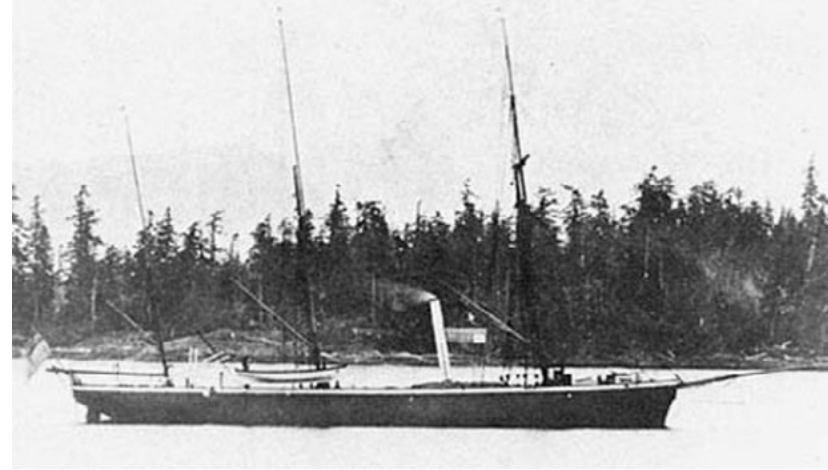
The story of Hwlumelhtsu (Lamalchi Bay)

Jared Qwustenuxun Williams

Video transcript: recorded at Hwlhits'um, August 2022

Where I'm from—just, if you look over behind me there's one of the mountains looks like a wave, a wave over the ocean. All the elders would say, when you leave this tribe's land and you would like to go home, you just have to look for that one mountain which we would call Swuq'us. Now on your way there there's one or two or three other large islands but I really want to highlight that the tribe that is here now on these lands is originally from the village at Hwlumelhtsu [Lamalchi]...

I just really want to raise my hands here to the Hwlitsum tribe. This is their lands for all these years and I just really want to talk about how



Gunboat HMS Forward in BC, c. 1860, unknown author, image: public domain

they wound up here. So this wonderful tribe, they are originally from the village at Hwlumelhtsu, also known as Lamalchi Bay. Lamalchi. In approximately 1863 they were attacked within their village by the HMS Forward and Captain Lascelles. They were attacked because the British were looking for two supposed murderers that were within their village which they were not and so when they told them, *oh no they're not here*, they attacked and the village is designed, or was designed, in a way that they were able to repel the attack. Which means they are the only tribe in the history of the West Coast to force the Royal Navy to retreat. So, hell ya! But when

Looking toward Swuq'us from Hwlhits'um, image: Simon Shutter



that happened though they realized that they would return and that they would have more guns and larger ammunition, and so they fled their home village at Hwlumelhtsu. They went to all these other villages within the islands but they eventually all settled here at Hwlhitsu'um.

Hwlhitsu'um originally translates to *where you harvest the stthe'qun* so this was already a well-used harvesting village which was then used by the remainder of the tribe from Hwlumelhtsu. I really just want everybody to know that the tribe here was the only tribe to successfully repel the Navy. And that's just awesome.



Common horsetail, image: botany08, Wikimedia Commons

(s)xumxum'

horsetail

READ: ESSAY

Bill Angelbeck, archeologist and anthropologist, Douglas College

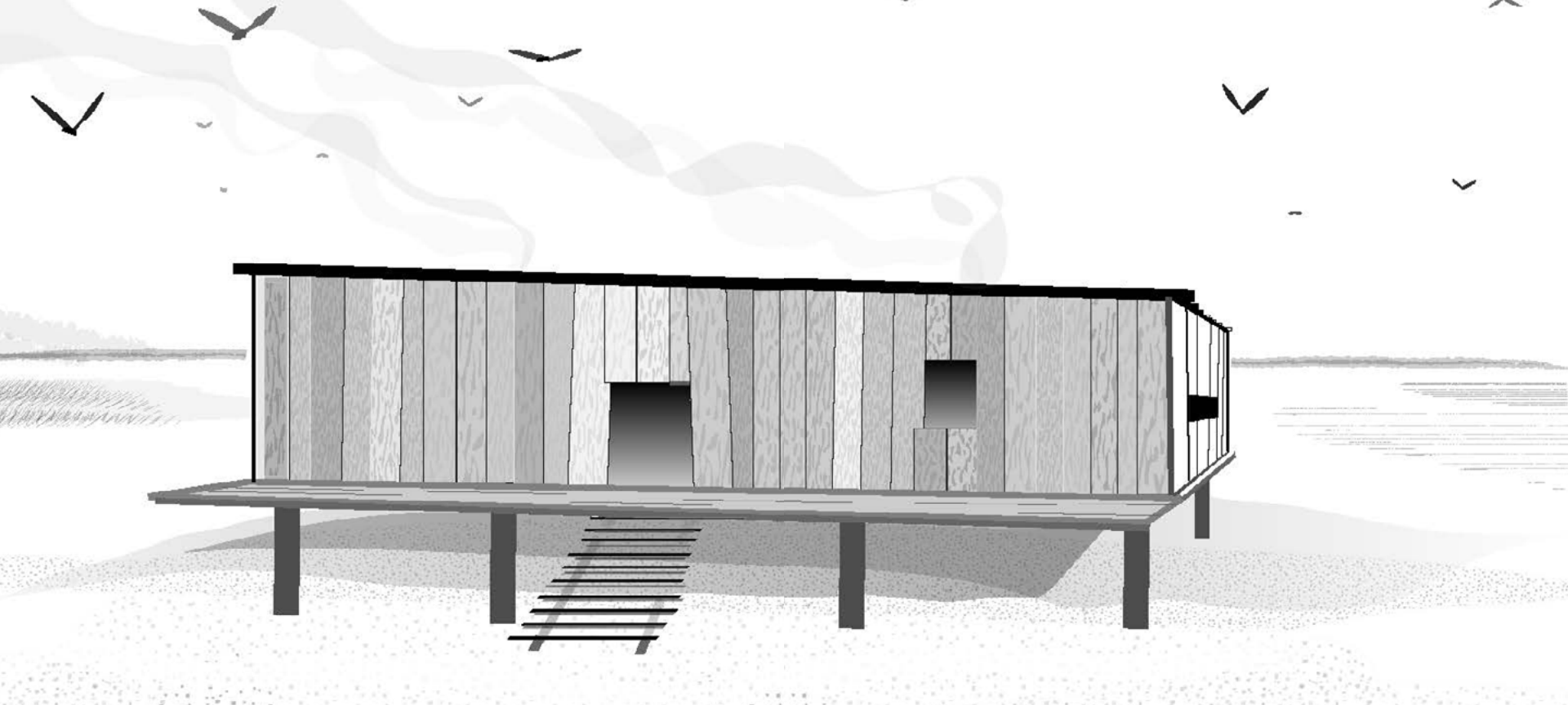
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The centrality of Canoe Pass in Hwlitsum traditional territory

Bill Angelbeck

For millennia, Coast Salish peoples have lived in the Lower Mainland of what is now British Columbia dating back to the earliest periods, occupying the area once the massive glaciers retreated over 10,000 years ago at the end of the Pleistocene. More specifically, the area of Canoe Pass and Brunswick Point are the traditional territory of the Hwlitsum First Nation, a Hul'q'umi'num'-speaking people. Historically, they were known as Lamalchi, or Hwlumelhtsu,¹ which is the name of another of their villages located on Kuper Island to the west. Other villages and seasonal camps were located on Galiano and other southern Gulf Islands. The Hwlitsum also had camps and settlements along the Lower Fraser River, for accessing lakes and montane regions. One of their main villages, Hwlhitsu'um (Hwlitsum), was located along Canoe Pass, at Brunswick Point on the southern arm of the Fraser River. The name of the village and



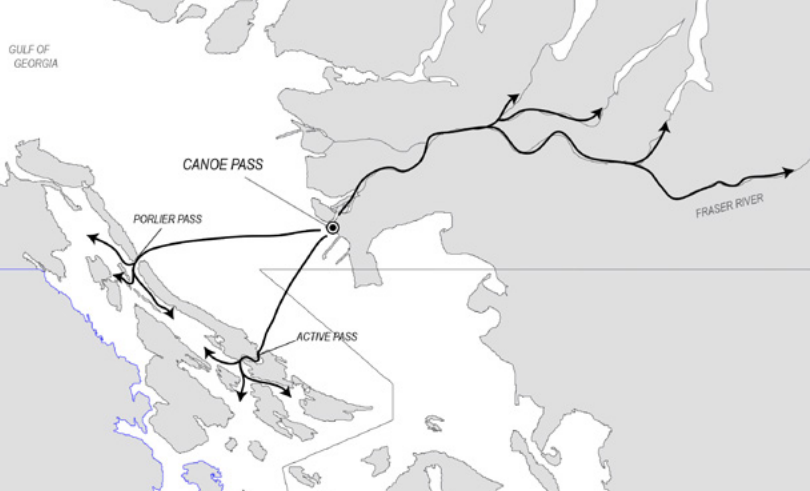
Example of Salishan stilt house, illustration: Angelbeck

of the people are one and the same, Hwlitsum, which in itself strongly indicates the ties of people and place. (See map, p.30.)

Their village at Canoe Pass was centrally located within their traditional territory. Given the nature of the delta, when tides or floods may quickly raise the water levels, the Hwlitsum recount that these plankhouses were built upon stilts. These were rectangular post-and-beam structures, to which they attached cedar planks for the walls and roof above an earthen floor; wooden platforms and floors would also have been added. Although shed-roof plankhouses were more common among the Coast Salish, some Salishan groups such as the Nuxalk in Bella Coola also built houses on stilts, some of which were visited and photographed by G. Dawson in the early 1900s.

The Hwlitsum were distinctive for living amidst and knowing well both the Lower Mainland and the southern Gulf Islands as their village along Canoe Pass allowed for ready access to both regions. In interviews, Rocky Wilson, former chief of Hwlitsum, detailed that the time to depart for the Gulf Islands was during low tide, when the Fraser River waters emanated furthest into the Salish Sea. As he put it, the flow of the Fraser River waters would “push” you towards Galiano Island. Conversely, to return from the Gulf Islands to Canoe Pass, the optimal time was high tide, when the sea was pushing back the waters of the Fraser.

Over the several millennia of occupation, Hwlitsum maintained a highly mobile lifeway, living at various settlements and camps throughout their traditional territory. The late chief Rocky Wilson² recounted their “seasonal



Hwlitsum seasonal movements, map illustration: Angelbeck

cycle” from their oral histories, beginning with spring.³ A new year began with Spring salmon and Eulachon (or Candlefish) entering Canoe Pass as they headed further up the Fraser River. With summer came the runs of Sockeye salmon, which provided more than enough to eat and smoke for storage. In fall, Hwlitsum fished the chum and Coho runs of salmon that appeared in the river, and hunted for deer and elk; some would even hunt mountain goat in the upper mountain reaches. Traditionally, most would head to Lamalchi village on Kuper Island to settle in as a base for the winter months—a time of visiting, feasting, potlatching, and ceremony throughout Coast Salish territory and the Northwest Coast.

The traditional seasonal cycle included numerous other species that were fished, hunted, or gathered. Being in the lower delta of the Fraser meant that Hwlitsum were also optimally situated for annual migrations of numerous bird species that gathered seasonally throughout the area. This included ducks, mallards, geese, and brants, in addition to pheasants that were common year-round. These seasonal forays of the Hwlitsum were not just for foods, but involved material resources, whether for lumber, stone tools, or paints. Healers sought medicinal plants or minerals to treat a range of minor to major ailments.

They also engaged in forms of cultivation of landscapes to enhance the productivity of certain species, whether it involved constructing clam gardens in the islands, burning forest margins to augment the growth

of berry bushes, or tilling areas to augment the productivity of wapato, a regional starchy root that was cooked in the manner of potatoes. Such activities, which intensify the presence of a species, question the notion of whether “hunter-gatherer-fisher” is an appropriate characterization of their economic lifeway.

For each species harvested, it was necessary to know their seasonal availability and their distribution in the territory. It was important as well to know which tools were optimal for hunting or processing the catch or harvest, and how to make those tools. They taught the children in their Hul’q’umi’num’ language: the name of the plant and its various parts, ways of identifying it, ways of distinguishing it from poisonous look-alikes, and any stories related to the species as a part of a broader education. In this way, their seasonal rounds were also a time for educating youth with the breadth of knowledge and wisdom of their lifeway and culture.

After the British gunboat, the *Forward*, shelled their village at Lamalchi on Kuper Island in 1863, many moved predominantly to Canoe Pass as their main village, taking their name from this place, Hwlitsum. Still, they continued their tradition as a predominantly fishing people, even as settlers began to inhabit the region. Eventually, a cannery was built at Brunswick Point, and many Hwlitsum incorporated this wage work into their seasonal rounds.

In recent times, Hwlitsum families have continued to gather at Canoe Pass, during the peak of salmon fishing season, to process fish and can salmon brought in by the fishers. In a series of interviews conducted with Hwlitsum, community members have described such times with fondness. These gatherings were central to their identity as Hwlitsum people. While done in a contemporary context, it was no different from the same basic activities that had been done by their ancestors for generations over millennia throughout their traditional territory.

¹ As reported by Florence James in Glavin, Terry. (2005). “This Haunted Place,” *The Georgia Straight*. “Hwlumelhtsu” means “lookout place.”

² Raymond “Rocky” Wilson, Bruce Miller, Bill Angelbeck, and Alan Grove (2009) *The Hwlitsum First Nation’s Traditional Use and Occupation of the Area Now Known as British Columbia*. Hwlitsum First Nation Archives, Ladner, B.C.

³ Raymond “Rocky” Wilson (2007) “To Honour Our Ancestors We Become Visible Again.” In *Be of Good Mind: Essays on the Coast Salish*, edited by Bruce Granville Miller. UBC Press, pages 131-38.

qel'qulhp

Nootka rose



[WATCH: VIDEO](#)

Amy-Claire Huestis, artist, KPU

Welcome Song: Omar Zubair, composer, with a BC Choral Federation choir, led by Brigid Coult, director

49.062469, -123.150804



Walking here on the dike trail every day, a story landed in my ears. Observing the mudflats, the river, and the birds over time, a transformation story arrived, about a woman who is also this place, who is also the Silvery blue butterfly, *glaucopsyche lygdamus*. She is the soft, shimmering colour of Hwlhits'um—iridescent and blue-gray.

MOTHLIKE / silvery-blue community performance

Amy-Claire Huestis

Hwlhits'um (Brunswick Point), September 24, 2022

Omar Zubair and I wrote an experimental score for Hwlhits'um, based on this story. On the Autumnal Equinox in 2022, we led a community performance there with dance and choir. The event began with *Welcome Song*. The choir sang the words, "ts'ekw'unshun kws qututhun," granted this privilege by Cowichan Elder, Luschiim Arvid Charlie. Many of the contributors to *walk quietly*, with their friends and families, carried flags in the sunset procession. Chief Jim Hornbrook welcomed everyone.

This event was made in consultation with Hwlitsum First Nation and was curated and supported by the Richmond Art Gallery.



above, Nootka rose, image: waferboard, Wikimedia Commons

left, Omar Zubair sings with members of the BC Choral Federation choir at Hwlhits'um, image: courtesy of Richmond Art Gallery

right, Rachel Harris, image: courtesy of Richmond Art Gallery



Rainbow Story

(excerpt 1)

Silvery Blue: This is my story of all the colours
Of my mother's colour Rainbow
I listen to her voice in the marshes
To the voice of a woman called Shadow
The voice of the blue sky

The cricket song pure gleeful magic
Singing spirit voices

I play the grassy string
I am Silvery Blue

Brigid: I am the soul talking to the self
Shifting through landscape
To water to voice to ear

I am listening to raindrops
Drawing circles
Spreading on the gray river surface

Silvery Blue: My story is heard in ears of gold
They listen in golden liquid reflection

left, Dancers Twyla Raffé-Devine, Ellen Harris, and Lina Baang perform at the eeeee circle with Omar Zubair and others (behind), image: courtesy of Richmond Art Gallery

Rainbow Story

(excerpt 2)

Silvery Blue: High tide looking for the moon I have rainbow visions
And she lies in the blue profile with snow gradient
So beautiful with clouds rising around

That we are all the children of the woman called Rainbow
Who rests here in blue mountain profile
With black spruce eye and black marsh island hair

She surrounds blue green red yellow white again blue
And becomes liquid at sunset

Choir: Three spirits puffing spirit haze
The Ancestor, Rainbow, and Marsh

Brigid: They lie in their spirit clouds making the colours
Making the silvery blueness making the marshland

These colours and clouds
How we all breathe their giant breaths
And walk around in a daze

See their profiles to the north and to the west

Choir: They once walked the Earth
Now they sleep here in the mountains

They make the silvery blueness surrounding

right, Rachel Harris accompanied by Amie MacDonald, image: courtesy of Richmond Art Gallery



sxwut'ts'uli

hummingbird



[WATCH: VIDEO](#)

Tristan Douglas, biologist, UBC,
with video editor Omar Zubair

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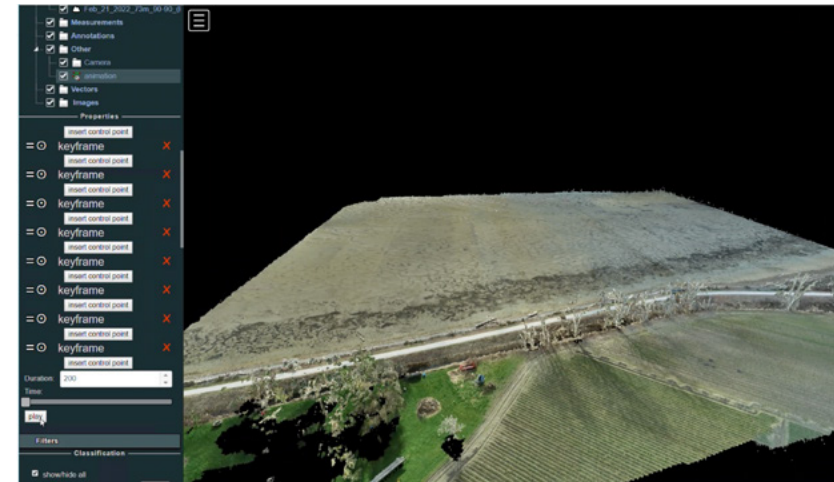


Studying mudflats and intertidal biofilms using remote-sensing technologies

Tristan Douglas

Each fall and spring, millions of birds migrate to their breeding grounds via the Pacific Flyway—the westernmost of the four major North American bird migration routes stretching from Central and South America to Siberia and Alaska. Migration over thousands of kilometers is energetically demanding for birds, who stop to refuel at the estuarine ecosystems of major rivers. Abundant, predictable, and high-quality food resources at stopover estuaries are thus critical to the survival of many migratory bird species. Within estuaries, photosynthesizing benthic algae (mainly diatoms¹) and cyanobacteria (also known as “blue-green algae”), collectively form microphytobenthos, which can contribute up to 50% of the total primary production, representing a central component of the coastal food chain. Microphytobenthos secrete “sticky” extracellular polymeric substances that form aggregations with other microbes, mud-dwelling meiofauna,² and organic matter, which develop into “biofilms” on the surface of the seafloor. These nutritious, labile biofilms are consumed

by a range of taxa in estuarine food webs, from invertebrates to fish to birds. Indeed, biofilm is consumed directly or indirectly by at least 21 species of shorebirds that include sandpipers, shanks, and plovers, accounting for up to 68% of the daily energetic requirements of some migrating shorebird species. Specifically, it is the fatty acids produced by microphytobenthos within biofilms that are known to be a primary fuel for high endurance migration in birds. Birds assimilate fatty acids by grazing directly on surficial biofilm or by consuming meiofauna that have fed on biofilms or planktonic algae. In recent decades, a much greater understanding has developed about the importance of intertidal biofilms, especially as a high-energy food source for migratory birds. This has elicited calls for conservation strategies to preserve biofilms in estuaries and for further research on the specific processes underlying fatty acid production by the microphytobenthos.



3D rendering of the mudflats at Roberts Bank, video still: Tristan Douglas

Estuaries along the Pacific Flyway, including the Fraser River Estuary, are subjected to increasing pressures from human activity. Land transformations, urban development, eutrophication, pollution, disturbances associated with recreational and industrial marine traffic, and many other disturbances to ecologically important estuaries have contributed to a ~29% net loss of North American avifauna abundances—approximately 3 million birds—since the 1970s, along with steep declines in

migratory shorebird species. The proliferation of artificial structures into intertidal and shallow subtidal areas often replaces natural habitats and can dramatically shift ecological structure, altering water turbidity, light availability, and sedimentation patterns in areas important for shorebird foraging. The impact of such habitat disturbances on food availability for biofilm-consuming shorebirds is significant but still understudied and likely site-specific. Within an estuary, biofilms are often patchily distributed, and their biomass and production of fatty acids are influenced by a complex interaction of environmental variables such as mudflat elevation and sunlight exposure times, salinity, proximity to shore and to freshwater discharge, and many other time-varying factors. In order to determine the viability of an estuary for shorebird foraging, microphytobenthos distributions need to be monitored frequently and accurately, taking into account changing mudflat morphology and many environmental variables.

In recent decades, remote-sensing methods that utilize satellite- or aircraft-acquired images have emerged as powerful tools for studying many facets of Earth's biosphere, and they have great potential for mapping, monitoring, and studying microphytobenthos within biofilm in estuaries. Estimations of chlorophyll-a content can be derived from multispectral and hyperspectral imagery containing wavelength ranges beyond the visible range of the electromagnetic spectrum. Since chlorophyll-a is used as a proxy for microphytobenthos biomass, it can be quantified and used to map microphytobenthos at a variety of spatial and temporal scales, from millimeters to kilometers. Many satellite missions collect multispectral and hyperspectral imagery with high spatial resolution and high acquisition frequency, much of which is free and open access. We can use these data to investigate decades of historical spring biofilm blooms and shorebird migration seasons in estuaries along the Pacific Flyway.



In addition, drones—formally referred to as “unoccupied aerial vehicles, or “remotely piloted aircraft systems”—can be equipped with similar multispectral cameras, able to detect chlorophyll



above, Tristan Douglas and specially-permitted drone on the dike trail, image: Huestis
left, 3D mapping of Roberts Bank mudflats, video still: Tristan Douglas

content in surface sediments and used to detect extremely fine detail microphytobenthos patterning. Drone-acquired imagery can also be processed in such a way as to generate centimeter-scale 3D models of mudflat topography, offering great potential to investigate the interactions of biofilms and shorebirds with their physical environment.

Amidst surging human activity and steep declines in migratory shorebirds along the Pacific Flyway, new tools and strategies are needed to help monitor the health of intertidal ecosystems and survival success of the species that rely on intertidal biofilms. My research is aimed at resolving the nuanced, time-dependent, dynamic nature of intertidal biofilm distribution and abundance in order to make this available to policymakers; it will inform conservation strategies and reduce the current declines in migratory shorebirds and ecosystem integrity. Remote-sensing technologies offer great potential in this context, with an ability to help bridge gaps in our current understanding of the relationship between biofilms, shorebirds, estuaries, and humans.

¹ Diatoms are “algae that live in houses made of glass. They are the only organism on the planet with cell walls composed of transparent, opaline silica. Diatom cell walls are ornamented by intricate and striking patterns of silica.” (<https://diatoms.org/what-are-diatoms>). They are photosynthesizing algae, and “are found in almost every aquatic environment including fresh and marine waters, soils, in fact almost anywhere moist” (<https://www.ucl.ac.uk/GeolSci/micropal/diatom.html>).

² “Marine meiofauna are typically smaller than 1 millimeter (0.04 inches) and larger than 32 micrometers (32/1000 of a millimeter). These animals encompass a wonderfully diverse and very important, yet often overlooked part of marine ecosystems.” (<https://oceanexplorer.noaa.gov/facts/marine-meiofauna.html>).

tsiitmuhw

Great Horned Owl

10

READ: ESSAY

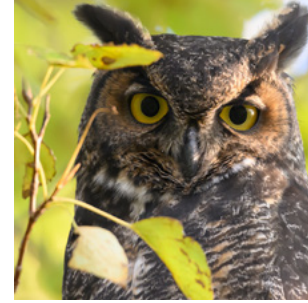
Bruce Granville Miller,
anthropologist, UBC

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To honour our ancestors we become visible again

Bruce Granville Miller

The late Chief Raymond Clayton (Rocky) Wilson, 1948-2016, was a large, strong man, descended from boxers, wrestlers, and, further back in time, freedom fighters who fought to defend their homeland from an assault by the British Navy on their Lamalchi Bay village on Penelakut Island in 1863. He was also a kind, gentle man who deeply cared for both his family and Hwlitsum community members. His story, though, and his place in history, begin before his birth with the shelling of his ancestral home by the British gunboat the *Forward* following the killing of two settlers, an act attributed without evidence to the Hul'q'umi'num' speaking Lamalchi people. This event led to the hanging of leaders by colonial authorities and the dispersal of the Lamalchi band from their Penelakut Island homeland. Many eventually settled in their historic fishing village, Hwlhits'um,



on the south fork of the Fraser River at Canoe Pass. Some fled south and joined Lummi relatives in what became Washington state and others went east to the villages of relatives on the Fraser River. For many years the Lamalchi descendants remained unrecognized

by Canadian authorities as Indigenous people and as members of the Hwlitsum band. His people, Chief Rocky often said, had become invisible to the colonizers.

Rocky published an account of the Lamalchi/Hwlitsum people in his contribution to an edited volume, *Be of Good Mind: Essays on the Coast Salish*.¹ In his own words:

Our ancestry is Hul'q'umi'num' and comes down from the Lamalchi people, a tribe with village sites on the east coast of Vancouver Island and on the lower Fraser River at Hwlitsum, also known as Canoe Pass. Our oral histories tell us that the way of life of the Lamalchi people, the way they survived, was based on what some call a 'seasonal cycle,' where the people gain their sustenance starting in the spring of the year at the mouth of the Fraser River. In the Lamalchi case, our people would fish for eulachon, spring salmon, and those types of fish as well as pick berries and plants at Hwlitsum and further up the river. . . (p. 131)

above, Great Horned Owl, image: Simon Shutter

below, Women and children in dugout canoe on the Fraser River in 1890, image: City of Vancouver Archives



Chief Rocky's great-great-grandfather was Culuxtun, a shaman and prominent leader known throughout the many Coast Salish communities. Other ancestors, too, were Siem, honoured people.

The honoured place of the Hwlitsum was undermined by the dislocation of the band but in 1985 Chief Rocky saw an opportunity to change that after the passage of federal Bill C-31,² and the revised Indian Act. Then began a long, troublesome legal fight to have Hwlitsum status as Indigenous people recognized by Canada; they succeeded in 2000. The second fight is still underway, for recognition as a band.

It would take a number of years to organize a movement that would focus on organizing our rights from a legal perspective. Our people were dehumanized through the Indian Act, and forced to live under horrible social and economic conditions. . . My father joined my grandfather, Henry Wilson, and great-grandfather John Andrew Wilson, who had maintained residence at and around our ancestral village at Hwlitsum. . . Yet, through those troubled times, my father and the rest of the family remained strong leaders . . . (p. 134)

Chief Rocky Wilson was a commercial fisherman, proud of his families' extensive knowledge of fishing practices and of the waters and ecology of Canoe Pass, Roberts Bank, and the Salish Sea. As a boy, he learned Coast Salish cultural practices and perspectives from his father. He was also a university graduate of the UBC Department of History and the First Nations Studies program. Over time, Rocky gradually melded these two bodies of knowledge, Indigenous and academic, as he undertook to lead his community through burdensome Canadian bureaucracies while pushing for recognition for Hwlitsum people. Chief Rocky sought Indigenous allies including the Squamish and other Coast Salish tribes, and in 2003, the Hwlitsum joined with several Vancouver Island-based bands which composed the Hul'qumi'num Treaty Group. He also met with the Penelakut First Nations elders' council, pushing to regain the Hwlitsum place in the Coast Salish world. Meanwhile, Chief Rocky worked to educate his community on the possible impacts of the expansion of the Port of Vancouver on Hwlitsum ancestral lands and waters. He used

funding from industry to undertake a comprehensive study of Lamalchi/Hwlitsum fisheries, hunting, and gathering locations and band history more generally. This resulted in two volumes of research.³

Always, Chief Rocky fought against the invisibility which plagued his community. Gradually, he refined his message to the outside world: the Hwlitsum are a Coast Salish people with a place in the larger social Coast Salish network defined by inter-marriage and common cultural practices. His community had been wrongfully harmed



Chief Rocky Wilson, image: Miller

by the colonial powers, the British and later the Canadians, and by abusive residential schools and the systemic racism of Canadian society. Now, he wanted his Hwlitsum community restored to its rightful place, to its share of the salmon catch, to a land base on which the families could reunite, and jobs to help sustain the band members. Chief Rocky delivered this message calmly, politely, but forcefully. Always, the past, the present, and the future were intertwined, and Rocky Wilson's message was that "to honour our ancestors we become visible again."⁴

¹ "To Honour our Ancestors We Become Visible Again," in *Be of Good Mind: Essays on the Coast Salish*, edited by Bruce Granville Miller. University of British Columbia Press, 2007, pp.131-137.

² "In 1985, Bill C-31 was used to amend the Indian Act to conform with the equality rights guaranteed by s.15 of the Canadian Charter of Rights and Freedoms." <https://www.afn.ca/wp-content/uploads/2020/01/16-19-02-06-AFN-Fact-Sheet-Bill-C-31-Bill-C-3-final-revised.pdf>

³ *The Hwlitsum First Nation's Traditional Use and Occupation of the area now known as British Columbia* and Volume 2: *Hwlitsum Marine Traditional Use Study*, both compiled and written by Chief Wilson, Bruce Miller, Al Grove, and Bill Angelbeck.

⁴ He was survived by his children, Kristin, Regan and Fred, seven grandchildren, and siblings, in addition to the larger body of related Hwlitsum people.

qu'qee-ye'

Western Sandpiper



[WATCH: VIDEO](#)

Amie MacDonald, Biologist, Birds Canada, Motus Wildlife Tracking System Coordinator, with filmmaker Kris Cru, Birds Canada

49.058223, -123.141223



Motus research on Dunlin in the Fraser Estuary

Amie Macdonald

Video transcript: Roberts Bank mudflats, 2022

I'm Amie MacDonald. I'm the Motus Wildlife Tracking System coordinator here in British Columbia with Birds Canada. We are out on the Delta tonight to capture Dunlin which are migratory shorebirds that migrate through the Fraser Delta and also some of them spend the winter here so we're catching Dunlin to put tiny radio transmitters on them. The Fraser River Delta provides critical habitat for Western Sandpipers and Dunlin migrating along the Pacific Flyway and is recognized as a site of hemispheric importance by the Western Hemisphere Shorebird Reserve Network. So we're doing this project tracking Dunlin because we want to



Western Sandpiper, image: Simon Shutter

know how they're moving around the Fraser Delta so that we can better understand what parts of the Delta are important habitats for Dunlin and hopefully that information will be able to inform conservation strategies and conservation planning.

The Motus Wildlife Tracking System is an international collaborative research network that aims to study the movement and ecology and conservation of small flying animals. Mostly that's birds but it can also be bats or insects as well. How it works essentially is there are receiver stations all over the landscape that are able to detect tagged animals. And what makes Motus interesting is all the tags that are put out on the animals operate at a specific frequency but still have a unique ID so any of the receiver systems in the network are able to detect any of the tagged animals in the network so it's not just your receivers that you set up that could detect birds you tag but also receivers all the way down in Mexico or up in northern BC or even Alaska could detect birds that we tag here in southwestern BC.

This is the track of a Dunlin we tagged at Brunswick Point and this bird was detected on three Motus stations around the Fraser Delta before migrating north and being detected on another Motus station in the Copper River Delta in Alaska. Taking a preliminary look at the data we can



Dunlin and Western Sandpipers being tagged, video still: Birds Canada

see that the Dunlin are moving around the Fraser Delta quite a lot. They're moving back and forth between Brunswick Point and Boundary Bay as well as up to Iona Island and even making a few inland movements.

Being out here and being able to catch and handle wild birds is a real privilege and I try to always remember how much of a privilege it is to be able to get to work so closely with wild birds and get to observe them and hold them in the hand. So just being out here seeing the birds and getting to interact with them so closely is really amazing and a real privilege that I'm very glad to be able to do.¹

1. Birds Canada: Collaborators and partners are Environment and Climate Change Canada, City of Surrey, City of Delta, Metro Vancouver Regional Parks, Anderson Elementary School, fieldwork volunteers, and private donors. Bird safety is our top priority. All bird captures and handling were done by trained personnel using standard protocols under a valid scientific permit.

Dunlin murmuration at Roberts Bank, image: Simon Shutter



contributors

Bill Angelbeck is an archaeologist and anthropologist who is interested in the histories and cultures of Salishan peoples of the Northwest Coast and Interior of North America. Since 2000, he has worked throughout the region on various archaeological, ethnographic, and ethnohistorical projects. He has published his research in *World Archaeology*, *Current Anthropology*, and *Ethnohistory*, among other outlets. He acquired his doctorate at the University of British Columbia and is currently a faculty member of the Department of Anthropology and Sociology at Douglas College in New Westminster, B.C.

James Casey earned a master's degree in International Environmental Policy at the University of Northern British Columbia, after which he worked with WWF-Canada on topics ranging from eelgrass and marine planning to hydropower and the Water Sustainability Act. This experience established a base of knowledge he is now applying to the context of the Fraser Estuary Key Biodiversity Area. For Birds Canada, James is building support for the development of a Fraser River Estuary Management Plan for this Key Biodiversity Area.

Kris Cru grew up in the bustling city of Manila, in the Philippines and often watched the Pied Fantails forage around his neighbour's garden. Upon moving to Canada, Kris completed a Biological Sciences degree from Simon Fraser University and has embarked on numerous science communication roles. As the Conservation Engagement and Outreach



Barn Swallow, image: Simon Shutter

Worker for Birds Canada, he supports the team through photography, videography, social media, and outreach. Kris considers it a privilege to be able to share what he loves and is ecstatic about connecting minority communities with birds and the natural world.

Tristan Douglas grew up on the Cowichan Bay estuary. As an undergrad he studied the bottom-up influence of microbes on ecosystem functions, including their role in global climate-change mitigation. His MSc work at the University of Victoria looked at carbon sequestration in Cowichan Bay, British Columbia, with a particular focus on intertidal biofilms. A PhD candidate at IRSS, Tristan is mapping and monitoring biofilms in Fraser River Delta, a critical stopover site for migratory birds. When not in the field or lab, Tristan has a secret life as a musician; he releases and tours music on Planet Mu records, UK.

Hazel Fairbairn is a fiddle, viola, and violin player/sound artist, who works with electronic regenerations and manipulations of acoustic sources and instruments. She created a strings-based score for Kim Trainor's film realisation of her long poem *Ledi*, which they performed live in Fall 2021 at the New Media Gallery, and is creating experimental scores and soundscapes for Kim's poetry-film series 'Seeds.' With roots in Irish Folk music, and a PhD in ethnomusicology, Hazel is endlessly curious about the way sound connects cultures, migrations, and the natural world.

Chief Jim Hornbrook, elected Chief of the Hwilitsum First Nation since 2017, has spent a good part of his life fishing and plying the waters of the Fraser Estuary and the Salish Sea. Born and raised in the area he has gained a lifetime of experience through oral histories passed down for generations. Following in the steps of those before him, he is honoured and humbled to continue to lead the Hwilitsum People in upholding their custodial duties to the Creator in accordance with their Indigenous laws and culture.

Amy-Claire Huestis, co-curator of *walk quietly*, lives on Canoe Pass at Westham Island. She makes artworks through ritual and attention to the landscape over time. She has a daily walking practice at Brunswick Point, and in this thinking-through-walking she considers how we might live better with more-than-human kin. Her work is experimental and community-oriented; some of her collaborators, partnerships, and programs have included North Pacific Cannery Museum, Aadmsteti: Stinging Nettle Net, Time Lapse Dance, Henry Andersen Elementary School, Birds Canada, UCLA Art/Science Center, and many beloved artists and individuals. Amy-Claire teaches fine arts at Kwantlen Polytechnic University.

Amie MacDonald is a biologist with Birds Canada. She studies shorebird ecology and is working to expand the Motus Wildlife Tracking System in Western Canada. Motus is revolutionizing our understanding of small animal migration, telling new stories in extraordinary detail about how and when individual animals are moving across the landscape. Amie has studied Dunlin in the Fraser Estuary, Red Knots on the James Bay coast, and Semipalmated Sandpipers in the Bay of Fundy. Amie loves being in the field and she's interested in migration, population ecology, and conservation.

Bruce Granville Miller is a Professor of Anthropology at UBC and worked with Chief Rocky Wilson and others to record Hwilitsum history. Bruce is the editor of *Be of Good Mind: Essays on the Coast Salish* and author of *Oral History on Trial: Recognizing Aboriginal Narratives in the Courts*.

Simon Shutter is a wildlife photographer based in Ladner, B.C. For 20 years he has captured images of fauna, flora and landscapes across this province. While he has photographed some of the most beautiful places on Earth, Simon is always drawn back to the ecological diversity, beauty and tranquility of the Fraser Estuary. Brunswick Point is one of Simon's favourite locales.

Kim Trainor, co-curator of *walk quietly*, writes poetry and makes poetry films steeped in local ecologies. She is the granddaughter of an Irish banjo player and a Polish faller who worked in logging camps around Port Alberni in the 1930s, as well as a descendent of the Husband family of Ladner. *A thin fire runs through me* will appear with icehouse poetry/Goose Lane Editions in 2023. She teaches at Douglas College at the kwikwəłəm campus.

Jared Qwustenuxun Williams is a passionate traditional food sovereignty chef. For the last 13 years, he worked for and has learned from the Cowichan Elders. He is a Hul'q'um'num' language teacher, knowledge holder, and storyteller. He is also a father and owner of Medieval Chaos, the largest live action role playing game in Western Canada. He shares his traditional teachings with care and respect for land, family, and people.

Lindsey Jay Wilson was born April 6, 1956, at Canoe Pass, BC. He is a commercial salmon fisherman and knowledge keeper. "I travelled the coast my whole life. I'm very honoured and grateful to have had wisdom passed down from Elders coastwide. Being my grandfather's oldest grandson, he told me stories of sasquatches, sea monsters, and Jim Thorpe being the greatest athlete ever. He also told me about his introduction to the residential school on Kuper Island. I am passionate about passing on the wisdom and stories I have gained to our people."

Uxx

Yuck!

[WATCH: VIDEO](#)

Hul'q'umi'num' — Uxx

Jared Qwustenuxun Williams,
Hul'q'umi'num' language teacher and
Cowichan knowledge holder



Roberts Bank Shipping Terminal Expansion

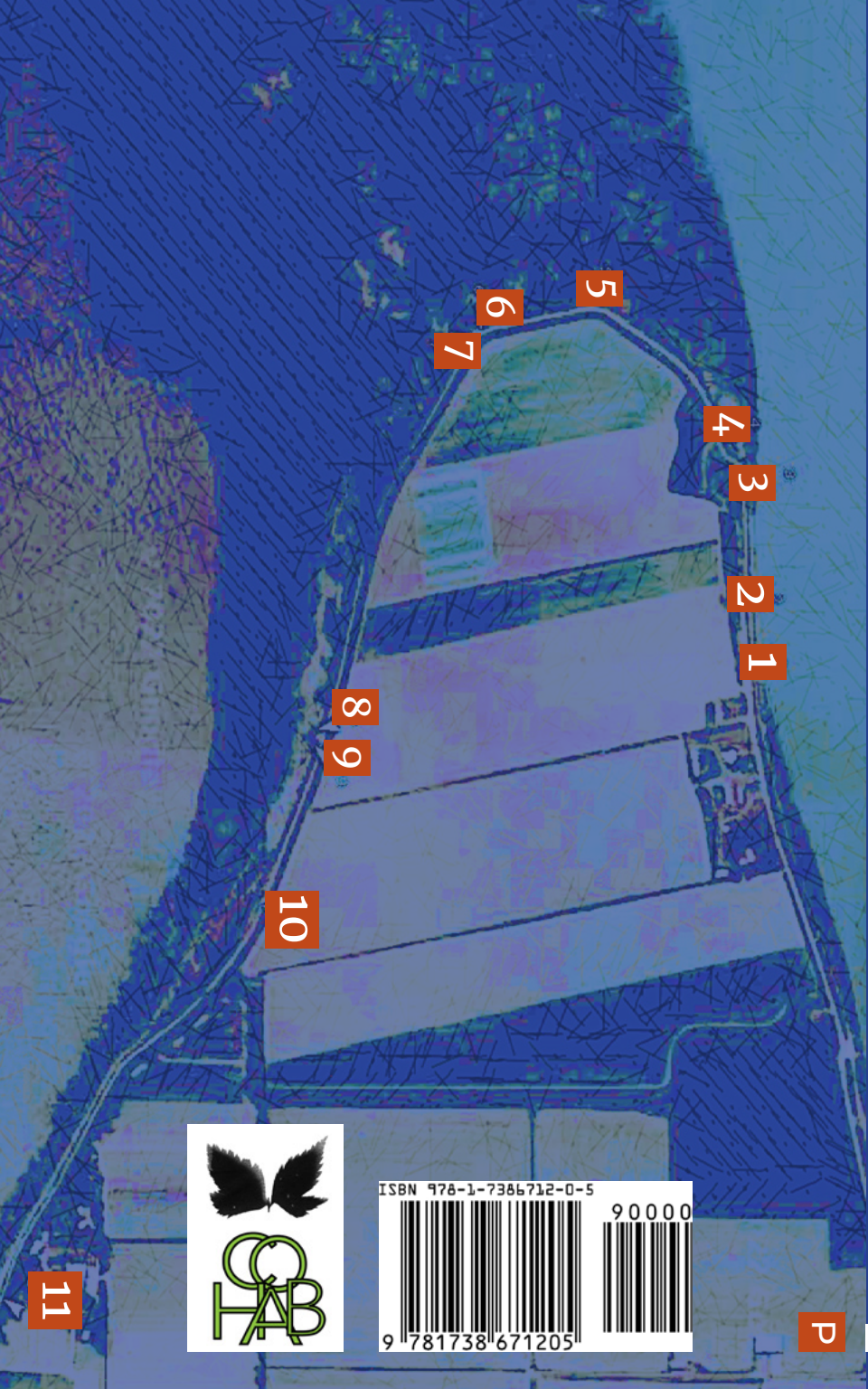
This marshland and intertide area is at immediate risk due to the approved expansion of Roberts Bank Terminal 2 (RBT2). The Canadian Environmental Assessment Agency's report has found there will be significant, adverse, cumulative effects on these species as a result of RBT2, and that these effects would be "regional in extent, permanent in duration, irreversible, and continuous" (Impact Assessment Agency, 2020). There is scientific consensus that the negative and irreversible potential impacts cannot be offset by the Port's proposed mitigation plan.

At risk are Western Sandpipers, Fraser River Chinook Salmon, and endangered Southern Resident Killer Whales, who rely on the Chinook Salmon for their survival.

It is the work of the community to rebuild and maintain a healthy estuarine ecosystem, and to ensure the survival of our more-than-human kin—all the incredible creatures who live in this place.

Pelicans in front of the Deltaport GCT Container Shipping Terminal, image: Simon Shutter





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