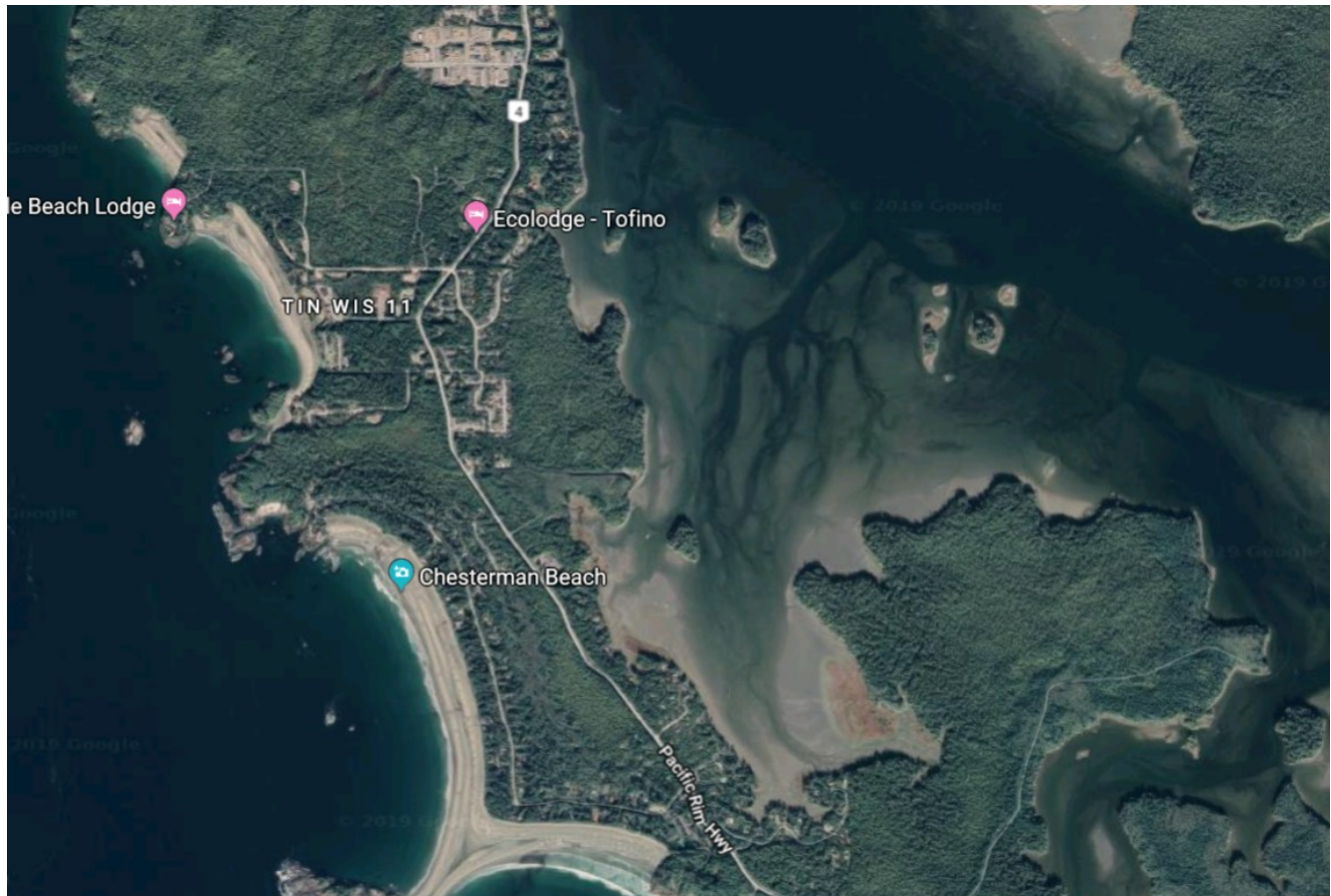


Biology 3021
Community and Ecosystem Ecology
Blogs by E. Carmen Bell

Blog Post 1: Observations

Already, this Ecological Field Study has taught me many things. It has taken me weeks to settle on potential field study locations and considerations. I believe this has to do with my perspective being originally too narrow for the assignment. I was searching for a particularly interesting angle from which I could make a detailed study and inventory and may have been attempting a prescribed outcome. However, I now understand that my scope needed to open to a wider lens. Time spent in two situations, as well as, revisiting the Biology 3021 requirements, guided me to observe the patterns of interacting species of flora and fauna.

Comparing two potential field plot locations, situated across the Esowista Peninsula from each other, may provide an interesting exploration into the similarities and differences between coastal shorelines on the inside and the outside of the peninsula. The inlet plot location is slightly NE from the Ecolodge on the satellite image below. The outside coastal plot is towards the bottom of the image, along Chesterman Beach and before the spit that looks like the tail of a 'Y'.



Credit to Google Maps

Salt water tidal fluctuations make contact with the inlet plot location at high tides when close in time to the new and full moons. Both sites are close to high tide levels and surely receive wave action during storm surges. During today's observations, it was a flooding tide, less full by one to two hours.



West side of Esowista Peninsula

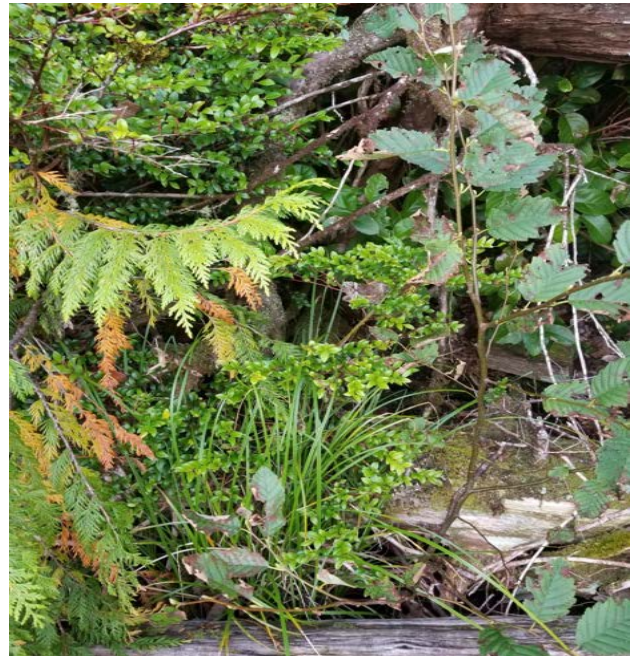


East side of Esowista Peninsula

Picea sitchensis, *Thuja plicata* and *Tsuga heterophylla* trees were interwoven with *Gaultheria shallon* and *Vaccinium parvifolium*, whom still had the odd berry dangling. There were *Blechnum spicant* and *Polystichum munitum* ferns and grasses of which I have yet to identify. I observed patterns of layered growth on nurse logs and transitioning ecotones over depths of 5 meters from where the forest becomes the beach. While on location at the sites, I have observed an eagle, osprey, heron, robin, blue jay and today, a delightful small bird with a yellow patch that I must identify. Different times of day may provide for different observations of bird life.



Flora at the Western site.



Flora at the Eastern site.

My visits to these locations have been at high tide and low tide, morning and late afternoon. They are each approximately ten meters wide and 5 meters deep from the shoreline into the forest. The gradients have a similar topographical slope upwards into the bush. Today, 3-10-2019, I was at the inlet location at 1500 hours and the sandy beach location on the outside of the peninsula at 1700 hours. There was a light wind of about 10 km/hr, the temperature was 13 degrees Celsius, there were cumulus clouds in a patchy sky that gave pockets of gentle sunshine. No fog was visible at these times. The inlet plot is roughly 5km South of the Tofino community within the property of the Tofino Botanical Gardens. The western beach plot is about 3km Southwest of the inlet plot, “as the crow flies”, is of District of Tofino designation closest to the ocean and private land on the forested aspect. The coordinates of Tofino, British Columbia, are 49°08’N 125°54’W. The Esowista Peninsula lies on the western side of Vancouver Island and is not sheltered from the open ocean by large land masses.



The photo on the left was taken at the western (beach) site and the photo on the right was taken at the eastern (inlet) site. As I develop my field journal, it will be valuable to sketch the layers of plant life as I am expecting to see new members of the population with each visit. I question whether there are differences among plants of the same biological species in the different locations? Being that the temperatures have been above twelve degrees on my previous visits, I question whether there will be observable changes in the flora and any animal species interacting with these communities? I question whether the ecotone transitional vegetation, as well as yet to be discovered small creatures, will be different over the 5 meter depth that spans forest to beach contrasting the two locations? I look forward to exploring what these organisms are doing in their environments and discovering the patterns of interactions exhibited.

Carmen Bell, 03-10-19



Chesterman Beach, Tofino, British Columbia, Canada.

3.10.2019

Wx: overcast
1500 hours
13°C

Tofino Botanical Garden: 5km S of Tofino
Inlet side of peninsula

lightwind (10 km/hr?)

gradual
incline
into forest

Thuja had some brown tips

tree boughs overhanging
beach zone

grasses

Vaccinium

Gaultheria

descending
size of rocks
pebbles
sand

seaweed(s)

Still water

Heron watching from water
~ 75m
grey

TREE SPECIES:

Spruce: *Picea sitchensis*

Cedar: *Thuja plicata*

Hemlock: *Tsuga heterophylla*

VEGETATION:

Salal: *Gaultheria shallon*

Huckleberry: *Vaccinium parvifolium*

Ferns: *Blechnum spicant* (Deer)

Polystichum munitum

Small bird c
prominent yellow
patch



mosses / lichens?
seaweeds?

3.10.2019

1700 hours

13°C

Wx: overcast
more cumulus
coming from W

Chesterman Beach

- outside of peninsula
- sandy up to vegetation
- steep bank @ start of veg.

Not many people around

mostly *Picea*, very thick
growth on
higher elevation

grasses growing
higher than Salal

sand

* patches
of grass
extending
out into
sand

3 types
of grasses?

* different bin
type!

Questions:

- nurse logs in both locations?
- can I get a measurement
of slope grade(s)?
- more birdlife in mornings / evenings?
- is there seaweed differences?
- driftwood?