



MAPPING PETROGLYPHS

An example of GIS application in Archaeology

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<https://www.megalithic.co.uk/article.php?sid=37837>

A photograph of a rock wall covered in petroglyphs, with trees and a blue sky in the background.

— What Are Petroglyphs?

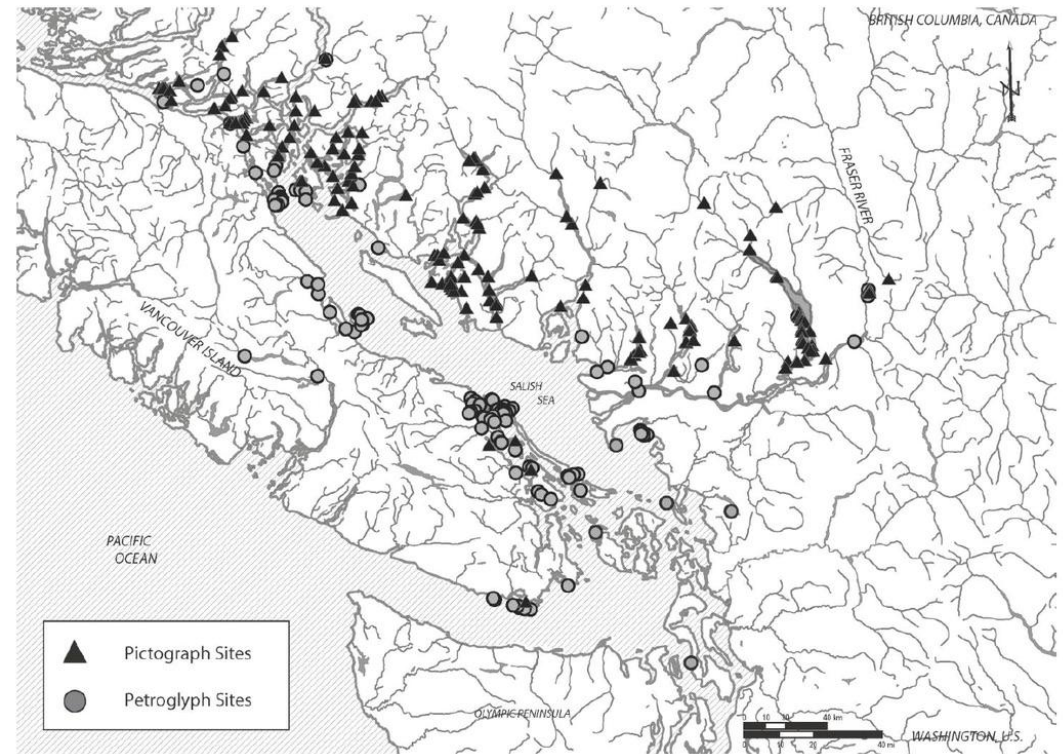
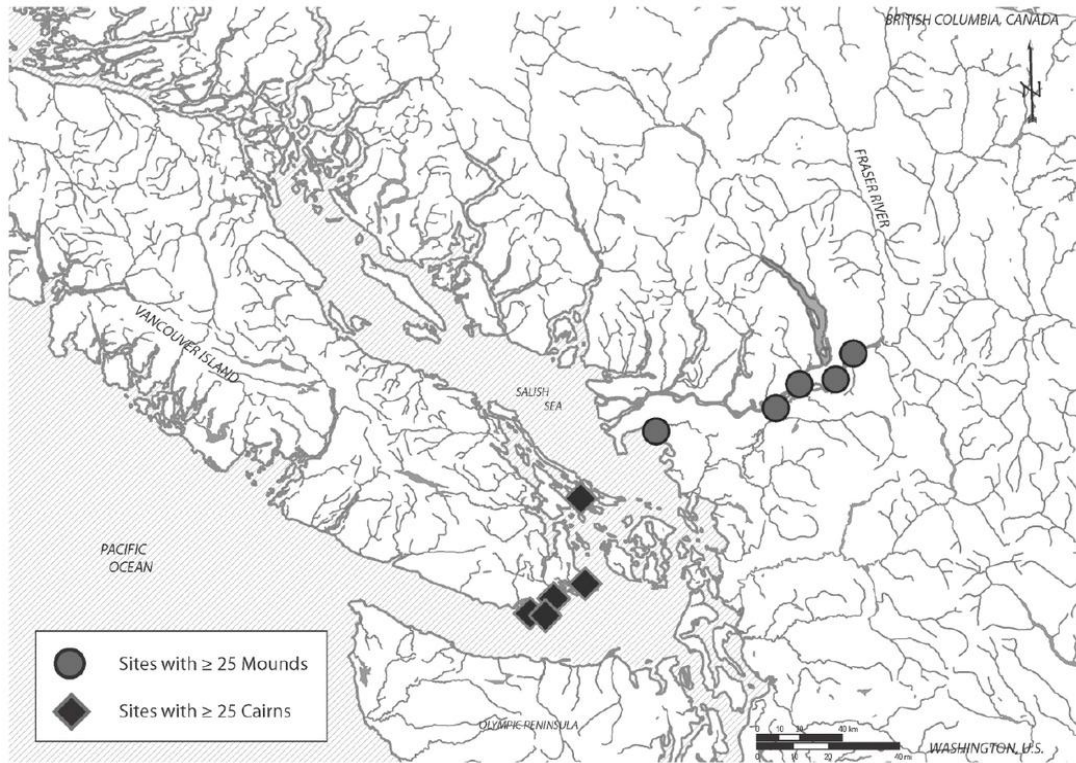
- **Petroglyphs** are images on a rock surface created by removing some of the rock by pecking, incising, or abrading it.



PETROGLYPHS CAN BE DIFFERENT

EXAMPLE OF A SIMPLE COMPARISON BETWEEN ROCK ART AND ASSOCIATED BURIALS

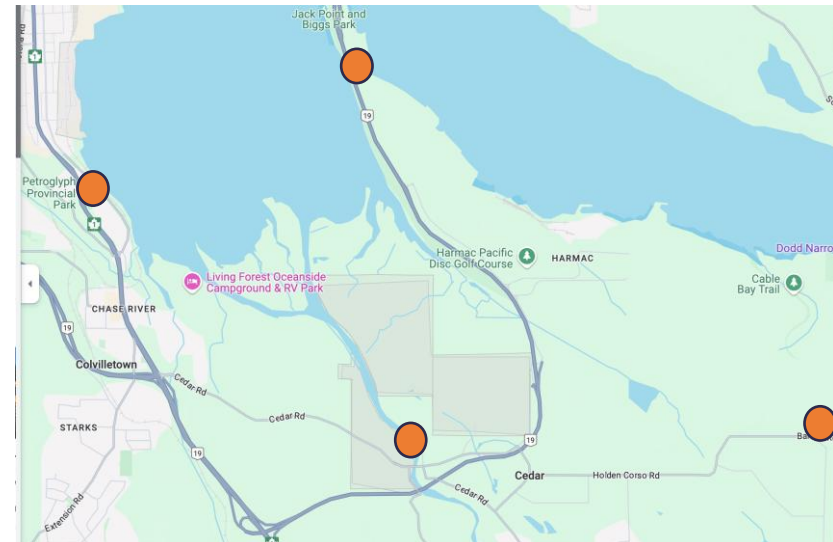
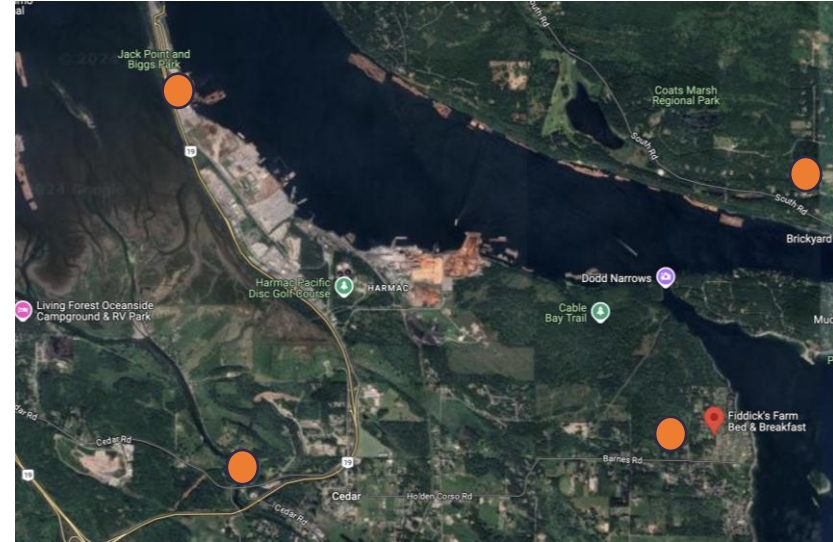
(AFTER BILL ANGELBECK, 2016)

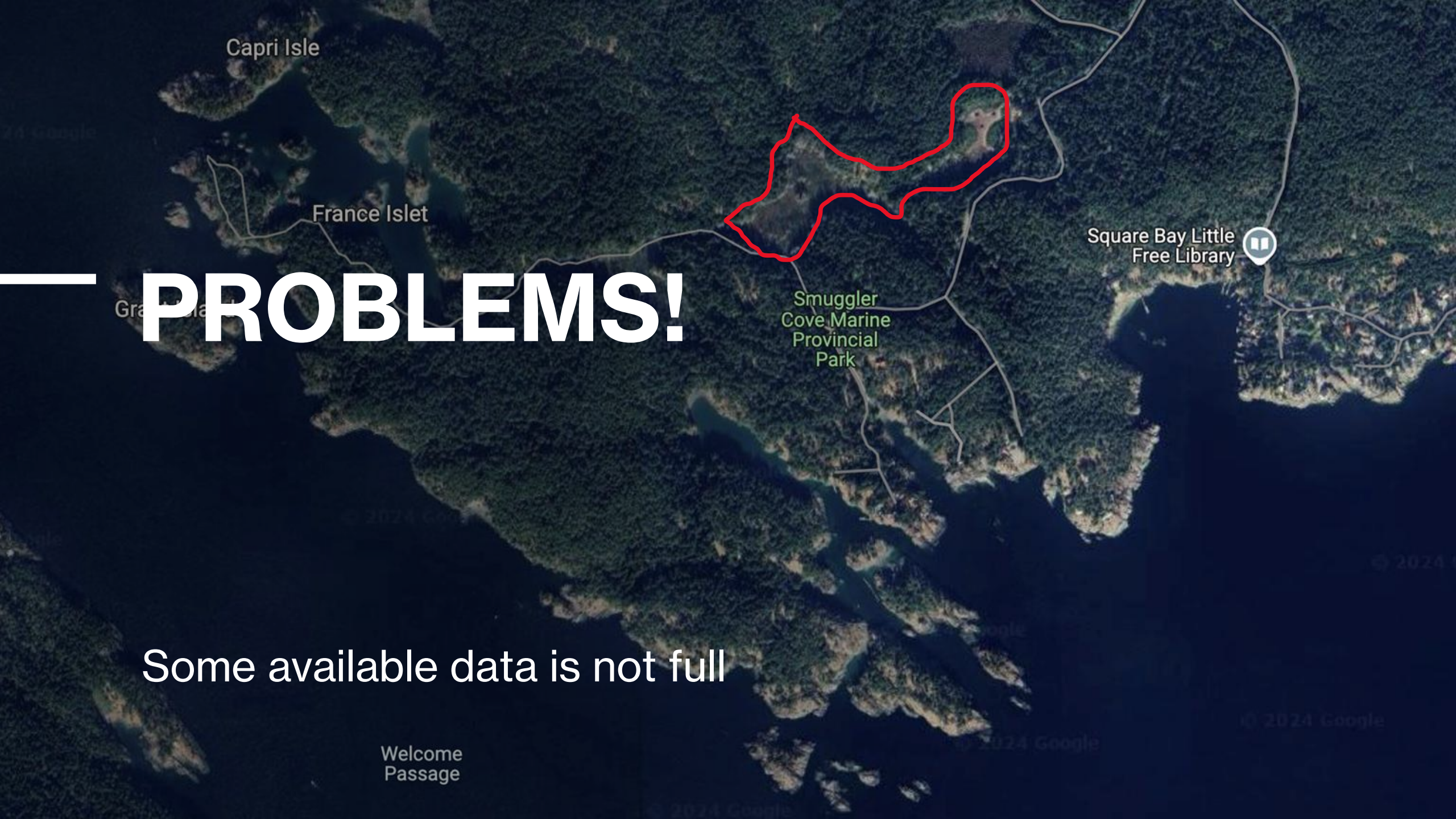


WHAT IS COMMON BETWEEN THESE SITES?

1. Proximity to Sea?
2. Close to a fresh water source?
3. Close to burials?
4. Territory markers?
5. Good hunting places?
6. Good fishing places?
7. Close to villages?
8. Source of raw materials for stone tools?

What if I check all these possibilities?





Capri Isle

France Islet

Square Bay Little
Free Library

Smuggler
Cove Marine
Provincial
Park

PROBLEMS!

Some available data is not full

Welcome
Passage

PROBLEMS!



Rainbow Canoe Club

Arrow Canoe Club

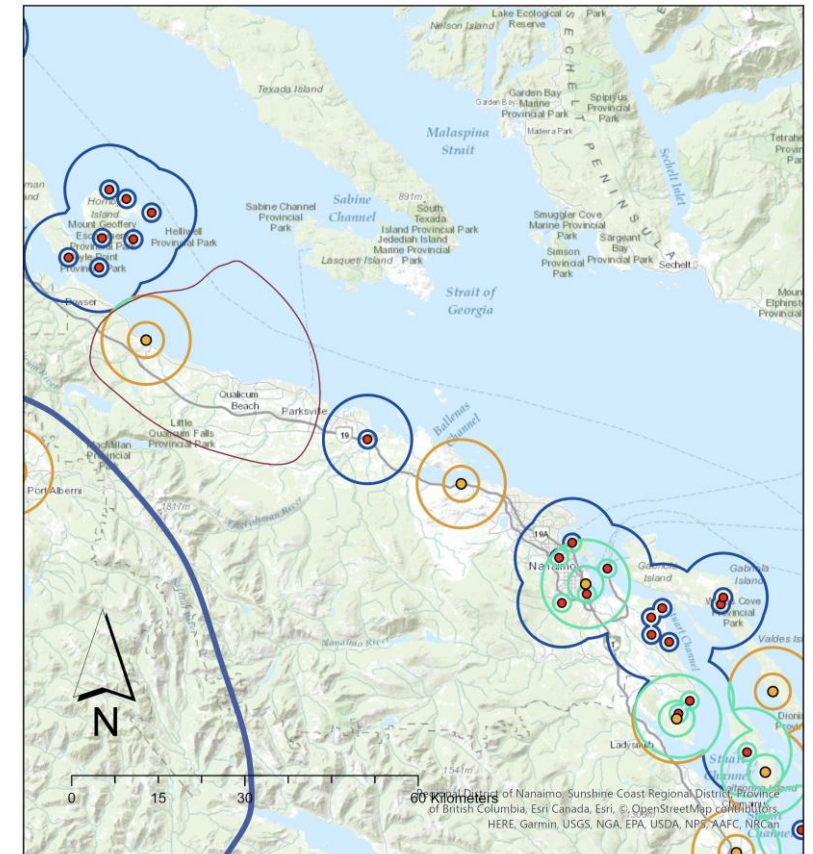
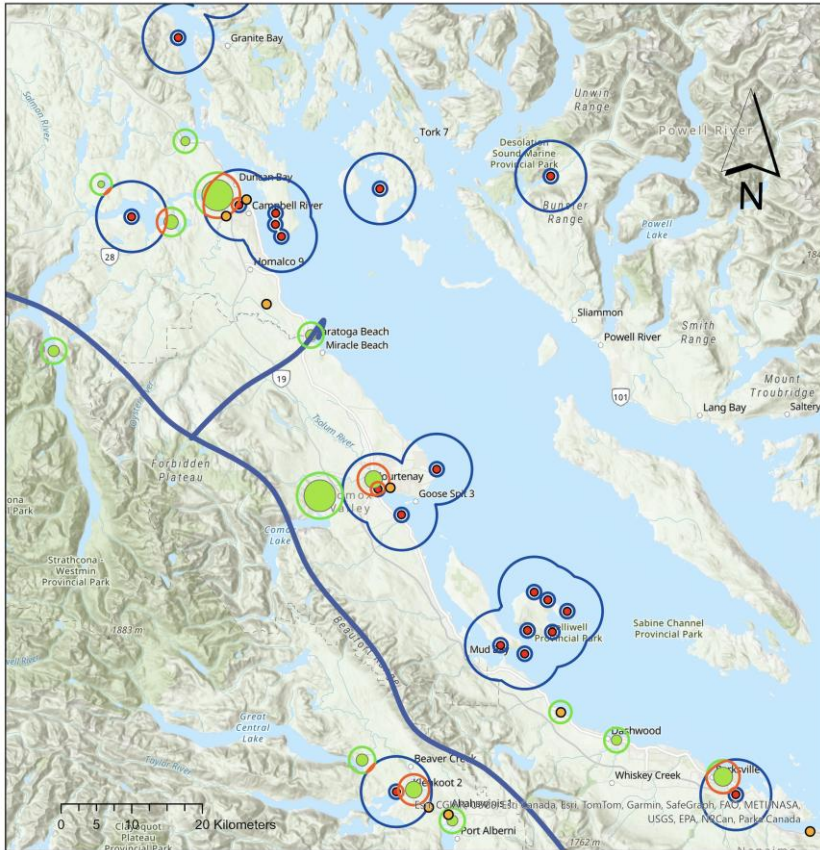
Kulleet Bay

- Some data is not available at all
(the petroglyph is somewhere
here)

Fresh water, Salmon, Territory were important factors.

I compared location of petroglyphs with:

- local geology
- streams and lakes
- Indigenous communities
- Languages
- Salmon density data



Kwakwa'wakw
languages

Nuu-Chan-Nulth
languages

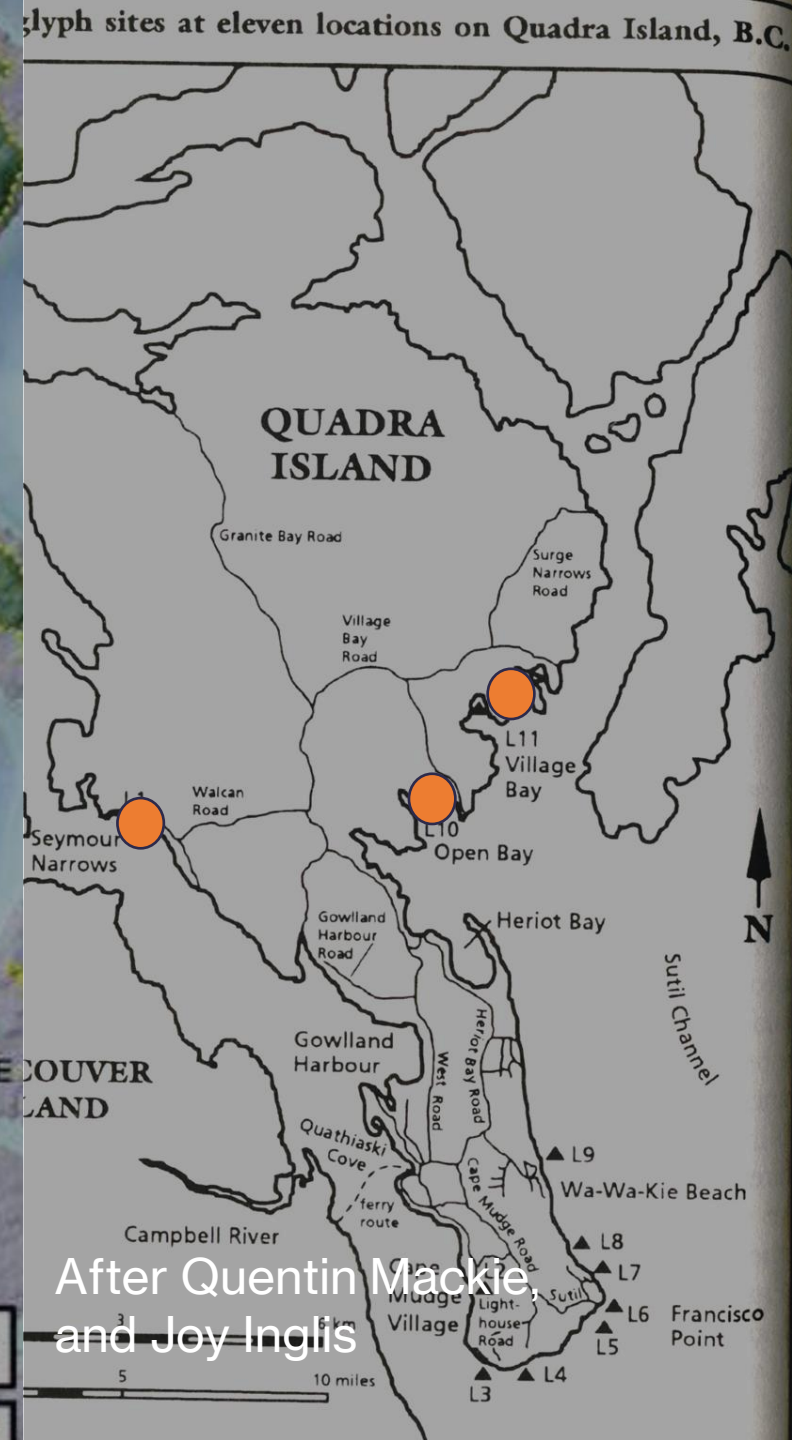
Coast Salish languages

- Indigenous Communities
- Salmon Density Buffer Zone Intersect
- Salmon Density Buffer Zone 1km
- Languages
- Salmon Density areas
- Petroglyph Sites
- Petroglyphs Buffer Zone 5km



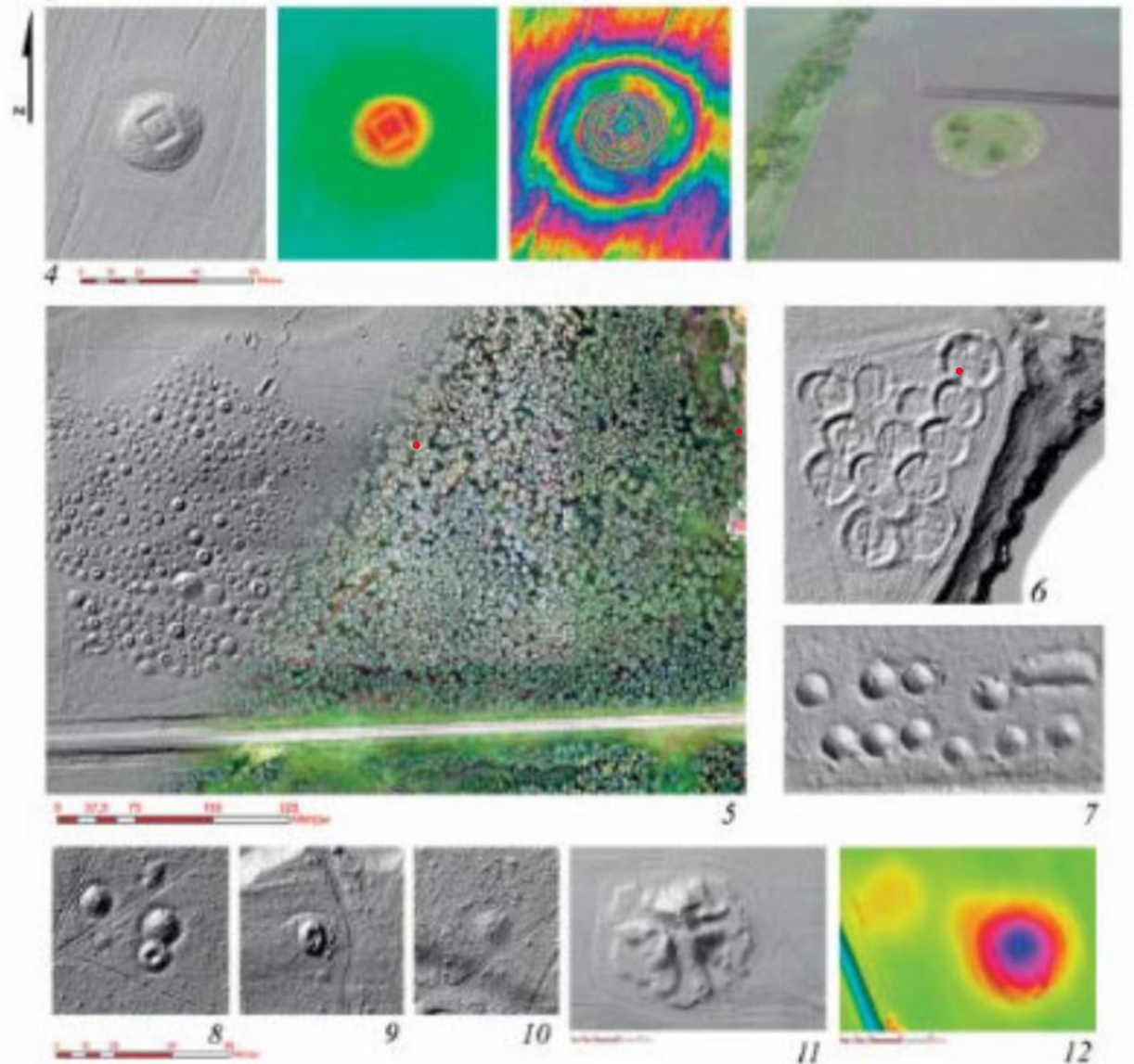
Kira Sokolovskaia, 19.03.2024

OVER PERSPECTIVES?



LiDAR

LiDar imagery bears, perhaps the greatest potential for archaeology. By analyzing the images, we can find new sites, structures, important features.



(After Vasiliy Novikov, 2022)