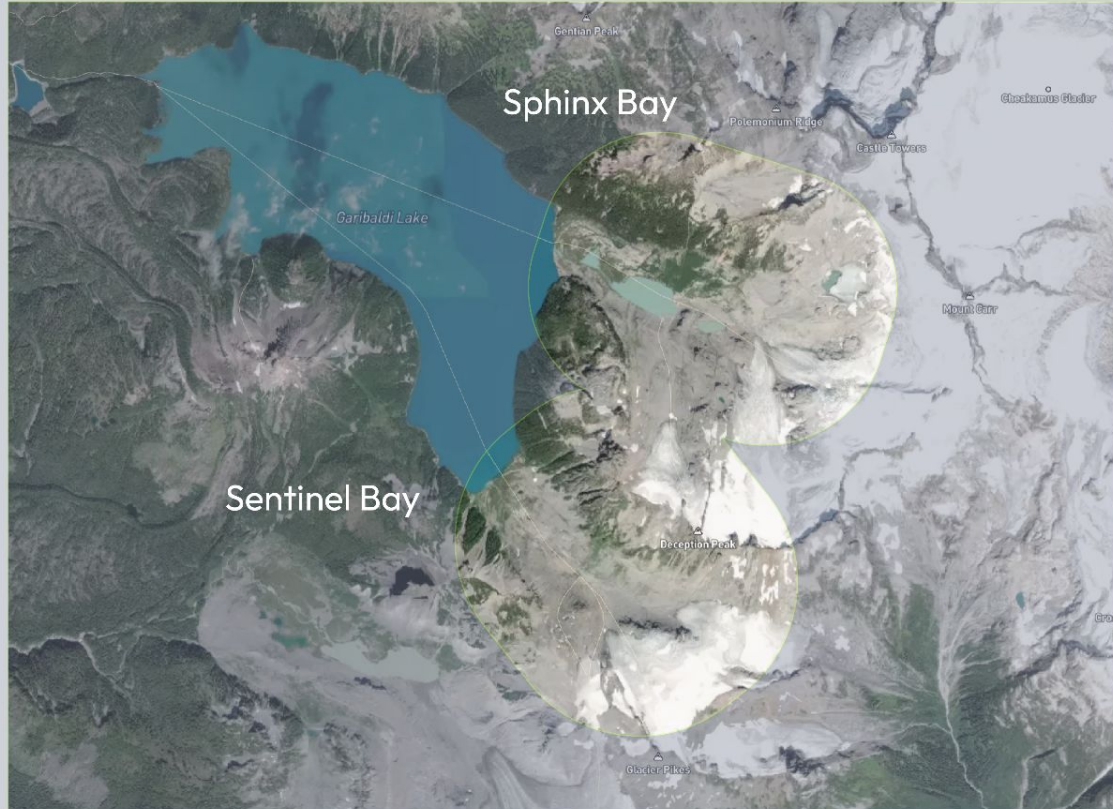


Mapping the spatial distribution of alpine plant communities in Garibaldi Park

Authors: Ciara Norton,
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Courtney Collins, Paul Pickell



Sphinx and Sentinel Bays, Garibaldi Provincial Park, British Columbia, Canada



Sphinx Glacier 1927



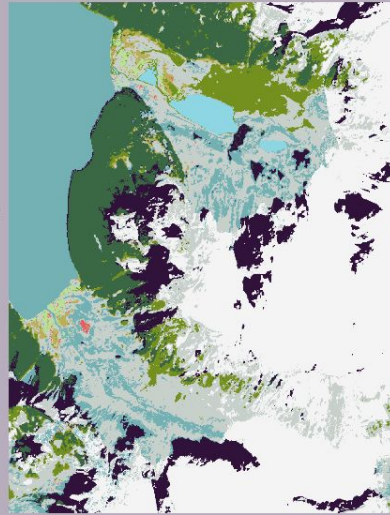
Sphinx Glacier 2023



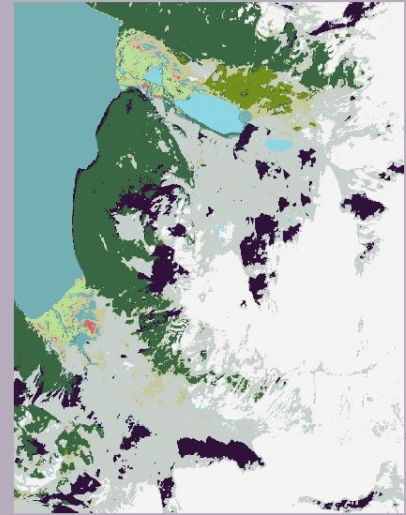


We used both top-down and bottom-up approaches to map the vegetation and landcover in the glacial bays.

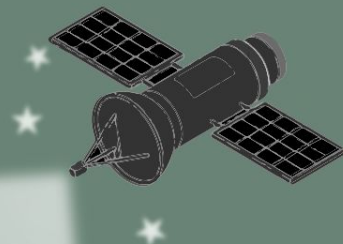
Top-down



Bottom-up



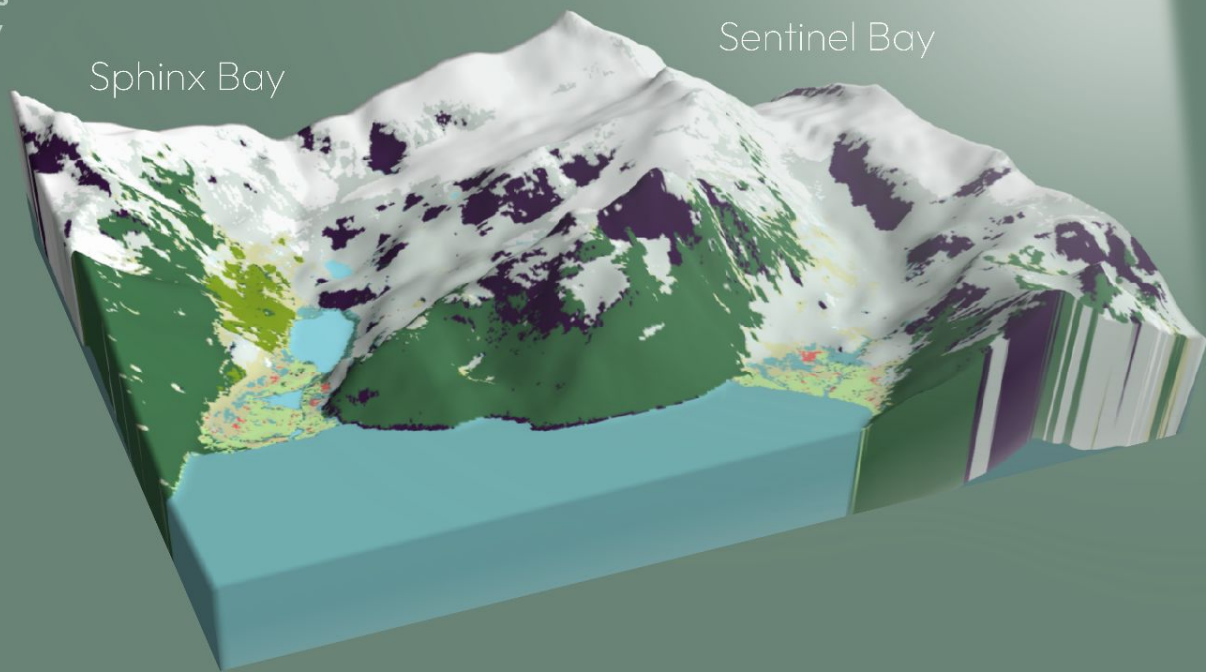
The top-down model produced an overall accuracy of 88%.



Land Cover Classes

- Shadow
- Water
- Water Till
- Glacier/Snow
- Conifer
- Alnus viridis
- Equisetum spp.
- Salix spp.
- Mixed 10-25%
- Mixed 25-50%
- Mixed 50-100%

97%-100%
Producer's
Accuracy



Top-down

- Mixed community classes defined by hierarchical clustering of species composition data
- Higher classification precision of mixed communities
- Higher sampling efforts
- Higher cost
- Lower classification accuracy

Bottom-up

- Mixed community classes defined by % vegetation cover
- Less precise classification of mixed communities
- Reduced sampling efforts
- Cost effective
- Lower precision of
- Higher classification accuracy