ALEX BASTYR, M. Sc.
GIS/GEOMATICS ANALYST

EDUCATION

Masters of Geomatics for Environmental Management, University of British Columbia, Canada, 2021

B.Sc., Earth and Planetary Sciences, McGill University, Canada, 2019

SUMMARY

Alex Bastyr has a B.Sc. in Earth and Planetary Sciences and a Masters of Geomatics for Environmental Management. He has two years of research experience in utilizing forest inventories and satellite derived datasets to map and predict tree species across Canada. He joined Robertson GeoConsultants Inc. in 2023 as a GIS/Geomatics Analyst.

Alex has experience in the application of GIS and remote sensing tools and technologies for environmental and forestry applications. He specializes in geographic information systems, spatial analysis, machine learning, data visualization, and has proficiency in ArcGIS, SQL, and R.

PROFESSIONAL HISTORY

2023-present: GIS/Geomatics Analyst, Robertson GeoConsultants Inc.
2021-2023:   Research Associate, University of British Columbia (Integrated Remote Sensing Studio)

PROJECT EXPERIENCE

GIS Analyst for various projects at RGC
- Database management, data compilation and analysis
- Technical GIS assistance for data visualization and the preparation of figures

Development of fine spatial resolution tree species information for MPB-impacted ecosystems for Species-at-Risk habitat assessment, UBC (2022-2023) in collaboration with the Foothills Research Institute
- Initial data review, compilation, pre-processing, analysis, and visualization conducted in ArcGIS and RStudio
- Modelled key tree species information for mountain pine beetle impacted ecosystems across Alberta, British Columbia, and the Yukon to conduct species-at-risk (Caribou) habitat assessment.
- Prepared quarterly and final reports/manuscripts.

Mapping the presence and distribution of tree species in Canada's forested ecosystems, UBC (2021-2022) in collaboration with the Canadian Forest Services (CFS)
- Literature review, data compilation, pre-processing, and analysis.

- Developed a novel methodological framework with CFS to map the presence and distribution of 37 tree species across Canada using satellite imagery and ancillary datasets.
- Provided technical writing for reports and manuscripts along with descriptive figures produced using ArcGIS Pro, RStudio and Adobe Illustrator.

Mapping 'Blue Carbon' in Cambodian Mangroves: A Case Study Analysis for the Koh Rong Archipelago, UBC (2020-2021) in collaboration with Fauna and Flora International

- Conceptualization and development of an individual project focused on mapping blue carbon in Cambodian mangroves.
- Conducted a time series analysis using satellite imagery and machine learning to make estimates on mangrove forest extent through time and its impacts on blue carbon for the Koh Rong Archipelago in ArcGIS and RStudio.
- Created a user guide to facilitate blue carbon projects for Fauna and Flora International.

RELEVANT ACADEMIC EXPERIENCE

- **Courses:** Landscape Ecology and Management, Geographic Information Systems for Forestry and Conservation, Advanced Geographic Information Systems for Environmental Management, Geospatial Data Analysis, Linear Regression Models and Introduction to Spatial Statistics, Remote Sensing for Ecosystem Management, Advanced Earth Observation and Image Processing

SELECTED PUBLICATIONS

Bastyr, A., (2021). "Mapping 'Blue Carbon' in Cambodian Mangroves: A Case Study Analysis for the Koh Rong Archipelago", https://doi.org/10.5683/SP2/DWOXBB, Scholars Portal Dataverse, V1

Hermosilla, T., Bastyr, A., Coops, N. C., White. J. C., & Wulder, M. A. (2022). Mapping the presence and distribution of tree species in Canada's forested ecosystems. Remote Sensing of Environment, 282, 113276.