PAOLA VINCENT

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SPATIAL ANALYSIS & CONSERVATION PLANNING PROJECTS

- **Labrador Protected Areas Species Distribution and Habitat Modelling:** Research and analysis of caribou distribution using GPS collar data and distribution analysis in R, such as kernel densities. Habitat modelling for other threatened or at-risk species using MAXENT (the predicted probability of presence) and other habitat suitability modelling.
- **Pink Footed Shearwater and Marbled Murrelet Distribution:** GIS and modelling support for the processing of environmental predictors used in GAM and MAXENT models to identify critical marine habitats for two globally threatened sea birds. The project led by Environment Climate Change Canada Developing was centred on understanding the spatial distribution and habitat needs of these species to support critical habitat delineation for species-at-risk management.
- **Community Coastal Resource Inventory:** The existing Coastal Community Resource Inventory (CCRI) for the Island of Newfoundland, created during the period of 1996 to 2007, has been scheduled for an update starting in 2021/2022. Feaver's Lane was tasked with updating the CCRI for the St. Georges Bay - Port au Port area, by conducting virtual interviews to gather information. This involved outreach, virtual interviews that involved an ESRI collector app to digitize information during interview process, data cleanup and a summary report.
- **GIS-based Connectivity Framework:** Research, development, and piloting of a flexible framework to provide decision support for the Ontario Waterways field unit of Parks Canada to support their multi-faceted management role within the Trent-Severn and Rideau Canal Waterways. The framework is primarily focused on aquatic and ecosystem connectivity but allows for the inclusion of heritage, recreational, and other values. Workshops and mentoring were provided to staff on the variety of tools used for the framework, such as Linkage mapper, Fipex/DCI, and NCC Freshwater Habitat Classification. Pilot projects were completed in conjunction with the workshops and mentoring that provided workflows for data acquisition, prepping and processing. Some of the data involved included species observations and water quality parameters (salinity, temperature, alkalinity).
- **Aboriginal Traditional Knowledge (ATK) and Traditional Territory Mapping:** First performed data cleaning and standardization of internal and public ATK for Qalipu First Nation (QFN). This data then underwent importance rankings and spatial aggregation to draft a traditional territory delineation and presented to QFN staff, councilors and members.
- **Historical VHF Marbled Murrelet Datasets:** Contract for Environment and Climate Change Canada to assemble VHF telemetry datasets of Marbled Murrelet movement based on data collection performed from 1998 to 2002 in Clayoquot Sound and Desolation Sound, British Columbia. Data was collected across many different sources and compiled into datasets to be shared on Movebank. Sources were quality checked and where necessary processed to derive location tracking data previously not available to scientists.

- **Habitat Restoration Sites Prioritization:** Multi-criteria prioritization using GIS analysis and local/expert knowledge to rank suitable capelin, salmon, and char habitat restoration and enhancement sites. This is an update to an earlier prioritization analysis and incorporates additional field knowledge and extensive work on beaver dam site candidates to be outfit with a beaver baffler / flow device by World Wildlife Fund (WWF) Canada and partners.
- **Fisher's Knowledge Transformation:** Digitizing 3Ps cod fish harvesters' knowledge of cod fishing practices and changes over time. Fishing grounds and associated information were mapped by harvesters on large format paper maps. Digital spatial data and recommendations on survey methods were delivered to the Fish Food and Allied Workers Union. This work was extended to include flounder fish harvester data.
- **Labrador Coastal Characterization:** Digitizing coastal characterization for southern Labrador based on a Coastal Risk Assessment report. The results are available in the NL Geoscience Atlas and are being used to support identification and prioritization of coastal habitat restoration sites by WWF Canada and the NunatuKavut Community Council.
- **Conservation Plan Analysis:** Analysis of environmental variation representation across existing and proposed protected areas on the Island of Newfoundland using ArcGIS Pro and Excel. Analyses and summary report were incorporated into a Canadian Parks and Wilderness Society official submission.
- **Marbled Murrelet Tracking and Sea Surface Temperature:** Contract for Fisheries and Oceans Canada entailed analysis of satellite sea surface temperature (SST) in raster format of 16 areas over the years 2012-2018 in the waters surrounding Vancouver Island. Software used was ArcGIS and Excel. Statistics, data spreadsheets, maps, graphs, workflows, and summaries were all created as deliverables to project head researcher and correlated with tracking/movement information for Marbled Murrelet and their prey.
- **Coastal Change Assessment:** High-resolution mapping of beach systems in Conception Bay which required both field work and post data processing. Assisted in gathering remote sensing and elevation data and transforming raw data into comprehensive maps. Transect surveys were also conducted along beaches to assess geological and biotic data. UAV/drone, ROV and surveying equipment were used in the field, and Agisoft and ArcGIS were used for post-fieldwork processing.
- **Cost Path Analysis for Caribou Corridors:** An independent GIS term project exploring options for animal corridors. ArcGIS was used to map anthropogenic activities and Woodland Caribou species range near Jasper National Park. This area had two ecologically important regions for the caribou that are fragmented due to human activity. Cost path analysis tools were used to estimate the least energy pathways where Woodland Caribou could cross over major roads to connect the ranges.

MUNICIPAL GIS AND MAPPING SERVICES

- **Heart's Content Municipal Planning:** Currently providing mapping and data support to planner John Baird in developing the first municipal plan for the community.
- **Logy Bay – Middle Cove – Outer Cove:** Currently providing GIS support, survey digitizing, and mapping products. This includes current and future land use zones and environmental maps with planner Stephen Jewczyk, as well as an ArcGIS Online mapping portal for the town.
- **Witless Bay:** Mapping for various town projects, survey digitizing, and crown land applications.

- **New-Wes-Valley:** E911 mapping as well as developing GIS training modules for an in person 2-day training session later this year.
- **Avondale:** Consulting and acquisition of high-resolution imagery mapping for use in a large town map mural.

EMPLOYMENT

February 2021 - Present	**Geographic Information Systems Consultant, *Feaver's Lane Enterprise Inc.***
	Providing spatial analysis, digitization, prioritization, reporting, cartography, and related services for clients in natural resources, environment, conservation and other sectors.
December 2019 - February 2021	**Geographic Information Systems Analyst, *Independent Contractor***
	Collaborated with and mentored by Randal Greene of Feaver's Lane Enterprises Inc. as a GIS Analyst on a per-contract basis.
May 2019 - July 2020	**Research Assistant (Field & Laboratory), Department of Geography, *Memorial University of Newfoundland***
	Assisted in the gathering and processing of coastal elevation data and beach assessment with lead researcher Brandon Tilley and project managers Dr. Rodolphe Devillers and Dr. Norm Catto.
May 2019 - March 2020	**Server, Bartender, and Host, *Bernard Stanley Gastropub***
	Filled many front-of-house positions at this very busy restaurant with Gastropub atmosphere.
October 2014 - March 2019	**Food and Beverage Supervisor, Bartender and Sever, *Exile Restaurant at Jag Hotel***
	Started as a server and was promoted to position which included many managerial responsibilities at this higher-end hotel restaurant and lounge.

EDUCATION

August 2019	**Bachelor of Science (Major in Geography, Minor in Biology), *Memorial University of Newfoundland***
	Focused on physical geography, geographic information systems, conservation, and marine biology.

SKILLS

- Completed numerous projects in **ArcGIS**: digital terrain models, 3D geovisualization, geocoding, vector and raster analysis, etc.

- Holds **Esri certificate** for 6-week online training of "Cartographic Concepts" using ArcGIS Pro
- Holds **Esri certificate** for 6-week online training of "Spatial Data Science Analytics" using ArcGIS Pro
- Holds **Esri certificate** for 6-week online training of "Imagery in Action" using ArcGIS Pro
- Holds **Esri certificate** for 6-week online training of "Do-It-Yourself Geo Apps" using ArcGIS Pro
- Knowledgeable in **QGIS** Software
- Familiar with **R** Software
- Experienced with spatial analytical tools **Linkage Mapper**, **FIPEX/DCI** and **MaxEnt**
- Familiar with **HTML** and **CSS**
- Attended the **Geomatics Atlantic 2020** workshops and conference offered through Canadian Institute of Geomatics
- Completed numerous high-resolution elevation surfaces in **Agisoft**
- Trained in **TileMill** for designing web-based basemaps
- Used **UAV/drone** and **ROV** technology in numerous field sites
- Experienced with **RTK GPS** equipment in surveying
- Competent in discovery, acquisition and editing of spatial data
- Completed field courses in a variety of Newfoundland environments
- Holds **Open Water Diver** and **Dry Suit** certificate
- Holds **Basic Drone Operations** license
- Experienced with recreational and sea kayaking
- Extensive management, communication, problem solving, and customer service skills