

Atlantic Coastal Plains Mapping

The Limestone Plains in Ontario are characterized by shallow soils (less than 1m) and lie within a mosaic ecotone between the St. Lawrence Lowlands and The Canadian Shield, known as The Land Between. The Land Between, further, has an incredibly high density of shorelines to area. It is known that within these distinct features, habitats and so wildlife species are specialized or dependant on those limited features. Furthermore, shorelines along limestone plains and with fluctuating water levels give way to a suite of relic species known as Atlantic Coastal Plain. Understanding which species are indicators for these habitats, and then discovering and mapping their population distribution will help to understand the value and extent of these rare habitats. Understanding characteristics of indicator species, their range and habitats, will provide benchmarks and a framework to manage ecosystems as well as monitor changes.

Key research question(s):

****Each project may be restricted to a set of questions (questions/projects are suggested in a stepped and consecutive order building on one another), or to a geographic area, wherein all the questions may be researched. Furthermore, projects may be further scoped by choosing one area of Atlantic Coastal plain (flora and/or fauna) to study and monitor.**

Questions A

Where are the Atlantic Coastal Plain shorelines located within The Land Between?

““a specific watershed/county?”

What is the extent of the shoreline at each site? (Size/depth/length)

What are the species associated with the habitat/shoreline at a specific site?

Questions B

What is the condition of the site/species?

What are the dispersal capacities of indicator species?

Questions C

What are the threats to these species and spaces?

What is the general viability of the habitat at this/each site?

What management options are appropriate for key areas?

Benefits to the community:

- The results of this project will help to characterize the lands within the “Land Between”; it will support the assessment of uniqueness as well as the vulnerability of these lands to development, climate change and other pressures.
- The project will set a benchmark for further research and analysis.
- The project will allow the assignment appropriate messages and measures for conservation of the lands and lakes.
- The project will highlight/target areas of greater sensitivity for protection and stewardship.
- The project will provide a benchmark and framework from which to measure changes and monitor actions.
- The project will help local communities through highlighting areas of sensitivity for protection, stewardship and/or incorporation into planning documents, and may help to promote appropriate land uses and support local lake plans.

Benefits to the student/researcher:

- Students will be contributing basic understanding and standards in an area of new and uncharted science.

- Students will gain experience in wildlife biology
- The project will hone skills related to field inventories and assessment techniques.
- Students will utilize and enhance skills in resource management including research methods, report writing, GIS mapping and modeling and public relations. It will qualify an individual for work in the conservation sector: an area requiring broad ranging skill sets from field assessments to critical analysis.
- Landowner and agency contact, communication and coordination are public relation skills that will be enhanced and are utilized providing beneficial experience to the student in any sector and level of environmental management today.
- Lastly, results and research will be marketed and communicated to groups across the Land Between, as well as resource agencies such as OMNR, NHIC, Ontario Stewardship, Municipalities and Watershed Councils and educational institutes.

Resources/support:

Office space and computer access. ArcMap 9 GIS software.

Networks and contacts in OMNR and NHIC as well as educational sectors.

Limited travel budget for necessary field investigations (mileage @ \$0.42)

Stipend as required.

Printing costs.

Larger publishing costs.