



# Natural Ecosystem Connectivity across the Chignecto Isthmus - Opportunities and Challenges

Executive Summary and Table of Contents

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By:

*Alexander MacDonald*  
CPAWS Nova Scotia Chapter

*Roberta Clowater*  
CPAWS New Brunswick Chapter

A Collaborative Project of CPAWS New Brunswick and CPAWS Nova Scotia



## **Background on the Canadian Parks and Wilderness Society**

The Canadian Parks and Wilderness Society (CPAWS) is a national non-profit charitable organization. CPAWS is dedicated to safeguarding Canada's biodiversity through parks, protected areas and similar natural areas, coupled with the responsible management of the lands and waters that surround those protected spaces. We do this because our country's truly wild spaces should last forever....

CPAWS was founded in Calgary in 1963, when it was known as the National and Provincial Parks Association, and has since grown to include 13 chapters and approximately 15,000 members nationwide. Our efforts to protect Canada's wilderness now extend from coast to coast to coast.

CPAWS Nova Scotia Chapter came into existence in 1994 with a mandate to pursue land-based and marine wilderness conservation work in Atlantic Canada. In 2003, CPAWS Newfoundland and Labrador Chapter was established. CPAWS Nova Scotia Chapter continued wilderness conservation work throughout the Maritime Provinces until fall 2004, when the CPAWS New Brunswick Chapter evolved from the long-standing New Brunswick Protected Natural Areas Coalition (NBPAC). CPAWS Nova Scotia Chapter continues to focus on wilderness conservation on land and sea in Nova Scotia and Prince Edward Island.

The New Brunswick and Nova Scotia Chapters of CPAWS currently work together to address wilderness issues of a trans-boundary nature, such as the conservation of the endangered Acadian Forest ecosystem and the conservation of ecosystem connectivity within that Acadian Forest. The following report is the first published product of the important relationship between the New Brunswick and Nova Scotia Chapters, one that we intend to have relevance to wildlife managers, policy makers, planning specialists, residents and grassroots conservationists in both provinces.



**Photo credit - Ian Smith, Cape Chignecto Provincial Park, NS.**

For more information on this project, or to request a pdf version of the whole report (7 MB), please contact:

CPAWS-NS: 902-446-4155, [coordinator@cpawsns.org](mailto:coordinator@cpawsns.org) or [www.cpawsns.org](http://www.cpawsns.org); and  
CPAWS-NB: 506-452-9902, [cpawsnb@nb.sympatico.ca](mailto:cpawsnb@nb.sympatico.ca) or [www.cpawsnb.org](http://www.cpawsnb.org).

## Executive Summary

Between November 2004 and May 2005, the New Brunswick and Nova Scotia Chapters of the Canadian Parks and Wilderness Society assessed the opportunities and challenges involved in conserving 'ecosystem connectivity' on the Chignecto isthmus, a narrow land bridge between the two Maritime Provinces. Existing scientific, geographic and historical information was used to conduct a preliminary identification of challenges and opportunities in this area, coupled with the use of local knowledge to provide a relevant context for our efforts. The analysis was focused on the areas east of Shemogue and Sackville, New Brunswick, and west of the Shinimicas River and Nappan, Nova Scotia.

Ecosystem connectivity refers to a landscape-level approach to maintaining suitable habitats and functional movement corridors for flora and fauna. A group of focal species was used as a framework for assessing connectivity on the Chignecto isthmus, including moose, black bear, Canada lynx, American marten, northern flying squirrel, barred owl and interior forest bird species.

To understand the local challenges and opportunities related to habitat connectivity for these species, land-use and land cover information was compiled using GIS (geographic information system) analysis. The interpretation of this geographic information shows that habitat fragmentation by roads, forest harvesting, human development and small-scale agriculture may interrupt connectivity for a number of these species. The assessment was informed through conversations with more than forty-five local residents and stakeholders, who helped identify some of the challenges and opportunities discussed. Identified challenges include:

- Community sprawl around the communities of Moncton and Shediac (NB) and Truro and Pictou (NS), has the potential, if it proceeds, to pinch off the entire isthmus from the anchor natural areas on either end of the land bridge;
- A number of highways and roads cross the breadth of the isthmus from north to south, creating potential barriers to wildlife movement, and fragmenting the landscape;
- The isthmus landscape is dominated by private land, which has led to an uncoordinated approach to land use (forestry, agriculture, settlement) and a resultant ecosystem that is broken into fairly small patches of natural habitat;
- There is a dearth of ecological knowledge related to ecosystem connectivity issues, including a lack of knowledge about local species distribution and movement, and lack of coordination between NB and NS with respect to wildlife monitoring and management, outside of federally listed species at risk.

The Chignecto isthmus benefits from a myriad of conservation initiatives, predominantly around the internationally significant wetlands in the southern Bay of Fundy portion of the isthmus. This existing conservation work provides a number of interesting opportunities to extend stewardship to the forested portion on the northern side, including:

- A pioneering group of woodlot owners on the isthmus are being certified according to the standards of the Forest Stewardship Council, under the auspices of an FSC certified forest manager;
- Several land trusts and conservation organizations are active on the isthmus, and have developed productive working relationships with landowners and governments - these include Ducks Unlimited, the Nature Conservancy of Canada, the NB Community Land Trust, and the Chignecto Agro Club of the Soil and Crop Improvement Association;
- A collection of conserved lands have been designated to meet various objectives on the isthmus, including the Chignecto, Cape Jourimain and Tintamarre National Wildlife Areas, Amherst Shore Provincial Park, the Hackmatack and Round Lakes Game Sanctuary and the North Tyndal Protected

Water Area. All of these areas could be cornerstones of an ecosystem connectivity network on the isthmus;

- Proposed conservation zones, such as the Missaguash/East Amherst Wildlife Management Area, and proposed conservation stewardship initiatives, such as the Fundy UNESCO Biosphere Reserve, could help increase on-the-ground conservation attention on the isthmus.

As a result of this exercise, the authors have identified areas of high conservation priority to potentially facilitate ecosystem connectivity across the isthmus, and best options for connectivity routes. These options are based on available data, maps produced for this project, and local knowledge. The options do not incorporate information on the quality or abundance of high quality habitat available on the isthmus, as this level of data was not available. Most notable among these high priority sites are lands located along the northern portion of Highway 16 in New Brunswick, which represent some of the largest patches of habitat in the border area, and are a critical part of the projected connectivity route.

CPAWS NS and CPAWS NB make several suggestions for next steps toward a new cooperative conservation venture - one that explores cross-border conservation and connectivity issues in more detail, and weaves together the conservation areas and initiatives that currently exist. As a first step, CPAWS NB and CPAWS NS intend to organize a steering committee to oversee such a cooperative project, and use the results of this phase of the project to spur collaborations and further research.

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