

Litter-dwelling invertebrate diversity in mixedwood forests

Lead by: [Anne Oxbrough](#)

Theme: [Arthropod Diversity](#)

Status: Continuing

Start: 2010

Participants

- [Anne Oxbrough](#)
- [John Spence](#)

Background

This project is funded through an IRCSET-INSPIRE Marie Curie Fellowship (EU) and involves a two year secondment at the University of Alberta, with a third and final year completed at University College Cork in Ireland. Invertebrates are an important component of forest biodiversity, inhabiting all areas from the soil and litter, to understory layers and the canopy. They have functional importance in food webs acting as herbivores and predators, as a food source for mammals and birds, and as decomposers and pollinators. Invertebrate diversity is known to be influenced by factors acting at various spatial scales including forest structure and canopy species composition to forest patchiness in a landscape. Invertebrates are also influenced by environmental parameters acting at much smaller scales, such as soil conditions or litter and vegetation structure. As forest policy is usually implemented at stand and landscape scales, there is a need to investigate how these small-scale processes can be integrated into forest management plans. This project aims to examine habitat features which influence the assemblage structure of litter-dwelling invertebrates in comparison with factors acting at larger spatial scales (stand and landscape). A further goal is to identify potential biodiversity indicators which are easily identifiable by non-specialists and have potential applications in sustainable forest management.

Objectives

1. Examine the community structure of litter-dwelling invertebrates in mixedwood forests.
2. Identify structural, compositional and functional habitat features that are indicators of litter-dwelling

invertebrate diversity 3. Make relevant policy/management recommendations for enhancing litter-dwelling invertebrate diversity in managed forests in Canada and Ireland

Key Results

Ongoing