

Dynamics of a Lepidoptera (moth) community in managed boreal forests of North Western Alberta, Canada

Lead by: [Esther Kamunya](#)

Theme: [Arthropod Diversity](#)

Status: Completed

Start: 2005

End: 2012

Participants

- [Esther Kamunya](#)
- [John Spence](#)
- [Jan Volney](#)

Background

My project seeks to evaluate and investigate the impact of forest harvesting methods on boreal lepidopteran community assemblages. In this study I seek to examine, analyze and interpret patterns of species abundance, diversity and community assemblages of moths in response to post harvest forest regeneration over a period of 3 years. Pre-harvest and 2 year post-harvest sampling of moths was done and documented by Morneau (2002) while I did a 5 year post harvest sampling in 2005 (unpublished data).

Objectives

The study's specific objectives include: 1. To determine post treatment moth assemblages at the EMEND research site (described below) and to evaluate treatment effects on relative abundance (number of individuals), species richness (number of species), evenness (species distribution within sample: rareness and commonness), diversity (Shannon Weiner and Simpson Yule diversity indices), community assemblages (composition), as well as indicator species 2. To determine post treatment defoliator assemblages (Caterpillars) associated with understory vegetation at EMEND and to evaluate treatment effect on richness, species diversity, functional diversity and species composition 3. To determine the

parasitoid complex of selected understory larval species at EMEND and evaluate treatment effect on these complexes. 4. To investigate the effect of post treatment vegetation regeneration on trophic interactions of selected species in the study (host plants, caterpillars and parasitoids)

Key Results

n/a