

Causes and rates of mortality for understory white spruce, aspen, and balsam fir in a boreal mixedwood forest

Lead by: [Ellen Macdonald](#)

Theme: [Pattern and Processes](#)

Status: Continuing

Start: 1999

Participants

- [Ellen Macdonald](#)

Background

An understanding of mortality in juvenile trees is essential for developing models of forest succession and growth and yield. Little is known about mortality in juvenile trees in the understory - either the rates or the underlying causes. The study will provide a mechanistic understanding and a quantification of mortality of major commercial boreal forest trees in the understory. The results will contribute to development of stand level succession and growth and yield models. Results will also be interpreted to provide information on the likely success of stand-level silvicultural manipulations (e.g. understory protection, uneven-aged management systems, shelterwoods, underplanting).

Objectives

The objective of this project is to characterize the seedling mortality of important tree species across the boreal forest through a collaborative effort between different research groups. A five- year monitoring of naturally regenerated seedlings will permit comparisons of mortality between geographic regions, soil types, light levels and (possibly) stem heights.

Key Results

n/a