






## DATA PAPER

# Seasonal and annual dynamics of western Canadian boreal forest plant communities: A legacy data set spanning four decades

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## Abstract

As boreal forests rapidly warm due to anthropogenic climate change, long-term baseline community data are needed to effectively characterize the corresponding ecological changes that are occurring in these forests. The combined seasonal dynamics (SEADYN) and annual dynamics (ANNDYN) data set, which documents the vegetative changes in boreal forests during the snow-free period, is one such source of baseline community data. These data were collected by George H. La Roi and colleagues in Alberta, Canada from 1980 to 2015 within permanent sampling plots established in the Hondo-Slave Lake area (eight stands; 1980–2015) in central Alberta and the Athabasca Oil Sands (AOS) region (17 stands; 1981–1984) near Fort McMurray in northeastern Alberta. Various data were collected, with temporal and spatial coverage differing by data set. These data sets include, but are not limited to, cover of each identified vascular plant and bryoid (moss, liverwort, and lichen) species; forest mensuration; forest litter production; and soil temperature and moisture. Notably, permanent sampling plots were set up as a grid, which will facilitate analyses of spatial relations. These data can be used to analyze long-term changes in seasonal dynamics and succession within boreal forest communities and serve as a baseline for comparison with future forest conditions in unmanaged, managed, and reclaimed forests. Data are released under a CC-BY license; please cite this data paper when using the data for analyses.

## KEYWORDS

Alberta, Athabasca Oil Sands, boreal forest, community ecology, forest mensuration, legacy data, *Pinus banksiana*, seasonal dynamics, succession, understory vegetation, vascular plants

Amelia V. Hesketh and Jenna A. Loesberg contributed equally.

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## CONFLICT OF INTEREST


The authors declare no conflict of interest.

## DATA AVAILABILITY STATEMENT

The complete data set is available as Supporting Information and associated data are also available in Borealis, the Canadian Dataverse Repository, at <https://doi.org/10.5683/SP3/PZCAVE>. Associated code used to tidy data are available in Zenodo at <https://doi.org/10.5281/zenodo.6587653>.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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