

Biology Seminar



Western
UNIVERSITY · CANADA

12:30 - 1:30 pm
Friday, November 16, 2018
BGS 0153



John Stinchcombe
Professor
Department of Ecology &
Evolutionary Biology
University of Toronto

Adaptation and constraint in introduced plant species

Species introductions are uncontrolled evolutionary and ecological experiments. While early work focused primarily on ecological factors, recent work has begun to emphasize evolutionary and genetic forces and their roles in determining invasion success. I will describe recent work in my lab on the evolution and genetics of two introduced species. The model plant, *Arabidopsis thaliana*, has been introduced to North America in the last 200 years. I'll describe our work on uncovering the underlying genetic basis of post-introduction differentiation. The dominant cause of hay fever, *Ambrosia artemisiifolia*, invaded Europe in the mid-20th century. I'll describe our recent work on whether this invasive species shows a decline in genetic variance, its potential for adaptive evolution that could further its spread, and whether it shows signals of nascent adaptive differentiation. Throughout I'll highlight the complementary lessons of studying evolution and genetics in model and non-model systems.

