



# Assessing the Impact of Slender False Brome

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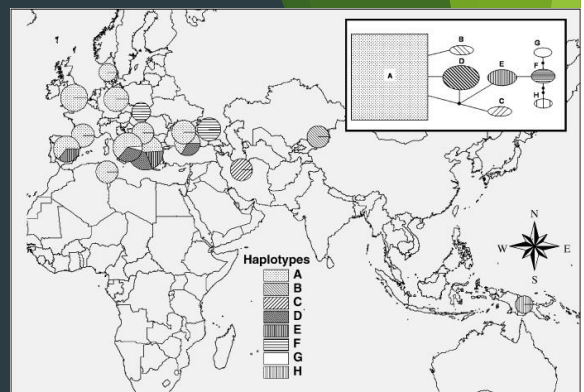
Slender False Brome Working Group

October 23, 2018

## Slender False Brome

*Brachypodium sylvaticum*

- ▶ Wind-pollinated, perennial bunchgrass
  - ▶ Reproduces via seed, non-rhizomatous
  - ▶ Self-pollinating
- ▶ Native to Eurasia
  - ▶ Relatively common understory forest grass and early colonizer of disturbed habitats
- ▶ Introduced: Pacific NW (early 1900s), Northeast (2000s)
- ▶ Broad environmental tolerance
  - ▶ Low light environments to open canopy
- ▶ Unique relationship with specialist mutualistic/parasitic fungus, *Epichloë/Neotyphodium*



Rosenthal et al. 2008



endophyte.uky.edu

## What is it doing?

- ▶ Forms expansive colonies
- ▶ Typically in forested areas
- ▶ Few papers on ecology, fewer on impact



## Research Questions

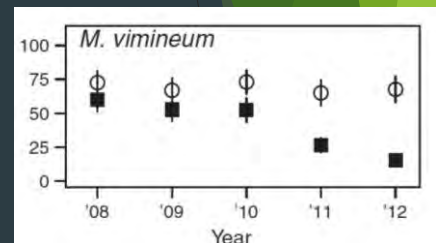
What is the impact of *Brachypodium* on native understory plants?

What is the role of deer/earthworms in this interaction?

### Hypothesis:

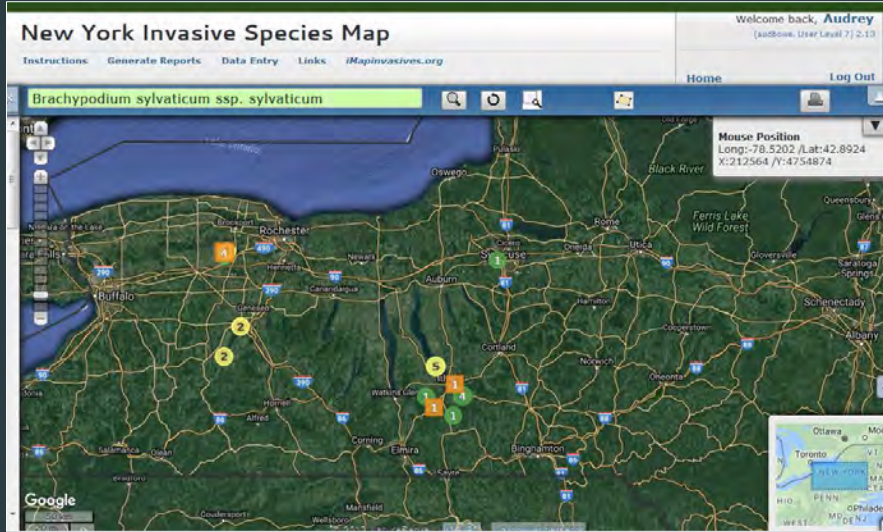
Invasion of *Brachypodium*:

- ▶ Reduced growth
- ▶ Reduced reproduction
- ▶ Interaction with deer



Dávalos et al. 2015

# Statewide Distribution



Syracuse



Brooktondale



Connecticut Hill



Taughannock



Letchworth



Genesee County



Bergen Swamp



Danby

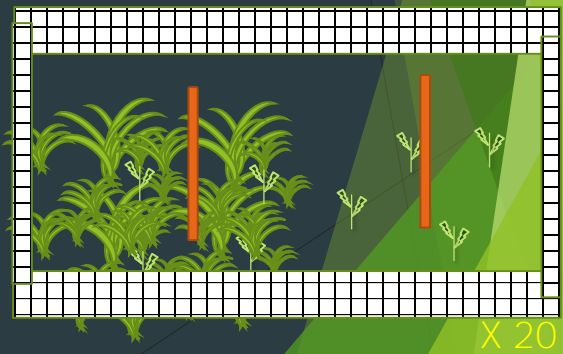
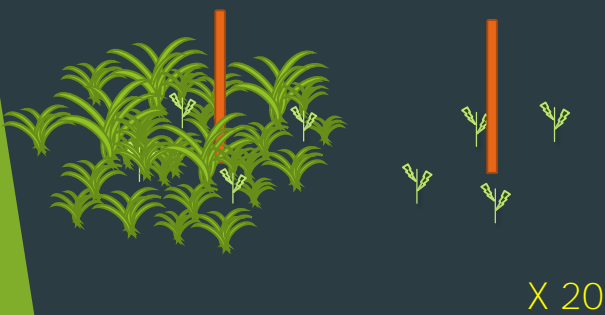




## Experimental Approach

### ► Field experiment

- Plant native species
- Follow growth, survival and reproduction over time
- Measure deer/insect/rodent browse
- 3 sites within Danby State Forest
  - Each with unfenced & fenced plots



## Plant Species



White wood aster  
*Eurybia divaricata*



Red oak  
*Quercus rubra*



Christmas fern  
*Polystichum acrostichoides*

Blue cohosh  
*Caulophyllum thalictroides*

Maple-leaved viburnum  
*Viburnum acerifolium*



Bottle brush grass  
*Elymus hystrix*

## Current Status

- ▶ Permit received to do work
  - ▶ Establishing sites this fall
  - ▶ Planting planned for Spring 2019

Questions?



Bergen Swamp - Deer

