

## **The Ecology of Prairie Restoration: How rapid adaptation and plant-bacteria mutualisms may promote restoration success**

**Mentors:** Susan Magnoli (PhD Candidate) and Dr. Jen Lau (KBS-IBIO Faculty)

### **Project Overview:**

The restoration of degraded landscapes can play a critical role in biodiversity conservation and the provisioning of ecosystem services. Yet species sown into restorations often fail to establish. My research explores factors that influence plant population establishment in prairie restorations. Particularly, I focus on the ways that rapid adaptation and plant-bacteria mutualisms can affect establishment success. It is my hope that the results from this research can be used by restoration practitioners to make future ecological restorations more successful.

A student working with me this summer would assist in conducting field and greenhouse experiments exploring the effects of rapid adaptation and plant-bacteria mutualisms on plant population establishment. There will likely be some lab work as well. Field work sometimes requires spending long hours outside in hot weather, with some strenuous physical labor. During the summer, the student will gain experience in setting up experiments, collecting and analyzing data, measuring plant traits, quantifying fitness, and culturing bacteria. Please feel free to email ([magnolis@msu.edu](mailto:magnolis@msu.edu)) if you have any questions!