

Flower Power: Using Native Plants to Enhance Pollinator Habitat in Suburban Developments

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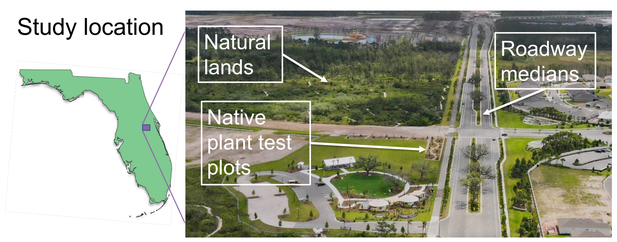
University of Central Florida, Orlando – Urban Ecology Lab



Introduction

- Wild plant communities and global food production depend on healthy pollinator populations
- Around 85% of plants rely on pollinators
- However, humans have altered more than half of terrestrial ecosystems, resulting in serious habitat loss for pollinators
- Urban landscapes can be transformed to support a wider array of pollinator species
- Using native plants in landscapes better supports pollinator communities
- The Sunbridge development near Lake Nona, Florida, is incorporating native plants in their landscape designs
- In this study we compared pollinator communities in three habitat types within the Sunbridge development

Methods



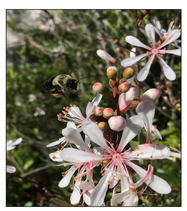
- We studied three habitat types: roadway medians (MD), native plant test plots (XP), and natural lands (NL).



Medians had native and introduced plants



Native test plots had 26 species of flowering plants



Natural lands consisted of scrubby habitat

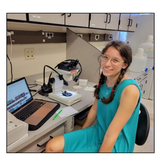
- Sampled in two seasons, late spring/early summer (June) and late summer/early fall (September)
- Two sampling methods: 1) blue vane traps set out for two days and 2) counting pollinators visiting flowers and collecting unknown species for identification in the lab.
- Specimens were identified in the lab to at least genus, but most were identified to species.



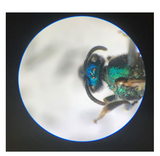
Blue vane trap



Bee in vial

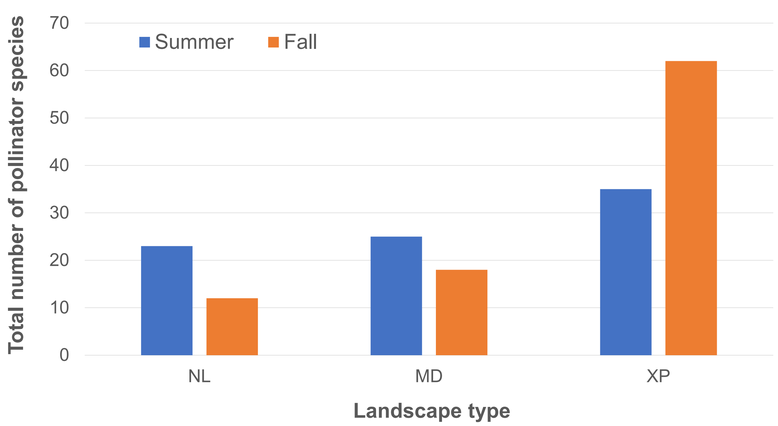


ID work in lab

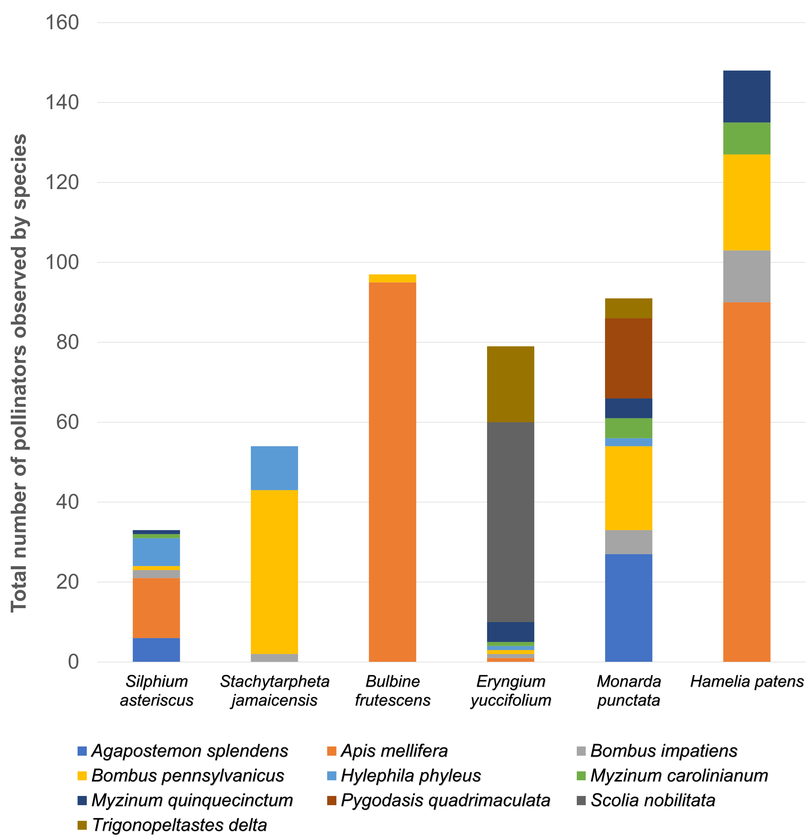


Augochlorella spp.

Results







Discussion

- The native plant test plots had the greatest species abundance in both seasons.
- In the medians, honey bees accounted for 75% of summer visitors and only 18% of fall visitors and were predominantly observed on *Bulbine frutescens*.
- The American bumble bee (*Bombus pennsylvanicus*) is a threatened species and we had 127 total observations of this bee, 81% of which occurred in the native plant test plots, mostly in the fall. It occurred moist frequently on blue porterweed, spotted bee balm, scarlet sage, and firebush.
- Although the experimental plots had both great species diversity and abundance, the pollinator species occurring there likely came from the surrounding natural areas.
- Native flowers can greatly increase foraging resources for pollinators, but having nearby natural areas is important for providing source populations and space for nesting.
- The results are limited by the short time frame of the study. Many of the dominant plants in the natural lands bloom in early spring, but our sampling did not include that time period. Future research should include spring sampling to provide more accurate data on pollinator diversity and abundance in the natural lands.

Acknowledgments

We thank the Sunbridge Development District for providing funding that supported this project, and for their commitment to developing more sustainable landscape approaches. We also thank Project partners at UF from the Center for Land Use Efficiency and the Program for Resource Efficient Communities, and Cherrylake, Inc for helping to plan and support the native plant test plots at the Sunbridge Basecamp.