

1st Kendeda Micro-Grants Research Symposium
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BBUGS Pollinator Garden

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What do these animals have in common?



And that's 35% of all the insects that have been lost since 1990, and 50% of that population decline¹

1. NARMC Council, *Status of Pollinators in North America* (National Geographic Press, 2007). *Proceedings of the Royal Society B: Biological Sciences* **274**, 303-313 (2007).
2. R. Rader et al., Non-Bee Insects Are Important Contributors to Global Crop Pollination. *Proceedings of the National Academy of Sciences* **113**, 146-151 (2016).

Background: BBUGS Pollinator Garden to the rescue!

- Pollinator decline majorly driven by land cover and configuration¹
 - Mowed bermudagrass lacks floral resources²
- BBUGS received GT support to convert lawn to a garden
- BBUGS Pollinator Garden planted in April 2021

¹L. V. Dicks *et al.*, A Global-Scale Expert Assessment of Drivers and Risks Associated with Pollinator Decline. *Nature Ecology & Evolution* **5**, 1453-1461 (2021).

²Boyle, Paige E., *et al.*, Testing Flowering Perennial Plants in a Bermudagrass (*Cynodon* spp.) Lawn. *HortScience* **55**, 1642-1646 (2020).



Research Problem: How does a pollinator garden impact the GT ecosystem?

- Create community data for pollinator activity at the garden
 - Garden visitors contribute pollinator information
- Find the impact of the garden on members of Georgia Tech



Approach

Thank you for visiting the Garden!

The tiny chocolate midge is the ONLY pollinator who serves the cacao plant.

The name and photo associated with your Google account will be recorded when you upload files and submit this form. Your email is not part of your response.

Any files that are uploaded will be shared outside of the organization they belong to.

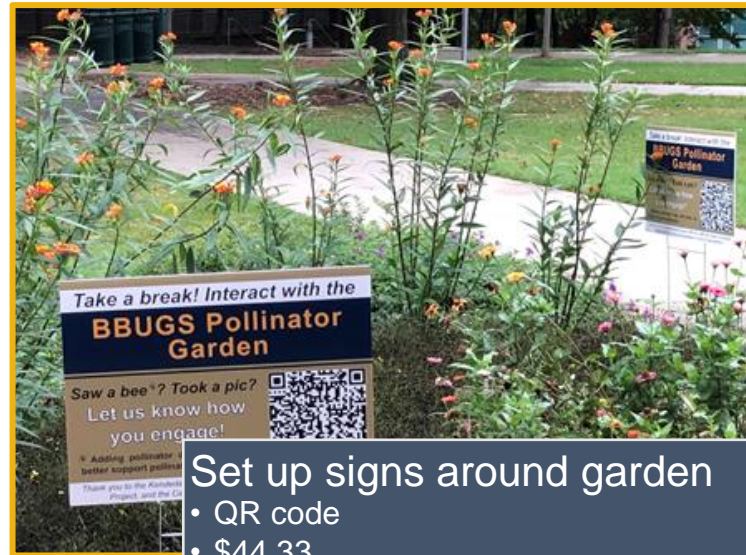
Enter your email

Your answer

How did you eng

Survey for community

- Pollinator count
- Opinions
- Engagement



Set up signs around garden

- QR code
- \$44.33

Win free Honey! 🍯

Take a break!

Visit and interact with the
BBUGS Pollinator Garden

See a bee? 🐝 Take a pic!

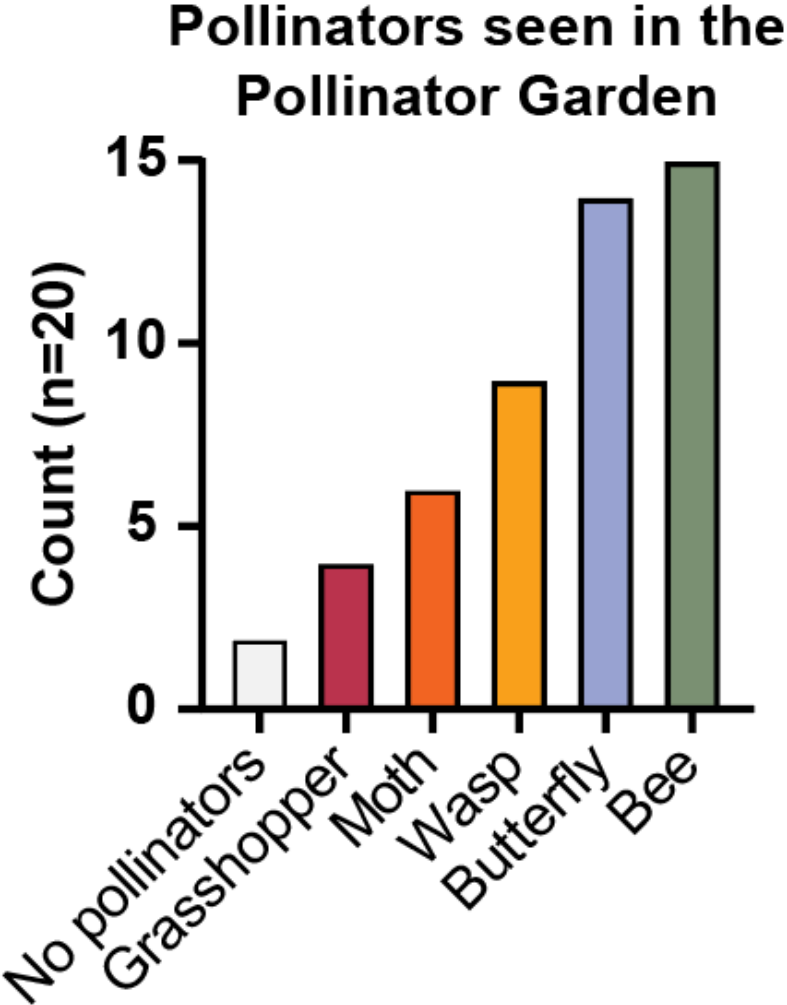
Scan the QR code in the garden and
share your experience!

*One submission
win a honey jar
hive*

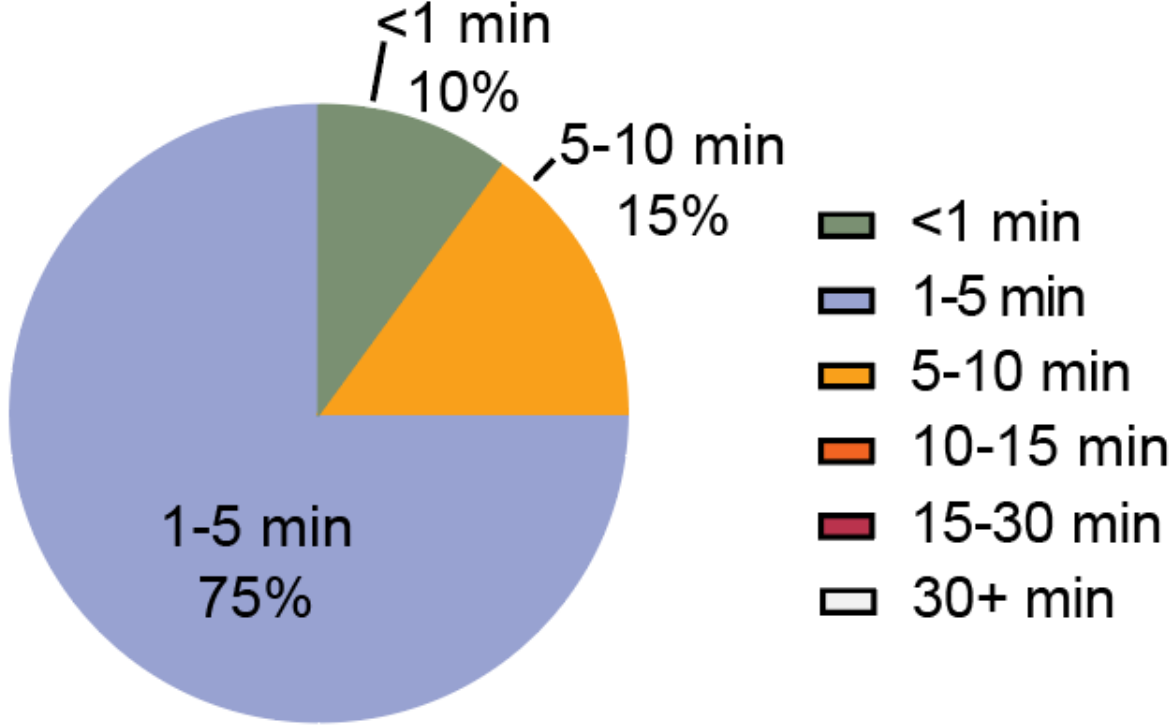
Engagement

- Offer a chance to win honey
- Changed survey's pollinator fun fact
- Voluntary, local members

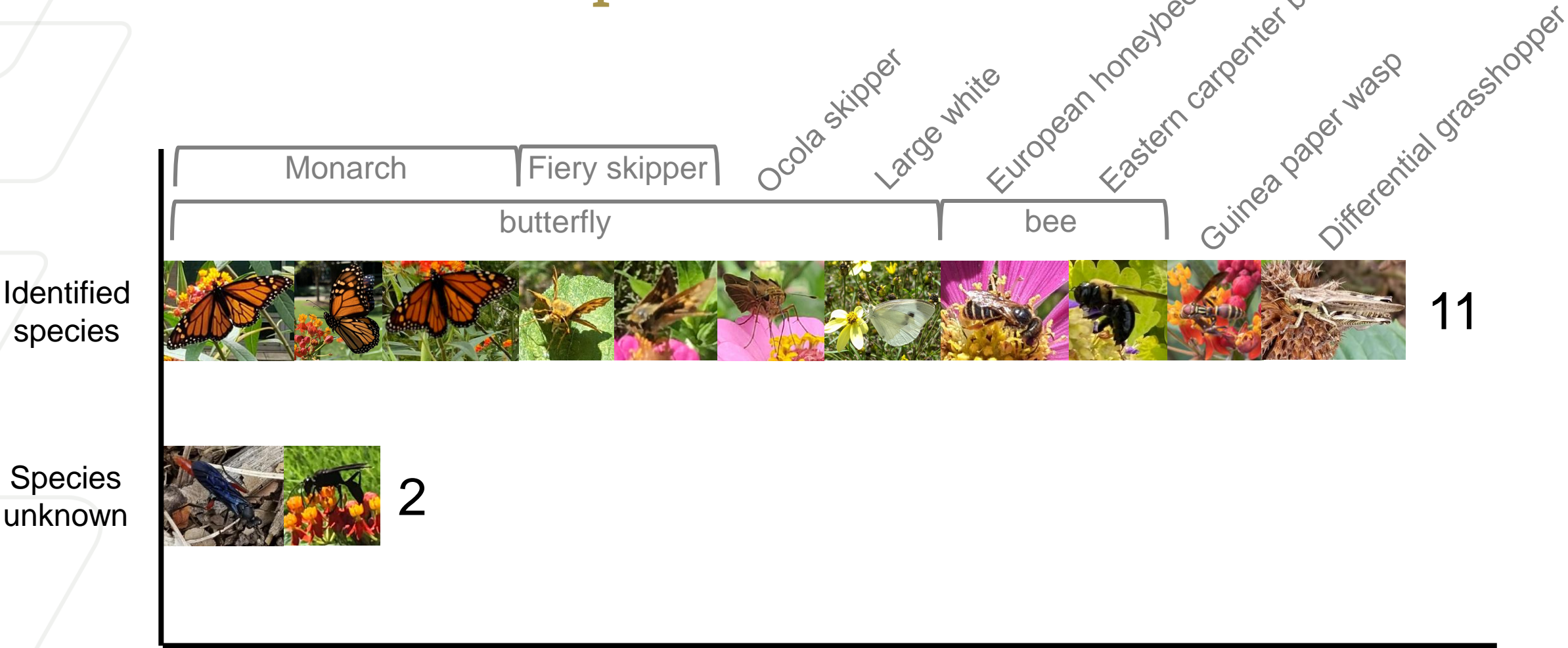
6 different pollinator types were seen with most people only spending under 5 minutes at the pollinator garden



How long did you spend observing pollinators?

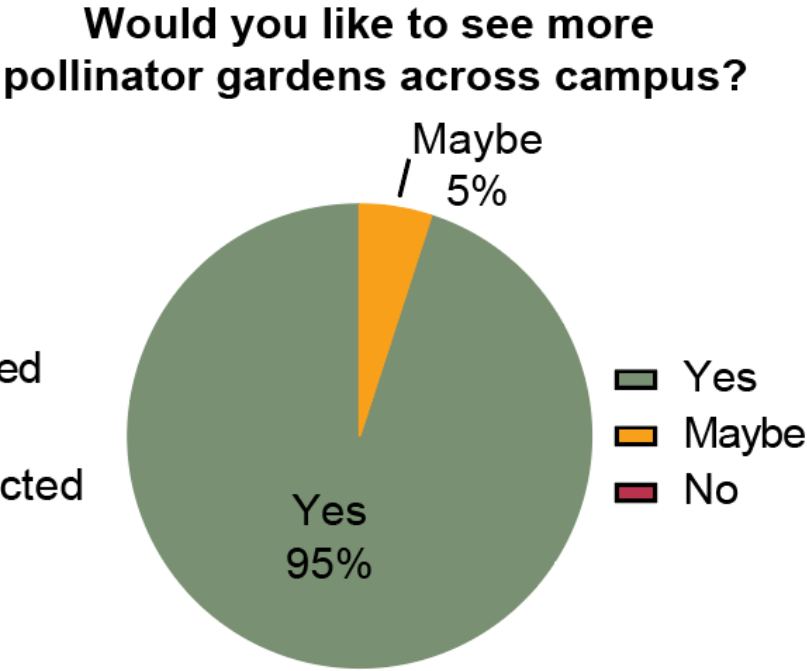
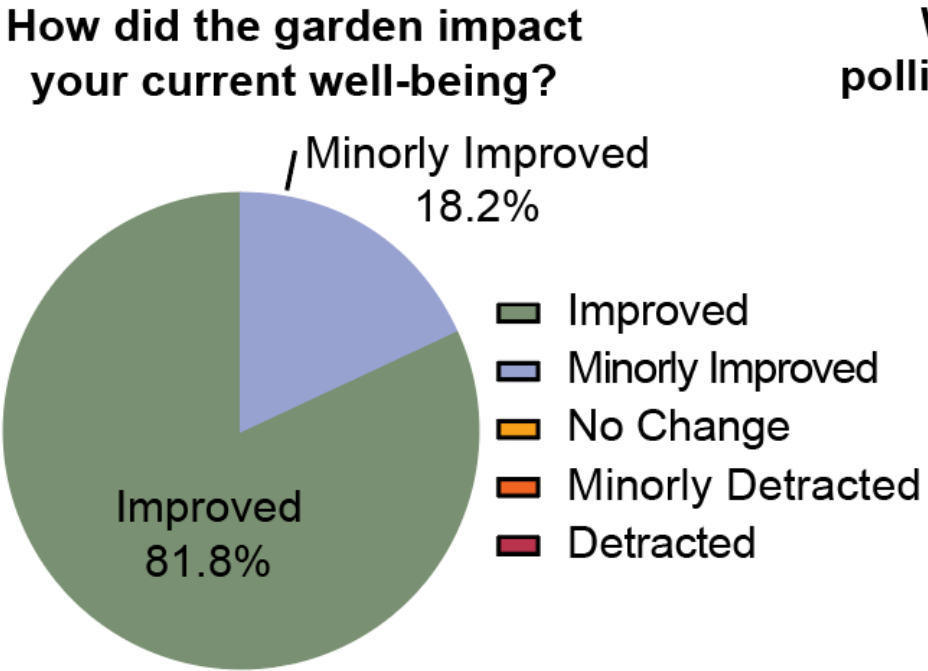
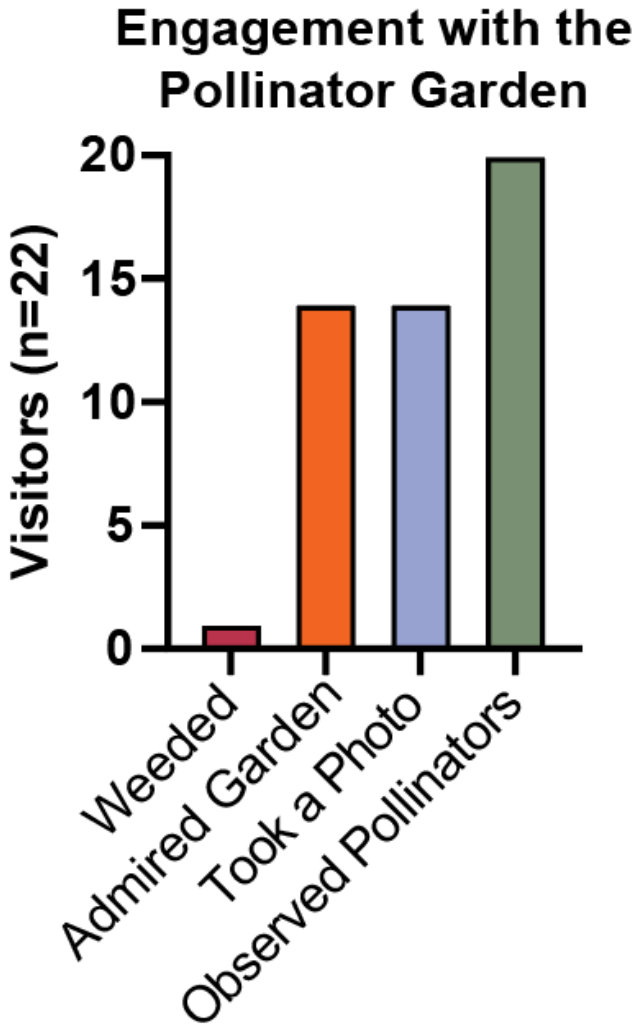


Results: Pollinator species



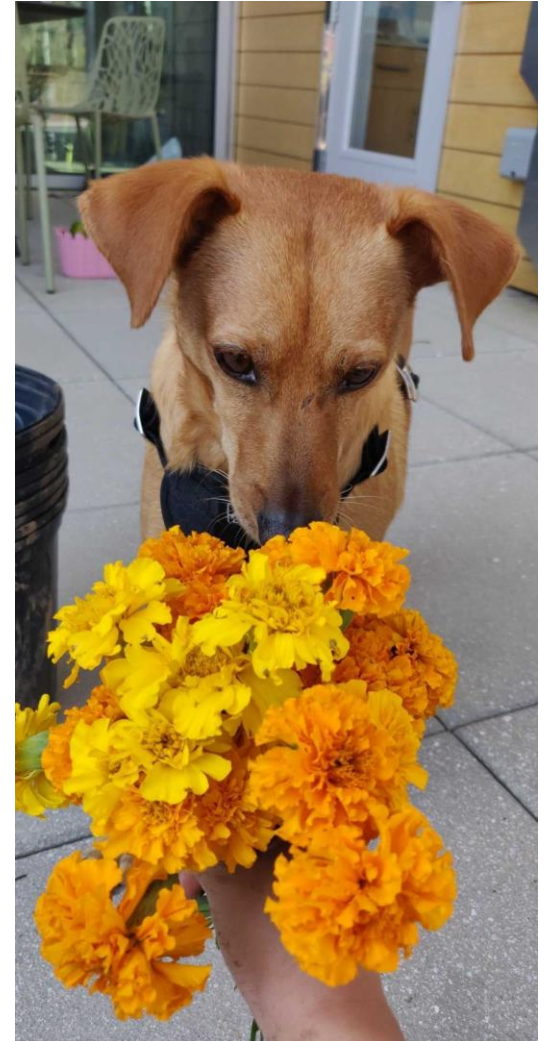
Number

Visitors engaged with the pollinator garden in a variety of ways and would gladly see more gardens across campus



Results: Some Quotes

- "I walk past this garden several times a week (I work in ES&T) and it always makes me so happy :) I love the different colors and varieties of plants, and I appreciate that pollinator-friendly plants are being added to the campus landscaping."
- "I have enjoyed watching the progress of this garden over the past few months - thank you!"
- "Saw a male goldfinch on the milkweed plants!"
- "This made me so happy as I was just walking around. there was this cute white moth fluttering around and also two more moths! It's really cute and I'm glad you added this to campus :)"
- "WOOF!" - Pollinator groups' dog

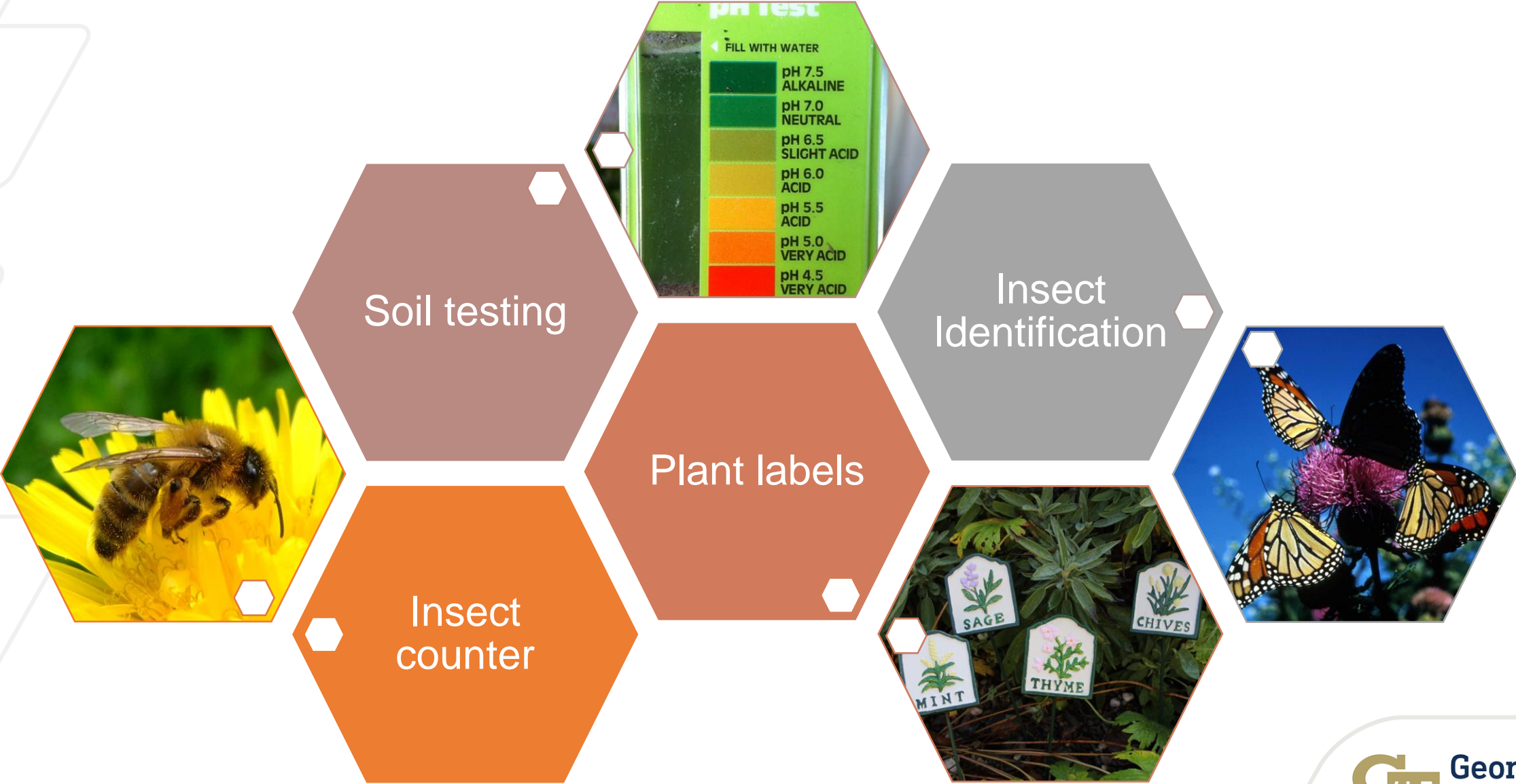


Conclusions

- This pollinator garden had a positive impact on student health
- High number and diversity of pollinator sightings from those who recorded
- Community projects need some driving force, and collecting control data is not attractive
- Many variables when using community collected data



Future Research



Thank you!

Funding sources:

- Kendeda Micro-Grant
- BBUGS
- IBB
- Urban honeybee project
- Georgia Tech Beautification Funds

People

- Steve Place
- Michelle Wong & IBB
- BBUGS community service members

