

Bee Campus USA - Mississippi State University

Report on 2022

Pollinator Habitat Creation & Enhancement

Staff and students designed and constructed 500sqft pollinator gardens (flower garden) in front of Thompson Hall, College of Forest Resources (CFR). These beds were constructed in Fall 2022 and planting was completed in April 2023 as part of a CFR Dean's Council service activity that involved 64 participants. Interpretive signage is being developed. In the Veterans Memorial Rose Garden and R.R. Foil Plant Science Research Center, various maintenance efforts have included prescribed fire, invasives removal and fire ant control. At the Turfgrass Research Facility, a biodiverse lawn demonstration plot was installed (1200 sq. feet). At the Clay Lyle Entomology Building, native and non-native demonstration garden has been planted and maintained using predominantly perennial blooming species that are known food plants for a myriad of local pollinators, including migratory butterflies and hummingbirds.

How many habitat projects did you help to create or enhance last year?

5

How many total square feet of habitat were created or enhanced?

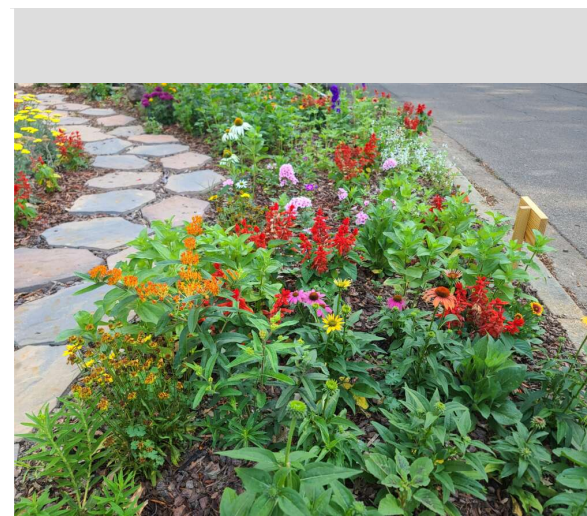
9000

How many volunteers helped with those projects?

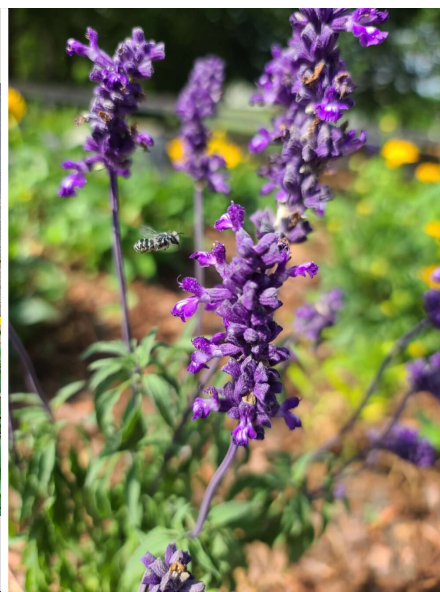
70

Please check all that describe the habitats your affiliate helped to create or enhance last year with pollinator benefit in mind.

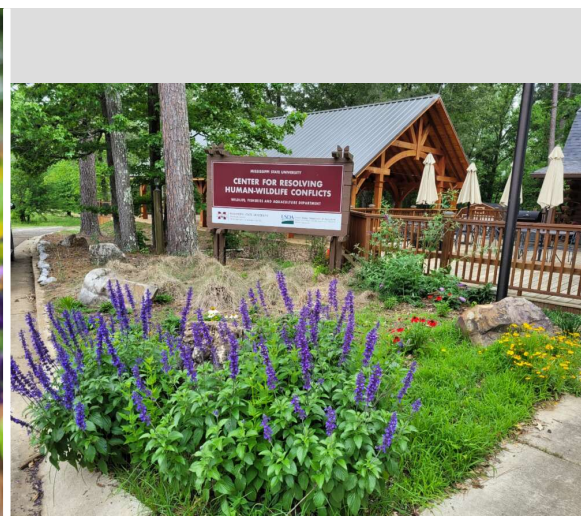
- Flower garden
- Meadow
- Pollinator-friendly lawn (with flowering clover, dandelions...)
- Invasive/exotic plant species removal for habitat improvement



One of three pollinator garden areas in front of the forestry building (Thompson Hall)



A leafcutter bee visiting flowers at one of the planted pollinator gardens at MSU



Pollinator plantings in front of the center for resolving human / wildlife conflicts.

Education & Outreach

A short course on native pollinators was given to middle and high school student campers at the Rural Training and Center Forestry Summer Camp in June. Topics covered included: introduction to native pollinators, how to promote their habitat, and why they are important for both agriculture and forest health. A permanent observation honey bee hive was constructed inside Clay Lyle Entomology lobby to use as part of several K-12 educational programs held by the entomology department. The observation hive is also used for general tours, college course units, and beekeeping workshops. An MSU Apiary was constructed on Clay Lyle Entomology grounds. This active apiary is used for beekeeping demonstrations to public school groups (Grade 3 & up), teaching bee husbandry to vet school, classes, and general interest groups. Members of the committee hosted the Mississippi Farm Bureau, members of the State Forestry/Agriculture Senate, members of the Maroon VIP group, and MS Gulf Shore Community College Students at the on-campus research apiary. The apiary is used to train veterinary students (College of Veterinary Medicine) on honey bee diseases and apicultural practices every six weeks. Committee members hosted the Mississippi State University 4H extension event, the World Food Prize Day event and Borlaug Scholars at Mississippi State University, and an on-campus apiary inauguration and pollinator event. Committee member Priya Basu has been interviewed in the following forums: 1) Mississippi State University interview in Alumnus magazine for Starkville Daily local newspaper to highlight the talk at the Noxubee Wildlife Refuge. 2) Interview for National Pollinator Week, Lawn Love (<https://lawnlove.com/blog/best-states-for-beekeeping/#expert=priyadarshini-chakrabarti-basu-phd>). 3) Interview by USDA-NIFA for World Honey Bee Day (<https://www.nifa.usda.gov/about-nifa/blogs/world-honey-bee-day-profile-dr-priyadarshini-chakrabarti-basu>). Lastly, members of the committee have published the following in trade journals: McCurdy, J.D. and E.B. de Castro. Industry Leaders Partner with Refuge Lawn to Help Guide Research and Extension Outreach. Mississippi Turfgrass Magazine

(Winter 2022), Tennessee Turfgrass (February/March 2022). McCurdy, J.D. Future-Proofing the Lawn Care Industry. Mississippi Turfgrass Magazine (Spring 2023), Tennessee Turfgrass (Spring 2023). O'Neal, C., J. Wang, and N. Minaev. Ecologically Beneficial Turf: A Changing Landscape. Alabama Turfgrass Times (Summer 2023). McCurdy, J.D. and E.B. de Castro. Industry Leaders Partner with Refuge Lawn to Help Guide Research and Extension Outreach. Mississippi Turfgrass Magazine (Winter 2022), Tennessee Turfgrass (February/March 2022). McCurdy, J.D., and I.P. de Souza. Partnership for Pollinator Friendly Lawns. Mississippi Turfgrass Magazine (Summer 2021), Turfgrass Producers International Turfgrass News Magazine (September/October 2021). McCurdy, J.D. Native and Natural Roughs for Southeastern Golf Courses. Mississippi Turfgrass Magazine (Spring 2021), Arkansas Turfgrass (Spring 2021), Tennessee Turfgrass Magazine (Winter 2021). McCurdy, J.D. and I.P. deSouza. Future Lawn. MSU Turfgrass Field Day, September 22, 2022. McCurdy, J.D., and D. Held. Ecologically Beneficial Turf – A Changing Landscape. Deep South Turf Expo, Biloxi, MS, November 4, 2021.

How many pollinator-related events did your affiliate host or help with last year (in total)?

23

How many people attended those events (in total)?

1800

Courses & Continuing Education

The following courses have been offered or are under development: 1) Intro to Turfgrass: This course provides the basic scientific principles and introductory information not presented in other courses for all majors who are interested in turfgrass management. It serves as an introductory course for turfgrass majors who will enroll in other advanced turfgrass management courses. 2) Turfgrass and ornamental pests: This course provides an in-depth understanding of various insect pests of turfgrass and ornamentals and in addition the pesticide application chapter also discusses pollinator safety when mitigating insect pests of turfgrass and ornamentals. 3) Honey bee biology and beekeeping: Developed this course in 2021-2022 to be offered in Fall 2023. 4) Native bees and pollination ecology: Developed this course in 2021-2022 to be offered in Fall 2023. 5) Ecological Risk Assessment and Chemical Regulation: Developed this course for 2021-2022 to be offered in Fall 2023. Includes pollinator risk assessment and endangered species risk assessment.

How many of your for-credit courses included pollinator-related information last year?

2

How many students attended those for-credit courses?

77

Service-Learning

In 2021 and 2022 3 undergraduate research scholars participated in the establishment of 3 large-scale habitats on a working farm in Clay County MS. These established pollinator plantings have been used for demonstration during landowner/resource professional workshops and field days, and are to be utilized for research by future students.

How many service-learning projects did your campus host and/or support to enhance pollinator habitat on and off-campus?

2

Educational Signage

Permanent signs include "Attracting Butterflies" and "Attracting Bees" (pictured), to educate the public/campus on ways to create habitat. "Honey Bees at Work" and "Pollinators at Play" to inform public about the presence of active bee hives in those areas, and a Refuge Lawn sign: <http://www.refugelawn.com/wp-content/uploads/2022/04/Signs-13x24-draft-2.pdf>, which has also been distributed to numerous homeowners.

Number of permanent interpretive/educational/Bee Campus USA signs installed to date?

5



Policies & Practices

In collaboration with the MS Pesticide Safety Education Program, members of the bee campus committee have been distributing educational materials to students and residents on reduction of pesticide use to benefit pollinators. In addition signs have been placed to not spray or treat plants in the various pollinator garden areas, and non-chemical management methods are being employed instead.

What actions have you taken to make pest management practices more pollinator-friendly?

- **Avoided use of pesticides in public sites containing designated pollinator habitat or other sensitive features (except when targeted use is deemed the best option for invasive or noxious weed, insect or disease management)**
- **Implemented non-chemical pest prevention and management methods on city or campus grounds**
- **Distributed educational materials to residents or students to encourage the reduction or elimination of pesticide use**

In your city or campus, are any policy initiatives underway to further protect pollinators, people or waterways from pesticides?

The bee campus committee will be working on an IPM plan during 2023/2024 to be implemented campus-wide

Please describe actions by your affiliate to attend training on ecologically-based Integrated Pest Management and/or to review IPM plans and programs considered of high quality by Bee City USA?

Integrated Pest Management Plan:

Recommended Native Plant List: [2020BeeCampusApplication_Plant list.pdf](#)

Recommended Native Plant Supplier List:

<https://roundstoneseed.com/>



Pollinator bed at entry of Landscape Architecture building, containing mostly prairie species: *Ratibida pinnata*, *Rudbeckia hirta*, *Oenothera speciosa*, *Conoclinium coelstinum*, *Penstemon digitalis*, *Liatris aspera*, *Asclepias viridis*, mixed asters and daylilies and *Carpinus* and *Nyssa sylvatica*

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