Bee Campus USA - Mississippi State University

Report on 2023

Pollinator Habitat Creation & Enhancement

Please describe pollinator habitat creation or enhancement projects in your community in 2023, and whether your committee hosted them or not.

JoVonn Hill and students installed a Black Belt prairie planting of over 30 species of local genotype prairie/woodland plants and a mixed native and exotic planting for pollinators at the Clay Lyle Entomology building. JoVonn Hill and students also worked to preserve 2 hectares of mesic Black Belt forest designed to protect a population bur oaks. Restoration efforts included removal of Chinese Privet and planting of native woodland spring ephemerals. Jeff Harris, Priya Basu and Audrey Sheridan planted and maintained a native and non-native demonstration garden using predominantly perennial blooming species that are known food plants for myriad local pollinators, including migratory butterflies and hummingbirds, at the Clay Lyle entomology building Tim Schauwecker and Department of Landscape Architecture planted the following installments: 1) Pollinator gardens at building entrance and in central courtyard, including early-successional stream buffers to be managed at three heights: first cut at 6", second cut at 12", and uncut, and removal of all invasive species. 2) A grassland buffer along tributary of Catalpa Creek, managed as natural area dominated by native grasses and wildflowers, designed to be a grassland buffer, slated for control burn to control Chinese privet in early spring of 2024. 3) Forest and Grassland buffers along tributary of Catalpa Creek, managed as natural area with a forest buffer 10' from stream edge and 25+' grassland buffer dominated by native grasses and wildflowers.

How many habitat projects did you help to create or enhance in 2023?

7

How many people (staff, volunteers, students, partners, etc.) helped with those projects?

17

How many projects benefit monarchs, milkweed, or nectar plantings?

7

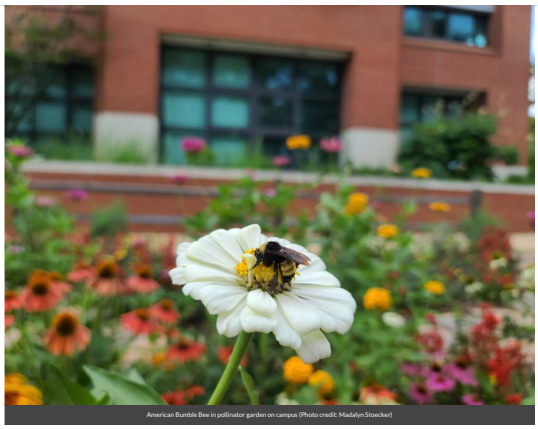
How many total square feet of habitat were created or enhanced?

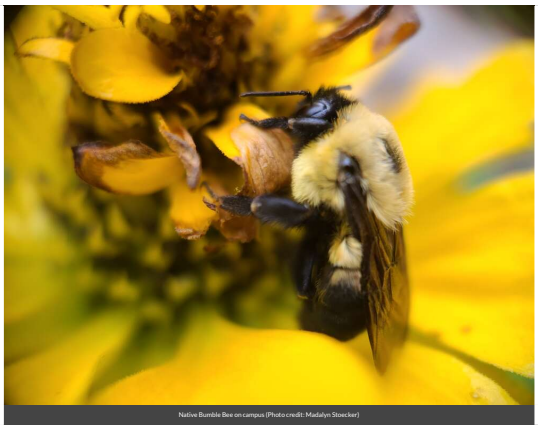
688321

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

- Flower garden
- Natural area with tree snags and stumps, and bare areas for ground nesting species
- Meadow
- Invasive/exotic plant species removal for habitat improvement
- Other


Pollinator plantings in front of Thompson Hall, College of Forest Resources (Photo credit: Wes Burger)


American Bumble Bee in pollinator garden on campus (Photo credit: Madalyn Stoecker)


Native Bumble Bee on campus (Photo credit: Madalyn Stoecker)

Education & Outreach

Please describe pollinator conservation events or outreach activities in your community in 2023, indicating whether your committee hosted them or not.

The following conservation events and outreach activities were conducted on campus or university property in 2023: Jay McCurdy gave an outreach presentation on 'Designing and Maintaining Turfgrass Landscapes for Reduced Pesticide Inputs' at the Southwest Turfgrass Association Recreational Landscape Conference and Expo, Albuquerque, NM, November 8, 2023. He also gave a presentation on 'Linking diversified lawn care and sod production—is there a market?' at the Deep South Turf Expo, Biloxi, MS, October 19, 2023, and 'Future-proofing the American lawn' at the Southeastern Turfgrass Conference, Athens, GA, October 25, 2023. JoVonn Hill and entomology department students and staff participated in 'Science Night at the Museum'. Science Night at the Museums is a family-friendly event filled with science related fun. Visitors can tour the Dunn-Seiler museum, and enjoy science demonstrations and hands-on activities in physics, astronomy, geology, archaeology, paleontology, chemistry, microscopy, biology, veterinary studies, entomology, and more!! Priya Basu, Jeff Harris and Audrey Sheridan constructed a permanent observation honey bee hive inside Clay Lyle Entomology lobby to use as part of several K-12 educational programs held by the entomology department. This installation is also used for general tours, college course units, and beekeeping workshops. Priya Basu and Audrey Sheridan constructed the MSU Apiary 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. Jeff Harris and Priya Basu conducted a training on Varroa Mite Biology, to learn more about the ectoparasitic mites of the honey bee colonies. Priya Basu along with students in the entomology department conducted various workshops and tours to raise pollinator awareness. These included a workshop for the Division of Agriculture, Forestry and Veterinary Medicine on honey bees and apiculture, a MAFES director's tour of the on-campus research apiary and apiculture lab, a World Bee Day event to celebrate pollinators and was open to the public, a BCH-EPP Departmental Advisory Board committee tour of the apiary, a pollinator awareness event at the Barnes and Noble bookstore, Mississippi State University, a book signing event that was coupled with pollinator awareness event and research effort on campus, a Summer Research Scholars Camp which provided hands-on training on pollinator research to high school students, a Gulf Shore Community College Students Tour, a T.K. Martin Center field day including hands-on activities for the disabled children enrolled at T.K. Martin center and their families, a North Dakota 4H pollinator field tour and training at the USGS Bee Lab in Maryland which included training on bee nutrition and pollen collection, an Ag Day at MS Gulf Coast Community College in Lucedale MS, and set up a pollinator booth at Bugfest – a general entomology event open to high school students. Tim Schauwecker participated in NRCS Field Day: Buffers, Biodiversity and Bioreactors – an outreach event for local NRCS personnel and stakeholders at the MAFES Dairy Unit stream buffer and bioreactor site. The College of Forest Resources hosted a SPARK Leadership Conference, and an Academic Discovery Day for high school students where Christine Fortun conducted Pollinator Education to participants including an Introduction to wild pollinators in the U.S., identification of major pollinator groups and how to create habitat, and included tour of pollinator gardens at Thompson Hall.

How many pollinator-related events or outreach activities did you host or help with in 2023 (in total)?
22

How many people attended those events (in total)?
2534

Number of temporary interpretive/educational/Bee Campus USA signs installed in 2023?
2

Curriculum, Continuing Education, & Service Learning

Please describe the curriculum your campus engaged in 2023, indicating whether it was part of a for-credit course or continuing education.
For-credit courses included the following: Jay McCurdy taught PSS 2113: 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 for the study of other advanced turfgrass management courses. JoVonn Hill taught EPP 4142/6142: Insect Taxonomy. This course provides

students with a foundation on the classification and identification of insects. Priya Chakrabarti Basu taught EPP 3423: This course covers insect pests of turfgrass and ornamentals which also covers IPM and how to avoid inadvertent pollinator exposures to pesticides. Priya Chakrabarti Basu taught EPP 4273/6273: Honey Bee Biology and Beekeeping. This course teaches graduate and undergraduate students all about the biology of the honey bee, what are the stressors affecting pollinators and basics of beekeeping. Dr. Basu also provided four guest lectures Tim Schauwecker taught LA 1333: Landscape Systems and Plant Communities. This course covers the nature, scope and relevancy of landscape systems and their respective plant communities as they relate to land planning and landscape architectural design. Tim Schauwecker taught LA 4724: Landscape Contracting II. This course covers Cost Estimating Analysis of legal, financial, and management aspects of landscape contracts; and quantity surveying, cost estimation, and critical path management of landscape construction projects. Cory Gallo, Casey Johnson, and Tim Schauwecker taught GA 1001: CALS Sustain+Ability Program Seminar. The course and program are designed to provide the Ability to Sustain you through your college career and introduce you to sustainability topics related to the College of Agriculture and Life Sciences. Christine Fortuin taught NREC 4990/6990: Ecological Risk Assessment and Chemical Regulation. This course introduces student to the principals of assessing ecological effects, exposure and risk characterization of chemical contaminants in the environment, including special focus on pollinator risk assessment and effects of chemical contaminants on pollinators. In addition, the following workshops and guest lectures took place: Priya Basu: Pollination ecology, guest lecture for Intro to Insects. Priya Basu: Pesticides and GMOs and their implications on honey bees, Guest lecture for Oregon State University discussing the impacts of pesticides and GMOs on honey bees and other bee pollinators. Priya Basu: All about honey bees, guest lecture for intro to biochemistry discussing the fascinating world of bee pollinators. Priya Basu: Honey bee behavior, guest lecture for wildlife major students. Priya Basu/Jeff Harris: Honey bees and the veterinary feed directive, workshops for MSU vet school to train them on honey bee biology, hive inspection and VFDs.

How many of your for-credit courses included pollinator-related information in 2023?
14

How many students attended those for-credit courses?
427

How many of your continuing education courses included pollinator-related information in 2023?
3

How many participants attended those courses?
275

Policies & Practices

Please describe actions taken to make pest management more pollinator-friendly.

Use of pesticides was curtailed by Campus Landscape at the Landscape Architecture Facility, and targeted use only for control of invasive species. The same is being done at the pollinator habitat next to the apiary. Turf areas at the Landscape Architecture Facility are managed without use of herbicides or pesticides, and turf management prioritizes biodiversity in the turf areas. In collaboration with the MS Pesticide Safety Education Program, educational materials are being distributed to residents and student to encourage the reduction or elimination of pesticide use.

Please check actions you have 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
- Eliminated pesticide uses that are solely to maintain aesthetics on city or campus grounds
- Distributed educational materials to residents or students to encourage the reduction or elimination of pesticide use

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Learn More

Integrated Pest Management Plan:

Recommended Native Plant List: 2020BeeCampusApplication_Plant list.pdf

Recommended Native Plant Supplier List:
https://roundstoneseed.com/

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