Bee Campus USA - University of North Texas

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.

During the past year, we hosted over 15 workdays to maintain our 8 dedicated pollinator habitat spaces. These spaces were as follows: Campus Community Garden, Natural Dye Garden, the Pecan Creek Pollinative Prairie (now known as the Diamond Eagle Community Learning Area), the UNT Butterfly Flower Patch, the Willis Library Rock Wall, the Central Campus Pollinator Project, the Clark Park walkway, and the Parking Lot Preserve. All of our events engage students in hands-on planting and learning activities. In some of our Prairie workdays, students learned how to girdle trees that had been diseased or invasive. We also finished building out educational flower beds in a few of our locations that are built to educate not only the public, but also the students who work on them. Some of our students even have the opportunity to germinate seeds in our Biology green house, and then get to transplant them once ready. Though we did not add new spaces this year, we were able to focus and expand upon some of our current areas. Three of our spaces: the Pollinative Prairie, the Parking Lot Preserve and the Community Garden were given the status of Certified Wildlife Habitats by the National Wildlife Foundation. These spaces each have healthy plants for pollinators, organic IPM practices, and water features for various wildlife to utilize. In the Prairie, we have expanded to an area we call 'The Pond Project' where students have started a restoration of the space using a gift-in-kind of the US Army Corp of Engineers and the Lewisville Aquatic Ecosystem Research Facility (LAERF). What has begun as 9 species of aquatic flowering plants, we are hoping to get over 1,000 plants and even more material to spread throughout The Pond.

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

8

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

257

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

6

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

208188

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

- Flower garden
- Vegetable garden
- Natural area with tree snags and stumps, and bare areas for ground nesting species
- Native milkweed planting for monarchs and bees (where appropriate)
- Invasive/exotic plant species removal for habitat improvement
- Native pollinator-friendly tree planting
- Native pollinator-friendly shrub border/hedgerow planting
- Rain garden/bioswale
- Other

Image of an educational flower bed at the Pecan Creek Pollinative Prairie.

Image of a plant staging for the Butterfly Flower Patch

Photo of plants for the Aquatic Pond restoration project.

Education & Outreach

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

In 2023 we hosted various workdays, bio-blitzes, and educational workshops related to pollinator conservation and education. This was the first year we implemented a partnership between Dr. Elinor Lichtenburg's pollinator research

laboratory to provide netting demonstrations in our Community Garden on campus. We had overall 12 students join and catch various pollinators to observe them closely. We also partnered with a local nonprofit organization, Texas Petal Project, to host a seed saving workshop in our Natural Dye Garden. In this event, we discussed historical and Indigenous uses of plants, why seed saving is important, and then we began harvesting seeds to be able to replant in subsequent seasons. Throughout our 8 pollinator-dedicated spaces, we hosted 18 workdays. These workdays included removal of invasive species, planting of new seed, transplanting from local vendors, cutting down stems for pollinators to over-winter, and general education about native spaces. Throughout 2023- we have been anticipating a controlled burn in our Pecan Creek Pollinative Prairie. Though weather conditions have not allowed us to move forward yet, the preparation for these events have engaged many students in both burn prep workdays and general education about why controlled burns benefit prairie life. One new event we hosted this year is a 'Dawn-to-Dusk' event where students are invited to spend a whole day at our prairie to engage with each other and the space in different ways. Some activities done included a musical jam sessions, a bird walk, a talk about Indigenous culture from the Native American Student Association and how they use plants for various purposes in their cultures, an art-in-nature project, and prairie bio-blitz walk. This was our most raved about event of the year and we look forward to continue it from year-to-year.

How many pollinator-related events or outreach activities did you host or help with in 2023 (in total)?
24

How many people attended those events (in total)?
443

Number of permanent interpretive/educational/Bee Campus USA signs installed to date?
3

Number of temporary interpretive/educational/Bee Campus USA signs installed in 2023?
25

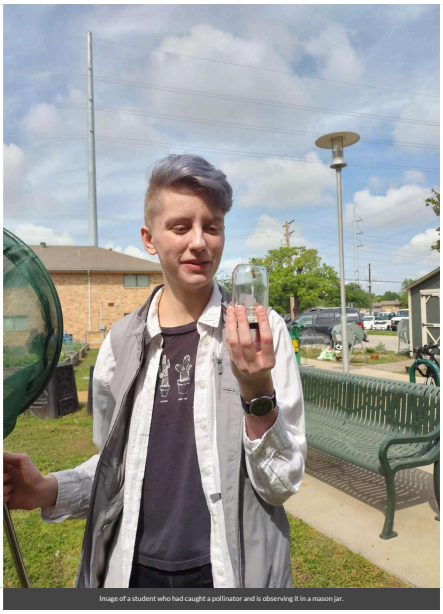

Image of a student who had caught a pollinator and is observing it in a mason jar.

Image of a workday at the Pecan Creek Pollinative Prairie

Image of students who attended a Parking Lot Preserve Workday

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XERCES SOCIETY
for Invertebrate Conservation

Image of a parking lot preserve and National Wildlife Habitat sign.

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.

Pollinator related information was covered in various courses through the UNT Department of Biology. These courses ranged from very basic introductions to pollinators in the ecology and environmental science labs, to more in-depth courses related to specific pollinator functions in the environment. The ecology and environmental science students have requirements in the curriculum to do research in the Pecan Creek Pollinative Prairie, where many pollinators and native plants thrive. Other offered classes include an Insect Biology course and a Behavioral Ecology course; both of

which are open to graduate and undergraduate students. These both have course content related to pollinators and pollinator protection.

How many of your for-credit courses included pollinator-related information in 2023?
4

How many students attended those for-credit courses?
790

How many service-learning projects did your campus host and/or support to enhance pollinator habitat on- and off- campus?
11

How many students participated in service-learning projects in 2023 to enhance pollinator habitat on or off-campus?
160

Please describe the service-learning projects your students were engaged in 2023, indicating which, if any, were associated with a course.
This year, a graduate student received funding for a Green wall project. This project researched how to grow native plants in vertical spaces. It engaged over 65 students throughout the process in the Spring 2023 semester. Students who engaged with this project learned about the value of native plants and brainstormed creative solutions to increasing pollinator life in the built environment. Another opportunity that 4 students had the opportunity to engage with was a partnership with the City of Lewisville's 'Extending the Green' program to create native spaces in some of their street medians. Students participated in an solarization experiment to kill of invasive plants, then were able to plant natives in the space. They also created educational content for the City to better engage with the public on the 'Extending the Green' program. The students were able to get compensated for this experience and added it on their CVs. Our committee also works closely with the Lake Lewisville Environmental Learning Area (LLELA) to host various service-learning projects throughout the year. One notable one from this year was a mothing/blacklight demonstration hosted after dark. The UNT Society for Ecological Restoration (student organization) also participate in various service-learning projects through their club. Some notable pollinator-related projects included the City Nature Challenge with iNaturalist, a tour of a regenerative cattle crazing ranch (Thomson Ranch), and an educational hike in the Clear Creek Nature Preserve in Denton. The Committee was also able to send students to various conferences related to the work they have done on campus. Two notable conferences include the Texas Regional Alliance on Campus Sustainability (TRACS) and the Texas Society for Ecological Restoration Conference (TxSER). At TRACS, we had 12 students participate and share 6 posters about the various wildlife protection and restoration projects they do at UNT. At TxSER we had 13 students attend and two presentations that won best undergraduate oral presentation and best undergraduate poster, respectively, that discussed their work in ecological restoration on campus. A last notable service learning project was a joint effort between our Bee Campus, Bird Campus, and Tree Campus committees to establish a tree-survey on campus. These 6 students assessed the health and status of all trees on

campus over the course of a year, and created an extensive presentation that they have been able to share with campus and community partners across the state.

Photo of students and staff members who attended the Texas Regional Conference for Campus Sustainability

'Extending the Green' Project Team

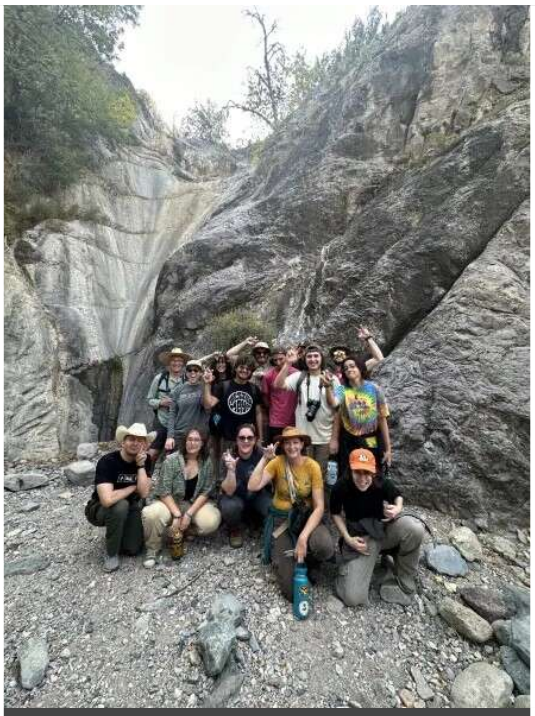

Image of students and staff who attended the Texas SER conference.

Policies & Practices

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

The University of North Texas Grounds Department uses only the safest, lowest toxicity products for effective control of pests. UNT prohibits the use of pesticides containing neonicotinoids, and pesticide use was avoided altogether in areas with designated pollinator habitats. The Grounds Department has been increasing their efforts to use non-pesticide management methods, such as propane torches, frequent mulching, and the use of hand tools for weed control. Additionally the team has maintained a 50-50 rule, meaning products must be at least 50 percent organic across campus. This year, the team began practicing No Mow May (June and July, too!) in various spaces across campus to encourage wildflower growth during peak pollinator seasons. They began experimenting with various oils and soaps to utilize a variety of organic practices to maintain pests. Many plants sourced for campus grounds are from local landscaping shops, and any contractors used for campus grounds are encouraged to use these sources as well. The team also works diligently to identify and mitigate non-native species of plants that currently exist on spaces on campus. The Community Garden at UNT uses only organic methods of pest management, as well as removal by hand. The Garden Facilitator teaches garden members the basics of organic Integrated Pest Management. This year, this included using Milk Spores to control grub life in one of our plots. The Pollinative Prairie at UNT also only uses organic

and hand removal methods of pest management and has seen hawks as a natural predator for pests that are present. The Prairie also received a burn permit to mitigate invasive species in their area, though has yet to successfully implement the burn due to weather complications.

In your city or campus, are any policy initiatives underway to further protect pollinators, people or waterways from pesticides?
No

Did your committee participate in any continuing education on ecologically-based Integrated Pest Management planning?
Our grounds team has 5 certified individuals who attended Continuing Education events that spoke specifically on IPM.

Please check actions you have taken to make pest management practices more pollinator-friendly.

- Implemented or maintained a written IPM plan
- 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)
- Eliminated use of neonicotinoid insecticides on city or campus grounds
- Distributed educational materials to residents or students to encourage the reduction or elimination of pesticide use
- Sourced plants for city or campus grounds using “Buying Bee-Safe Plants” methods recommended by Xerces Society. (See https://xerces.org/publications/fact-sheets/buying-bee-safe-plants)
- Sourced plants for city or campus grounds that were not treated with neonicotinoids
- Encouraged developers and private landscapers to source plants using “Buying Bee-Safe Plants” methods recommended by Xerces Society. (See https://xerces.org/publications/fact-sheets/buying-bee-safe-plants)
- Encouraged developers and private landscapers to source plants that were not treated with neonicotinoids

Any lessons learned you would like to share?
Get connected with your administration as much as possible; let the students pave the way to progress

Image of locally sources plants used for a workday.

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Image of our Bee Box Habitat project (left) and our Native Bee Support Initiative team (right)

Learn More

Integrated Pest Management Plan:
https://studentaffairs.unt.edu/sites/default/files/sustainability/ipm-plan.pdf
Recommended Native Plant List: UNT Preferred Native-Adaptive Plant List.xlsx

Recommended Native Plant Supplier List:

https://beecampususa.unt.edu/
wemeangreenfund@unt.edu

https://www.instagram.com/untwmgf

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