

# Bee Campus USA - University of Texas at Austin

Report on 2024

## Pollinator Habitat Creation & Enhancement

*Please describe pollinator habitat creation or enhancement projects in your community in 2024, and whether your committee hosted them or not.*

Throughout 2024, the Beevo Beekeeping Society worked to create one pollinator habitat on campus and enhance and maintain its three pre-existing plots. Beevo continued work on its own on-campus pollinator garden at T.S. Painter Hall until August 2024. The garden was awarded to the Beevo Beekeeping Society by UT's Office of Sustainability Green Fund in 2021 and has been developed and maintained over the past several years. In February and March of 2024, Beevo held two events for the maintenance of their pollinator garden in the courtyard of Painter Hall. During these events, society members and UT students assisted in the removal of harmful weeds and invasive plants, like bermuda grass, as well as the pruning and planting of native plant species. Native plant species included Wax Mallow (*Malvaviscus arboreus* var. *drummondii*), Zexmenia (*Wedelia acapulcensis* var. *hispida*), Flame Acanthus (*Anisacanthus quadrifidus* var. *wrightii*), Mealy Blue Sage (*Salvia farinacea*), Autumn Sage (*Salvia greggii*), Gregg's Mistflower (*Conoclinium greggii*), and more. Over the course of the spring and early summer, this garden was watered three times a week, as needed, by society members. Unfortunately, in the summer of 2024, the Painter Hall garden was closed by the University in order to erect a commemorative statue for Heman Sweatt; Beevo and UT Landscaping Services relocated the garden's plants to their honey bee hive site on campus. In July, Jim Carse, UT's Assistant Director of Landscape Services, helped Beevo identify a plot of land for the development of a new pollinator garden located next to their hive site. In October, society members began work on the terraced garden by removing the original weed fabric from below the soil, creating a blank canvas for a new pesticide-free, native pollinator-friendly green space on campus. In early November, a group of society members spent the evening planting over 40 native Texas flowering plants in the new garden. Key native plants included Autumn Sage, Gregg's Mistflower, and Mealy Blue Sage. Along with these species, they seeded a shadier part of the garden landscape with a native, shade-friendly seed mix from Native American seed. Finally, society members watered the entirety of the garden to ensure plant growth in the coming months. For the remainder of the Fall, this garden was watered three times a week by society members to establish the plants, and are now watered 1-2 times a week to conserve water. In addition to the habitats above, Beevo maintained its 4x8 ft community garden plot at the off-campus UT Microfarm. Beevo hosted three workdays in conjunction with Microfarm during the months of February, April, and September. Society members helped to install more native plants, remove invasive bermuda grass, and cut back dead foliage. During the Fall, the plot was watered three times a week, as needed, by society members. During the Spring, watering was reduced to once a week as needed by society members. In October, within the organization's honey bee hive site, society members removed invasive species, like Asiatic Jasmine (*Trachelospermum asiaticum*), and planted native pollinator plants (e.g. *Anisacanthus quadrifidus* var. *Wrightii*, *Salvia farinacea*, etc.). Additionally, the landscape was seeded with a native, shade-friendly seed mix from Native

American seed. UT Landscaping Services (UTLS) has continued its maintenance of several gardens on campus. The UT Orchard and Pollinator Garden is protected behind fencing as construction for a new engineering building occurs. University students and UTLS have planned several work days to remove invasive species and clean up trash along Waller Creek. UT Housing and Dining has continued to enhance their own pollinator garden that was created in 2018, hosting plants such as Echinacea, Gregg's Mistflower, Heartleaf Hibiscus, and American Beautyberry. The Texas Swim Center Pollinator Garden, created in 2017, has native shrubs, perennials, and milkweed designed to attract butterflies, bees, and other pollinators. The Dell Medical District Landscape, created in 2017, involved the removal of invasive species, heritage tree preservation, stream bank stabilization, and re-vegetation with a diverse mix of native species. This past fall, Bee Campus and Bee City officials toured Dell Medical District Landscape and learned from UTLS about their efforts to encourage native plants on campus. UTLS and students from the Campus Environmental Center partnered to create at Little Blue Prairie, created in 2023, to demonstrate the Blackland Prairie ecoregion landscape that covered much of what is now called Texas before colonization. In March 2024, a prescribed burn was conducted at this Blackland pocket prairie to represent a natural and regenerative way to maintain a healthy prairie ecosystem. The Dell Medical District Landscape, created in 2017, involved the removal of invasive species, heritage tree preservation, stream bank stabilization, and re-vegetation with a diverse mix of native species. The Brackenridge Field Laboratory property comprises areas of rich natural vegetation which include a native bluestem prairie, old pasture land, former quarry, Firefly Meadow, Pecan Bottoms, Colorado River and juniper woodlands. The newly developed Erwin Center Site, comprises a sallow field with a mix of native grasses. The reclaimed demo site was hydroseeded with Native American seeds from 19 different native grass species.

*How many habitat projects did you help to create or enhance in 2024?*

8

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

150

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

1

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

3466

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

- Flower garden
- Orchard
- Natural area with tree snags and stumps, and bare areas for ground nesting species

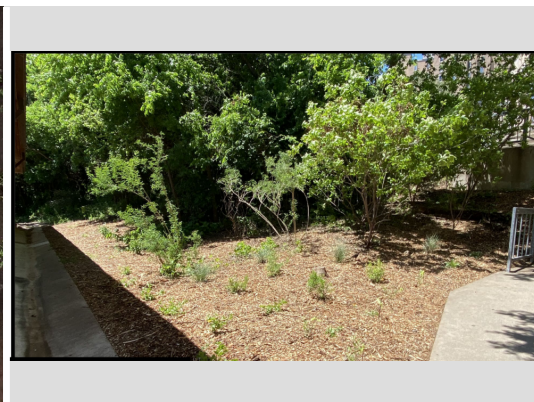
- Meadow
- Native milkweed planting for monarchs and bees (where appropriate)
- Invasive/exotic plant species removal for habitat improvement
- Native pollinator-friendly tree planting
- Native pollinator-friendly shrub border/hedgerow planting



Beevo Beekeeping Society members finished a garden workday to remove weeds and plant new, native plants at the Painter Hall Pollinator Garden. (Provided by Sofia Franching)



In the fall, Beevo Beekeeping Society created a new pollinator garden after the Painter Hall garden was destroyed for construction. Members pose after removing weeds and invasive species, planting native plants, and watering the garden. (Provided by Kaitlyn Yewand)



UT Landscaping Services restored the Caven Clark Field landscape, removing invasive species and planting 12 native plant species. (Provided by Jennifer Probst)

## Education & Outreach

*Please describe pollinator conservation events or outreach activities in your community in 2024, indicating whether your committee hosted them or not.*

Beevo Beekeeping Society at the University of Texas at Austin hosted a variety of pollinator conservation and outreach events in 2024 for society members and for the Austin community at large. In 2023, Beevo created an education committee which focuses on teaching the UT community about bees, pollination, conservation, and sustainability. The Beevo education committee has continued hosting events, such as guest speaker talks (3), presentations at local elementary schools (2), documentary night (2), craftersnoons (2), and game nights (6). The education committee also created education reports and handouts about bees and pollination that were distributed at UT Farmstand events. Below are highlighted events that stand out from 2024. Our committee has discovered creative and engaging methods to educate our community about pollinators while encouraging broader involvement beyond our committee and into the UT public. The most successful of these initiatives is game nights, such as Jeopardy, Kahoot!, “Spelling Bee,” and Trivia. These events are created and run by Beevo education committee members and created for society members, UT students and staff. Beevo is committed to finding new ways to involve different members of the UT community in pollinator education. In September, Beevo hosted an event to teach members how to make seed bombs, which are balls made of clay and native wildflower seeds that can be thrown into gardens or other natural areas to promote native

wildflower growth. The event was intended to teach Beevo Beekeeping Society members as well as the general UT student population how they can become more involved in preserving native biodiversity without plots of land for their own personal gardens. To uphold Beevo's commitment to sustainability, reusable canvas bags and paint to decorate them were available to every participant in place of plastic bags. At a Beevo pollinator workday, Beevo members spent an evening planting over 40 native Texas flowering plants in the society's new pollinator garden. For shadier areas that presented a particularly difficult challenge for a wide variety of sun-adapted Texan plants, Beevo opted for a 100% native, shade-friendly seed mix purchased from a Native American seed brand. This plot has continued to be consistently watered and monitored by Beevo members as the plants take root in their new home. The hope for this event was not just to create a pollinator refuge of pesticide-free native plants, but also to promote a love of native plants and gardening competency within the society's members. Beevo aims to expand this garden to house more native species, and the society plans to add educational signage to emphasize the importance of pesticide-free native plant spaces to the general public. Beevo also worked with the PEAS Program – a program that brings nature specialists to schools to give children hands-on learning experiences – to lead a workshop on native bee hotels at a local elementary school and work in the school's community garden. Four Beevo members led a short informational presentation on the society and the importance of protecting native pollinators. Then, Beevo members helped the kids make their own native bee hotels and answered any lingering questions about native pollinators. Once the hotels were completed, Beevo members helped the kids work on the PEAS community garden, specifically with mulching and planting.

*How many pollinator-related events or outreach activities did you host or help with in 2024 (in total)?*

33

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

515

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

2



Beevo Beekkeeping Society hosted a beeswax wrap event using the leftover wax from the fall honey harvest, open to society members and the public. (Provided by Anna Hollins)



Beevo Beekkeeping Society members tabled at UMLALF sculpture garden pollinator day and created bee finger puppets with kids. (Provided by Kylee Mitra)



Beevo Beekkeeping Society partnered with community organization PEAS to teach kids about the importance of native bees through gardening and creating native bee habits. (Provided by Kylee Mitra)

**Little Blue Prairie**

This prairie was funded by Green Fund and designed by partnership with Landscape Services and the Campus Environmental Center. Prairies are dynamic and diverse ecosystems that change year-round.

This student-led project hosts more than fifty different types of grasses and forbs (broadleaf, non-woody plants). To mimic the conditions under which prairies thrive, this plot is regularly subject to controlled burns that maintain cycles of growth.

To learn more about this student led project visit: <https://utenvironment.org/projects/little-blue-prairie/>

Signage for the Little Blue Prairie that is located on campus and mimics native habitats to support a variety of ecosystems year round. (Provided by UT Facilities Services)

**UT Orchard & Pollinator Garden**

This urban orchard, managed by UT Landscape Services, showcases native and adapted fruiting trees & shrubs for Central Texas' challenging soils and climate.

The pollinator garden contains plants that provide food and habitat to attract and sustain beneficial insects and pollinators.

For a virtual map and more information, scan the QR code below

**TREE CAMPUS HIGHER EDUCATION**  
An Arbor Day Foundation Program

**The University of Texas at Austin Facilities Services**

Signage for the on-campus UT Orchard and Pollinator Garden that contains native plants to boost pollinator populations. (Provided by UT Facilities Services)

**This pollinator garden**

was created in 2024 by UT Farm Stand and BEEVO Beekkeeping Society to educate our community to support the health of pollinators and use native and domesticated bees, butterflies, crabs and bats that we depend on daily.

**facts**

- The average person spends 100-150 minutes per day on their phone.
- One-third of the world's food supply depends on pollinators.
- There are 20,000 native species of bees in the Americas, only 10 are domesticated.

Signage at the Farm Stand Pollinator Garden which contains a variety of native plants to attract pollinators on campus. (Provided by Shannon Henry)

## Curriculum, Continuing Education, & Service Learning

Please describe the curriculum your campus engaged in 2024, indicating whether it was part of a for-credit course or continuing education.

The University of Texas at Austin offered eleven academic for-credit courses that included pollinator-related information. Out of the eleven academic courses, one is offered to freshmen as an introduction to research techniques and analytical skills through working on pollinator research. BIO 206L FRI Bugs in Bugs Stream focuses on the gut microbiota of Texas native bees and wasps, looking at how different behaviors, sociality, and diets affect microbe diversity in certain species. The other thirteen classes are for-credit for UT students and cover various information regarding pollinators. BIO 311D, INB 373, BIO 301E, and INB 370 focus on the ecological roles of bees, and their mutualistic relationships with other species. They discuss the dynamics of pollinator mutualisms, how pollinators evolved, and how extrinsic factors impact these close relationships (e.g. climate change). Some classes, INB 359K and

INB 337 focus on the cognition and social behaviors of pollinators. These classes explore why organisms behave the way they do, discussing fitness, genetics, gene expression, and cognition of pollinators. These classes discuss the behavior of pollination, why flowers develop certain colors for pollination, social dynamics between species that live in groups, such as honey bees, and provide overall context to species' actions and decisions. INB 375 discusses environmental preservation, conservation, restoration, and other actions humans can take to aid species. The class covers a variety of anthropogenic and natural factors leading to species becoming endangered and vulnerable, all applicable to native pollinator conservation. It also explicitly discusses techniques for promoting biodiversity and supporting ecological processes, such as pollination. In the class, a case study on Hawai'i and the introduction of non-native species impacted species endemic to the area, including its insects and pollinators. INB 453L, entomology, teaches insect physiology, behavior, and hones in on specific insect groups. The class has a unit focusing on pollination and a unit focusing on honey bees and beekeeping. INB 373L and EVS 311 both have lab components for students to explore ecological concepts by observing pollinators. EVS 311 gives students the option to make species lists and note plant-pollinator mutualisms, whereas INB 373L provides opportunities for independent observation of pollinator interactions as a project.

*How many of your for-credit courses included pollinator-related information in 2024?*

11

*How many students attended those for-credit courses?*

4200

*How many of your continuing education courses included pollinator-related information in 2024?*

2

*How many participants attended those continuing education courses?*

50

*Please describe the service-learning projects your students were engaged in 2024, indicating which, if any, were associated with a course.*

The University of Texas has a number of research opportunities in the Jha, Moran, Muth, and Keitt labs in which students study and participate in academic research projects supporting plant-pollinator communities and pollinator health. These research opportunities include field data collection, conducting experiments in greenhouses, interacting with insect specimens in museums, and participating in a wide range of laboratory methods. In addition to working on UT's campus, students engage with a number of locations around the Austin and Central Texas area that house pollinator habitat, including field stations and preserves managed by the University of Texas including the Brackenridge Field Laboratory, Stengl Lost Pines Biological Station, and Lady Bird Johnson Wildflower Center. The Beevo Beekeeping Society held 18 hive checks in 2024 as a means to care for the honey bee hives managed on UT campus. These events included society members and UT students. Volunteers conducted routine hive inspections to

carry out necessary maintenance and feeding of the hives. In February, March, July, October, and November 2024, Beevo held seven volunteer workdays for the Painter Hall Pollinator Garden located on UT campus. In the Spring, volunteers helped in the maintenance and upkeep of the pollinator plot, including the removal of dead and invasive plants, soil tilling, planting native plants, and watering. Beevo and Landscaping Services relocated the Painter Hall Pollinator Garden to a new location and volunteers prepared the new space, removed landscape fabric, aerated the soil, and made a drainage system. In February, April, October, and December of 2024, Beevo participated in four water cleanups of Lady Bird Lake, held by Keep Austin Beautiful. Volunteers were put into pairs and traversed the lake and its shoreline via kayak to collect waste in the water. In March, Beevo coordinated a volunteer clean-up of the on-campus creek, Waller Creek. Volunteers collected landfill trash and recyclables from the water and surrounding bank to be disposed of properly.

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

34

*How many students participated in service-learning projects in 2024 to enhance pollinator habitat on or off-campus?*

275



One of the weekly hive checks in a Langstroth bee hive conducted by Beevo members. Some hive checks are open to all UT students to generate excitement about bees and encourage pollinator awareness. (Provided by Kylie Mirza)



Beevo Beekeeping Society members planting native plants at their new pollinator garden next to the bee hive site. (Provided by Kaitlyn Townsend)



Beevo Beekeeping Society members hosted a seed bomb making workshop with native plant seeds open to the UT public. (Provided by Aerushi Gupta)

## Policies & Practices

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

UT Landscaping Services (UTLS) follows the Integrated Pest Management and Plant Health Care Plan (IPM) that was proposed in 2020. This plan outlines actions such as selecting suitable turf species for specific areas, ensuring proper

drainage, conducting land inspections for pests and diseases, testing soil quality, and promoting plant species diversity. UTLS has continued efforts to minimize pesticide use in public areas with designated pollinator habitats or other sensitive features—unless targeted treatments are necessary for managing invasive species, noxious weeds, pests, or diseases. UTLS has strived to emulate the Dell Medical District Landscape model for pollinator protection in urban gardens. UTLS focused on non-chemical pest management methods for city and campus grounds, eliminating pesticides used solely for aesthetic purposes, and reducing the overall area where pesticides are applied on campus or city-managed lands. Furthermore, UTLS restricted using RoundUp and instead used organic alternatives (with an organic label) and vinegar. UTLS phased out neonicotinoid insecticides and worked toward eliminating pesticide use altogether on city and campus grounds. In 2024, staff members were designated as spray technicians who are trained to use pesticides and educated on proper procedure. Thus, minimizing the amount of pesticide used. Beevo Beekeeping Society distributed education materials to residents and students, encouraging reducing or eliminating pesticide use. Plants for city or campus grounds are sourced using the “Buying Bee-Safe Plants” guidelines from the Xerces Society (see <https://xerces.org/publications/fact-sheets/buying-bee-safe-plants>) and are chosen to be free of neonicotinoid treatments. Beevo and UTLS actively encourages developers and private landscapers to adopt these same practices, ensuring plants they source follow the Xerces Society’s recommendations and are not treated with neonicotinoids.

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

The City of Austin became a Bee City in 2022. This has major implications for the education and protection of native pollinators within our community. Starting in 2016, UT Landscaping Services (UTLS) made significant improvements on Waller Creek, an on-campus creek, to help build species diversity and reduce erosion. Events were held to remove invasive species, maintain vegetation, and install new plants. Next year, UTLS expects to focus more efforts on the maintenance of Waller Creek. In June 2018, City Council approved an ordinance that places a citywide ban on the use of chlorpyrifos and glyphosate, a carcinogen and possible carcinogen, respectively. These chemicals are the main ingredients in certain insecticides, including RoundUp, which UTLS has stopped using. In September 2021, the Austin Climate Equity Plan was enacted. This plan provides protection for 500,000 acres of farmland in the five-county region through legal conservation or regenerative agricultural programs. 20,000 additional acres of carbon pools on natural lands are protected. The city has also pledged at least a 50% tree canopy to be achieved citywide by 2050. These policies will have positive ramifications in the protection of pollinators and humans alike from the negative environmental effects of pesticides. The City of Austin has an Integrated Pest Management (IPM) plan that outlines the use of least-toxic solutions when addressing landscape problems, not applying fertilizer or pesticides before a rain, how to properly identify an insect (and whether it’s a pest or not), use of pesticides as a last resort, to read and follow pesticide label instructions, and encourage beneficial insects. UT Austin’s Pollinator Program has been implemented on campus to strive for the creation and maintenance of safe, sustainable, and beautiful landscapes that provide pollinator habitat by increasing native plants, nesting sites, and reduced pesticide use. This plan has established the UT Orchard & Pollinator Garden, Texas Swim Center Pollinator Garden, Dell Medical District Landscape, and Little Blue Prairie pollinator gardens. Below is a list of some policy initiatives underway in our city: Austin becoming BeeCity PollinATX Imagine Austin comprehensive plan (<https://www.austintexas.gov/edims/document.cfm?id=376827>) Austin Invasive

Plants Management Austin Watershed Master plan in effect.

*Did your committee participate in any continuing education on ecologically-based Integrated Pest Management planning?*

UT Landscaping Services (UTLS), including Bee Campus committee member and Urban Forestry Supervisor, Jen Hrobar, provided an in-house training for all staff in the summer of 2024 about plant health care, best practices, proper pruning, and identification of weeds and non-weeds. The full-day event had approximately 100 staff members involved and trained to discourage using pesticides. The IPM plan that UT implements was designed in collaboration with Bee Campus USA committee members in the Integrative Biology Department. Beevo Beekeeping Society hosts educational events and pollinator garden workdays in our new pollinator garden. This garden is open to the UT public and used to educate people about sustainable gardening and landscaping practices. The club contributes to the education of students on campus about sustainability practices, the importance of native plants, and how they can become involved in pollinator protection. The faculty in various ecology labs on campus, including the Jha Conservation Lab, participates in education and outreach by tabling at Gene Andrews Event. Information used at tabling events is provided from research conducted by undergraduate assistants. Ecology labs host and participate in assorted seminars on native pollinators, such as the weekly Eco-lunch.

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

- Implemented or maintained a written IPM plan
- Only use pesticides as a last resort within the 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)
- 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
- Reduced the total area of city or campus-managed lands to which pesticides are applied
- Restricted pesticides used to organic pesticides on city or campus grounds
- Eliminated use of neonicotinoid insecticides on city or campus grounds
- Dropped pesticide use altogether 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

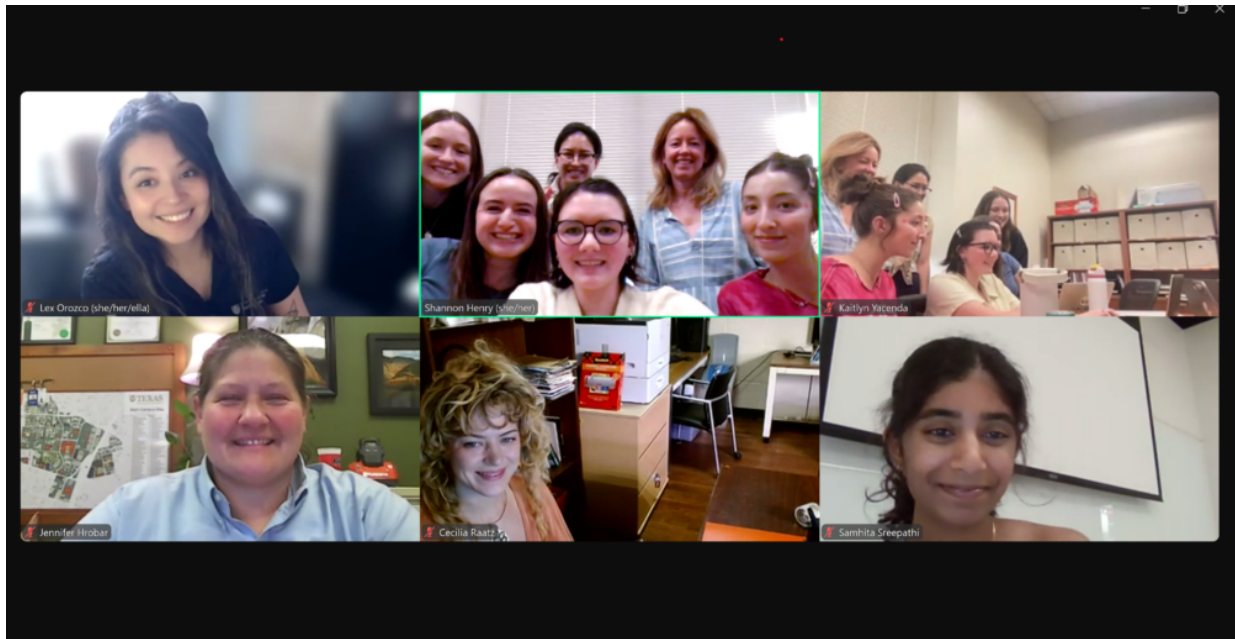


A photo from the prescribed burn at Little Blue Prairie on UT Austin campus. (Provided by UT Landscaping Services)

*Any lessons learned you would like to share?*

Our committee has discovered creative and engaging methods to educate our community about pollinators while encouraging broader involvement beyond our committee and into the UT public. These activities include events such as Jeopardy nights, tabling at elementary school science nights, arts and crafts sessions, and social garden workdays. The Beekeeping Society and affiliated organizations are committed to finding new, exciting ways to involve everyone at

## Committee Photo



Members of our Bee Campus committee discuss pollinator initiatives on campus. (Provided by Shannon Henry)

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## Learn More

Integrated Pest Management Plan: [IPM Plan Jim Carse.pdf](#)

<https://utexas.app.box.com/s/zud883x94gyr8g9fhi2568ls9ayn847h>

Recommended Native Plant List:

<https://utexas.app.box.com/s/6qlr5p6david6591slblgh717on501eqm>

Recommended Native Plant Supplier List: [Native Plant Supplier List.xlsx](#)

<https://utexas.app.box.com/s/6qlr5p6david6591slblgh717on501eqm>