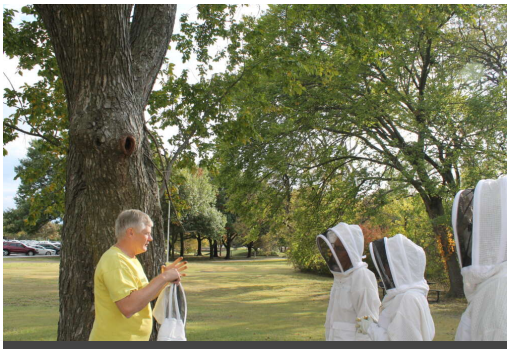
Bee Campus USA - The University of Texas at Dallas

Report on 2021

Pollinator Habitat Creation & Enhancement

To create and enhance our campus mission of being pollinator friendly we have hosted several habitat creation and enhancement events such as hive inspections and Eco Hub workdays. During hive inspections students go the chance to handle frames of bees and learn how to inspect hives for overall health. At Eco Hub workdays, students worked in teams to plant crops across an area of 13,000 square feet. These vegetables will provide an excellent pollen source and a new apiary is being built adjacent to the vegetable garden to provide more opportunities for student experiences. We have also partnered with the city of Richardson to seed medians and roadside areas with wildflowers.

students gather around a hive in the middle of our monarch waystation



students learn about a wild hive living inside a tree next to our main apiary

students working together to plant their first crops at the eco hub

Education & Outreach

Our committee hosted 13 pollinator events in addition to four workdays at our Eco Hub student vegetable garden. During the pollinator centered events, students learned about how human interaction with the environment is affecting bees, and other pollinators, as well as how we can protect against such impacts. Students collected honey from our beehives and, in the process, learned about the behaviors and needs of honeybees. Honey collection events consisted of a beginning educational element, at our wild beehive, in which the natural settings of honeybees were discussed while students were able to view a wild hive located in a nearby tree. Students then suited up with safety gear before going into the campus apiary to collect frames of honey from hive supers. These events were opened to students of all majors to encourage different viewpoints during our discussions while in the apiary. Throughout the event students were encouraged to ask questions and, as a result, important conversations were held surrounding the habitat destruction of many pollinators and what could be done to protect them. Students also built new hives to provide homes for more pollinating honeybees. The

committee hosted hive cleaning events. At our hive cleaning events, students scraped beeswax off old frames and boxes outside near the apiary. These cleaning events gave students another way to experience and learn about bees while also returning a precious resource back to the hives, beeswax. Although not hosted by the committee, the student led vegetable garden provides a source of pollen for bees and other pollinators and serves as an educational platform regarding pollinators. Students learn firsthand that we could not survive without them due to the widespread need for pollination across crops.

students work in teams to build two new beehives outside on a sunny day

students stand near the apiary while cleaning bee boxes and frames to allow the bees to collect and reuse old wax

students stand in the apiary and learn about the methods we use to provide for and protect the bees before getting to remove some honey themselves

Courses & Continuing Education

UT Dallas offers two different for-credit courses relating to pollinator health and habitat. For Collegium V honors students, students can take HONS 3199.HN1 – Honey Bees and Society. This class discusses the bee biology, the colony, and beekeeping, and is taught by Dr. Scott Rippel and Dr. Christina Thompson. Biology majors have the opportunity to take BIOL 3388 – Honey Bee Biology which covers honey bee anatomy, nest architecture, caste development and social organization, reproduction and genetic diversity, pheromones and communication, foraging behavior, colony reproduction, pest and disease management, and basic beekeeping and is taught by Dr. Scott Rippel. In both classes students have multiple hands-on opportunities to interact with our campus beehives as well as view wild swarms and hives when possible. Students regularly visit the apiary to check overall hive health and diagnose any potential issues while viewing and learning about bee behavior outside of the classroom. Both classes leave students with knowledge not only about how bees live but the problems and challenges facing them today as well. By making a quality effort to educate students about these issues and potential solutions we hope to create advocates for pollinators in the fields of biology and other sciences. For students who do not have the opportunity of taking these classes many volunteer events are available that enable them to get into the hives. This way we engage majors all over campus which is important to us because everyone has something to contribute to sustainability and pollinators in turn.

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students participate at a hive installation

a student works closely with Dr. Rippel to rescue a swarm of bees from one of our campus buildings

students examine a frame of bees in the sun to view varying shades of honey and pollen

Service-Learning

Student volunteers participated in hive inspections, honey collection, and Eco Hub workdays as service-learning projects. Such volunteer activities were open to students of all majors however, certain hive installations and inspection activities were reserved to students in the honors class (honey bees in society) or the honey bee biology class. At volunteer events in the apiary, students were guided by Dr. Rippel through an educational experience with the bees. Students learn what materials bees need to survive, how to identify workers and drones, and how to identify whatever behaviors they are witnessing. Students are also encouraged to handle frames and assist with honey collection during these events. During Eco Hub workdays students worked together to plant crops that would provide for our school food pantry as well as provide a pollen source for our local pollinators. During inspections with the biology classes Dr. Rippel allowed students to observe the bees for prolonged periods to provide data for their end of semester research projects. Such projects are required for the class and encourage students to reach for an in-depth understanding of honey bee biology. The projects consisted of data collection at the apiary and a presentation in class on a topic they witnessed or read about supported by their research.

student volunteers work as a team to build a bee hive that will be installed in our new apiary

students examine worker bees surrounding a queen through the mesh of a queen cage

students participate in a hive installation

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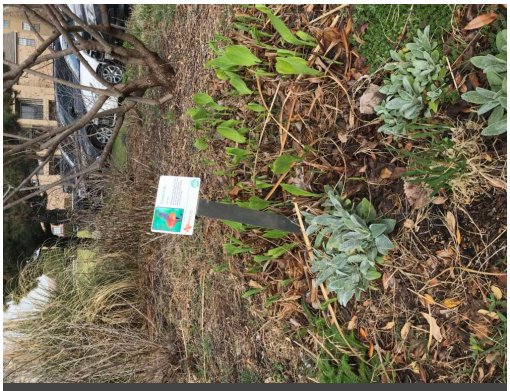
Educational Signage

Educational signage was installed in the pollinator area of the community garden. These signs are permanent flower identifiers. They each consist of information about the flower as well as a QR code to the Lady Bird Johnson Wildflower Center so that people may find out more information

blue sage sign including information, scientific name, and a QR code to a Lady Bird Johnson Wildflower Center webpage that offers more detailed information about this plant.

Texas Star Hibiscus sign including information, scientific name, and a QR code to a Lady Bird Johnson Wildflower Center webpage that offers more detailed information about this plant.



Cala Lily sign including information, scientific name, and a QR code to a Lady Bird Johnson Wildflower Center webpage that offers more detailed information about this plant

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Policies & Practices

To continue in our efforts to be a pollinator friendly campus we have utilized an IPM plan and avoided the use of pesticides wherever possible. We have also distributed materials to students detailing alternatives for using pesticides and why moving away from pesticides is one of the best things we can do for our pollinators. No pesticides are used near our apiaries or Eco Hub. We frequently discuss the topic during sustainability events such as hive inspections, eco hub workdays, and tabling events across campus. In addition to using the IPM and educating students we have also planted native plants wherever possible to provide a pollen source and home for pollinators. These plants beautify our campus, support pollinators, and provide an opportunity for further education. Pollinator friendly plants, in our community garden, are labeled with educational signage that allow for people to learn more about why they are important. In addition, we have designated approximately 39,000 square feet as a monarch waystation and disc golf course that is planted with native flowers and is mowed only on walking paths which total to about 7800 square feet.

Integrated Pest Management Plan: Integrated_Pest_Management_Plan.pdf
https://sustainability.utdallas.edu/download/Integrated_Pest_Management_Plan.pdf
Recommended Native Plant List: Bee_Campus_USA_Preferred_Plant_List (1).xlsx
https://sustainability.utdallas.edu/download/Bee_Campus_USA_Preferred_Plant_List.xlsx
Recommended Native Plant Supplier List:

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Implementation

Education

The University will integrate the Sustainability Policy in educating faculty, staff, and students, promote the development and expansion of sustainability-related research and curriculum, support sustainability related service and learning opportunities on and off campus, and encourage sustainability-themed programming opportunities and events.

Campus Operations

In campus planning, operations and activities, the University will use resources in a manner that takes into consideration environmental, social and economic impacts. The University will seek to integrate sustainability considerations into all business decisions including but not limited to:

- Energy and water management
- Procurement
- Materials and resource management
- Landscaping and grounds maintenance
- Transportation
- Dining
- Building construction, renovation, operation, and maintenance.

Community Engagement

The University will seek to establish partnerships with government, business and community organizations that strive to foster environmental consciousness and lead to the betterment of our campus and surrounding communities, encourage research by faculty that benefits the local community, share experiences and provide outreach to the community wherever feasible, increase awareness and inform the community on sustainability?related issues.

screenshot of UTD sustainability policy which includes sustainable landscaping in the implementation plan

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Learn More

https://sustainability.utdallas.edu/campus/bees/
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opening slide of our BC USA committee presentation

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