



Bee Campus USA Annual Report Pollinator Conservation & Education 2019



The University of Texas Rio Grande Valley Edinburg, Texas

EDUCATION & OUTREACH



UTRGV students gather around a member from the National Butterfly Center during a Butterfly Revitalization workshop to educate about the importance of pollinators and encourage students to participate in upcoming service learning projects.



Milkweed and mistflower seedlings are one of many giveaways at the UTRGV farmers market events (provided in partnership with our awesome City Forester, Ed Kuprel) to encourage students, staff and faculty to grow their own pollinator gardens at home or in their communities.

- February 22, 2018 – On-campus Farmers Market
- March 29, 2018– On-campus Farmers Market
- April 19, 2018 – Earth Fest Celebration
- April 26, 2018 – On-campus Farmers Market
- July 12, 2018 – Butterfly Identification at Resca de la Palma State Park
- September 12, 2018 – On-campus Farmers Market
- October 10, 2018 – On-campus Farmers Market
- November 14, 2018 – On-campus Farmers Market
- February 14, 2019 – On-campus Farmers Market
- March 28, 2019 – On-campus Farmers Market
- April 17, 2019 – Leave the Leaves
- April 25, 2019 – On-campus Farmers Market



UTRGV Faculty and students gather around Dr. Ranger Kelly Cummins at Resaca de la Palma State Park to learn about identifying butterflies.

May 15, 2019 – Leave the Leaves
June 19, 2019 – Leave the Leaves
September 25, 2019 – On-campus Farmers Market
October 19, 2019 - Rio Reforestation
November 20, 2019 – On-campus Farmers Market

- UTRGV hosted a Butterfly Revitalization Workshop along with the Center of Native Plants and Monarch Butterfly Conservation on the University of Texas Rio Grande Valley's Brownsville campus, conducted by instructor Javier Garcia from South Padre Island Birding and Nature Center. There were about 15 participants in the workshop at Brownsville.
- Another workshop was held on drip irrigation and water conservation. This workshop included the Ecology course (BIOL 3409) with instructor Cruz Salinas, which has about 90 participants.
- At the Butterfly Identification event at Resaca de la Palma State Park, students met for a butterfly identification training session with Park Ranger Kelly Cummins at Resaca de la Palma State Park. Ranger Cummins provided information on how best to observe butterflies using special binoculars and provided tips on butterfly identification. This was a preliminary workshop to support our planned participation in the National Butterfly Count.
- Earth Fest was held on the Brownsville Campus on April 24 and on the Edinburg Campus on April 25. Around 1,300 students, staff and faculty stopped by booths and received information about Solar Energy, Water Conservation, Organic Produce, and Stormwater management, and went on tours of the Pollinator Garden, Community Garden, Crawfish Garden and Butterfly Gardens on campus.
- Arbor Day was observed by the Edinburg Campus on December 13 and for the Brownsville Campus on December 14, 2019. Students, staff and faculty gathered to plant two flowering Anacahuita Trees (a great pollinator in South Texas), one on each campus.
- Over 100 UTRGV student, staff and faculty volunteers participated in this year's Rio Reforestation event, planting seedlings at the La Sal Del Rey tract of the Lower Rio Grande Valley National Wildlife Refuge. This event is one of the most important events the refuge hosts every year, drawing thousands of volunteers from across the Lower Rio Grande Valley who spend a half day helping plant native trees and shrubs on the refuge. Because 95% of the habitat in the Valley has been cleared, this is especially important work! To date, volunteers have planted nearly 200,000 seedlings on nearly 620 acres of the refuge.

POLLINATOR HEALTH & HABITAT



The Lower Rio Grande Valley is home to nearly 40 percent of the 700 species of butterflies found in the United States. Now, the UTRGV biology department is hoping to attract as many of those as it can with its new butterfly garden on the Brownsville Campus, to help establish suitable habitat for butterflies and increase awareness of their importance.



A monarch butterfly drinks nectar from a flower that was planted by University of Texas Rio Grande Valley students on the Brownsville campus. Photo: Steven Hughes



Pollinators, such as this bee, represent an important food source for birds, bats and other insectivorous animals that in turn keep the undesirable insects in check. And, through pollination, they aid in the production process of many fruits, nuts, berries, plant-derived medicines and foliage

- A pollinator garden was established and continuously maintained. Fifteen beds equipped with a drip irrigation system were constructed using on-site soil amended with compost from the City's composting facility and delineated with reclaimed bricks. About 30 native perennial species were planted. A puddling station (moving water with a solar pump) was included along with several bee houses.
- Along with the Pollinator Cantina, there were improvements and establishments to an additional seven gardens (Community Garden; Veterans Memorial Garden; E-LABS Butterfly Garden; E-CEP Community Courtyard Garden; E-SCNE Rain Garden; Crawfish Garden; and B-MSLC Courtyard Butterfly Garden) that are all located on both the Edinburg and Brownsville Campus. These gardens are all planted with pollinator friendly plants, trees, and flowers that sustain many habitats for butterflies, bees, and several other insects.

SERVICE LEARNING

- Pollinator Cantina Maintenance and Expansion: This garden was funded through a UTRGV strategic planning grant specifically as a service-learning project tied to several courses. This year it has received additional funding to expand and continue providing experiential learning to both students and community.
- UTRGV Faculty have added the annual Rio Reforestation event to their syllabus as one of many course activities where students learn in an outdoor class setting as they provide a critical service, helping plant native trees and shrubs, to include pollinator plants, on the La Sal Del Rey refuge.
- UTRGV Celebrates Arbor Day and Pollinator Day each year during Earth Fest in collaboration with the School of Earth, Environment and Marine Science, Student Organizations, Staff Senate and several Faculty who annually make these events part of their course outdoor class activity for the day.
- UTRGV Faculty have partnered with Resaca de la Palma State Park and US Fish and Wildlife to create an annual service learning activity identifying butterflies in the RGV for our students.
- UTRGV Dr. Christopher Gabler, assistant professor in the School of Earth, Environmental and Marine Sciences, has spearheaded the Brownsville Research and Community Garden, known academically as Project CRAWFISH – Climate Resilient Agroecological Watershed-Food Integration System for Husbandry. His team of graduate and undergraduate students and volunteers created a garden that replicates an agroecological watershed system as found in the world's larger systems.
- The UTRGV Edinburg Campus Research and Community Gardens is a quarter-acre certified-organic garden complex located on the northeast side of the UTRGV Edinburg campus. The garden complex includes 7,500 square feet dedicated to certified-organic research under the UTRGV Agroecology Program, and 2,500 square feet dedicated to certified-organic fruit-and-vegetable production by the UTRGV campus community. Both gardens are fully equipped with drip-irrigation systems and each garden has its own toolshed, while the research garden is adjacent to UTRGV's state-of-the-art greenhouse, equipped with a water wall, sprinklers, and fans. The organic produce harvested from these gardens provide the nutritious fruits and vegetables sold at the UTRGV Farmers Market.



UTRGV Biology Students help provide routine maintenance while they conduct research in the Pollinator Garden

CURRICULUM & CONTINUING EDUCATION



Dr. Julie A. Mustard (at center), assistant professor of biology at UTRGV, is conducting neurological research by studying honey bees, with the help of student researchers Valerie Alvarez (left) and Mariaolga Montes de Oca. Mustard, a neurobiologist, is studying the bees' molecular mechanisms to find out how cells in the brain change during the learning process.



UTRGV professors creating a buzz: Dr. Joanne Rampersad-Ammons and Dr. Dongchul Kim are collaborating across disciplines with a team of students to study the honeybee population in South Texas.

- Undergraduate Courses: Ecology, Biology II, Biology Problems I, Entomology
- Graduate Courses: Plant-Animal Interactions, Thesis I, Graduate Research

EDUCATIONAL & INTERPRETIVE SIGNAGE

The permanent signage is designed and approved, and is just awaiting funding to procure and install. We have temporary signage at the Community Garden, Pollinator Garden and E-SCNCE Rain Garden.

POLICIES & PRACTICES

The purpose of this Integrated Pest Management (IPM) Plan is to guide the use of environmentally sensitive pest management strategies and least-toxic control methods in The University of Texas Rio Grande Valley. Integrated Pest Management (IPM) is defined as managing pests (plants, fungi, insects and/or animals) in a way that protects human health and the surrounding environment and that improves economic returns through the most effective, least-risk option. Core elements of IPM include:

- Use of least-toxic chemical pesticides
- Minimum use of chemicals
- Use of chemicals and pesticides only in targeted locations and for targeted species
- Routine inspection and monitoring
- Proactive communication

Recommended Locally Native Plant Species List —

<https://www.utrgv.edu/pollinatorcantina/en-us/plants/index.htm>

https://www.wildflower.org/collections/collection.php?collection=TX_south

Regional Native Plant Supplier List — <https://www.valleynaturecenter.org> and <http://heepsplants.com>

Pollinator Friendly Integrated Pest Management Plan — <https://reports.aashe.org/media/secure/1017/7/659/5033/UTRGV%20Integrated%20Pest%20Management.pdf>

CONTACT US!

Committee — UTRGV Bee Campus USA Committee, Alejandro Fierro Cabo, alejandro.fierrocabo@utrgv.edu and Sara Black, sara.black@utrgv.edu

Website — <https://www.utrgv.edu/pollinatorcantina/en-us/index.htm>

Social Media — not available