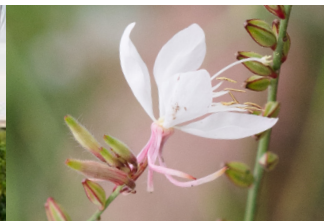
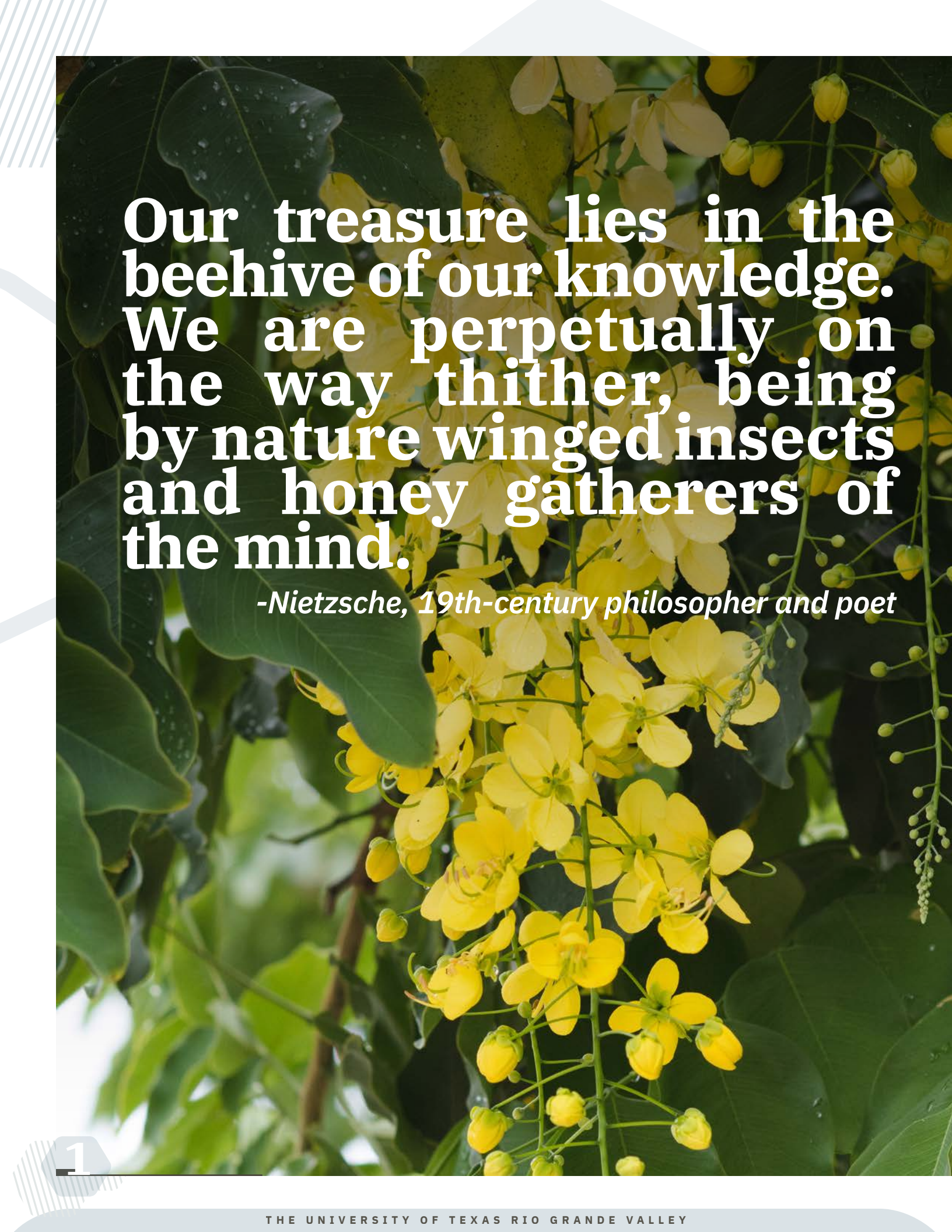




The University of Texas
Rio Grande Valley
Bee Campus USA Report





**Our treasure lies in the
beehive of our knowledge.
We are perpetually on
the way thither, being
by nature winged insects
and honey gatherers of
the mind.**

-Nietzsche, 19th-century philosopher and poet

pg.

CONTENTS

3

INTRODUCTION

4

STANDARD 1

Bee Campus USA Committee

5

STANDARD 2

Campus Pollinator Habitat Plan

6

STANDARD 3

Annual Campus Events

7

STANDARD 4

Service Learning Projects

9

STANDARD 5

Biennial Pollinator Protection Workshop

9

STANDARD 6

Educational Signage Regarding Pollinators

10

STANDARD 7

Local Website & Contact Information

Photo by Jose Pena



Photo by Jose Pena

Introduction

The University of Texas Rio Grande Valley serves the lower four counties of Texas, which is home to a documented 1,200 plant species and over 300 butterfly and other pollinator species, according to the Lower Rio Grande Valley National Wildlife Refuge. As an agricultural region on the U.S-Mexico border, pollinators are especially important to the Rio Grande Valley, for example, honeybees pollinate some \$587 million worth of crops every year in Texas. However, pollinator populations in Texas are falling just as they are worldwide, threatened by habitat loss due to development, intensive use of pesticides, and other threats such as Africanized bees and bee parasites, mites, and diseases.

UTRGV is an emergent research university in the heart of the Texas citrus region, and as such hopes to consolidate and lead efforts in pollinator research and conservation. A Bee Campus USA recognition indicates that UTRGV's commitment to sustainability and conservation is taking actionable form. In accordance with Bee Campus USA, UTRGV commits to establishing a Bee Campus USA Committee, hosting annual events to raise awareness of pollinators, and educating through formal courses as well as workshops and signage.

Bee Campus USA aligns with UTRGV's commitment to sustainability, which it carries out through university operations, engagement, teaching and research. In addition to UTRGV's incorporation of native plants into campus landscaping and exclusion of pesticides that are harmful to pollinators, students, staff and faculty from the UTRGV's Department of Biology and School of Earth, Environmental, and Marine Sciences (SEEMS) are contributing to conservation efforts with pollinator gardens, among other efforts. In 2018, Dr. Lucia Carreon Martinez, UTRGV biology lecturer, spearheaded the establishment of the new

pollinator garden on the UTRGV Brownsville Campus (The Pollinator Cantina), teaming up with Dr. Alejandro Fierro Cabo (SEEMS faculty), Dr. Julie Mustard (Biology faculty), Sara Black (Biology faculty), and Dr. Rupesh Kariyat (Biology faculty.) Student volunteers helped build the garden now help maintain it.

The Brownsville campus is also the home to Dr. Julie Mustard's bee research lab, where students have the opportunity to handle bees in a research setting. Their hive is thriving due to its proximity to The Pollinator Cantina, and the bees' pollination contributes to the garden growing beautifully.

UTRGV outreach events reach the entire community, and offer opportunities to start educating about the importance of pollinators. As students and community members learn about the plants that bees and butterflies thrive on, they can begin to apply this knowledge in their backyards and workplaces. Thus, we can extend UTRGV's commitment to sustainability to the surrounding community, and empower individuals to contribute to preserving local ecosystems.



STANDARD 1

Bee Campus USA Committee

Photo by Dr. Julie Mustard, UTRGV

UTRGV has participated in programs similar to Bee Campus USA including the Arbor Day Foundation’s Tree Campus USA, and has established working procedures for sustainable projects, which are always carried out by order of committees. UTRGV’s Bee Campus USA Committee is made up of faculty, students, and the director of Campus Facilities Operations, among other staff. They meet quarterly to plan pollinator conservation education efforts and events.

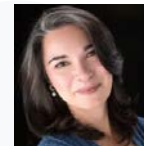
UTRGV FACULTY COMMITTEE MEMBERS



Alejandro Fierro-Cabo
Committee Chair
UTRGV Assistant Professor
School of Earth, Environmental, and Marine Sciences
alejandro.fierrocabo@utrgv.edu



Sara Black
Committee Co-Chair
UTRGV Lecturer
Biology
sara.black@utrgv.edu



Marianella Franklin
Committee Member
Chief Sustainability Officer
UTRGV Office for Sustainability
marianella.franklin@utrgv.edu



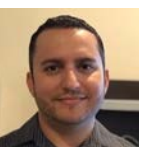
Rupesh Kariyat
Committee Member
UTRGV Assistant Professor
Biology
rupesh.kariyat@utrgv.edu



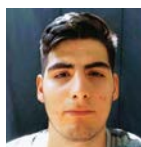
Julie Mustard
Committee Member
UTRGV Assistant Professor
Biology
julie.mustard@utrgv.edu



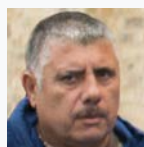
Abraham Hernandez
Committee Member
Director
Campus Facilities Operations-Brownsville
abraham.hernandez@utrgv.edu



David Lecusay, Jr.
Student Committee Member
UTRGV Student
Biology



Daniel Flores
Student Committee Member
UTRGV Student
Biology



Martin Cortez
Committee Member
Assistant Director
Facilities Maintenance and Operations
martin.cortez@utrgv.edu



Oliver Salander
Student Committee Member
UTRGV Student
Biology



Javier Navarro
Student Committee Member
UTRGV Graduate Student
Ocean, Coastal, and Earth Sciences (MS)

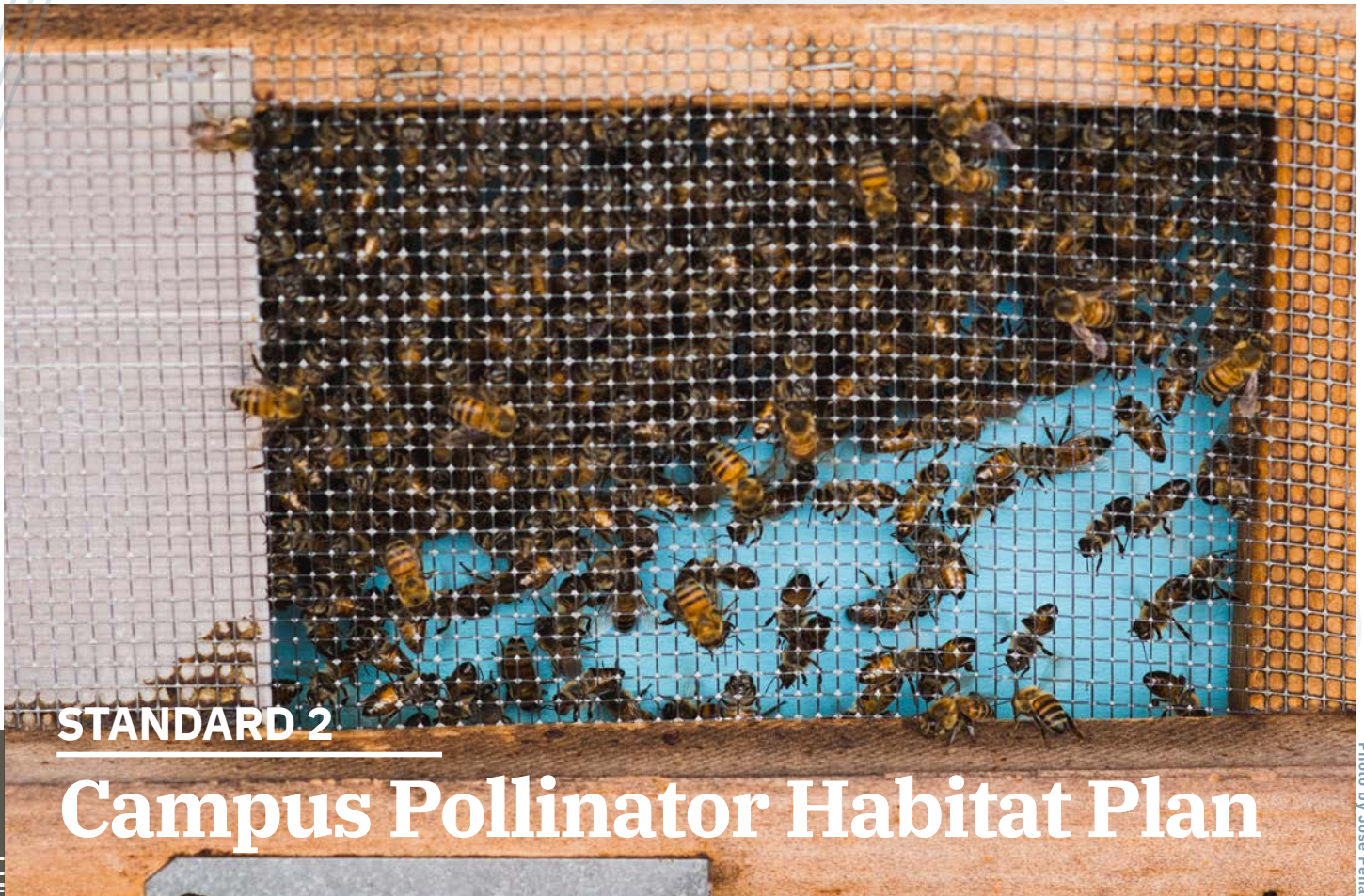


Photo by Jose Pena

STANDARD 2

Campus Pollinator Habitat Plan

UTRGV's Integrated Pest Management Plan includes native and pollinator-friendly plants, which are listed in UTRGV's annual Tree Care Report, available on the Office for Sustainability's website. Some of UTRGV's staples in landscaping are species preferred by insect and bird pollinators.

We are committed to taking the next step in education by adding regional sources for such plants and detail a least toxic integrated pest management (IPM) model applicable to other local landscapes.

“ When the flower blossoms, the bees will come. ”

-Srikumar S. Rao, Author

List of Native Plants in the UTRGV Pollinator Garden

- | | |
|-------------------------|----------------------|
| Vasey adelia | Texas kidneywood |
| Frog fruit | Sweet gaura |
| Fiddle wood | Heart leaf hibiscus |
| Blue creeping sage | Turk's cap |
| White plumbago | Trixis inula |
| Texas Baby bonnet | Wolly pyramid bush |
| Carlowrightia | White brush |
| Runyon's water willow | Hairy wedelia |
| Snake herb | Velvet lantana |
| Tube tongue | Skeleton leaf |
| Texas lantana | Prairie milkweed |
| Scorpion's tail | Common sunflower |
| Scarlet sage | Wild sunflower |
| Spring mistflower | Lady finger cactus |
| Crucita | Twisted rib cactus |
| White mistflower | Prickly pear cactus |
| Golden rod | Pincushion cactus |
| Low croton | Nigh-blooming cereus |
| Bettany leaf mistflower | |



STANDARD 3

Annual Campus Events

UTRGV is committed to raising awareness of the importance of pollinators through events which may be guided pollinator garden walks, workshops, presentations, and films on pollinators. These also serve as an opportunity to acknowledge the institution's certification as a BEE CAMPUS USA institution. UTRGV hosts an annual tree-planting event in honor of Arbor day, to which UTRGV integrates pollinator presentations. Similarly, UTRGV hosts an Earth Fest, in which pollinator awareness is featured through the Office for Sustainability's outreach efforts.

UTRGV hosts other events throughout the year to celebrate the beauty and importance of bees and other pollinators. Some of these are during National Garden and Pollinator Week, or Butterfly Education and Awareness Day in June, National Garden Month during April, and National Wildflower Week during Garden for Wildlife Month (May), and certainly the Annual Butterfly Count (North American Butterfly Association.) Other pollinator-specific events such as National Moth Week, National Honey Bee Day, World Bee Day, and National Bat Week are hosted by

departments such as Biology, School of Environmental Sciences, or student organizations dedicated to conservation.

UTRGV engages the community with urban forestry activities and events throughout the year, such as HESTEC, FESTIBA, and Rio Reforestation. Opportunities for student participation in these events are made possible through the collaboration of the Office for Sustainability, the Department of Biology's Environmental Science program and Agroecology program, the Department of Community Engagement, the U.S. Department of Agriculture, and Texas Forest Service.

UTRGV's campus events reach a population beyond the university, and have the potential to make an impact beyond South Texas. The monarch butterfly is regionally significant, with its annual passing through the RGV on its return to Mexico in time for the Day of the Dead - an ongoing phenomena enjoyed by spectators every fall. As such, pollinator education is incorporated into cultural celebrations, as well.



STANDARD 4

Service Learning Projects

Photo by Dr. Julie Mustard, UTRGV



Photo by Dr. Julie Mustard, UTRGV

Students at UTRGV have the opportunity to contribute to initiatives on-and off-campus through service learning projects. UTRGV requires that officially designated service-learning courses meet defined criteria in course design, but activities remain at the sole discretion of the faculty member teaching the course. These criteria are based on nationally recognized standards and have been established to enable the institution to document and assess service learning activities in a consistent fashion and to tie institutionally recognized community engagement activities to agreed upon practices and definitions. Designations are given on a section-level (on an instructor basis for a singular course).



7

Photo by Dr. Julie Mustard, UTRGV



Photo by Dr. Julie Mustard, UTRGV



Photo by Dr. Julie Mustard, UTRGV



Photo by Dr. Julie Mustard, UTRGV

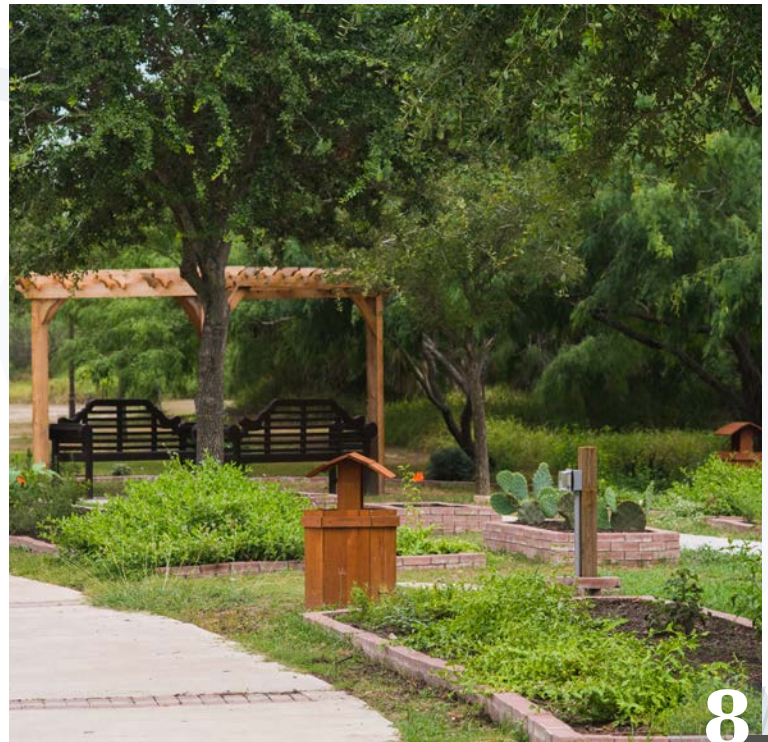


Photo by Dr. Julie Mustard, UTRGV

Two such courses (Introductory Biology and Ecology) took on the service learning project of building and maintaining the new pollinator garden on the Brownsville campus. Though volunteers are also welcome to these experiences, the participation of students enrolled in service learning courses is tracked. Other courses expected to incorporate a service learning component related to pollinator habitats include Animal Behavior, Conservation Biology, and Plant-Animal Interactions. The annual sponsorship of these projects is one of UTRGV's next commitments.



Photo by Dr. Julie Mustard, UTRGV





STANDARD 5

Biennial Pollinator Protection Workshop

In addition to pollinator focused courses such as Plant-Animal Interactions where one section is dedicated to pollination, UTRGV is committed to incorporating pollinator protection workshops into the already existing selection of professional development training offered to faculty and staff. Workshops like the *Butterfly Revitalization Workshop* have been offered to students and faculty in an effort to educate a broader audience on the importance of pollinators, and engage students in service learning projects.

For planning the pollinator garden, we had input from Silvia Barr (Quinta Mazatlán), Matt Kauffman (Valley Nature Center), Cruz Salinas (drip irrigation expert), and Max Munoz (National Butterfly Center.)

Photo by Dr. Julie Mustard, UTRGV



Early design mockup of educational signage.

STANDARD 6

Educational Signage Regarding Pollinators

UTRGV commits to educating the campus and broader community about pollinator-friendly landscaping principles by labeling the plants in campus pollinator gardens and posting signage to explain how beneficial insects provide a natural process for pest management and pollination. We will post signs across campus gardens, cafeterias, cafes, and student unions to explain the role of pollinators in food production during Bee Campus USA events at UTRGV.

STANDARD 7**Local Website &
Contact Information**

UTRGV will inform the community about Bee Campus USA initiatives through a page on the UTRGV website, currently under construction. The site will be hosted by the *College of Sciences*.

For more information contact:

College of Sciences

cos@utrgv.edu

(956) 882-6701

URL: <https://www.utrgv.edu/cos/>



Photo by Dr. Julie Mustard, UTRGV

**The bee collects honey
from flowers in such a
way as to do the least
damage or destruction
to them, and he leaves
them whole, undamaged
and fresh, just as he
found them.**

-Saint Francis de Sales



CONTACT

The University of Texas Rio Grande Valley
1201 West University Dr.
Edinburg, TX 78539

The Office for Sustainability
(956) 665-3030
sustainability@utrgv.edu
www.utrgv.edu/sustainability

Facilities Planning and Operations
(956) 665-2770