

“Mariposas of the Milpa: Fostering Urban Biodiversity through Urban Agriculture”

A project funded by the Commission for Environmental Cooperation
2015 North American Partnership for Environmental Community Action

Final Report: November 2017

Quick Analysis

1. What was the single best thing that happened during the project?

No single thing stood out as the one and only best thing to all project staff. For some the creation of over 500 m² of pollinator habitat, much of that at Las Milpitas stood out as a huge success. It has been heartening to ASDM staff to hear about the pollinators that have already been observed at the eight gardens that were planted across Tucson. Plant it, and they will come!

For others, the single best thing was the enthusiasm for pollinators and pollinator conservation in our community. In addition to the eight gardens we created, we gave pollinator plants to an additional approximately 100 homes in the surrounding community. At times, the enthusiasm was overwhelming!

Another unexpected highlight of this project was how much we engaged the Spanish-speaking members of our community. All of our outreach and education events were at least partly bilingual, with Spanish equal to English at all events taking place at Las Milpitas.

2. What was the single worst thing that happened during the project?

The single worst thing that happened was losing the contract with our desired filmmaker, Matthew Velazquez (<https://vimeo.com/matthewv>). The timing of this loss was unfortunate in that it occurred just before the most significant outreach event we hoped to feature in the video. We were fortunate that an ASDM volunteer stepped in to film the event, but we did not have a chance to vet this volunteer's prior film work. Much of the video he took during the event was of poor quality.

3. What was the single most unexpected thing that happened during the project?

The single most unexpected thing to happen was the involvement of six biology undergraduates from the Universidad de Sonora in our pollinator conservation work. These students approached the Arizona-Sonora Desert Museum to inquire about summer internships in pollinator conservation. Although ASDM does not have a formal summer internship program, we were able to offer them a wide variety of experiences in conservation while at the same time benefitting from the extra hands available for education and outreach events. These students worked hard to develop their knowledge of pollinator conservation and their communication skills. They returned to Sonora with a greater capacity to carry out pollinator conservation and even more importantly, a better understanding of how to generate collective action to tackle environmental problems.

4. What was the single thing that could have made the project more effective?

It took us a year to really understand what the other organization was doing (i.e. the CFBSA and ASDM). If had started the project with a working relationship, we could have hit the ground running, and perhaps accomplished a great deal more outreach. But this was actually the overarching goal of this project – to develop a strong relationship between two organizations, CFBSA and ASDM, whose missions, at first glance, might not seem to overlap significantly. But what we have learned is that connecting people to biodiversity is critical to the mission of each organization and that we can accomplish much more together than we can apart.

5. What will happen as a result of this project during the next five years?

This project has laid the foundation for many projects that we hope to launch in the next five years. Building the capacity of ASDM to produce pollinator plants and establishing a long-term monitoring program has already enabled ASDM staff to begin new research projects that engage youth in real science and conservation. ASDM research scientist, Kim Franklin is launching a project with Sunnyside Highschool in South Tucson to barcode the bees collected at Las Mipiltas. This is an opportunity for high school students to participate in a truly meaningful research experience that we hope will also engender a stronger conservation ethic. The high school will also receive a pollinator garden, with students enlisted to quantify the impact of the garden on the bee fauna on campus. This is the type of work that ASDM staff envision resulting from this NAPECA project.

6. Is there anything else that is important to say about the project?

Our experience with CEC through this program was very positive. One of the biggest highlights for ASDM and ASDM staff scientist Sergio Avila, was presenting to the environmental ministries of CEC countries: Catherine McKenna of Environment Canada, Gina McCarthy of the Environmental Protection Agency, Mexico's Rafael Pacchiano, Secretary of Environment in Mexico and Alejandro el Mazo, Natural Protected Areas Commissioner, during the Twenty-Third Regular Session of the CEC Council and Joint Public Advisory Committee Regular Session in Merida, Yucatan, Mexico in September 2016. This was a great opportunity to share knowledge and lessons learned and cultivate relationships

with partners across North America. We are thankful to the CEC for their support. This funding helped put our efforts on the map of pollinator conservation across North America.

PROJECT EVALUATION

“Mariposas of the Milpa: Fostering Urban Biodiversity through Urban Agriculture”

A project funded by the Commission for Environmental Cooperation
2015 North American Partnership for Environmental Community Action

DESCRIPTION

Background: Sustainable communities manage their resources to meet current social, economic, and environmental needs while ensuring the ability of the community to meet the needs of future generations. Biodiversity is a key component of sustainable urban communities. Biodiversity within cities contributes to improved air and water quality, moderation of climate extremes, the decomposition of waste, and human health and well-being. Urban agriculture has tremendous potential to increase biodiversity in our cities. Small-scale farms and backyard gardens create high quality habitat for a wide variety of species and connect people to nature, increasing community commitment to biodiversity conservation. Furthermore, many crops require the pollination services of bees and other animals, many of which are experiencing population declines. Urban areas can support healthy pollinator populations, but their capacity to do so is limited by the quality and quantity of favorable habitat. The goals of this project were to establish a partnership between the Arizona-Sonora Desert Museum (ASDM) and the Community Food Bank of Southern Arizona (CFBSA) and to use this partnership to promote biodiversity in Tucson, Arizona, with an initial focus on increasing the abundance and diversity of pollinators.

Project Description: Our first objective was to increase the quantity of high quality habitat to support pollinator populations in Tucson. With funding from NAPECA we were able to increase ASDM’s production of native pollinator plants, which were then used to establish eight new pollinator gardens. The largest of these gardens was planted at the CFBSA Las Milpitas Community Farm. We also developed bilingual signage for the two CFBSA pollinator gardens, created a teaching insect collection for Las Milpitas Community Farm. Our second objective was to facilitate a deeper connection between city residents and the biodiversity in their own backyards as well as to expand their understanding of pollination and pollinators. We offered workshops on pollinator conservation and pollination gardens in both English and Spanish for CFBSA staff, volunteers, and residents in the targeted neighborhoods, participated in numerous outreach events

across the city, lead a portion of the summer camp for the families in the neighborhood surrounding Las Milpitas Community Farm, and created a short film about the project.

Outcomes: We created a pollinator garden in Las Milpitas Community Farm that occupies close to 150 m². The combination of this new resource with the existing resources on the farm provide nearly 6 hectares of high quality habitat that supports biodiversity in this low income neighborhood identified by the USDA Food Access Research Atlas as a food desert. We also created gardens in seven additional locations, including a second CFSBA property, five schools, and in the front yard of a private home belonging to an esteemed member of a neighborhood near Las Milpitas Community Farm, for a total of more than 500 m² of habitat in central Tucson. A new shade structure at ASDM built as part of this project made the production of pollinator plants for these gardens possible and has increased the capacity of ASDM to carry on this work into the future. We engaged hundreds of individuals in educational activities on pollinator conservation through a dozen outreach events, six more in-depth educational events, and four school programs. The majority of these events and programs targeted low income Mexican-American audiences of all ages. Many CFBSA staff and volunteers, as well as many Las Milpitas gardeners, are now able to identify pollinators like bees, butterflies, hummingbirds and moths and to create high quality pollinator habitat that will benefit urban agriculture. These outcomes have set the stage for ongoing work promoting community sustainability and urban biodiversity in South Tucson.

Project products:

- Eight pollinator gardens, the most accessible of which are the two CFBSA gardens. These two gardens will serve as demonstration sites for additional education work that aims to promote urban biodiversity and agriculture. Access to these gardens is easily obtained through the CFBSA. <http://www.communityfoodbank.org/Locations/Las-Milpitas>; <http://legacy.communityfoodbank.com/Programs-and-Services/Community-Food-Resource-Center/Garden-Program/Nuestra-Tierra>
- Signage for the CFBSA gardens was created collaboratively. The content of these signs is available by contacting Kim Franklin (kfranklin@desertmuseum.org).
- This project was featured in a popular local publication *edible Baja* (<http://ediblebajaarizona.com/butterfly-restaurants>), and another article to be published in *The Desert Leaf*, another local publication, is forthcoming.
- A 3-minute video about this project is in the final stages of production. The video will be made available online.

Project Contact:

Kim Franklin, PhD
Research Scientist, Arizona-Sonora Desert Museum
kfranklin@desertmuseum.org
520-883-3008