

Conservation Senior Project

Sedgwick County Conservation District

Friends University

How to make milpa gardens more pollinator friendly

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“Happiness is to hold flowers in both hands.” (Japanese proverb), and for many people a garden is happiness. A space outdoors, set aside for the cultivation, display, and enjoyment of all the flowers, roses, bushes, and trees. Being able to smell the sweet scent of nature's fragrance and being one with nature if only for a moment. But if you were to go to the grocery store and stood in the vegetable aisle and just closed your eyes, would you think that it would bring you as much happiness as flowers? A milpa garden or a chaos garden as it is also called is a traditional and sustainable garden that grows 50 varied species of seeds, including leaf vegetables, squash, cucumbers, pumpkins, melons, beets, beans, and corn.

The word “Milpa” is described as a small field in Central America that is cleared from the forest, used for agriculture for the season, and abandoned for nature to use until the next season. This kind of gardening was used by Central American ancestors, the Mayans. The Maya agriculture would include a rotation of the crops every year where the agriculture patch would be close to the forest where it could intertwine with trees and shrubs. When the garden was ready, the Mayas would collect all the vegetation and leave the garden to re-establish its roots with nature. The milpa cycle had two years of cultivation and eight years of natural growth, to allow for the natural regrowth of vegetation. This kind of gardening had no chemical or artificial fertilizers or pesticides, and this allowed the milpa vegetation to be richer in nutrients and healthier. This also helped fertilize the soil in a natural way.

Today people across the world follow the tradition of the Mayans by creating milpa gardens of their own because of their simplicity, tradition, and natural aesthetics but humans are not the only ones that are attracted to milpa gardens, pollinators are fans of them as well.

A pollinator is an organism that transfers pollen from a male plant (stamen) to a female plant (stigma). This transfer of pollen helps the plants and vegetation to spread and fertilize other

plants producing produce like fruits, seeds, and other plants. Pollinators come in many assorted sizes and species. Pollinators include insects and animals like bees, wasps, moths, butterflies, birds, and mammals. Insects and other animals live around these plants and vegetation for a source of food, they can also use it as material to help build their shelters. Pollinators like bees, wasps, and hummingbirds use the plants and flowers as food and as nesting areas. Bees especially use milpa gardens as nurseries. They lay their eggs on the growing squash and other vegetables which have all the nutrients and protection for their offspring to grow. Other organisms like small mammals are accidental pollinators. They come to the vegetation, flowers, or plants to find food, the pollen then sticks on their fur, feathers, feet, or paws when they are eating the nectar of the flower or they are eating the vegetables, then they unknowingly move the pollen to other areas as they leave.

“Did you know that pollinators are responsible for the survival of 30% of the human food supply and 90% of our wild plants?” (NPS, Adapted from E. O. Wilson, *Forgotten Pollinators*, 1996).

This makes pollinators a keystone species. Keystone species are species that have a large effect on the habitat and ecosystem that they live in. Many of the organisms including animals, plants, and humans rely on them for their own safety, health, food resources or just overall survival. As humans we depend on our pollinators, for more than half of our food crops can grow and thrive because of pollinators, including our milpa gardens. Pollinators are in charge of the increase of plants and vegetation; this ripples down and helps stop desiccation. Areas that contain milpa gardens have a stronger connection to pollinators because of their natural growth and are more susceptible to changes because they have the ability to harvest native plants that can adapt to the environment.

Although pollinators are important to our ecosystem and we rely on them, many species are in danger. Many of the pollinators are lost due to habitat destruction because of agriculture and

suburban development. Increase in home, company and business building has diminished the land for natural plants, flowers, and vegetation to develop. Another resource that has contributed to their decrease in numbers is the health of the plants that they are getting pollen from. Many people use pesticides and artificial fertilizers that contain considerable amounts of chemicals that are not suitable for the pollinators to consume, decreasing the health of not only the pollinators but the health of the garden. Pollinators are also in danger because of climate change and pollution. The change in the weather means flowers are blossoming later in the season and the amount of pollution means that plants and vegetation are not growing as fast or as healthy. Pollinators must find food in other places that can be dangerous for them and because they must find food during colder weather, most of them do not survive. The decrease in the number of pollinators is not only hurting the species but the different vegetation, the habitat and even humans.

However, this is not all sad news, there is more than one way we can help and save pollinators that not only helps the actual pollinators but the environment and human wellness as well. Creating a wildlife-friendly garden that not only has flowers and roses but also contains vegetation and native-plants just like milpa gardens. Being able to have your garden grow wild makes for a safe and healthier area for pollinators, helps with nesting, shelter, and better source of food. Another way to help pollinators is by avoiding the use of chemical pesticides at home. Help your yard or garden in a natural and organic way as many of the pollinators themselves work as natural pesticides. Help by passing the word along and educating others on how to help keep their milpa gardens healthy and strong and how to keep your garden pollinator friendly.

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