Bee Campus USA - University of Dayton

Report on 2024

Pollinator Habitat Creation & Enhancement

Please describe pollinator habitat creation or enhancement projects in your community in 2024, and whether your committee hosted them or not.

At the University of Dayton, the members of Bee Campus complete a host of habitat creation and enhancement projects around the campus. Many of our student members are involved in prairie and native floral resource restoration projects which include fortifying native resources, eliminating invasive species by hand instead of utilizing chemicals, and educating the student population on how to care and respect these native habitats. The prairie restoration projects are driven by the students of Bee Campus and the staff that assists them, and they have proved in maintaining the solar prairie on campus at Curran Place. In the greater Dayton community, there are many non-profits which engage in community-based conservation outreach and pollinator habitat creation, restoration, and enhancement projects. The non-profit organization Mission of Mary Farms has instituted five community gardens that work to feed food insecure communities within Dayton. Apart from their agricultural work, Mission of Mary provides sustainable pollinator habitats across Dayton, aiding in habitat fragmentation within the city. Similarly, the Dayton Five Rivers MetroParks hosts a variety of prairie, grassland, wetland, and forested areas around Dayton which serve as critically important pollinator habitats. One major project being instituted at the time involves wetland habitat restoration in an abandoned golf course near Dayton, with the goal of reinstating a population of threatened marsh butterfly species, the Baltimore Checkerspot Butterfly. The Five Rivers MetroParks have also worked throughout their locations to limit or cease the use of harmful chemicals used for pesticides and herbicides and have instituted native cavity nesting bee habitats at many of their sites. Wright-Patterson Air Force Base is also in the process of becoming an arboretum, which will provide necessary habitat for many cavity and ground nesting bees in the area. Although the University of Dayton Bee Campus does not host any of these projects, they are important examples of how we can institute professional conservation practices throughout our own campus.

How many habitat projects did you help to create or enhance in 2024?

7

How many people (staff, volunteers, students, partners, etc.) helped with those projects?

20

How many projects benefit monarchs, milkweed, or nectar plantings?

3

How many total square feet of habitat were created or enhanced?

968750

Please check all that describe the habitats your affiliate helped to create or enhance last year with pollinator benefit in mind.

- Vegetable garden
- Orchard
- Natural area with tree snags and stumps, and bare areas for ground nesting species
- Meadow
- Pollinator-friendly lawn (with flowering clover, dandelions...)
- Native milkweed planting for monarchs and bees (where appropriate)
- Invasive/exotic plant species removal for habitat improvement
- Rain garden/bioswale

Flowers in full bloom at UD's 6-acre Solar Prairie.

Education & Outreach

Please describe pollinator conservation events or outreach activities in your community in 2024, indicating whether your committee hosted them or not.

As a city with a rich environmental and cultural landscape that is cared for by multiple organizations which have focuses including pollinator conservation, there were multiple events focused on pollinator conservation and outreach in the past year. One of our largest events regarding this subject is the Wright-Patterson Air Force Base Pollinator Expo, which occurs yearly in June. As a designated Bee City, WPAFB holds this free educational event in order to bring

together environmental activists, educators, and the public in the name of celebrating and conserving pollinators and the natural resources that they require. Although the University of Dayton Bee Campus does not host this event, we are working towards utilizing this event as an additional outreach opportunity. Also in 2024, Ohio State Parks collaborated with Aviation Energy Center to create the Pollinator Power Fest at John Bryan State Park in Yellow Springs, Ohio. This free event aimed to connect the public with pollinator conservation methods and included educational opportunities on topics such as solar energy, renewable resources, and local pollinator communities. The University of Dayton Bee Campus does not host this event. Centerville-Washington Park District also holds an annual pollinator event titled the Pollinators and Flowers Color Fun Run, in which youth experience hands-on education on native pollinators and their host flowers. This event is sponsored by Dayton Children's Hospital and aids in the continuation of youth as pollinator stewards. The University of Dayton Bee Campus does not host this event. As a Bee Campus, our committee hosts, and is involved in, events on the University of Dayton campus in order to bring awareness to the native pollinators which live in and around the university. In order to reach a larger audience of students at the university from a diverse group of majors, we have given presentations on an overview of the Bee Campus mission, the importance of native bees and their habitats, and the implications of technological updates such as solar panels around campus. These presentations are geared towards students which have no prior knowledge of Bee Campus, and the University of Dayton Bee Campus hosts them. Bee Campus also participates in the annual Earth Fest to educate participants on the importance of native pollinators, prairies, and conservation.

How many pollinator-related events or outreach activities did you host or help with in 2024 (in total)?
2

How many people attended those events (in total)?
175

Number of permanent interpretive/educational/Bee Campus USA signs installed to date?
10

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for Invertebrate Conservation

UD Bee Campus student members hosting an outreach table at UD Fall Fest.

Permanent educational sign installed at UD's Solar Prairie.

Curriculum, Continuing Education, & Service Learning

Please describe the curriculum your campus engaged in 2024, indicating whether it was part of a for-credit course or continuing education.

In 2024, the University of Dayton offered four for-credit courses that incorporated pollinator-related content. Three of these courses were Biology courses: Concepts of Biology II: Evolution and Ecology, Ecology, and Invertebrate Zoology. Additionally, a mini-course on Beekeeping and Keeping Bees was offered, providing hands-on learning about pollinators. These courses were designed to enhance students' understanding of pollinator ecology and conservation, integrating key topics relevant to environmental sustainability and the protection of pollinators.

How many of your for-credit courses included pollinator-related information in 2024?
4

How many students attended those for-credit courses?
550

Please describe the service-learning projects your students were engaged in 2024, indicating which, if any, were associated with a course.
In the spring 2024 semester, UD Bee Campus student members participated in monthly volunteer days at the Marianist Environmental Education Center (MEEC). During these volunteer shifts, students assisted staff with removing invasive species such as bush honeysuckle, garlic mustard, and oriental bittersweet. They also helped collect and clean seeds from native prairie, woodland, and wetland species, propagated plants in the native plant nursery, and transplanted and cared for newly established plants in the preserve. Additionally, UD Bee Campus student members volunteered with Five Rivers Metroparks, where they received training and assisted with controlled burns in select prairie areas to support habitat restoration efforts. Neither of these service-learning projects were associated with a course.

How many service-learning projects did your campus host and/or support to enhance pollinator habitat on- and off- campus?
2

How many students participated in service-learning projects in 2024 to enhance pollinator habitat on or off-campus?
5

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UD Bee Campus student members installing a bee hotel in UD's Solar Prairie.

Policies & Practices

Please describe actions taken to make pest management more pollinator-friendly.

The Curran Place Solar Prairie faces a significant presence of invasive plant species that have been difficult to manage with existing methods. These plants are unsuitable for the site and contribute to issues like vegetation overgrowth, which interferes with the efficiency and mechanical components of the solar array. Previously, our student employee Resource Conservation Assistants used synthetic herbicides to target specific species and electric brush cutters to trim vegetation to knee height. However, invasive plants regrew and seeded too quickly, rendering these methods ineffective. In late summer 2024, following recommendations from the U.S. Fish and Wildlife Service, we adopted a new strategy. This approach involves mowing the vegetation between the rows and under the panels once a month from spring through fall, keeping it under 12 inches, while leaving perimeter vegetation un-mowed. This shift reduces herbicide use by controlling vegetation and invasive species through mowing, with minimal reliance on chemicals. Additionally, limiting mowing to about four hours per month over six months allows student employees to focus more on maintaining and enhancing other native plantings across campus, ultimately fostering better habitats for pollinators.

In your city or campus, are any policy initiatives underway to further protect pollinators, people or waterways from pesticides?

The University of Dayton continues to limit the use of pesticides at our native prairie areas, especially at the Curran Place solar prairie. The student and staff members of Bee Campus have worked over the past year to institute a culture of mechanically removing invasive species from this prairie rather than utilizing herbicides and pesticides. This limits the exposure of people to these chemicals, but it is also incredibly important to the native pollinators in the area as they currently thrive at this site. In addition, Curran Place is located between an oxbow lake and the Great Miami River, so the limitation of pesticides and herbicides in this area is essential to preventing these chemicals from reaching our important waterways.

Did your committee participate in any continuing education on ecologically-based Integrated Pest Management planning?

Members of the University of Dayton's Bee Campus Committee used the Xerces Society's new Integrated Pest Management Toolkit to review and update our Integrated Pest Management Plan for Native Pollinator Habitats.

UD Bee Campus student member trimming vegetation in UD's Solar Prairie.

Any lessons learned you would like to share?

We learned that providing education and engagement opportunities can spark interest in unexpected audiences. After presenting on pollinators and habitat conservation to students not involved in campus sustainability programming, we were surprised by their enthusiasm and desire to get involved, highlighting the power of outreach to inspire new connections.

Committee Photo

Learn More

Integrated Pest Management Plan: IPM Plan for Native Pollinator Habitats - 2025.pdf

Recommended Native Plant List:
https://ohiodnr.gov/discover-and-learn/safety-conservation/about-ODNR/nature-preserves/Documents/native-plants-lists

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Recommended Native Plant Supplier List:
https://www.deeplyrootedlandscapes.com/native-plant-directory

https://sites.google.com/udayton.edu/bee-campus
sustainability@udayton.edu

https://www.instagram.com/beecampusud

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