# Bee Campus USA - Berea College

Report on 2023

## Pollinator Habitat Creation & Enhancement

*Please describe pollinator habitat creation or enhancement projects in your community in 2023, and whether your committee hosted them or not.*

All habitat creation efforts in 2023 involved at least one member of the committee. Native habitats and plants are vital to the College, as helping the wider environment means nurturing our land and educating in the process. Habitat creation and enhancement projects included (but were not limited to) the following activities: • Enhancement to the educational and community garden managed by Grow Appalachia, which employs pesticide-free maintenance (500 sq. ft.). • The Grounds Team and 10 students installed a new native habitat garden, including nectar plantings and interspersed milkweed species (10,000 sq. ft.). • The College Farm maintained a 0.5-acre plot of native flowers and grasses and allowed approximately 50 acres of grass and native plant standing throughout the summer. The entire 600 acres managed by the Farm are Certified Organic, and fencerows and native plantings are left untreated. • A small 300-square-foot pollinator garden was created near the Forestry Outreach Center in collaboration with a community member. • The Berea College Forestry Team maintains seven open fields that have been converted from fescue to native wildflower prairies. Woodland herbaceous layers also persist within forest canopies and consist of annual, biennial, and perennial species that attract pollinators. Additionally, Grow Appalachia runs a Garden Grant Program that provides funding to communities and families in central Appalachia to grow as much of their own food as possible using organic and pollinator-friendly growing practices. In 2023, the program partnered with 23 non-profit organizations that worked with nearly 930 families in five central Appalachian states.

*How many habitat projects did you help to create or enhance in 2023?*

1000

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

30

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

25

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

300000

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

- Flower garden
- 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...)
- Herb garden
- Native milkweed planting for monarchs and bees (where appropriate)
- Invasive/exotic plant species removal for habitat improvement
- Native pollinator-friendly tree planting
- Native pollinator-friendly shrub border/hedgerow planting
- School garden
- Other


Berea's Forestry Outreach Center's March 2023 newsletter signifies the beginning of spring and the revitalization of Pollinator Gardens throughout the FOC and campus.


Berea's Forestry Outreach Center's April 2023 newsletter highlights the Wildflower Walk event with ecologist and Pollinator Committee member John Abrams.


Berea's Forestry Outreach Center's April 2023 newsletter highlights Earth Day events for the campus and community to participate in.

---

## Education & Outreach

*Please describe pollinator conservation events or outreach activities in your community in 2023, indicating whether your committee hosted them or not.*

At least one committee member was involved in the planning and execution of the College's 2023 pollinator conservation events and outreach activities. Events included the following: • A honey extraction class (10 attendees); • Two "All-Hands" gatherings hosted by our Grow Appalachia food insecurity program, which serves communities and families in central Appalachia. Topics included organic garden management and pollinator-friendly plants (85 attendees); • A Grow Appalachia pollinator educational class at the program's local educational and community garden (10 families); • A "Planting Day" to plant 2,000 native plant plugs across campus (10 participants); and • Five pollinator-related events hosted by our Forestry Outreach Center, including native plant giveaways, seed-collecting workshops, wildflower walks, and pollinator safaris (40 attendees). These activities reached our campus, local, and regional communities to promote a pollinator-friendly and sustainable means of agriculture and gardening.

*How many pollinator-related events or outreach activities did you host or help with in 2023 (in total)?*

10

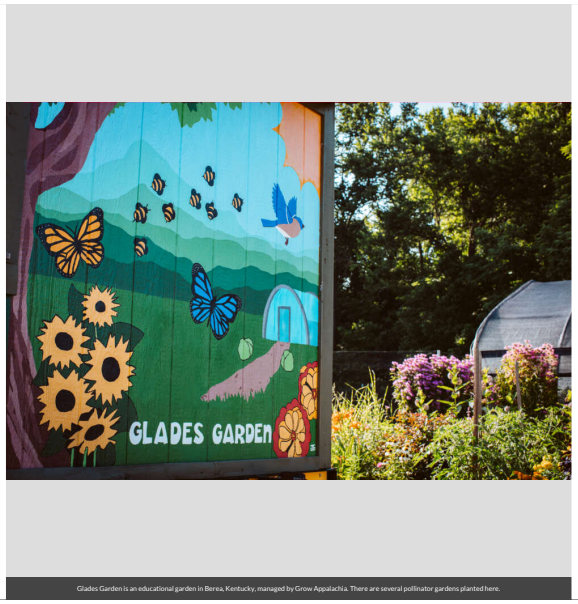
*How many people attended those events (in total)?*

155

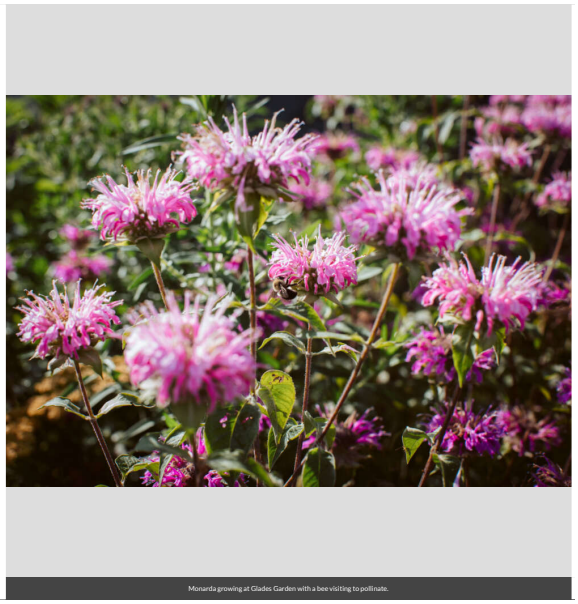
*Number of permanent interpretive/educational/Bee Campus USA signs installed to date?*
9

*Number of temporary interpretive/educational/Bee Campus USA signs installed in 2023?*
5

Beehives at a Grow Appalachia partner's home in Eastern Kentucky.




Glades Garden is an educational garden in Berea, Kentucky, managed by Grow Appalachia. There are several pollinator gardens planted here.



Monarda growing at Glades Garden with a bee visiting to pollinate.


Recently designed semi-permanent signage dispersed on campus since Spring 2023.

BEE CAMPUS USA™
AN INITIATIVE OF THE XERCES SOCIETY

XERCES SOCIETY
for Invertebrate Conservation

## Curriculum, Continuing Education, & Service Learning

*Please describe the curriculum your campus engaged in 2023, indicating whether it was part of a for-credit course or continuing education.*

Berea College is a private, liberal arts, undergraduate institution that does not offer continuing education courses. The College offered the following for-credit courses last year: Ecology (SENS/BIO 310) – Spring and Fall This course is an introduction to the basic ecological principles of terrestrial and aquatic systems. Emphasis is placed on experiential learning through field and laboratory studies. Principles of energy flow, material cycles, physiological ecology, population ecology, ecological succession, community ecology, and biological diversity are addressed. Hands-on exercises and experiments are integrated with lectures, discussion groups, student research projects, and computer exercises to demonstrate the process of scientific inquiry into ecological issues. The course is structured as two class periods and one laboratory period each week. Intro to Agriculture – Spring and Fall An overview of ecological production systems managed to generate food, fiber, fuel, and other natural resources for human use and the academic disciplines associated with them. The course surveys the diverse natural-resource systems upon which we depend while also emphasizing biological systems managed to produce renewable resources. Historical and current understandings of sustainable resource use are examined and applied to evaluate local, national, and international issues confronting human society today. Students are introduced to the fields of agriculture, forestry, and wildlife and fisheries management, and can explore careers in these areas. This course is recommended for all first-year students intending to major or minor in Agriculture and Natural Resources (ANR) as well as any students interested in exploring the major. Bees and Beekeeping About once a year, students can take a Beekeeping course to fulfill degree requirements. Because bees play an essential role in plant pollination and small-scale farming, this course appeals to many students. In the class, students learn the care and management of honeybees. They also study hive health and how to recognize diseases or pests that can occur. Significant takeaways from the course are the importance of honeybees in our farming systems and factors that contribute to decreased pollinator populations. Students also receive valuable hands-on experience by interacting with the hives at the Berea College Horticulture Farm. The ANR department provides protective gear so that each student can get hands-on experience caring for the bees under instructor supervision. Often, a student who has taken the course and works at the horticulture farm will monitor and care for the bees during their scheduled Labor Program work hours (in support of the College designation of a federally recognized work college). Plant Science This course is designed to develop an understanding of the processes and factors affecting plant growth and development. Biological, soil, genetic, and environmental factors are discussed in relation to agronomic, horticultural, and forest plants. Sustainable practices in crop production and management are also introduced.

*How many of your for-credit courses included pollinator-related information in 2023?*

6

*How many students attended those for-credit courses?*

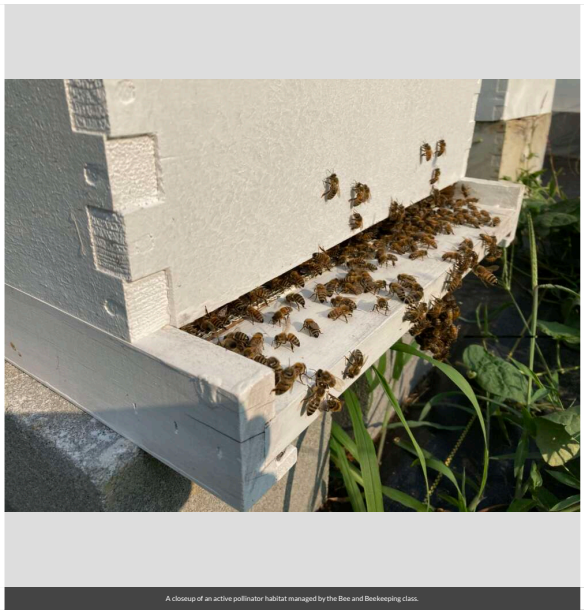
89

*Please describe the service-learning projects your students were engaged in 2023, indicating which, if any, were associated with a course.*

Berea College is a private, liberal arts, undergraduate institution that does not offer continuing education courses.

The Bee and Beekeeping course students learn about Berea's beehives.

Dr. Sean Clark, the Bee and Beekeeping Instructor, catches and transfers a hive on campus with his class.



A closeup of an active pollinator habitat managed by the Bee and Beekeeping class.

## Policies & Practices

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

Berea College implements "No Spray" practices on its main campus, meaning that no pesticides or herbicides are used to discourage the growth of weeds, and only organic fertilizers are used on landscaped beds (https://www.berea.edu/sustainability/campus-culture/berea-college-grounds/). This allows all native plants to grow on campus grounds and College-owned properties such as the Farm and 9,500-acre Forest. These practices are reviewed by the Grounds Management Team on a regular basis and training is provided to new team members.

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

In addition to protecting the health of the campus community and pollinators, the practice is essential because the College's main campus falls on the intersection of four watersheds and it is vital to limit pollution from water runoff in order to preserve the surrounding natural ecosystems. However, the College's Grounds Management Team does try to remove non-native plants, such as honeysuckle, given their detrimental effects on local ecosystems beyond their potential benefits to pollinators. Only Organic Materials Review Institute-certified products and spray are used, and

when used, spraying is timed to ensure the least impact on pollinators.

*Did your committee participate in any continuing education on ecologically-based Integrated Pest Management planning?*
Key campus areas, including the College Farm, Forest, Grounds, and Grow Appalachia continually seek professional development to ensure that best practices for Integrated Pest Management are implemented by Berea. Additionally, the College partners with the Madison County Conservation District, the Berea Urban Farm, the Madison County Pollinator Working Group, and central Appalachia extension agents to coordinate ecologically-based planning and educational efforts.

*Please check actions you have taken to make pest management practices more pollinator-friendly.*

- Implemented or maintained a written IPM plan
- Only use pesticides as a last resort within the IPM plan
- Avoided use of pesticides in public sites containing designated pollinator habitat or other sensitive features (except when targeted use is deemed the best option for invasive or noxious weed, insect or disease management)
- Implemented non-chemical pest prevention and management methods on city or campus grounds
- Eliminated pesticide uses that are solely to maintain aesthetics on city or campus grounds
- Reduced the total area of city or campus-managed lands to which pesticides are applied
- Restricted pesticides used to organic pesticides on city or campus grounds
- Eliminated use of neonicotinoid insecticides on city or campus grounds
- Encouraged developers and private landscapers to source plants that were not treated with neonicotinoids

Permanent signage on the main campus that explains the College's "No Spray" practices.

# Berea College Bee Campus USA Committee 2023 - 2024

Top row, from left to right: John Abrams, Ashe Hacker, Janet Meyers, Candace Mullins, Andrew Oles, Teri Thompson, Wendy Warren, and Dewey Williams. Not pictured: Warren Blankenship.

---

## Learn More

**Integrated Pest Management Plan:**
https://www.berea.edu/sustainability/learn-landscape-lesson-2-0%20/
**Recommended Native Plant List:**
https://www.berea.edu/sustainability/bee-campus-usa/
**Recommended Native Plant Supplier List:** Regional Suppliers of Native Pollinators Links.docx

https://www.berea.edu/sustainability/bee-campus-usa/%20%20
thompsonte@berea.edu

BEE CAMPUS USA™
AN INITIATIVE OF THE XERCES SOCIETY

XERCES SOCIETY
for Invertebrate Conservation