

Bee Campus USA - Washtenaw Community College

Report on 2021

Pollinator Habitat Creation & Enhancement

The Students For Sustainability Club and Sustainability Literacy Task Force planted some pollinator-friendly flowers in the Student Food Forest this year. They include things like Joe Pye weed, Anise Hyssop, Blue False Indigo, Compass Plant, Marsh Blazing Star, Golden Currants, Borage, and Oregano. We used the book 100 Plants to Feed the Bees from the Xerces Society (2016) to determine which ones to plant. One thing we learned this year is that some of the native bees (bumble bees) are very large, so large they couldn't fit through the holes in our plastic fencing. They eventually learned to go over the fencing to pollinate the flowers. As a result, next year, we'll buy fencing with much larger holes! The WCC Seed Library provides free seeds to grow your garden. One of the objectives of the Seed Library is to support pollinators and the WCC Bee Campus USA initiative. The Seed Library offers many flower varieties that support pollinators including Milkweed. The Landscape and Grounds Department completed 3 landscape renovation projects in 2021 that created new pollinator habitats and plants for foraging. The new landscape plantings included the flowering species of Astilbe, Dicentra, Hydrangea paniculata, Hibiscus, Lavendula and Syringa and encompassed 5,266 square feet of landscape beds. In addition, over 9,200 annual flowers were planted in the spring throughout the campus, including many species that support pollinators such as Ageratum, Blue Salvia, Cleome, Angelonia, Lantana, Marigold, and Zinnia.



Various landscape beds throughout WCC are planted with perennials and thousands of annual flowers, which are visited by different types of pollinators.



Photo shows the first 5 of 7 beds planted in the WCC Student Food Forest in 2021.



Education & Outreach

The WCC Bee Campus USA Committee scheduled four virtual events from January 2021 through December 2021. The events included Bee-Friend the Bees Event, Getting to Know Michigan Pollinators, The Bees in Your Backyard: Effects of Urbanization on Wild Bees, and Building the Motor City's Bee Highway, A Bee Talk with Brian Peterson-Roe. In Spring of 2021, the WCC Students for Sustainability (S4S) presented Bee-Friend the Bees Virtual Event. Students shared bee-friendly plants and how you can help save the bees with Bee-Friend the Bees! To celebrate Earth Month, Ana Heck, Apiculture Extension Educator, Michigan State University Extension, presented Getting to Know Michigan Pollinators. We also include a link to share photos of bees and trees <https://www.kudoboard.com/boards/8aKk5E> On September 24, 2021, two environmental sciences professors and their students from Eastern Michigan University interested in a forest restoration project at their campus scheduled an outdoor tour of the Washtenaw Community College campus. They saw WCC's efforts with the Nature Trail, Pine Woods, Student Food Forest, Tree Campus USA, and Bee Campus USA and wanted to learn more about our many sustainability initiatives. Each event focused on educating students, campus constituents, and community members about pollinators and the importance of their role in food production as well as their current state of decline and what we can do to support our pollinators. For October 2021, the Building the Motor City's Bee Highway, A BeeTalk with Brian Peterson-Roest, Founder of Bees in the D, discussed how urban farming and beekeeping have taken root in Detroit, not just as a hobby or a sideline, but as part of an integrated plan for the city's revitalization. In November, The Bees in Your Backyard: Effects of Urbanization on Wild Bees webinar by Chatura Vaidya, Ph.D. candidate in the Dept. of Ecology and Evolutionary Biology at the University of Michigan and Gordon Fitch, Ph.D. and an NSF Postdoctoral Fellow at the University of Massachusetts at Amherst talked about their work examining the effects of urbanization on bees in Southeast Michigan, and discussed actions to make cities more bee-friendly. In late fall 2021 and early winter 2022, the Library is promoting the Bee Campus USA and Seed Library initiatives with a display of books, educational materials, and an activity table. The goal is to promote awareness of pollinators and what you can do to help the bees. The annual Tree Campus USA Tree Walk tour provided by Campus Grounds continues to highlight our campus trees and pollinators. WCC Welcome Day is a time to share information about the campus as well as promoting the awareness of the WCC Bee Campus USA initiative.



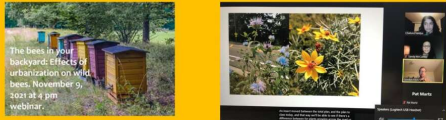
Bee-Friend the Bees!
Event hosted by the Students for Sustainability

Saturday March 13th 2-3:30 PM!
Fun games, Arts and Crafts, Education, & more!

Prizes offered for winning the bee drawing contest & the game!

Join us via Zoom!
Zoom Meeting ID: 898 6411 5228
Password: HZ57

The bees in your backyard: Effects on wild bees



Bee Campus USA Library Display



WCC Library Bee Campus USA Display



Courses & Continuing Education

Washtenaw Community College offers for-credit courses that include pollinator-related information and several personal enrichment courses by the WCC Economic and College Development (ECD) Division. Below is a brief description of pollinator educational topics for each for-credit course. BIO 101 – Concepts of Biology. In this course, we discuss the basics of evolution, ecology and sustainability. Lectures include an overview of pollinators. BIO107 – Field Biology – we directly examine in the natural areas around campus bee, wasp, hornet and flower identification, the importance of wildflower diversity and pollination ecology, conservation biology, and invasive species ecology. BIO 161 – Ecology and Evolution. In this class we discuss the coevolution of flowers and pollinators, pollination network ecology, conservation biology, and invasive species ecology. BIO227 – General Zoology – The course we discuss the evolution, anatomy and physiology, and ecology of social insects including bees and wasps. We discuss the coevolution of pollinators and the niche ecology of such species. ENV 101 – Environmental Sciences – The course includes a bee lab. The bee lab was included in the assignment Misinformation & Journal Analysis. Students used a journal article about bees to learn about the parts of an article and to pick out important information from a scientific article. They learn about the importance of pollinators while gaining familiarity with the structure of journal article. The current bee lab is called Bumble Bees and Fungicide. Students are using data from a scientific study of bumble bees to determine if giving them flowers that have been sprayed with fungicide impact the biomass and numbers of bumble bees at different life stages (larvae, pupae, adult worker bees and queen bee). They use the study to learn about native bumble bees, student t-tests and they ask "does a chemical labeled bee safe really have no impact?" The WCC Economic and College Development (ECD) offered nine pollinator related non-credit courses during 2021, this included: Basics of Natural Beekeeping Build Your Own Rain Garden Container Gardening Heirloom Flowers Homesteading Fall Gardening Tips





EMU Tour with students, faculty and Bee Campus USA Committee

Service-Learning

Due to COVID and the campus being closed from January 2021 – June 2021, two service learning projects were completed with students. The Bee Campus USA service learning projects included projects from Washtenaw Technical Middle College (WTMC) and the Seed Library. WTMC students sorted seeds for pollinators. Washtenaw Technical Middle College (WTMC) 9th grade Environmental Science students maintained (planted, watered, weeded, and prepped beds for fall) six outdoor raised beds with a variety of bee friendly plants that bloom at different times of the year.



Seed Sorting 2021



WTMC student volunteers to sort seeds for the WCC Seed Library. December 2021

"The extensive green roof located on the Larry Whitworth Occupational Education Building is planted with a variety of flowering sedum plants and is one of several pesticide free zones on WCC's campus."

Educational Signage

One new permanent sign was installed in 2021 that focuses on pollinators and sustainable systems. Our "What are Areas of Natural Beauty?" sign is the third in a series of four signs that highlight special natural landscapes, amenities, and educational opportunities. The graphic contains a campus locator map with brief descriptions of several sustainable landscape features, such as the Food Forest, The WTMC Hoop House, and the WCC Nature Trail. The sign is located near the large campus gathering space and along a highly traveled pedestrian sidewalk for great visibility.





"Installed in 2021, the "What are Areas of Natural Beauty?" sign is one of 4 new permanent educational signs highlighting the locations of special natural habitats and outdoor learning labs."

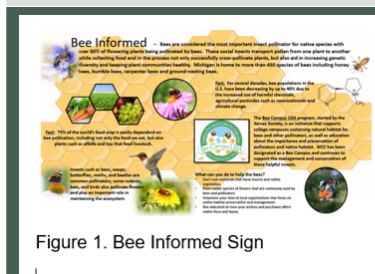


Figure 1. Bee Informed Sign



Figure 2. What is a Food Forest? Sign.



Figure 3. What are Areas of Natural Beauty? Sign.



Figure 4. Bee Campus USA and WCC sign.

"Graphic display of our series of permanent educational signs highlighting pollinators and special habitats, which are installed throughout campus."

Policies & Practices

WCC maintains a written IPM Plan, and reviews management practices annually for updates and revisions. The IPM plan outlines a four tiered approach not to eliminate pests, but to find a balance in the landscape. Our program avoids all pesticide use in sensitive areas and gardens, such as the Food Forest, WTMC Hoop House, green roofs, and other designated pesticide free zones. We utilize, and also specify that contractors must use pollinator friendly products such as Acelepryn for turf care, and limit applications to a single treatment. WCC is also increasing the use of bio-pesticides, which are developed from naturally occurring compounds or agents that are obtained from animals, plants, and microorganisms. Other management practices include installing chipped mulch to all landscape planting beds, and around bases of trees to reduce the applications of pesticides for controlling invasive and undesirable weeds. Plant materials and shrubs that are known to require pesticide applications for sustaining proper health are avoided, and pest free native and adaptive plant materials are utilized instead.

Integrated Pest Management Plan: [IPM Plan LandscapeGrounds 2022.docx](https://libguides.wccnet.edu/BeeCampus/habitat_plan)

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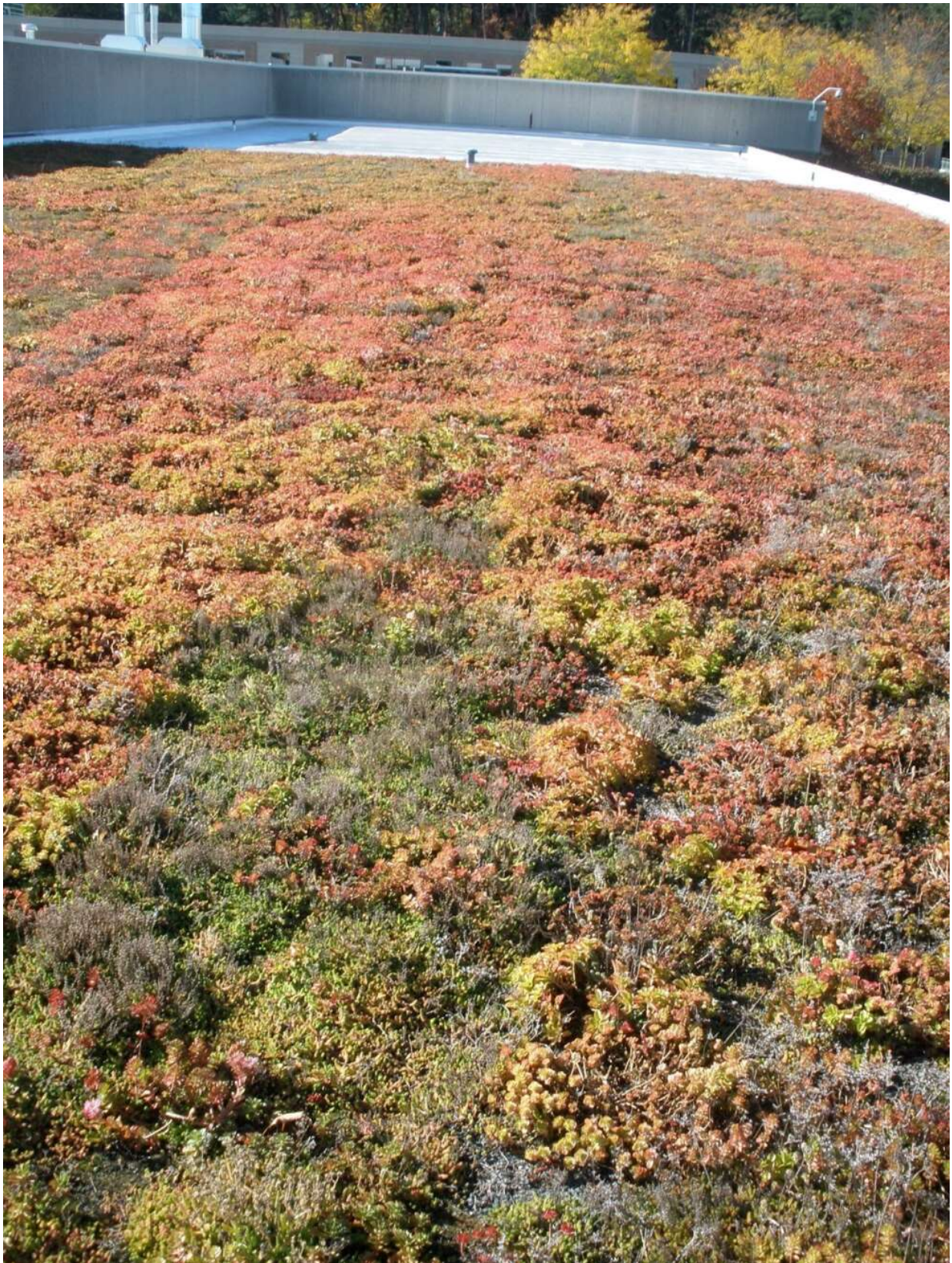
Recommended Native Plant List: [Athletic Field Bioswale Plant List.pdf](https://libguides.wccnet.edu/BeeCampus/habitat_plan)

https://libguides.wccnet.edu/BeeCampus/habitat_plan

Recommended Native Plant Supplier List:







“The extensive green roof located on the Larry Whitworth Occupational Education Building is planted with a variety of flowering sedum plants and is one of several pesticide free zones on WCC’s campus.”

Learn More

<https://libguides.wccnet.edu/BeeCampus>
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