

Bee Campus USA - University of Virginia

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.

In 2023, UVA Landscape Department partnered with a local contractor to clear approximately 44,000 sq ft of invasive plants and install native pollinator meadows. In our first area, invasive woody vines such as honeysuckle, porcelain berry, and bittersweet were treated with an herbicide and then manually removed from a steep hillside of about 28,000 sq ft. After the invasive plants were treated and removed, a seed mixture of over 20 native forbs, wildflowers, and grasses was then applied through a hydroseed method to help stabilize the bank. In the second meadow location, approximately 16,000 sq ft was cleared of non-native Lespedeza, while preserving native plants that were already present near a riparian buffer zone. The area was then seeded with another mix of over 20 different wildflowers, forbs, and native grasses. While both areas are somewhat unsafe for the public to access, our landscape department, working in partnership with local contractors, completed these habitat restoration projects publicly, but could not make an event out of it due to safety concerns. These projects were highlighted in articles published in UVA Today News, CBS19, and the Cavalier Daily. Additionally, a shady native wildflower mix was broadcast and tended to by a horticultural specialist for Darden School of Business, while an unused juniper bank is being converted to a wildflower patch. These efforts total 9,622 sq ft (about twice the area of a basketball court) on the northern stretch of campus. In addition to habitat creation, UVA's Decarbonization Academy is leading a movement of habitat enhancement to "contribute to CO2 sequestration while also providing other valuable ecosystem services and enhancing the well-being of the UVA community." Their method is that of Dr. Akira Miyawaki, also known as Miyawaki Forests. In 2023, The Decarbonization Academy enhanced a previously unused area, approximately 8,250 sq ft, to create a miniature functioning forest patch. Native plants and trees such as rhododendron, redbud, tupelo, beebalm, and black tupelo were installed in this area to enhance the soil, reforest the area, and provide carbon sequestration in an area that was otherwise underutilized. Around 90 student volunteers and six Landscape Department employee volunteers attended this event lead by Prof Tim Beatley and the Decarbonization Academy.

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

3

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

35

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

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

- Flower garden
- Meadow
- Invasive/exotic plant species removal for habitat improvement
- Native pollinator-friendly tree planting
- Rain garden/bioswale



A photo of the steep bank after the invasive species were removed and native meadow mix was applied with hydro seeder. (Photo: Ent Field)



A photo of the barren area, near existing wildflowers, that was cleared on invasive Legumes. In the photo a man is driving a tractor with a seed drill full of native seed. (Photo: Ent Field)



An aerial shot of several volunteers planting native trees and shrubs using dozers.

Education & Outreach

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

Our committee hosted an educational tabling event called “iNaturalist and Chill” in which we talked to students about pollinators on campus, and the difference between bees, wasps, and mimics. Our table was furnished with pinned specimens, literature on native plants, insect collection tools, and materials about the Bee Campus USA program. We directed students to contribute their own bee observations to an ongoing iNaturalist project to document different pollinators on campus and the flowers they visit. We also had a small activity in which participants could “BYOB” Build Your Own Bee and create a colorful papercraft bee. This event was open to anyone walking by the Environmental Sciences Department who wanted to participate. Additionally, we hosted an event called “Let’s Get Ready to Bumble” in which we taught attendees about six common and uncommon bumble bee species native to our area. This free, in-person event featured a presentation on how to differentiate between the bumble bee species and their ecology and natural history. For this event, we developed a coloring sheet that attendees filled in with the distinguishing color

patterns, seasonality, and fun facts about each bee species. To wrap up the event, and decided by audience vote, we also discussed how carnivorous plants are pollinated and how they avoid turning their pollinators into a meal.

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

2

How many people attended those events (in total)?

35

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

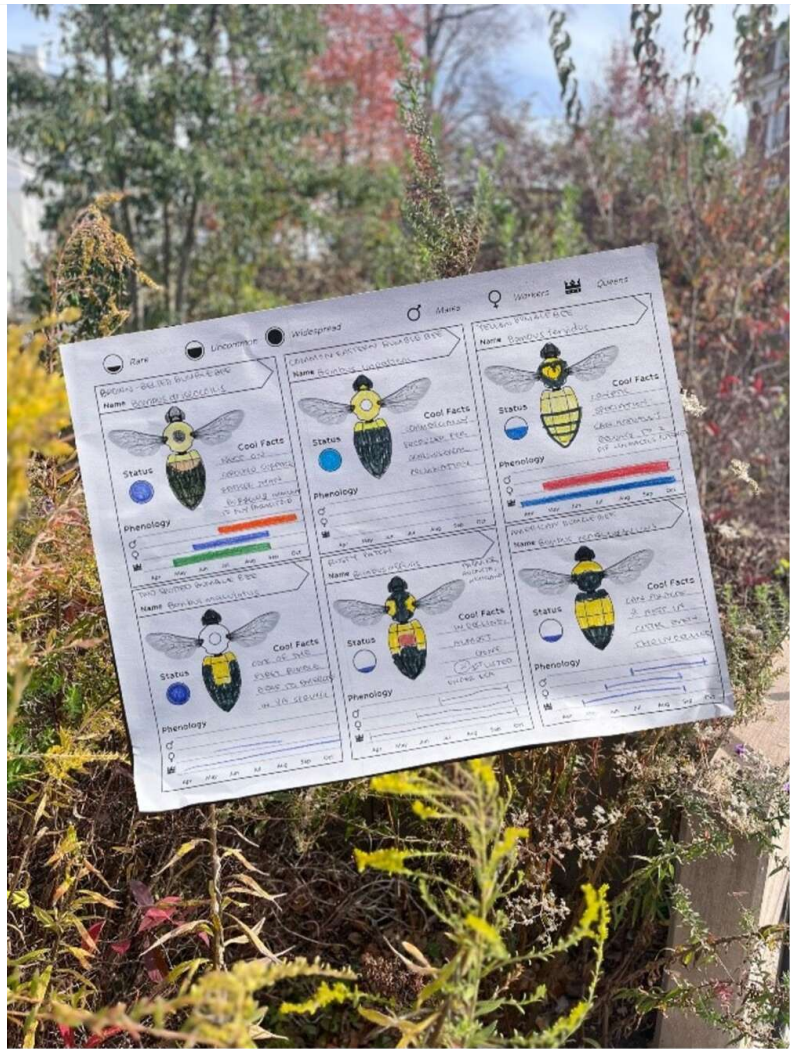
3

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

14



At our iNaturalist and Chill event, students gathered to learn about native pollinators and interact with educational books about pollinators, native plants, and pinned specimens. (Photo: Kelsey Schoenemann)



A worksheet created by committee member Kelsey S. for our Let's Get Ready to Bumble workshop. The coloring sheet allowed participants to color-in identifying markings for each species and fill-out information related to their seasonality and fun facts. (Photo: Em Ford)



Sign provided by Xerces Society that are kept year-round in areas that have been established for leaf litter to accumulate and decay naturally. This photo and sign are on Carr's Hill, the residence of the University's President. (Photo: Em Ford)



Informational signage for the blue-winged wasp, *Scolia dubia*, who is a visible summer resident on UVA's Grounds. Many complaints were received about these wasps with the assumption that they are dangerous, so signs are erected around their usual hunting grounds in summer while they are most active to edify faculty, students, and visitors on their harmless nature and explaining their behavior. (Photo: Em Ford)

Curriculum, Continuing Education, & Service Learning

Policies & Practices

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

Our campus and plant health specialist has entirely transitioned to using short-lived products that are only applied on a case-by-case basis. Products such as insect soap, *Bacillus thuringiensis* (a biological pest control), or pyrethrum are applied only if the health of the plant is at risk. That is, these products are not used merely for aesthetic appearance; if the pest won't kill the plant, then treatment is not carried out. Additionally, we use the safest fungicidal products

available. Copper fungicide and neem are also used on a case-by-case basis. The biggest goal with this transition is to help landscape workers to follow through with the physical/mechanical/cultural methods of making sure leaves with fungal disease are removed from the base of the plant when they fall, as well as pruning out disease when it is identified.

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

While not a policy initiative, it was brought to the attention of the Associate Director of Grounds that a storm water drain was dangerously close to the wash bay in which fleet vehicles are washed. This has inspired future changes to be made to relocate this stormwater drain to protect nearby Meadowcreek into which the stormwater runoff drains.

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

Landscape Plant Health Specialist for the Landscape Department attended the Entomological Society of America's annual conference to gain up to date information on Integrated Pest Management options, continue and further education, as well as to network and raise concern for the lack of framework for urban integrated pest management.

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

- 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

Learn More

Integrated Pest Management Plan:

Recommended Native Plant List:

<http://webapps.albemarle.org/nativePlants/default.aspx>

Recommended Native Plant Supplier List:

<https://vnps.org/native-plant-nursery-list/>

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