

# Bee Campus USA - University of Richmond

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.*

In 2024, the University of Richmond hired RVA Goats & Honey to assist with invasive plant removal. The area is in a flood plain and is difficult for motorized equipment to access. RVA Goats & Honey brought in goats for several weeks. The goats were able to eat down most of the woody vines. Afterwards, sheep were moved to the area to eat grassy invasives like Johnson grass. Afterward, volunteers target the remaining invasive vines.

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

30

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

152

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

2

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

10400

*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
- Rain garden/bioswale
- Roadside/rights of way planting
- School garden



Office for Sustainability interns, Ava DiBattista and Emery Ekinson, lead a volunteer event in the Eco Corridor to enhance pollinator habitat. Photo Credit: Antonia Avasd



University of Richmond STEM sorority, ASK, participates in a volunteer event led by Joseph Day in the Eco Corridor to remove invasive species. Photo credits: Haley Herrmann



Goats working hard removing invasives along the Eco Corridor. Photo credits: Haley Herrmann

## Education & Outreach

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

The annual Eco Challenge, created by the Office for Sustainability is a weeklong, campus-wide sustainability initiative to make our community greener during International Education Week. International Education Week is a week-long celebration of University of Richmond's robust International Education School. The first day of the 2024 Eco Challenge was focused on conservation and biodiversity with opportunities to support local pollinators, spend time outdoors, and join outdoor projects. Another program that raised awareness for pollinator conservation is the annual BioBlitz. The Bioblitz is an annual event during the Eco Challenge, led by biology professor Dr. Grayson and the Office for

Sustainability. Student and community members used applications like Merlin and iNaturalist to document plant and animal life on the University of Richmond's Eco Corridor. University of Richmond faculty lead tree plantings with students in cooperation with Landscape Services. A variety of regionally native trees were planted. The University of Richmond manages a community garden called Abby's Garden. Abby's Garden is a pesticide and herbicide free community garden where anyone can apply for a garden bed(s). Gardeners are strongly encouraged to plant pollinator friendly plants. Over the past year the Office for Sustainability led events that foster healthy agricultural practices that sustain the many pollinators that help with food production in the on campus community garden. The Office for Sustainability hosts weekly volunteer events in the Eco Corridor for students and faculty to get involved in our work on campus and in the community. The Natural Areas Steward, Joseph Day, and interns from the Office for Sustainability led student organizations and any students or faculty that would like to get involved. Examples of volunteering include working in the Eco-Corridor's pollinator meadows to plant native species or removing invasive vines in the Eco-Corridor, participating in a park cleanup, and engaging with local organizations in their volunteer efforts. The University of Richmond is a beautiful campus where natural beauty and tree canopy is a prized attribute of the school's identity. The Office for Sustainability leads tree campus tours in addition to Eco Corridor tours. Information about the trees and its pollinators are offered during tours. Eco-Corridor tours were also given by interns at the Office for Sustainability to educate faculty and staff about the restoration process of the creek and the ecosystem that thrives in the protected habitat created in the Eco-Corridor. The tours gave faculty and students an idea of the work that has been completed in the area and the work that the university continues to do. Many faculty that were new to the university attended these tours. The Office for Sustainability was able to showcase the wonderful outdoor resources they may not have known about yet including the Eco-Corridor walk-way, the outdoor classroom, and Abby's Garden (the community garden).

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

37

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

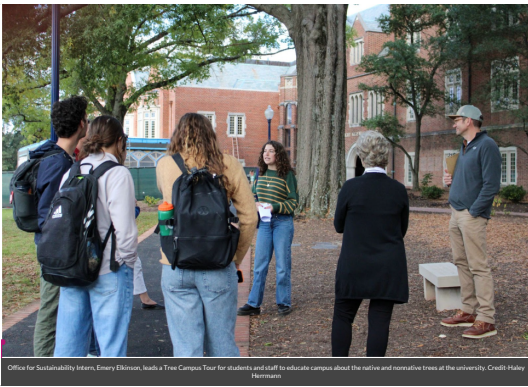
268

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

2

*Number of temporary interpretive/educational/Bee Campus USA signs installed in 2024?*

4



Office for Sustainability Intern, Emory Elblson, leads a Tree Campus Tour for students and staff to educate campus about the native and nonnative trees at the university. Credit: Haley Herrmann



Joseph Day and Daniel Hart participate in the annual Bio Blitz during International Education week. Credit: Haley Herrmann



Joseph Day and community members raise awareness for Abby's Community Garden by handing out fruit from local farms. Credit: Haley Herrmann



A permanent sign of the Pollinator Meadow along the Eco Corridor sharing information about the local pollinators and their importance to our community. Credit: Haley Herrmann



A wayfinding sign that explains the natural functionality of the Eco Corridor. Credits: Haley Herrmann

## Winter Cover Crops in Abby's Garden

During the warmer months, Abby's Garden is home to a variety of vegetables, herbs, and flowers. Although these plants thrive in the heat of the summer, many of them do not survive our winter weather. When summer crops are removed in the fall, **cover crops are planted to keep the soil aerated, reduce weed growth, prevent erosion, and build organic material for future crops.** At the end of the winter or in early spring, the cover crops are worked into the ground to create a healthy soil composition.


### Can you spot the crop?

Winter cover crops are a cornerstone of sustainable agriculture. If you look into the garden, you'll see cover crops growing in many of the garden beds. Listed below are the cover crops that we chose for our space.


#### GRAINS

**Winter Wheat and Winter Rye**


- Build biomass
- Add organic material and nutrients to the soil
- Break up compact soil and prevents erosion with hearty root systems




Winter Wheat



Winter Rye



Hairy Vetch



Australian Field Pea

#### LEGUMES

**Hairy Vetch and Australian Field Pea**

- Effective nitrogen-fixers
- Add nutrients to the soil for future crops
- Suppress weeds by outcompeting them for space, light, nutrients, and moisture

Office for Sustainability

A temporary sign that promotes regenerative agriculture through cover crops. Credits: Ava DiIattosa and Haley Herrmann

## 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 Richmond School of Arts and Sciences held 10 for-credit courses in the Biology Department that ranged from lower, 100, level courses to upper, 200 and 300, level courses. These courses included two BIOL/ENVR 199 courses: Biodiversity & Conservation and Mesoamerican Ethnobotany, as well as BIOL 120: Insects and People, and BIOL 202: Integrated Biological Principles 2. There were also upper level courses that included topics related to pollinator education including BIOL 315: Landscape Ecology, BIOL346: Medical Entomology, and BIOL381: Desert Ecology. Students in BIOL/ENVR 199: Biodiversity and Conservation monitor pollinators at sites across campus, investigate macroinvertebrates in the James River to conduct a biotic index, and participate in Monarchwatch

(in the fall semester). Two faculty (Jennifer Sevin and Emily Boone) also became certified as USA National Phenology Network Local Phenology Leaders. The Geography Department also taught 4 for-credit courses that included pollinator-related information. These classes were GEOG 215: Geography of the James River Watershed, GEOG 250: Planet Earth: Wind, Water, Fire, GEOG 345: Global Sustainability, and SUS 101: Introduction to Sustainability. The Professional Education unit at the School of Professional & Continuing Studies had a Permaculture Design Certificate Program that was not for academic credit, but instead the attendees earned the standard 72-hour Permaculture Design Certification. The School of Professional & Continuing Studies also has a non credit, one 2-hour session called The Forgotten Bee: The Benefits of Native Bees and Local Insects.

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

14

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

260

*How many of your continuing education courses included pollinator-related information in 2024?*

2

*How many participants attended those continuing education courses?*

55

*Please describe the service-learning projects your students were engaged in 2024, indicating which, if any, were associated with a course.*

**In Todd Lookingbill's courses, GEOG 250 (Planet Earth: Wind, Water, Fire) and GEOG 215 (Geography of the James River Watershed), students took field trips to plant trees around various on and off campus locations.**

*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?*

50



Students in Todd Lookingbill's class participate in tree planting on and off campus. Credits: Chris Schoen

## Policies & Practices

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

The Landscape Services team is committed to “the right plant for the right place” philosophy. This philosophy with the correct plant selection allows for less chemical intervention that could harm pollinators. Landscape Services has selected plant cultivars that are resistant to common diseases, therefore, less chemical interventions are required, if at all. Also, over the last year, plant selections have been made to increase the number of flowering plants on campus.

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

On the University of Richmond campus, stormwater management and stream bank restoration are a constant concern. The Eco Corridor was created to reduce pollutants entering the watershed. The banks of Little Westham Creek have

been stabilized with native vegetation to reduce the impacts of stormwater runoff on pollinators and people.

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

**No.**

## GENERAL IPM STRATEGIES

Pest management strategies may include education, exclusion, sanitation, maintenance, biological and mechanical controls, and pre-approved, site-appropriate pesticides.

An Integrated Pest Management decision at the University of Richmond shall consist of the following steps:

1. Identify pest species.
2. Estimate pest populations and compare to established action thresholds.

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Page 3 of 9

3. Select the appropriate management tactics based on current on-site information.
4. Assess effectiveness of pest management.
5. Keep appropriate records.

Decisions concerning whether or not pesticides should be applied in a given situation will be based on a review of all available options. Efforts will be made to avoid the use of pesticides by utilizing Integrated Pest Management strategies including adequate pest proofing of facilities, good sanitation practices, selection of pest-resistant plant materials, and appropriate horticultural practices.

When it is determined that a pesticide must be used in order to meet pest management objectives, the least-hazardous material, adequate for the job, will be chosen.

All pesticide storage, transportation, and application will be conducted in accordance with the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code 136 et seq.), Environmental Protection Agency regulations in 40 CFR, Occupational Safety and Health Administration regulations, University of Richmond policies and procedures, and local ordinances.

No person shall apply, store, or dispose of any pesticide on University of Richmond-managed property without an appropriate pesticide applicator license or being a trainee under the direct on-site supervision of a certified Commercial Pesticide Applicator. All pesticide applicators will be trained in the principles and practices of IPM and the use of pesticides approved for use by the University. All applicators must comply with this IPM policy and follow appropriate regulations and label precautions when using pesticides in or around University facilities. Outside contractors who are utilized when large areas need to be treated will adhere to these requirements and products used will be approved by the Associate Director of Landscape Services and/or the Integrated Pest Management Specialist.

*Any lessons learned you would like to share?*

We believe that it is important to integrate pollinators and people together on campus. Rather than a certain area be regarded as a pollinator garden; allow the entire campus to be a place where pollinators can live and thrive. The campus beekeeper, Kirstin Berben, noticed that the beehive on campus was located in a shady area which led to the infestation of pests such as hive beetles. The campus is reinstalling the hive in a sunny area next to the pollinator meadow in the Eco Corridor due to these findings. This location is in a more open and observed area which will help promote the presence of the beehive.

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## Committee Photo



Committee photo. Credits- Ava DiBattista

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Learn More

**Integrated Pest Management Plan:** [IntegratedPestManagementPlan20220111\[61\].pdf](#)  
<https://facilities.richmond.edu/departments/landscape/#integrated-pest-management-plan>

**Recommended Native Plant List:**

<https://drive.google.com/file/d/1gTpNIJdukZfIVdOyIKnAMRSUQLac0zBX/view?usp=sharing>

**Recommended Native Plant Supplier List:** [Recommended Native Plant Supplier List.pdf](#)

<https://sustainability.richmond.edu/campus/land/pollinators.html>

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<https://www.instagram.com/beagreenspider>

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