

Bee Campus USA - Tufts University Medford-Somerville

Report on 2022

Pollinator Habitat Creation & Enhancement

On campus, we planted 1000 sq. ft of new pollinator habitat in 2022. Each garden contains 8-10 species of native plants that bloom throughout the growing season from June through October. These gardens are managed for insects throughout the year. We balance the university's need for tidy gardens on campus with the insects' need for undisturbed habitat by hand-pruning all vegetation and leaving a thin layer of leaves in the garden beds. We also conducted biodiversity surveys of the pollinator communities visiting our gardens so we knew which insects were benefiting from our habitat enhancement programs. To date, we have observed 125 species of pollinating insects in our gardens, which total less than 0.1 acres in size (iNaturalist project: <https://www.inaturalist.org/projects/tufts-pollinator-diversity-survey>). Our work is a testament to the value of small urban spaces for attracting highly diverse pollinator communities. To increase the amount of pollinator habitat off campus, in summer 2022, we hosted a discount native plant sale. We collected and germinated native plant seeds from our garden to preserve local ecotypes and ensure that all plants were grown without pesticides. We distributed 1200 plants to over 140 people. We also wrote and published instructional guidelines to make gardening less intimidating. To make our sale accessible to all, we set up shop at our gardens within walking distance of thousands of homes. Each plant went for just \$3. In the fall we taught people how to collect and sow native seeds at a workshop titled Seeds and Cider. We also consulted with two city municipal governments (Medford, MA and Somerville, MA), the Boston MBTA train line, and several groups of landscape architects in an attempt to change pollinator friendly landscaping at a larger scale. In general, these groups are very interested in ways of balancing the needs of pollinators with the needs of people for aesthetically pleasing landscapes. Given that the alternative is typically lawns or mulched beds with non-flowering shrubs, we are enthusiastic about finding compromises to improve urban spaces for pollinators. These efforts allowed us to enhance 0.5 acres of habitat off campus.

How many habitat projects did you help to create or enhance last year?

9

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

22000

How many volunteers helped with those projects?

15

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

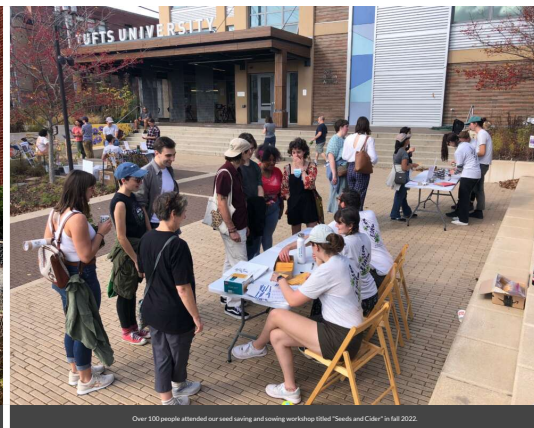
- Flower garden
- Vegetable garden
- Meadow
- Herb garden
- Rain garden/bioswale
- Other



We distributed more than 1200 plants during our discount native plant sale bringing pollinator friendly plants to more than 140 community members. All of our plants were grown by hand from seeds collected in our own campus pollinator gardens.



We added 3000 square feet of pollinator habitat to campus, bringing our total to 3000 sq. feet. Our habitat was strategically placed to be within 200m of other foraging sites on campus and this provides "pathways" of floral resources keeping stores for flower-visiting insects.



Over 100 people attended our seed saving and sowing workshop titled "Seeds and Claws" in fall 2022.

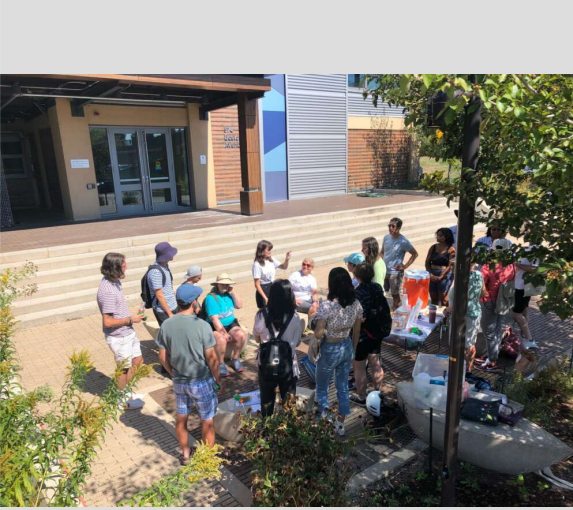
Education & Outreach

We have identified that a main factor limiting uptake of pollinator friendly landscaping behavior in our community is fear of insects, exacerbated by a general rift between people and nature in the city. To overcome this barrier, we prioritize experiential learning opportunities—changing people’s decision making requires changing their relationships with urban nature. We teach people to notice, appreciate, and respect their local pollinators. Our most popular in-person activities are Pollinator Safaris, where people visit our gardens and learn from TPI members how to observe, name, understand, and respect their neighborhood pollinators. We hosted 13 Pollinator Safaris in 2023, reaching more than 300 people. Since there is an inevitable tradeoff between depth of outreach and the breadth of people reached, we also have larger events that attract more people: pollinator-themed trivia nights at local breweries, visits to local elementary schools, guest lectures to community groups, and teach semester-long classes to Tufts undergraduates. Our committee hosted all 30 of these events—clearly, there is tremendous demand for pollinator-themed outreach in our community, and we want to meet that demand in a meaningful and consistent way.

How many pollinator-related events did your affiliate host or help with last year (in total)?

How many people attended those events (in total)?

1746



TPI member Ched Markovits teaches the Boston Society for Landscape Architects how plantings for people can also benefit pollinators like green metallic sweat bees.



TPI member Nick Duran teaches visitors at Wing and a Prayer Nursery how to identify common bumble bees in Massachusetts gardens.



TPI member Abigail Murphy shows community members how to find monarch butterfly eggs on milkweed plants.

Courses & Continuing Education

We've incorporated pollinator education into undergraduate courses at Tufts University by doing guest lectures in undergraduate courses. Four of our members delivered lectures/led activities to 259 students in 4 environmentally-related courses, including "Intro to Environmental Fieldwork," "Plants & Humanity," "Community Resilience in the Age of the Anthropocene," and "Food 4 All: Biotechnology and Sustainability in Food Systems." Although the content in each class period is tailored to the specific course, in general, students learned about the difference between wild and managed pollinators, the importance of pollinators for global food security, and the main ways to promote pollinator conservation. In more than one class, students visit our gardens to watch and record observations on pollinators in journals and on iNaturalist.org.

How many of your for-credit courses included pollinator-related information last year?

4

How many students attended those for-credit courses?

259

How many of your continuing education courses included pollinator-related information last year?

How many participants attended those courses?



Pollinator Ambassadors learn about honey bees and pollination science during week 2 of our training course.

Service-Learning

Tufts Pollinator Initiative taught experienced undergraduate and graduate students how to plant native plants and save seeds from our gardens. We distributed collected seeds to community members at our flagship fall events Seeds & Cider.

We also launched a new program Pollinator Ambassadors to train 14 Tufts undergrads how to do community outreach on pollinators. We designed 8 weeks of course materials and trained them in spring 2023 (ongoing as of Feb 2023).

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 last year to enhance pollinator habitat on or off-campus?

20



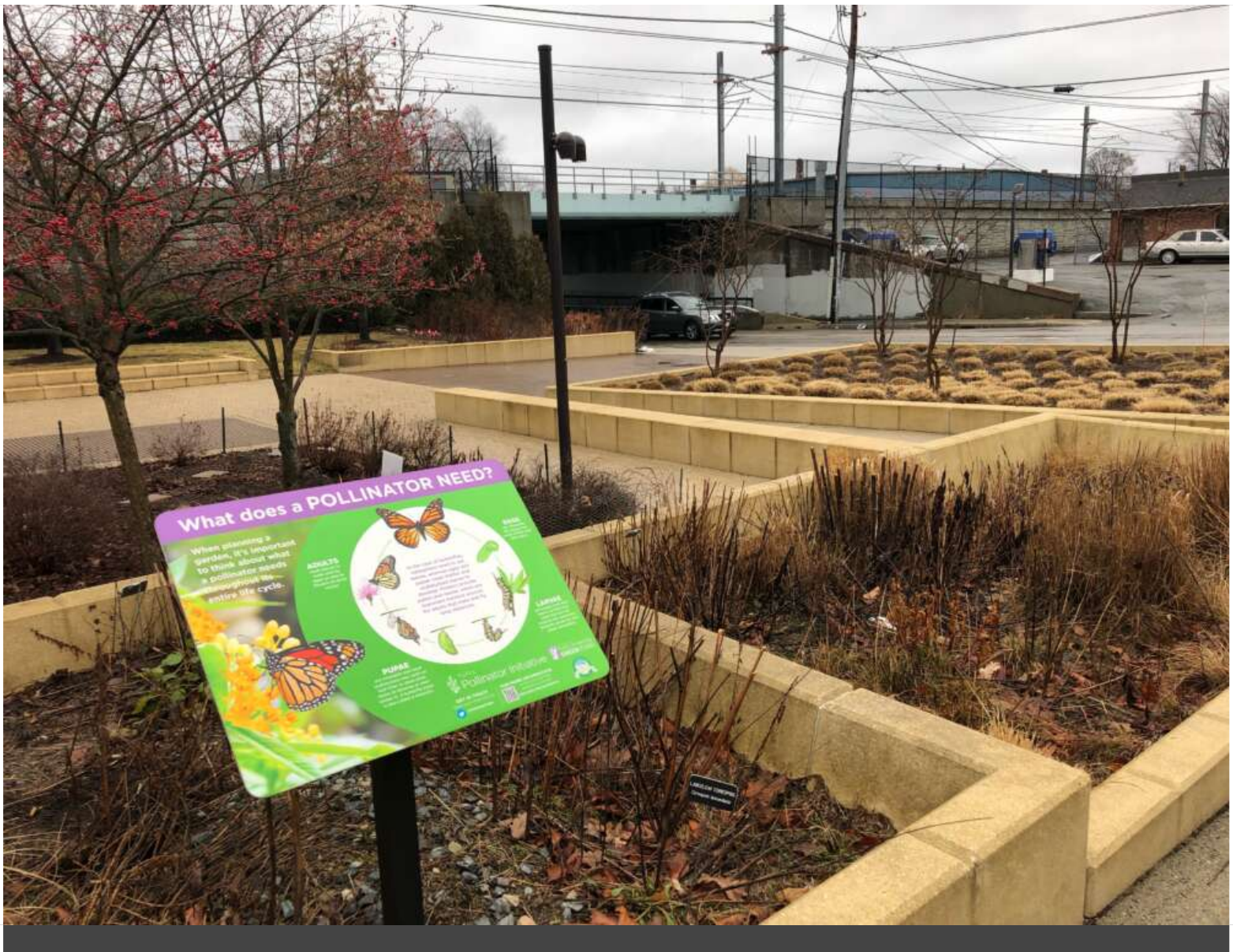
Educational Signage

Each of our 4 main educational signs describes a different aspect of urban pollinator conservation, from how gardens can support insects throughout their life cycles to the importance of habitat connectivity for urban pollinator conservation. We also installed 30 smaller plant identification signage so that visitors can learn the names of the native plants in our gardens. All educational signage on campus is permanent. We also produced garden yard signs that our community members can install in their gardens if they manage without the use of pesticides. All of our gardens have temporary signage to let visitors know that our gardens are intentionally planted for pollinators. We are in conversation with a graphic designer to add 4 more signs to our gardens in 2023.

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

4

Number of temporary interpretive/educational/Bee Campus USA signs installed last year?



Policies & Practices

Our focus on policy has been through the creation of an Integrated Pest Management plan for Medford-Somerville campus. We created the plan in collaboration with Tufts Facilities grounds team to eliminate all pesticide use in our 3000 sq. ft. of native pollinator habitat, and limit use of organic herbicides to a last resort across the rest of campus. All of our educational materials encourage people to eliminate pesticide use on residential properties, and our interpretive signage discourages the use of pesticides. We also printed and distributed garden yard signs that community members can install in their gardens to highlight the value of gardening without pesticides. We've also created social media content on our

@PollinateTufts social media channels to make people aware that ornamental plants can be pre-treated with pesticides and should be avoided

What actions have you taken to make pest management practices more pollinator-friendly?

- Implemented or maintained a written 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
- 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
- Distributed educational materials to residents or students to encourage the reduction or elimination of pesticide use
- Sourced plants for city or campus grounds that were not treated with neonicotinoids

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

None on campus, but there is a large movement in the greater Boston area through the Mystic River Watershed Association and Somerville Pollinator Action Plan to reduce pesticide use in the surrounding landscape.

Please describe actions by your affiliate to attend training on ecologically-based Integrated Pest Management and/or to review IPM plans and programs considered of high quality by Bee City USA?

We reviewed high quality IPM documents provided by Bee Campus affiliates on the online network portal while preparing our campus IPM.

Integrated Pest Management Plan: [FINAL TPI Tufts IPM.pdf](#)

Recommended Native Plant List:

<https://sites.tufts.edu/pollinators/guides/>

Recommended Native Plant Supplier List:

<https://sites.tufts.edu/pollinators/guides/>



A former garden maintained with pesticides was transitioned into our care. All 3000 sq. ft of habitat on Tufts campus is maintained without chemicals of any kind. We have worked with facilities to eliminate pesticide use and fertilizer use in all of our pollinator garden areas on campus. Tufts Facilities department has switched to targeted organic pesticide treatments when necessary.

Learn More

sites.tufts.edu/pollinators
tuftspollinators@gmail.com

<https://www.facebook.com/PollinateTufts>
<https://twitter.com/PollinateTufts>



Our committee in one of our gardens during the Seeds and Cider event in November of 2022.