

Bee Campus USA - Portland State University

Report on 2022

Pollinator Habitat Creation & Enhancement

The Student Sustainability Center (SSC) manages PSU's apiary through the Bee Volunteer Team. Within this program, students maintain two campus beehives and pollinator habitat within the PSU Community Orchard. Additionally, the Student Sustainability Center's Garden Volunteer Team maintains three campus gardens including a campus orchard where Portland State University has over 30 species of fruit trees. Many of the trees in the orchard are native to the Pacific Northwest. This orchard has fig trees and other fruit trees that give pollinators resources to survive and to make their offspring for next year. Students are currently establishing a pollinator meadow adjacent to the Orchard Apiary in order to increase the area's population of flowers and to add more habitat. By adding more habitat the Student Sustainability Center will better be able to give the 200 species of pollinators in Portland more nectar and pollen. The center's aim is to establish the pollinator meadow permanently after 3-5 years. The Student Sustainability Center also established a new Oregon native prairie garden which brings over 200 new native plants to campus and will provide valuable habitat and resources for native pollinator species. There is still space in this garden to add more species, and SSC is hoping to work with the Rae Selling Berry Seed Bank on campus to continue adding diversity and more native and rare species to the space. SSC prepared another area adjacent to the prairie plant meadow to add more shade-tolerant native plants this spring. These plants will add to the diversity of campus plants and provide additional resources for local pollinators. In SSC's vegetable gardens and orchards, students focused on planting flowers and groundcover to attract and support beneficial pollinators in order to increase our food yields. SSC also made sure to leave flowers and flowering herbs to finish flowering before de-heading and pruning them for fall, to extend the season that nectar and pollen is available for pollinators on campus. Finally, the SSC manages a seed library in our office that includes pollinator plants and native species. SSC tries to focus the seed library inventory on native, heirloom, organic, and non-GMO seeds. Native pollinator seeds have been donated by community members and students. These seeds are then shared with the PSU community to use on campus and in other natural habitats across the region. Through the seed library, the SSC is able to teach students about seed saving, habitat, pollinators, food security, and biodiversity.

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

1

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

21780

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
- Orchard
- Meadow
- School garden
- Other



This photo is of the Garden Task Force planting the Prairie plants.(Photographed by Serena Dressel)

Education & Outreach

Events Held By the Student Sustainability Center from Winter 2022-Winter 2023: Winter 2022 No events were held due to an unforeseen campus closure when many classes and events were converted to remote formats due to the Covid-19 virus surge. Spring 2022 Beekeeping Candlemaking Night Serve Your City, Serve Your Campus Dig-In Service Event : Mulch the Garden Party event (x2) Summer 2022 Summer Garden Party Art Garden Work Party with kids from the Sellwood Community Center Art Garden Work Party from the Intensive English Learning Program Program Fall 2022 Serve Your City, Serve Your Campus Dig-In Service Event collaboration with SCEC Seed Library Pop-up at La Casa Latina Resource Fair Fall Open Hive Event (changed to Honey Tasting due to weather) Pollinator Prairie Meadow Establishment Winter 2023 Winter Honey Tasting Event Seed Library Pop-up at La Casa Latina Resource Fair Orchard Work Party for Pollinator Meadow Additionally: Number of Garden Volunteer Team Meetings since Winter 2023: Approximately 25 Number of Bee Volunteer Meetings since Winter 2023 Approximately 35 Service hours: Bee Volunteer Team 634+ service hours since Winter 2022 Garden Volunteer Team 389 service hours since Winter 2022 For other events referenced service hours are estimated to be over 71 additional service hours The Student Sustainability Center (SSC) hosted eleven campus-wide events related to pollinator health and campus garden maintenance and beautification, in addition to hosting approximately thirty five Bee Volunteer Team meetings and twenty five Garden Volunteer Team meetings. In all, this equated to over 1,094 hours approximately contributed to these projects between Winter 2022 and Winter 2023. In particular we would like to highlight two Honey Tasting events and a candle making event that were hosted in order to promote pollinator awareness in Oregon. We also hosted a garden event where we planted 200 native plants for pollinators. Additionally we hosted several service events in our gardens that helped to maintain our pollinator habitat and native plant areas The Student Sustainability Center's student-led Garden Volunteer Team organized several events aimed at beautifying the garden by planting a variety of plants. These events were well-attended and successful, with many volunteers helping the Student Sustainability Center manage the garden. In fall 2022, the Student Sustainability Center hosted a party to address the issue of invasive grass in the Portland State University campus orchard, where the volunteer team initiated a process of eliminating the non-native plants and replacing them with a pollinator meadow. This involved killing the invasive grass and planting new seeds in the spring. The volunteer team also pruned our fruit trees to encourage more flower growth, which will aid in the pollination process.

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

36

How many people attended those events (in total)?

190



Here our second Honey Tasting Event which had over 63 people show up to learn more about bees. (Photo by Luca Gregston)



Here is a photo of one of our Honey Tasting Events where we ate honey and discussed about pollinators to help people learn more about them. (Photo by Serena Dressel)

Courses & Continuing Education

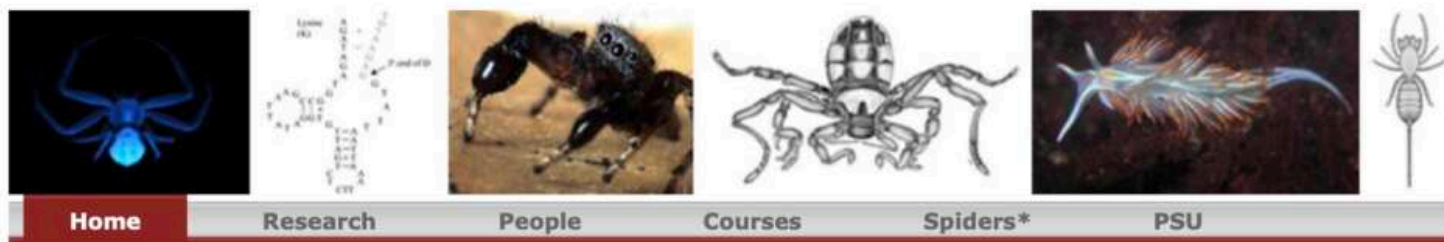
At least two PSU classes are covering pollinator-related topics: Urban Ecology and Invertebrate Zoology. The Invertebrate Zoology professor supported a graduate student as she continued sampling the diversity of native bees within the Orchard for her research. This baseline may allow us to measure changes in biodiversity in future years. A professor on campus, Susan Masta (link: <http://web.pdx.edu/~smasta/>), curates an invertebrate museum where her and her students catalog both native and non-native pollinators. In addition, Dr. Masta oversees research by graduate students that specifically deals with native pollinators. From 2018-2020 a graduate student, Stefanie Steele, has continued to compile data to provide a base genus-species list of pollinators in Multnomah County, where PSU is located. This data contributed to the Oregon Bee Atlas (link:), a statewide initiative to document Oregon's native bee species.

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

9

How many students attended those for-credit courses?

364



Susan E. Masta

Associate Professor
Invertebrate Biology Museum, Director and Curator
Department of Biology
P.O. Box 751
Portland State University
Portland, OR 97207-0751

smasta@pdx.edu
phone (503) 725-8505
office 531A Science Building 1
lab 514 Science Building 1



My lab focuses on the processes and patterns of biological diversification, and we use varied approaches to understand how genes, organisms, and populations evolve.

Here is a photo of the professors website who does almost all of her classes on pollinators. (Photo by Luca Gregston)

Service-Learning

The Student Sustainability Center (SSC) manages PSU's apiary through the Bee Volunteer Team. Within this program, students maintain two campus beehives and pollinator habitat within the PSU Community Orchard. Additionally, the Student Sustainability Center's Garden Volunteer Team maintains three campus gardens including a campus orchard where Portland State University has over 30 species of fruit trees. Both volunteer teams meet weekly during Fall, Winter, and Spring quarters and engage 7-15 volunteers per a team, committed for ten weeks or more each. The students plan and facilitate their own campus projects and events- the Student Sustainability Centers Outreach and Education events almost all simultaneously involve service learning and experiential learning for students and campus community members. The Bee Volunteer Team is the Student Sustainability Center's second most popular volunteer program, with the Garden Volunteer Team being the most popular. Volunteers sign up for a skills development community building experience where they experience leadership development, mentorship, and learn from another student leader about bees and pollination. They learn about bee biology and what conditions help bees to thrive in better health. They then help create events that are quite popular with our community of students and raise awareness about pollination. For example, the last bee event had over 60 attendees.

How many service-learning projects did your campus host and/or support to enhance pollinator habitat on and off-campus?

11

How many students participated in service-learning projects last year to enhance pollinator habitat on or off-campus?

190



Here is a photo of Volunteers providing service to our gardens. (Photo by Serena Dressel)

Educational Signage

Last year we installed temporary plant identification signage in two of our campus gardens that identified the names of specific plants present. These included native plants and fruit trees.

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

2



Policies & Practices

PSU is a Bee Campus USA, Tree Campus USA, Salmon Safe Certified, campus that uses Integrative Pest Management, Stormwater Management, and our Clean Air Corridor campus policies to advocate for a healthy campus environment for people, plants, and pollinators. Native and drought tolerant plants are prioritized in campus landscaping. Our campus also includes Portland's oldest park housed in the center of campus and greenroofs throughout campus including a policy to implement greenroofs on all new campus buildings. Policies on campus to highlight include: Integrated Pest Management: Portland State University has an Integrated Pest Management Plan:

<https://www.pdx.edu/sustainability/sites/g/files/znldhr3181/files/2021-08/PSUIPM.pdf>. Stormwater Management Plan: PSU's Planning and Sustainability Office is currently working to update the university's Stormwater Management Plan. Indigenous Traditional Ecological Knowledge: PSU's Facilities and Properties Management Team has been working with Indigenous Traditional and Ecological Knowledge Campus partners to reduce invasive management practices on the campus Oak Savanna microprairie site, including limiting mowing in the space to increase native grass and plant growth.

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
- Eliminated use of neonicotinoid insecticides on city or campus grounds
- 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?

Here are some examples of policy initiatives that have been implemented or proposed in the City of Portland as a whole: Pollinator Protection Policy: In 2015, Portland adopted a Pollinator Protection Policy that aims to reduce the use of neonicotinoid pesticides and promote pollinator-friendly practices on city-owned and managed properties. Pesticide-Free Parks: In 2016, the city passed a resolution to phase out the use of neonicotinoid pesticides in city parks and natural areas by the end of 2017, and to transition to organic land care practices. Pesticide-Free City Property: In 2018, the city passed a resolution to phase out the use of glyphosate (the active ingredient in Roundup) and other synthetic pesticides on city-owned and managed property, and to transition to non-toxic alternatives. Integrated Pest

Management: Portland has been using an Integrated Pest Management (IPM) approach since 1997 to reduce the use of pesticides and promote more environmentally friendly pest management practices.

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?

No we haven't but we follow the campus policies.

Integrated Pest Management Plan:

Recommended Native Plant List:

Recommended Native Plant Supplier List:



Photo of the Integrated Pest Management Plan that Portland State University has. (Photo by Luca Gregston)

Learn More



Our Committee had a candle event where we made candles. (Photographed By Serena Dressel)