



Bee Campus USA Annual Report Pollinator Conservation & Education 2019



Portland State University Portland, Oregon

EDUCATION & OUTREACH



Members of the Beekeeping Task Force pose with handmade signs at the Beekeeping 101 Workshop



PSU community members of all ages at the Family Pollinator Adventure event

- Portland State of Mind Day of Service: 1 (October 19, 2019)
- SHAC Beekeeping Training: 2 (Friday, October 9th & Date Unavailable)
- Beekeeping Task Force meetings: 27 (Weekly, March-June 2019, Weekly October-December 2019, Weekly January-March 2020)
- Garden Task Force meetings: 27 (Weekly, March-June 2019, Weekly October-December 2019, Weekly January-March 2020)
- Seed Sorting Event: 1 (Feb 7, 2020)
- Dig In Garden Service Events: 7 (Date Unavailable, May 9, 2019 & July 16, 2019, August 13, 2019, September 28, 2019, Feb 20, 2020, Feb 27, 2020)
- Beekeeping 101 Workshop: 1 (Feb 22, 2019)
- Family Pollinator Adventure: 1 (April 21, 2019)
- Bring Your Kid to Campus Day seed event: 1 (April 8, 2019)

Pollinator Seed Giveaway at Party in the Park: 1 (October 3, 2019)
Earth Day of Service: 1 (April 20 2019)
Tabling events: 5 (Throughout the year)
Village Building Convergence: 3 (June 1-9 2019)
Earth Week Seed Giveaway (April 2019)
Social Sustainability Month Seed Giveaway (May 29th, 2019)



Task force member poses with tabling materials during the Family Pollinator Adventure event

In 2019, PSU hosted guest speaker Mandy Shaw from Portland Urban Beekeepers on two separate occasions. During these two separate occasions she gave an intro presentation on beekeeping and seasonal advice. Afterwards, there was a dedicated time for a Q&A session with students.

PSU hosted a Beekeeping 101 workshop with our apiary mentor Tim Wessels from Portland Urban Beekeepers. The workshop included a presentation about beekeeping and honey bee biology, followed by hands-on activities curated by our student volunteers. These included a native pollinator matching activity, explanation of beekeeping equipment, honey tasting, and a native seeds giveaway.

In addition, our beekeeping volunteer group partnered with a gardening volunteer group to switch curriculums for a day and learn from each other. Our beekeeping coordinator organized a field trip to Green Anchors to meet with Tim Wessels, where he presented and showed his diverse hives and extensive pollinator habitat.

Another outreach field trip took our volunteers to Zenger Farms to work with the Portland Urban Beekeepers, a local beekeeping association.

Task force volunteers hosted a tabling campaign to advertise for our Beekeeping 101 workshop and share facts about bees and conservation. The leadership fellows created a brochure with facts about honey and native bees which was given to new volunteers.

SSC's inventory of garden projects and partnerships provides a full overview of the groups learning in our garden spaces. Groups now fill out the SSC's Garden Activity Request Form if they are interested in engaging with our gardens. This new process has streamlined our ability to manage requests and provide valuable learning opportunities for campus and community organizations.

POLLINATOR HEALTH & HABITAT



Volunteers plant native species in the garden near the Student Union.

During Beekeeping task force meetings in Spring 2019, volunteer task force members worked on creating and maintaining pollinator meadows in the Orchard space. In a separate Spring 2019 event, volunteer task force members planted herbs and flowers including native species at a separate garden located next to the student union.

PSU supports pollinators by planting native species habitat across campus. We also care for several student-focused gardens, including a native living rooftop garden and orchard that houses our apiary as well as at the Learning Gardens Laboratory.

Throughout the year, PSU hosts a variety of service events on campus that allow the PSU community to directly restore natural habitats with trained staff and student leaders. We also host educational events that raise awareness about pollinators and natural ecosystems.

The Student Sustainability Center (SSC) manages PSU's apiary through the Beekeeping Task Force. Within this program, students maintain two campus beehives, three mason bee houses, and pollinator habitat within the Orchard. The Task Force is managed by the SSC's Beekeeping Coordinator with support from two leadership fellows and 6-10 student volunteers. This group also maintains native plant

gardens and several pollinator meadows that provide vital habitat for native pollinators, both in the campus orchard and in other spaces around campus. The Garden Task Force also completes activities that care for these spaces.

Finally, the SSC manages a seed library in our office that includes pollinator plants and native species. We try 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.

SERVICE LEARNING



Students from the Intensive English Language Program engage in service learning for their Communication and Culture course, where they connect their learning with sustainable development goals.



Students from the Intensive English Language Program engage in service learning, labeling and translating the word Onion from English to Japanese.



Students from the Intensive English Language Program engage in service learning, labeling and translating the word Onion from English to Japanese.



Students from the Intensive English Language Program engage in service learning, labeling and translating the word Bean from English to Japanese.

Number of students attending indicated after each event:

September 2019: SSC Staff orientation (Summer) - 6

October 2019: Portland State Of Mind Day of Service - 8

June 2019: Village Building Convergence Cultural Task Force Pathway Build - 15

April 2019: Earth Day of Service - 7

February 20, 2020: Student Leadership Council service at Student Union - 4

October 2019): Viking Day of Service - 15

Date Unknown: PSU Food Pantry - 24

Weekly during Class Terms: Beekeeping Task Force Meetings: 22 meetings - (9 people per each = 198)

Weekly during Class Terms: Gardening Task Force Meetings: 22 meetings - (6-10 people per each = 154)

(Date Unknown, May 9, 2019, July 16, 2019, Feb 20, 2020): Dig In at the Smith Garden (4 events) - 20

(August 13, 2019, September 28, 2019, Feb 27, 2020): Dig In at the PSU Orchard (3 events) - 25

April 21, 2019: Family Pollinator event- 15

Associated with course:

April 26, 2019: Stefanie Steele's research project setup (Independent for-credit research) (post-raising) - 4

Urban Ecology (Honors) research project (Class: Urban Ecology, Honors College): 4

February 27, 2020: Orchard service activity (Class: Intensive English Learning Program Communication and Culture Program) - 15

Date Unknown: Leadership Fellows service group (Class: Leadership Fellows) - 20

Many service events have been hosted to support pollinators on campus. We were a host site during PSU's Earth Day of Service and Portland State of Mind Day of Service. We also supported work parties to create new pollinator and veggie garden beds with PSU's Campus Recreation staff and partnered with the Intensive English Language Programs Communication and Culture Program. Beekeeping volunteers also met each week during the academic year to plant new pollinator-friendly plants, install mason bee houses, work in the beehives, and more.

PSU maintains a partnership with Portland Urban Beekeepers (PUB) to provide beekeeping service learning experiences for volunteers. In 2019 volunteers visited PUB's observation hives at Zenger Farm five times or more to practice skill-sharing with experienced beekeepers and engage with and give back to the Portland community.

CURRICULUM & 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 (<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, a statewide initiative to document Oregon's native bee species.

EDUCATIONAL & INTERPRETIVE SIGNAGE

We continue to work toward the creation of educational signage across campus, however many of our efforts have been in planning long-term signage at and near our apiary. The SSC students are currently creating a long term vision for our orchard that will inform signage. Our orchard now has a welcome sign that advertises our apiary and encourages student involvement. We have also added a framed copy of our Bee Campus certification and a pint of PSU honey in our office, which receives many visitors. We have also created small homemade signs and painted bricks for our expanding pollinator meadows on campus to inform passersby that bees live here.

POLICIES & PRACTICES

Non-chemical methods used before considering pesticides include sanitation, exclusion, harborage removal, harborage denial, environmental alteration, interception, trapping & monitoring, vacuuming, lighting, and mechanical methods (see page 5 of IPM plan). Pesticides are used only if non-chemical methods are ineffective, and must meet San Francisco's Tier 3 hazard criteria under the designation of "least hazardous". Pesticides used must also not be listed on Salmon Safe's High Hazard List, as PSU is also a certified Salmon Safe campus. The use of pesticides is completely avoided in the orchard, apiary, and Smith garden, including pollinator meadows.

In 2019, PSU has continued to implement our integrated pest management plan that guides decision-making throughout PSU's outdoor spaces. This management plan was formed in collaboration with a local landscape architecture firm.

In 2019, the SSC continued to develop a management plan to create gardens and pollinator habitat for a nearly 10,000 square foot space, which is adjacent to the existing Orchard. We received approval from decision-makers at Planning, Construction and Real Estate, signed a memorandum of understanding with Facilities and Property Management in 2019, and have plans to start seeding in 2020. SSC worked in conjunction with the PSU community to envision the space process by sending a needs survey to campus and hosting design charrettes. This will integrate the new space with the existing Orchard in order to significantly increase the space available for garden education and habitat on campus.

Throughout 2019, we have continued to uphold the refined policies and practices within the Orchard and apiary so that students, staff, and faculty members are able to access the space while also following safety procedures that were vetted by PSU's Office of Risk Management. We also host a beekeeping training with Student Health and Counseling (SHAC) staff each fall, winter, and spring so that student leaders are prepared for any issues that may arise while supporting the beehives.

SSC also received full funding from PSU's Student Fee Committee in 2019. This stable funding ensures that SSC will continue to function without grant funding (our main source of funding since 2009). As a result, the pollinator-focused programs and positions we support will continue into the future.

Recommended Locally Native Plant Species List — The locally native plant species list is a draft as of now, but will be completed in 2020.

Regional Native Plant Supplier List —

https://docs.google.com/document/d/13XVpeX90FGOioEkmfdnr-tBzJiHfvIQWp7bu_snFuL4/edit

Pollinator Friendly Integrated Pest Management Plan —

https://www.pdx.edu/sustainability/sites/www.pdx.edu.sustainability/files/PSU%20IPM%20Plan%2004_2018.pdf

CONTACT US!

Committee — Bee Task Force, Serena Dressel, psussc@pdx.edu, NA, Beekeeping Coordinator
Position Changes with Student Employee Turnover and Graduation, bees@pdx.edu

Website — PSU pollinator events are listed on the sustainability events calendar (<https://www.pdx.edu/sustainability/events>). Information about our campus apiary is found at the Student Sustainability Center's campus apiary page (<https://www.pdx.edu/student-sustainability-center/campus-apiary>). Learn about our Beekeeping Task Force and other student programs here (<https://www.pdx.edu/student-sustainability-center/programs>).

Social Media — Sustainability at PSU Facebook (<https://www.facebook.com/sustainablepdx/>), SSC Facebook (<https://www.facebook.com/PortlandStateSSC/>), Sustainability at PSU Instagram (<https://www.instagram.com/sustainablepdx/>), Sustainability at PSU Flickr (https://www.flickr.com/photos/psu_slc/)