

Bee Campus USA - University of Washington Bothell/Cascadia College

Report on 2022

Pollinator Habitat Creation & Enhancement

Our campus installed a new bioswale that drains from the upper campus to the wetland. We have a series of vaults underground that capture rainwater runoff from buildings and parking garages. The water then goes through an oil-water separator in the vault before being drained to one of our bioswales where it is left to percolate into the wetland. We are a certified salmon safe campus and the wetland is home to a salmon-bearing creek, two families of beavers, and many species of migrating birds, so we take water quality very seriously. The bioswale was planted with native species such as dogwood, douglas fir, salal, and yarrow. This project was completed in December of 2022. In addition, our grounds team manages our entire campus Organically and using permaculture practices. We are constantly improving the landscape through our management practices. We have planted a majority native plants or regionally adapted plants to reduce water use, close pollinator gaps, and provide nesting habitat for pollinators and other wildlife. Our campus wetland natural area is constantly monitored for invasive species which are removed by hand. Our garden beds are planned to have flowers blooming at different times of the year and with different flowering species. Finally, we also maintain a small campus farm, two orchards, an herb garden, and other edible spaces on campus.

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?

16000

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

- Vegetable garden
- Natural area with tree snags and stumps, and bare areas for ground nesting species
- Pollinator-friendly lawn (with flowering clover, dandelions...)
- Herb garden
- Invasive/exotic plant species removal for habitat improvement
- Native pollinator-friendly shrub border/hedgerow planting
- Rain garden/bioswale



This is a photo of the new bioswale shortly after the new plans had been installed.

Education & Outreach

During 2022, our campus hosted three pollinator events. The first was a garden talk for staff where the interim sustainability coordinator at UWB spoke about native bees and garden needs at the campus farm. The second event was part of our campus Wellness Festival in May. The UWB and Cascadia sustainability offices participated in a tabling event where we shared about bees and pollinator habitat on campus as well as hosting a talk on campus describing native bees that forage on flowers on campus and describing the differences between the morpho groups that we commonly see.

Finally, the last event that we hosted was in September. This event was a collaboration with the Osher Lifelong Learning Institute and was primarily for community outreach. Stephan Classen from Cascadia and Kristen Attebery gave a presentation about bee foraging, nesting, and morpho groups. Additionally, within our greater community there were a number of pollinator events that took place including the newly created Pollinator Pathway Northwest program. Our campus is registered as one of the gardens in the Bothell region that have taken the Pollinator Pathway Pledge!

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

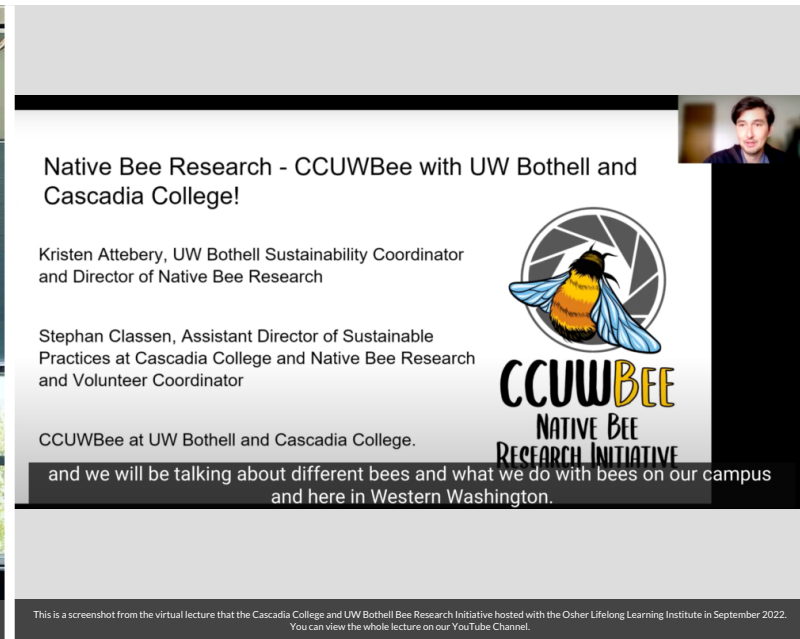
3

How many people attended those events (in total)?

116



Kristen Attebery, the Interim Sustainability Coordinator gave a lecture about native bees on campus during the campus Wellness Fest in May.



This is a screenshot from the virtual lecture that the Cascadia College and UW Bothell Bee Research Initiative hosted with the Osher Lifelong Learning Institute in September 2022. You can view the whole lecture on our YouTube Channel.

Courses & Continuing Education

At Cascadia College, an entry-level botany class (BIOL 213) is taught annually. This class covers the types of flowers that attract different types of pollinators. This class usually has an enrollment of about 60 students per year. Another entry-level environmental survey class (ENVS 101) teaches about the ecosystem services that pollinators provide. Some other classes cover pollinators as an example of mutualism but they are not heavily ingrained into the curriculum. On the UW Bothell side, there is a pollinator diversity and conservation course (BIS 360) that is taught every spring which includes curriculum on how insects influence our lives including in medicine, agriculture, and the arts. Other faculty members also include pollinator information in their courses. The portfolio capstone course (BIS 499) included a student project on

pollinators and a Climate Justice class (BCORE 110) included a research project on climate change from the perspective of monarch butterflies. An Ecology class (BES 312) is taught every quarter where pollination and pollinators are included in the curriculum for ecosystem functionality, ecosystem services, pollination syndrome, and species adaptations and interactions. Extra credit is offered for observation and documentation of pollinator species interactions on campus. Pollinators are brought up in six additional classes as examples of ecosystem services and ecological functions, but do not serve as a main topic in the courses. One of our UW Bothell professors teaches a King County Master Gardeners course that focuses on pollinators and Integrated Pest Management.

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

6

How many students attended those for-credit courses?

335

Service-Learning

The CCUWBee Research Initiative is an ongoing research project to document bees on campus with the goal of providing the campus community with detailed knowledge on local bee populations and how we can improve native bee habitats on campus. Students are given training on bee identification and then sent out across campus to quantify abundance. CCUWBee uses a morphogroup approach to sort bees into highly similar-looking categories, allowing us to identify each species often to the family level. Photos taken of the bees end up in our library archive, The Pollinator Native Bee Digital Collection, which has data from as far back as 2018. This research initiative is independent of any courses on campus, but often students from Dr. Lambert's pollinator course end up joining.

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

1

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

6



This sign is for our CCUWBee Research Initiative. When students are out in the field collecting data we put up this sign to raise awareness around what we are doing.

Educational Signage

We installed 2 temporary signs about no-mow and pollinator friendly campus areas. We will re-install them every March to September. The signs educate about the lack of mowing and protecting native pollinators. We also have a moving sign for CCUWBee when student researchers are tracking bees, to offer education to any students or the public walking past.

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

1

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

2



This permanent sign asks people to be mindful of the pollinator meadow where we plant wildflowers and forage for pollinators each year.



Policies & Practices

In 100% of cases, we try alternative pest control methods before applying chemical pesticides or baits. If alternative methods fail, we opt for least-toxic pesticides. We do not use synthetic pesticides or fertilizers on our campus and opt for the least toxic options available. Weeds are pulled by hand and beds are planted in such a way as to minimize the availability of bare areas for weeds to grow. Invasive species are removed by hand, in the past we have used goats to eat blackberries or planted native trailing blackberries to minimize growth of invasives. We have no mow lawns on campus where we do not use chemicals, irrigated water, or mowing equipment to keep them manicured and green throughout the summer. Wildflowers are allowed to grow in the lawns and the grass goes dormant during the summer months.

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

- Implemented or maintained a written IPM plan
- Dropped pesticide use altogether on city or campus grounds

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

We follow the guidelines of Salmon Safe on our campus, which includes being pesticide-free and using the least toxic options. This includes using nontoxic ice melt on the roads and sidewalks on campus and not using any chemicals that could runoff into the wetland or creek. Our stormwater system is separate from the City of Bothell and as such we manage our runoff in compliance with all state and federal regulations and use things like oil-water separators, rain gardens, and bioswales to make sure that runoff is safe before it enters the waterways.

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?

Our grounds manager is in charge of making sure that the IPM plan is executed and that the IPM vendor is fully trained on the plan and adheres to the plan procedures.

Integrated Pest Management Plan: [UWB IPM Procedure with Appendices.pdf](#)

<https://www.uwb.edu/campus-sustainability/campus-operations/grounds>

Recommended Native Plant List:

<https://your.kingcounty.gov/dnrp/library/water-and-land/yard-and-garden/native-plant-guide-western-washington.pdf>

Recommended Native Plant Supplier List:



We have signage up around campus to make our community aware that we do not use pesticides and the grounds are safe for them to enjoy.

Learn More

<https://sites.uw.edu/ccuwbee/the-initiative/>
uwbsust@uw.edu

<https://www.instagram.com/ccuwbee/?hl=en>



This sign says “pardon our weeds, we’re protecting our bees.” It is displayed in one of our no mow grasslands to give some context for the natural landscape people who visit the campus are seeing.