

Bee Campus USA - Randolph College

Report on 2020

Pollinator Habitat Creation & Enhancement

Randolph hosted one planting event with just a few volunteers. Typically, our Earth Day Festival's biggest draw is the pollinator garden expansion where we discuss pollinator education and outreach while planting. This year, the event was conducted via a Livestream while three volunteers planted the addition. All of the other planned events switched to a virtual platform as a result of the COVID-19 pandemic. The spring semester transitioned to a virtual format in early March and the fall semester was entirely online. Staff completed the regular maintenance and enhancement activities as needed. Staff created a new, small pollinator garden, spread seed in our meadow, added species diversity to existing beds and gardens, planted pollinator-friendly trees, and completed manual invasive and exotic species removal. We shared these activities with students and faculty virtually, but were unable to invite volunteers or host events relating to these activities.

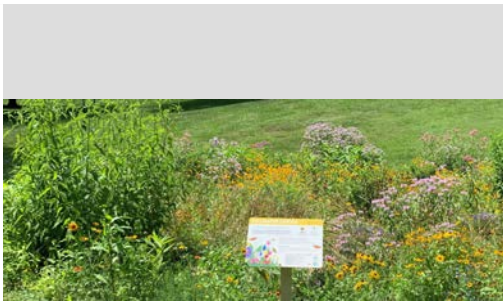
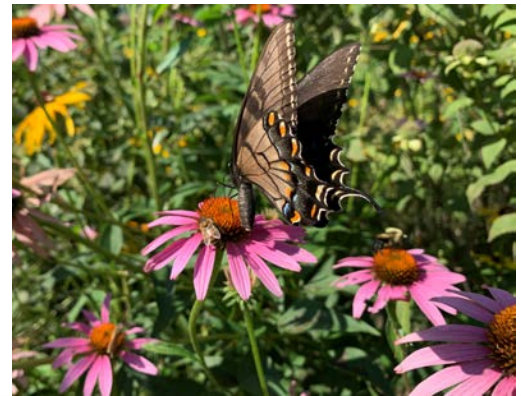


Photo of Randolph College pollinator garden with educational signage from September 2020.



Photo collection demonstrating the progress of the pollinator habitat from its addition on Earth Day through the spring and finally July 2020 when it is in full bloom.



The pollinator gardens have many visitors as this photos shows four separate species feeding on Purple Coneflower: there is a skipper on the bottom left (out of focus), a bee and Black Swallowtail butterfly in the center, and a bumblebee on the far right (out of focus)..

Education & Outreach

The COVID-19 pandemic shifted our plans to include one dual delivery event and virtual engagements. The installation of our pollinator garden last year was very well-received and presented a rich conversational piece and we had hoped to have a large in-person event again. Our campus shutdown in mid-March; students were sent home in the spring semester and did not return until spring of 2021. We were still able to host a planting event for Earth Day, but we added a livestream where we discussed the planting process, species selection, host plants for insects and what that means, and we answered



questions. We had over 60 participants tune in for the livestream. Later in the summer, we hosted three Zoom webinars on pollinator gardens and sustainable landscaping. The presentations covered eliminating pesticides and natural pest control methods, causes of insect population declines, reducing light pollution, gardening for pollinators, landscaping best practices, transitioning to pollinator-friendly lawn maintenance, transitioning lawns to meadows and pollinator habitat, recommended resources (including the Xerces online resources), how to locate plants and seeds, and left time for a Q&A session. We also increased our virtual programming in terms of photos, posts, and sharing.





Courses & Continuing Education

Our for-credit courses that cover pollinator-related information include: Introductory Biology, Evolution, Zoology, Zoology Laboratory, Botany, Botany Laboratory, Economic Botany, Physiology, Developmental Biology, Ecology, Ecology Laboratory, Principles of Conservation Biology (one-time course by guest faculty), Environmental Chemistry, Environmental Economics, Environmental Science: Systems and Solutions, The Ecosphere and Environmental Issues, The Ecosphere and Environmental Issues Laboratory, Quantitative Aspects of Global Environmental Problems, Research Design and Geographic Information Systems, Sustainability Principles and Practice, Climate Dynamics and Global Change, Laboratory in Climate Dynamics and Global Change, Environmental Problems: History and Culture, Natural History Collections, Collections Management, Environmental Philosophy, and Organic Gardening (physical education course 0.5 credit offered each semester). These courses vary in their depth of pollinator-related study where some courses, such as Principles of Conservation Biology, cover pollinators extensively including habitat creation, restoration, and protection, and population study. Other courses are more cursory, yet notable. For example, in Economic Botany, there is a unit studying the economic benefits of pollinating insects and production improvements resulting from native pollinator visitation. In Developmental Biology, students study the different life stages and metamorphoses of insects. These courses fall primarily into the natural sciences, specifically biology and environmental studies, with a few departments hosting just one course with pollinator-related information, such as Environmental Economics or Environmental Philosophy. It is important to note that each course features a writing or research assignment where the student dictates the area of study. Two Botany students researched stratification during the semester and then pursued a summer research project exploring native plant germination under different scenarios and from different sources.





Student Jdody Misidor '20, measures plants as a part of a germination study of native and naturalized plant species.

Service-Learning

This year, the Organic Gardening students were offered an opportunity to collect one or more photos of pollinators in their area for citizen science. They were instructed to collect site information for their observation and take as many crisp pictures as they could to aid identification. The students went a step further and even provided preliminary identifications, which demonstrated their curiosity of the subject. After these photos were submitted, the instructor shared them with online sighting databases, such as Butterflies and Moths. This project allowed us to host a service-learning project within the confines of social-distancing and travel restrictions.





A clear image of a Silver-spotted Skipper visiting a Black-eyed Susan submitted by a student as a part of a service-learning drive to collect and share images for citizen-science.

Educational Signage

In 2019, we began installing signage at habitat improvement locations to better communicate our goals and projects. These have been a great addition and have significantly improved the awareness on campus about our Bee Campus activities. The existing, permanent exterior signage accompanies our rain gardens, meadow, and the pollinator garden. They describe the species of plants there and highlight the importance of native planting and habitat creation. The pollinator garden sign describes how community members can support pollinator health in their own lives and details how



this pollinator garden directly addresses pollinator declines. The signage has been really well received and we anticipate incorporating additional signage as able. We added two temporary signs that are similar at our other pollinator habitats and expect to switch to these permanent signs in the future.



The new pollinator garden included a custom sign detailing the types of plants used, the benefits of these natural areas, and some information on what makes it valuable to pollinators.

Policies & Practices

The campus has eliminated all pesticide and herbicide use in sensitive locations and on lawns. The remaining locations where pesticides and herbicides are used are consistent with our written IPM. The lawns are maintained at a taller height and due to the elimination of herbicide application a few years ago, they are a composition of different fescues, clover, dandelion, false strawberry, and other flowering “weeds.” The community has expressed an interest in learning more about



alternative pest control methods. Our Organic Garden and Pollinator Gardens are demonstration sites for these practices. By planting species that attract parasitic insects between and around vegetable plants, we have created a more visually appealing vegetable garden while eliminating pesticide uses.

Integrated Pest Management Plan:

Recommended Native Plant List:

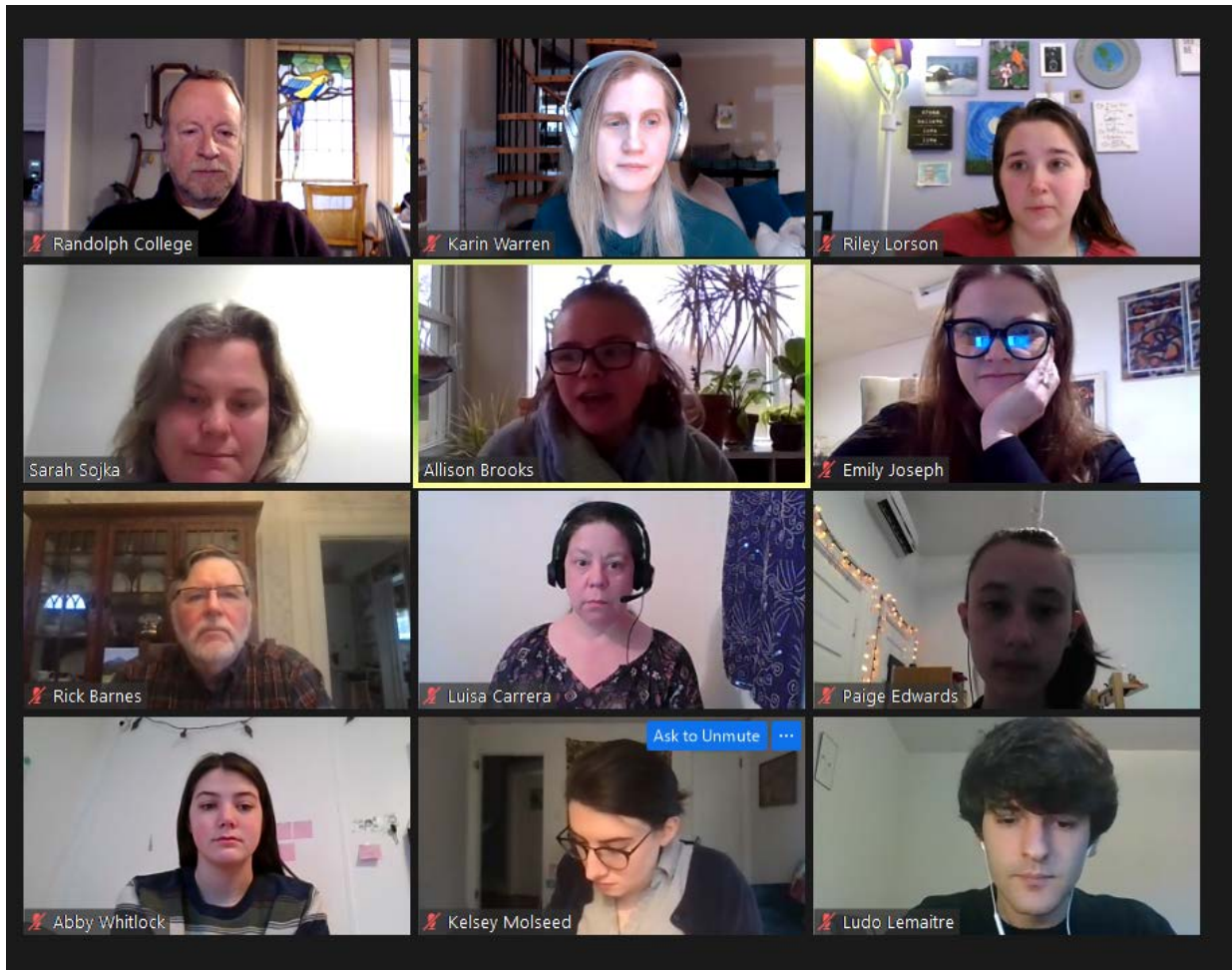
Recommended Native Plant Supplier List:



The College's Organic Garden is a shared space for faculty, staff, and students where companion planting and natural pest control is a standard.



Learn More



Committee meetings are a bit different this year. Attending this meeting we had three students, two current faculty, the CTO, two Institutional Advancement staff, a professor emeritus, and three staff from other departments; Randolph College's committee is a great space for a melding of minds.

