

Bee Campus USA - California State University Northridge

Report on 2021



Pollinator Habitat Creation & Enhancement

1/21/21: The Institute for Sustainability received approximately 200 native plant seedlings from the Santa Monica Mountain Conservancy Fund. These were planted in the garden and fruit tree orchard area by one employee and three volunteers.





Native flowering plants established between coffee and fruit trees in CSUN's orchard.

Education & Outreach

2/23/21: Two CSUN faculty members – Natale Zappia, associate professor of history and Director of CSUN's Institute for Sustainability and Danielle Bram, director of CSUN's Center for Geospatial Science and Technology, are part of a multi-institutional, interdisciplinary effort to create a detailed virtual map of Los Angeles' ecological and topographic history to help inform planning efforts involving sustainability, habitat restoration and preparing for the impacts of climate change. Courtesy of the Spatial Sciences Institute, University of Southern California. CSUN Faculty to Help Create a Virtual Map of Los Angeles' Ecological History 3/22/21: Tree Rings and Disappearing Water: Research from the Owens Valley



studying sagebrush using tree ring analysis and a brief history of water in California. Presented by Richard Rachman, CSUN Biology Graduate Student. To date, this presentation has been viewed over 300 times on YouTube. https://www.youtube.com/watch?app=desktop&v=RR7_zl30Vps 4/1/21: Native Plants in the CSUN Garden. Educational video, to date this video has over 300 views on YouTube. <https://www.youtube.com/watch?app=desktop&v=ul45WpT-k7g> 4/12/21: Oak Trees in the Santa Monica Mountains presentation. The Institute for sustainability co-hosted a presentation by Richard Rachman with the Southern California Native Plant Society. Oak trees are emblematic in the state of California, and their habitat supports hundreds of species of plants and animals. *Quercus agrifolia* and *Q. lobata* are the dominant oak species in the Santa Monica Mountains in Los Angeles, and these oak woodlands have been suffering dieback due to drought, wildfires, and invasive species. More mapping is needed of oak populations in order to plan future conservation efforts and hopefully figure out which factors are most heavily impacting their survival. Approximately 60 people attended this virtual presentation. 6/5/21: Monarch and Milkweed Conference. Richard Rachman represented the Institute at the first annual conference, facilitating a session titled, "Get Involved in LA Area Milkweed Projects presentation. This presentation covered research, planting, and community science opportunities to support monarch butterfly habitat in the LA area. The event was hosted by SAMO Fund (Santa Monica Mountain Fund). Approximately 400 people attended the virtual presentation. <https://www.samofund.org/southern-california-monarch> Summer Native Plant Workshop Series Hosted as part of CA Climate Corps Fellowships at the CSUN Sustainable Garden and Education Center. Facilitated by Samantha Lemus (Garden Coordinator) and Richard Rachman (CSUN biology graduate student) 7/10/21: Invasive plant foraging. 7/12/21: CA Black Walnut harvesting 7/13/21: Identify weeds and iNaturalist 7/14/21: How to Water Native Plants 7/15/21: Native Plant Seed collection 7/17/21: How to Identify and pull Weeds 7/19/21: Native Plant Propagation 7/20/21: Native Plant Propagation 7/21/21: Native Plant and Fruit Tree Pruning All of these events/projects as well as general educational information are posted on the Sustainable Food Garden Instagram account (@csunsustainablegarden), making an impact with food justice advocacy and garden education. Social media posts are intended to educate and spread awareness of issues linked with climate change and social justice. Marketing via social media has been key in increasing attendance for virtual/in-person campus events and beyond, and has played an integral role in engaging the community.





Richard Rachman leads a workshop on native plants in the CSUN Sustainable Food Garden

Courses & Continuing Education

For-Credit Curriculum: CSUN's curriculum addresses many different aspects of pollinator health across a variety of courses. Biologic Principles classes briefly cover the roles of pollinators, and their important role in food systems, while Bacterial Diversity classes delve into the gut biome of honeybees. Pollinators are addressed with great detail in courses such as Plant Biology, Evolutionary Biology, Ecology and People, Flowering Plant Systematics, Entomology, and Plant Ecology. A variety of significant and valuable information on pollinators is covered across this multitude of courses and their associated labs. Additionally, Environmental History and Early U.S. History courses discuss the role of pollinators in shaping policy and land use practices. Continuing Education: The Institute for Sustainability received funding from USDA in partnership with Multinational Exchange for Sustainable Agriculture (MESA) to develop and facilitate the Agroecology, Farming & Food Pathways (AFFP) program for students to explore careers in agriculture and earn a Certificate in Applied Agroecology. Two cohorts were offered this year that included guest presentations, hands-on farm training, local farm visits, and networking with farmers. Approximately 27 people completed the three-month program and received a non-credit certificate in Applied Agroecology. Program:

www.csun.edu/sustainability/multinational-exchange-sustainable-agriculture-mesa





Students in the Agroecology Farming and Food Pathways learn about polycropping.



Students from the AFFP cohort work with the Santa Monica Mountain Conservancy Fund to preserve Native Milkweed for the Monarch Butterfly.



Students from the AFFP cohort work with the Santa Monica Mountain Conservancy Fund to preserve Native Milkweed for the Monarch Butterfly.

Service-Learning

This project was a workshop series at the campus food garden and orchard. Participants were trained and participated in identifying and documenting native and non-native plants and insects. This inventory will be used to continuously curate the plants within the food garden and orchard in order to limit the impacts of non-native plants, and maximize soil and pollinator health.





Students participating in the workshop series learn about the importance of composting and mulching in caring for plants and trees.

Educational Signage

Unfortunately, no new pollinator signage was installed last year. Low on-campus occupancy due to the pandemic, coupled with limited expansion of pollinator habitat and competing priorities for limited personnel, meant that this priority was not



pursued. Existing permanent signage is still in excellent condition.





CSUN's signage denoting certain areas as pollinator habitat. 20 of these signs are posted around areas of campus that have been landscaped with pollinator-friendly species.

Policies & Practices

CSUN uses a variety of pest management methods in order to reduce the need for pollinator-harming herbicides and pesticides. These chemicals are not applied broadly to any areas of campus, and are only used for spot treatment. Manual weeding reduces the need for herbicide use, and the application of mulch and utilization of landscaping cloth prevents the growth of weeds. Spot-treatment of herbicide is used as a last resort. Additionally, CSUN's Grounds staff work with Biology professor Rachel Mackelprang to safely relocate bee hives that form in undesirable areas of campus, rather than eliminating them.

Integrated Pest Management Plan: [Integrated Pest Management Plan \(final\).docx](#)

Recommended Native Plant List: [CSUN Pollinator Habitat Plan.docx](#)

Recommended Native Plant Supplier List: [Regional Plant Suppliers.docx](#)





A bee hive that formed in an irrigation box. Grounds staff called a biology professor to remove the hive rather than have it exterminated. Biology professor Rachel Mackelprang removed a hive from an irrigation box, which she said was the largest she'd seen in such a space.

Learn More

<https://www.csun.edu/sustainability>
energy.sustainability@csun.edu

<https://www.facebook.com/CSUN.Sustainability.Institute/>
<https://www.instagram.com/sustaincsun/?hl=en>
<https://twitter.com/sustaincsun?lang=en>





The Institute for Sustainability Advisory Board meeting, December 2021. Some members of this board are play a role in pollinator projects through academics or facilities, and are also on the Campus Pollinator Committee

