

UC Santa Barbara Newsletters

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NCOS News - November 2019

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UC SANTA BARBARA

North Campus Open Space Restoration Project

NCOS NEWS

November 2019



The Burrowing Owl is back at NCOS! Photo taken on October 16, 2019.

UPDATES & EVENTS

Volunteer Saturday - November 16

This month's volunteer Saturday will take place next week on November 16th and will coincide with the UCSB Alumni Give Back day. Feel free to join us at the usual time and place: 9:30 am at 6969 Whittier Drive!

Tidewater Goby Survey

For the first time since 2013, Tidewater Goby (*Eucyclogobius newberryi*) have been found in Devereux Slough! These small, endangered fish were found on the recent survey that CCBER conducts annually with the help of biologist Rosie Thompson. Other fish seen in the survey include killifish and long-jawed mudsucker. Now we know what all of the egrets and herons have been feasting on the last few months, without a 'take' permit for unknowingly ingesting an endangered species! Have a look at the survey report [here](#).



CCBER staff using a seine net to catch fish.



Left: All fish caught are quickly identified, counted and returned to the water. Right: California Killifish (*Fundulus parvipinnis*).



A Tidewater Goby! Although none were seen at NCOS, several were found on the COPR portion of the Devereux Slough.



Another species of goby, the Longjawed Mudsucker (*Gillichthys mirabilis*), was found at NCOS near Venoco bridge.

Ventura Marsh Milk-vetch

NCOS is now home to a population of Ventura Marsh Milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), a federally and state-listed endangered plant that was presumed extinct until it was found on a private property in Oxnard in 1997. Since then, the California Department of Fish and Wildlife and USFWS have been working to introduce populations into Ventura and Santa Barbara counties. CCBER was provided seeds from the re-discovered population and was able to grow more than 200 plants that are being installed in several experimental locations on North Campus Open Space. Monitoring work is supported by a small grant from the [California Native Plant Society](#) to increase our understanding of this rare and fickle species. Finding suitable habitat sites that are protected has been a challenge for the agencies. Observations suggest that it prefers sites where willow (*Salix lasiolepis*) and mule fat (*Baccharis salicifolia*) grow with sandy or loamy soils and wet roots but not stems. It is also vulnerable to snails and herbivory and is able to extract nitrogen from the air through rhizobia - a bacteria-root symbiosis. CCBER and Professor Ryoko Oono are studying the nature of this relationship and vulnerability to saline conditions that may be found on NCOS.



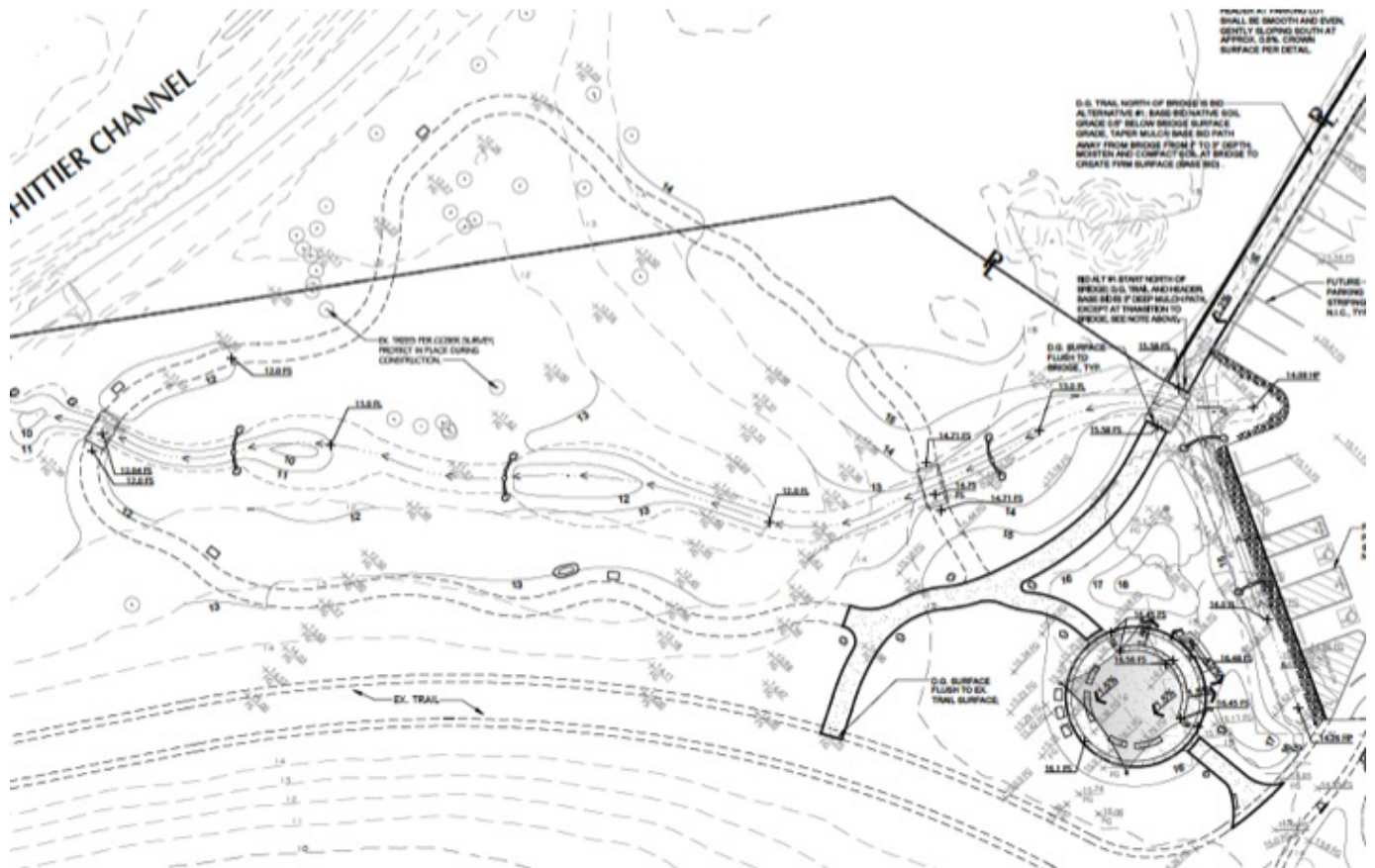
CCBER staff carefully plant Ventura Marsh Milk-Vetch in an area of NCOS specifically designated for establishing the population.



Ventura Marsh Milk-Vetch enjoying its new home.

Visitor Plaza Update

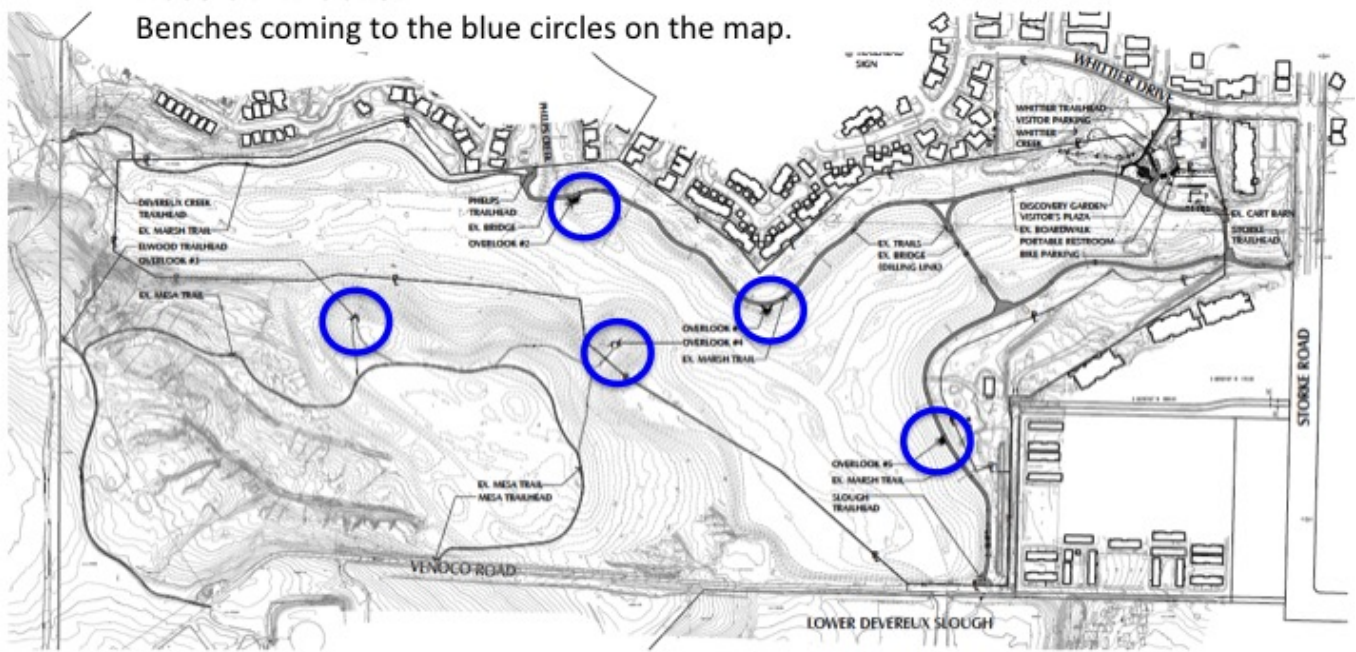
Construction bids will be opened on November 12th for a contractor to install a visitor plaza and discovery trail near the Whittier entrance of NCOS, and 5 overlooks with benches constructed along the trail to provide opportunities to sit and enjoy the views and wildlife on site. Construction will likely run from December to February, so **please be aware and alert on the trail.**



Carlton-Duncan Visitor Plaza and Discovery Trail interpreting Native American Ethnobotany
 These public amenities to be constructed this winter at Whittier entry area with funding from State Parks Outdoor Education Facilities Grant program.

NCOS OVERLOOKS!

Benches coming to the blue circles on the map.



There are still a few naming opportunities that we'd like to incorporate into the signage for overlooks, bridges and more. Please contact us at ncos@ccber.ucsb.edu if you are interested in supporting the long term vision for North Campus Open Space as a special ecological site and a living outdoor lab for nature education and enjoyment for everyone.

FEATURE STORY

NCOS Vegetation Update: The Restoration Evidence Is In



CCBER's restoration team recently completed the second year of vegetation monitoring at NCOS. [Check out](#) how the coverage and diversity of native species is expanding, as well as updates on the planting numbers and more.

[This feature story is continued on page 14.](#)

VOLUNTEER OPPORTUNITIES

"Second Saturdays" at NCOS

This month: November 16, 9:30-12:30

Please RSVP to ncos@ccber.ucsb.edu

Help us restore and create NCOS with plants and more! Meet at 6969 Whittier Drive at 9:30 am. Bring water, sunscreen, and wear a hat, clothes, and shoes suitable for garden work.



Saturday Tree Plantings

You can help Your Children's Trees plant oaks and other saplings at NCOS! Please contact [Your Children's Trees](#) for more information and to RSVP.



Thursdays - CCBER Greenhouse Associates

Come help transplant seedlings of native plants with the CCBER team from 9:00 - 12:00. To join, please send an email to ncos@ccber.ucsb.edu.



Group Volunteer Opportunities

We gladly welcome local business, non-profit, school and other community groups to come out to NCOS to help with planting and other activities. For more information, please send an email to ncos@ccber.ucsb.edu.



COMMUNITY FORUM & PHOTOS

We are interested in any observations of wildlife activity on NCOS. Please send your observations, with or without photos, to ncos@ccber.ucsb.edu. Thanks!



Bobcat near Phelps Creek. Photo by Jeremiah Bender.



Bobcat. Photo by Jeremiah Bender.



Red-necked Phalarope. Photo by Jeremiah Bender.

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**For more information on the
North Campus Open Space Restoration Project, [Click here](#), or email ncos@ccber.ucsb.edu**



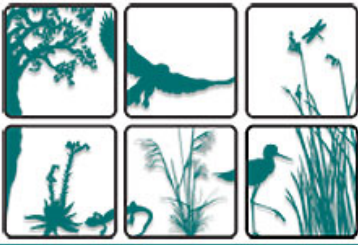
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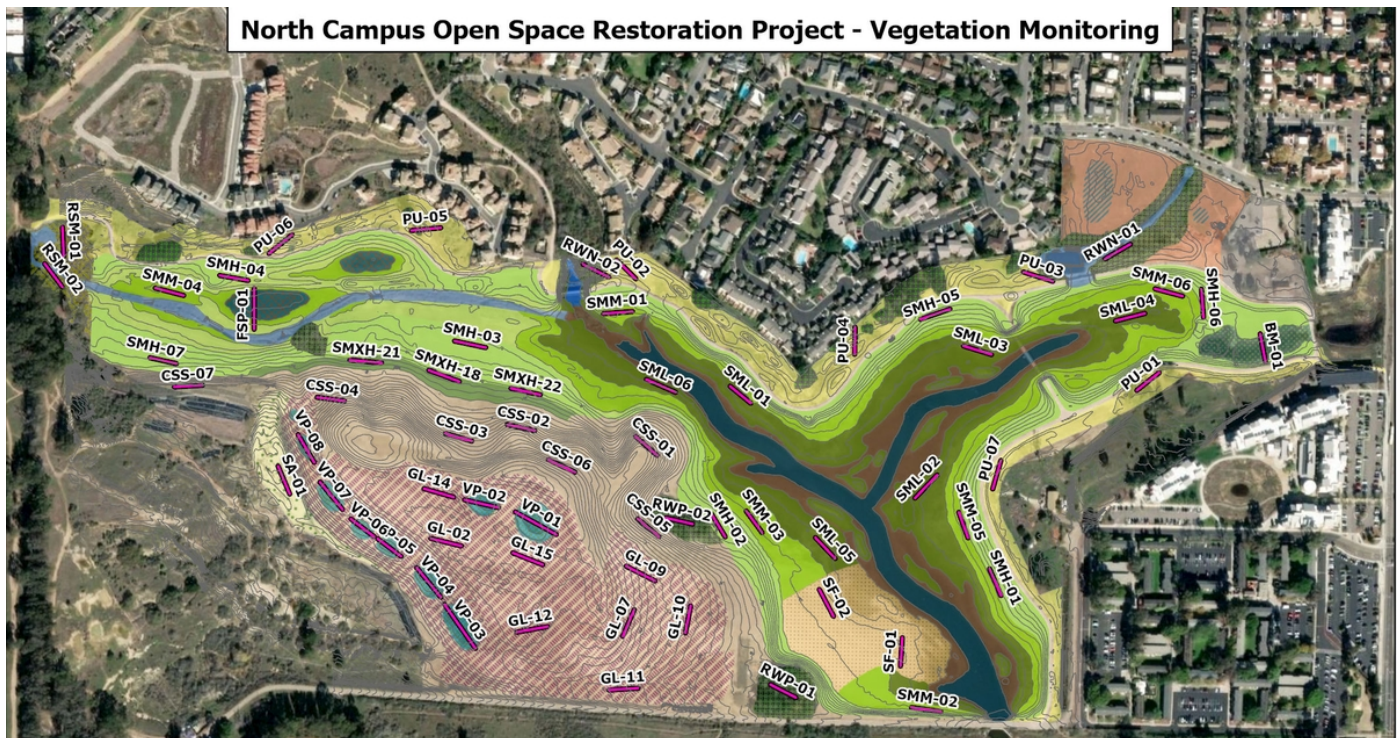




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NCOS VEGETATION UPDATE: THE RESTORATION EVIDENCE IS IN

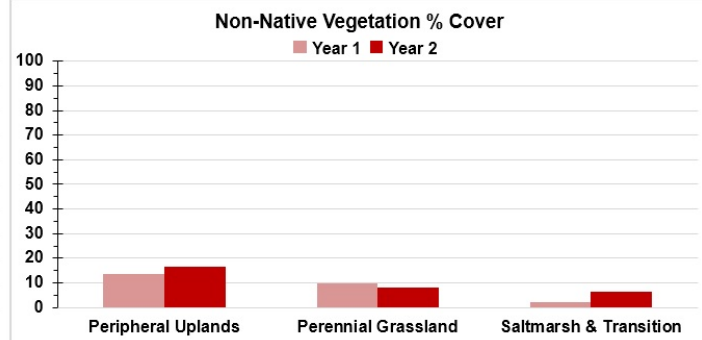
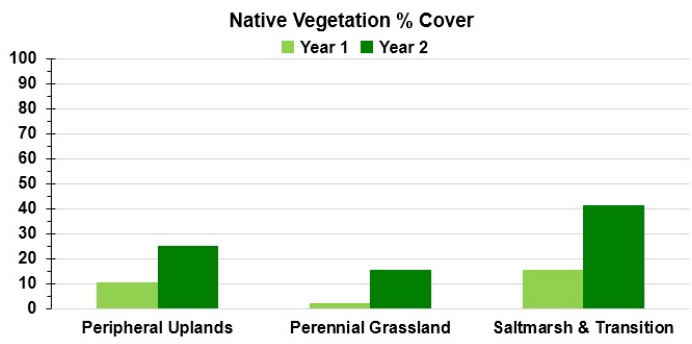
CCBER's restoration team recently completed the second year of vegetation monitoring at the North Campus Open Space (NCOS) project. This monitoring tracks annual changes in native and non-native vegetation coverage and species diversity in nine of the habitats and vegetation communities on NCOS (basically all areas except for the sub-tidal wetland channels, creeks and mudflat). We use one of two monitoring methods depending on the type of vegetation: point-intercept transects are used for taller plants such as shrubs and trees in the riparian and coastal sage scrub communities, and for all other areas we quantify native and non-native vegetation coverage of all species as well as the percent of bare ground and other cover (e.g. mulch and thatch) within 1-square-meter quadrats placed every 3 meters along a 30-meter transect.



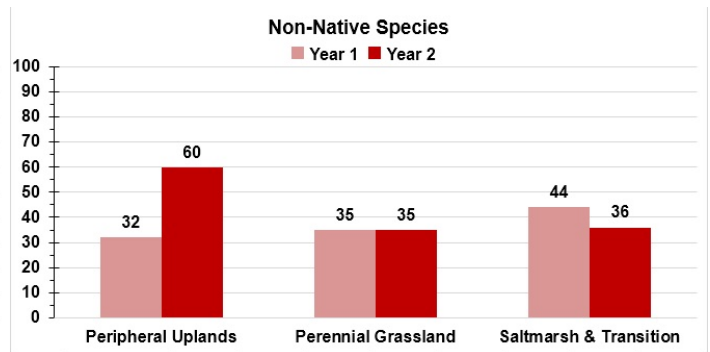
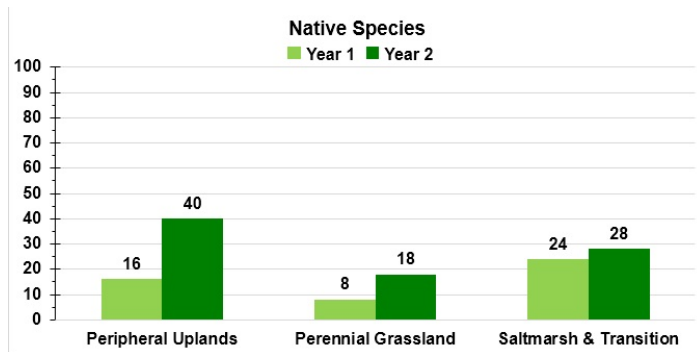
Map of vegetation monitoring transects at North Campus Open Space.

Three of the largest vegetation communities in terms of area of coverage on NCOS are saltmarsh (more than 37 acres including upland transitional vegetation), the perennial grassland on the mesa (15 acres), and what we call the peripheral uplands along the northern and eastern sides of the site adjacent to the community housing (9 acres). Across these communities we monitor a total of 396 quadrats along 36 transects.

The second year of monitoring in these areas shows an overall increase in cover and diversity of native plants and a decrease in unvegetated area or bare ground. Non-native vegetation coverage is about half or even less than native coverage with only small changes compared to the first year, while non-native species diversity increased (especially in the peripheral uplands) and is greater than native diversity.



Bar charts comparing the average percent of native (left) and non-native (right) vegetation cover along monitoring transects in year 1 (2018) and year 2 (2019) of restoration work in the Peripheral Uplands, Perennial Grassland, and Saltmarsh & Transition communities at North Campus Open Space.

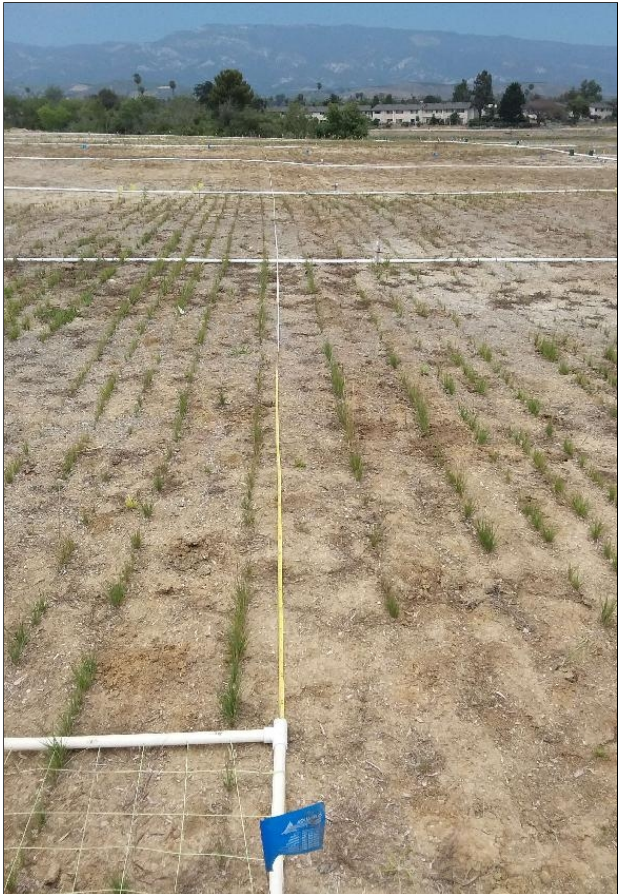


Bar charts comparing the number of native (left) and non-native (right) plant species observed along monitoring transects in year 1 (2018) and year 2 (2019) of restoration work in the Peripheral Uplands, Perennial Grassland, and Saltmarsh & Transition communities at North Campus Open Space.

Overall, 56 native species and 68 non-natives were identified in this year's monitoring of the peripheral uplands, perennial grassland, and the saltmarsh & transition communities. The native species seen the most this year include the saltmarsh aster (*Symphotrichum subulatum*) that dominated much of the upper saltmarsh transition and peripheral uplands, followed by purple needle grass (*Stipa pulchra*), pickleweed (*Salicornia pacifica*) and saltgrass (*Distichlis spicata*) - three species that we have planted and seeded more than any others on NCOS. For the non-natives, Italian rye grass (*Festuca perennis*) and a *Spergularia* species were seen more often than other non-natives. More details of the vegetation monitoring for all of NCOS will soon be available in the Year 2 Monitoring Report - stay tuned!



A vegetation monitoring transect in the Peripheral Uplands in 2018 (year 1 - left) and 2019 (year 2 - right).



A vegetation monitoring transect in the Perennial Grassland on the Mesa in 2018 (year 1 - left) and 2019 (year 2 - right).



A vegetation monitoring transect in the Saltmarsh in 2018 (year 1 - left) and 2019 (year 2 - right).

Mesa Planting Update

The mesa is starting to look more green! After several months of planting, we are beginning to see excellent growth from the diverse palette of coastal sage scrub species and grasses. In the coming months, we will continue to expand our restoration planting efforts into the western area of the Mesa, adjoining the South Parcel site that has been undergoing restoration since 2013. In addition, we are in the process of developing plans for diversifying the Mesa grassland with herbs, forbs and wildflowers.





The photos above show restoration progress and growth of native species on the Mesa Slopes from October 2018 (left) to October 2019 (right).



Giant Wild Rye and California Bee Plant



Sticky Monkeyflower



Purple Sage and California Sagebrush

Date:
Tuesday, November 5, 2019 - 10:00

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