

UC Santa Barbara

Newsletters

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UCSB Restoration Register - May 2023

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UC SANTA BARBARA
Cheadle Center for Biodiversity
& Ecological Restoration

Restoration Register

May 2023



Cattle Egret at NCOS. Photo by Susan Cook.

Updates

Bringing Back Our Wetland Screening

Exciting news! There will be a community screening of Bringing Back Our Wetland on June 1st at the Marjorie Luke Theatre, 721 East Cota Street in Santa Barbara. Following the screening will be a panel discussion featuring special guests Lisa Stratton, Carla D'Antonio, Michael Love, Marianne Parra, Colleen Grant, and Katherine Emery. Admission is free and [tickets are available here](#), as well as via the qr code accessible below.

Presented by: UCSB Affiliates and Cheadle Center for Biodiversity & Ecological Restoration



BRINGING BACK OUR WETLAND

Community Film Screening & Panel Discussion

Thursday June 1, 2023 | 7:00 PM

Marjorie Luke Theatre
721 East Cota Street
Santa Barbara, CA, 93103

Learn how UC Santa Barbara, alongside a community of visionary environmentalists, restored a former Goleta golf course back into a wetland.

Featuring Special Guests:

- Lisa Stratton, *Director of Ecological Restoration, Cheadle Center*
- Carla D'Antonio, *Professor and Schuyler Chair, Environmental Studies*
- Michael Love, *Director and Producer*
- Marianne Parra, *Representative for hi stok'oy hil xus Chumash Cultural Circle*
- Colleen Grant, *U.S. Fish & Wildlife Service*
- Katherine Emery, *Executive Director, Santa Barbara Audubon Society*



FREE ADMISSION

Scan to reserve tickets!

communityrelations.ucsb.edu/ucsb-affiliates/events

UC SANTA BARBARA



Santa Barbara County Museums

NCOS Water Level



The water level in the slough is approximately 5.9 feet above sea level with a salinity of 25.3 ppt as of Monday, May 1st. High surf and tides have brought sand in to the mouth and slowly increased the water level over the past couple weeks from a low of about 4.7 feet after the latest breach.

Darcy Aston Memorial Lecture on Water Sustainability

This year's Darcy Aston Memorial Lecture will feature our very own Lisa Stratton, Director of Ecosystem Management at the Cheadle Center. Come hear the story of how the North Campus Open Space restoration project came to be and how being on the UCSB Campus has multiplied the value of this project by engaging students and community in its restoration. The lecture is on Wednesday, May 3rd from 5:00pm - 6:30pm at the [Interactive Learning Pavilion Auditorium](#) 1302 (next to UCSB Library) as well as on Zoom ([registration link here](#)). More info in the flyer below!

UC **SANTA BARBARA**
Environmental Studies Program

Presents the 2023 Darcy Aston Memorial
 Lecture on Water Sustainability



LISA STRATTON, PHD,
 Director of Ecosystem Management,
 UCSB Cheadle Center for Biodiversity and Ecological Restoration

**BRINGING BACK OUR WETLAND; RESTORING A COMMUNITY
 TREASURE WITH THE HELP OF STUDENTS AND RESIDENTS**

Wednesday, May 3rd
5:00pm – 6:30pm

Hybrid attendance options:

Zoom & Interactive Learning Pavilion Auditorium 1302 (next to UCSB library)

Individuals interested in attending via Zoom, please register for Zoom link <https://tinyurl.com/4a2cv8x2>



Before the lecture you're encouraged to watch an inspiring film about how the former Ocean Meadows Golf Course was transformed and restored back to its original natural condition. The film *Bringing Back our Wetland*, by Mike Love and featured in the SB International Film Festival in February, is available for free streaming before the lecture at <https://vimeo.com/813893043/25336fd5c1>.

This year's Darcy Aston Memorial Water Lecture will feature Lisa Stratton, Director of Ecosystem Management at the Cheadle Center for Biological Diversity and Ecological Restoration (Cheadle Center) at UCSB. Come hear the story of how this exciting restoration project came to be and how being on the UCSB Campus has multiplied the value of this project by engaging students and community in its restoration. This restored wetland, referred to as the North Campus Open Space Project (NCOS), is a dynamic community asset. It serves as a real-world demonstration of how nature-based solutions can help us adapt to climate change by restoring drought-adaptive native habitat and rare plant communities, attenuating floods, improving water quality and addressing sea level rise. This project also serves as a living classroom and research laboratory for generations of UCSB students, advancing our understanding of our environment and the role we can play in preserving and enhancing our ecosystems.



The eighth in a series of annual lectures and community gatherings in memory of Darcy Aston, 1981 UCSB Environmental Studies Alum and beloved member of the Santa Barbara Community. To find out how to donate to and support this series, please visit: <https://es.ucsb.edu/give>

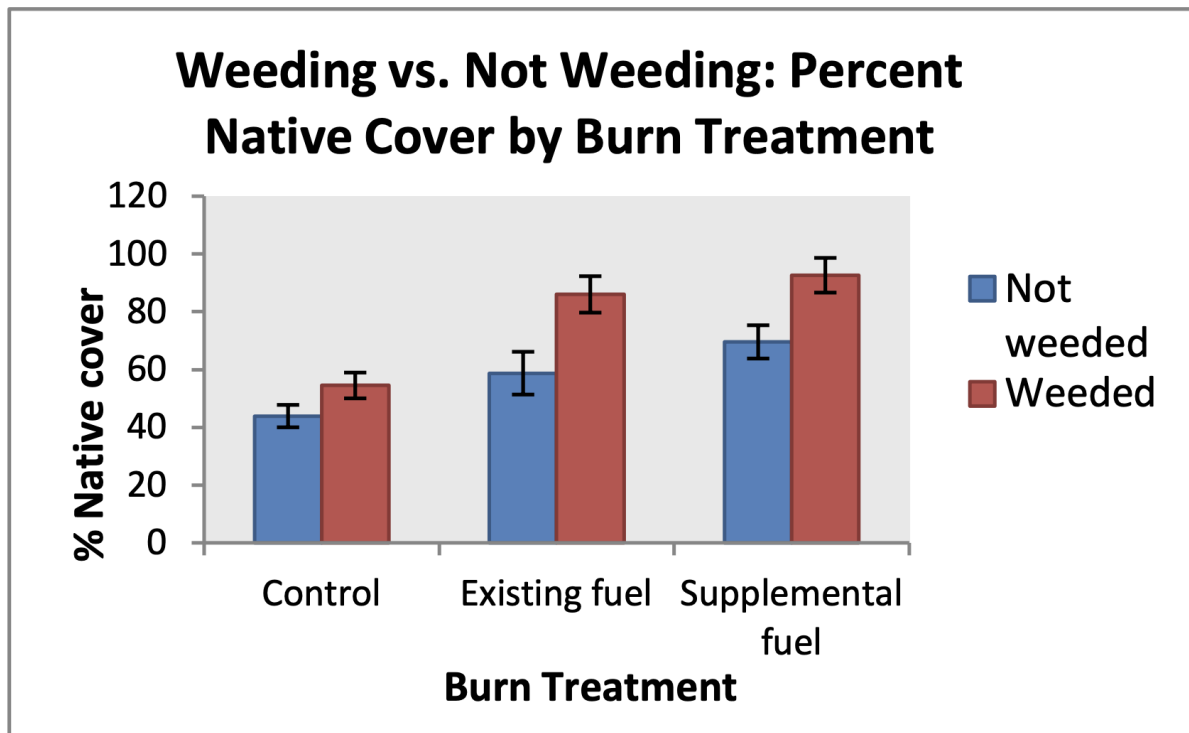
Feature Story

Controlled Burns on Lagoon Island



2022 controlled burn on Lagoon Island.

Since 2009 The Cheadle Center has conducted 8 prescribed burns on Lagoon Island as a means of controlling non-native, invasive grasses and restoring native coastal sage scrub and wildflower meadow habitat. These burns are based upon research conducted by former EEMB graduate student Alice Levine, who conducted several small-scale experimental burns at the Campus Lagoon from 2006-2008. Alice found that by using supplemental, woody fuel to increase the intensity of the burn, reaching temperatures of 200C, the seedbank of invasive grasses (primarily *Bromus diandrus*, or ripgut brome) could be reduced by upwards of 99%. Follow-up weeding of remaining grasses, combined with planting or seeding of native coastal sage scrub species, resulted in successful restoration, converting areas once completely dominated by ripgut brome into healthy, diverse sage scrub. This formula of burning, weeding and planting was repeated several times over the following years resulting in significant conversion of the Lagoon Island from non-native grassland, to native coastal sage scrub.



Effect of weeding on native cover in different burn treatments.

In 2016, however, a different approach was taken with the 5th and largest burn to date. Rather than planting more coastal sage scrub post-burn, large amounts of locally-sourced, native wildflower seeds were cast in the burned area. After several years of intensive seed collecting by former Lagoon Steward, Scott Tomkinson, and his students, from Coal Oil Point Reserve, More Mesa and other restoration sites, the Cheadle Center amassed large enough amounts of seed, to make broadcast seeding of wildflowers a viable restoration strategy. All species were sourced locally from sites with similar sandy-loam soils, like Lagoon Island. Some of the main species utilized in the 2016 burn were California poppy (*Eschscholzia californica*), common popcorn flower (*Cryptantha clevelandii*), miniature suncups (*Camissoniopsis micrantha*), blue toadflax (*Nuttallanthus texanus*), Nuttall's snapdragon (*Antirrhinum nuttallianum*), and importantly red maids (*Calandrinia menziesii*). Red maids are the earliest blooming of these wildflowers, and known to be a fire-follower, meaning their germination and growth is enhanced in areas that have recently burned.



California poppy (*Eschscholzia californica*) persist in the 2016 burn plot area.

These early-blooming, aggressively growing native wildflowers help to suppress any grasses that may have survived the burn and fade out mid-spring allowing the other seeded wildflowers to express themselves in the plot. Other wildflower species not seeded in, such as miniature lupine (*Lupinus bicolor*), coastal morning glory (*Calystegia macrostegia* ssp. *macrostegia*) and bush lupine (*Lupinus arboreus*), also germinate in large numbers in these wildflower focussed burn plots.



Red maids (*Calandrinia menziesii*) and California poppy (*Eschscholzia californica*) providing excellent native cover in the 2018 burn plot. Photo by Susan Cook.

With the success of the 2016 burn plot, the Cheadle Center has continued to go wildflower heavy on the 3 burns since, with little to no planting and even more wildflower species being added to the mix. The most recent burn plot, 2022, includes the previously listed species as well as: common phacelia (*Phacelia distans*), sea-side fiddleneck (*Amsinckia spectabilis*), peppergrass (*Lepidium nitidum*), tansy mustard (*Descurainia pinnata*), cobweb thistle (*Cirsium occidentale*), strigose lotus (*Acmispon strigosus*), Spanish lotus (*Acmispon americanus*), winecup clarkia (*Clarkia purpurea*), California chenopode (*Chenopodium californicum*), miner's lettuce (*Claytonia perfoliata*), owl's clover (*Castilleja exserta*), sandy-soil suncup (*Camissonia strigulosa*), coastal tarweed (*Madia sativa*), California plantain (*Plantago erecta*), and slender buckwheat (*Eriogonum gracile*). Additionally some native bulbs were planted such as blue dicks (*Dipterostemon capitatum*) and golden stars (*Bloomeria crocea*). Thanks to the abundance of wildflowers in these burn plots, the Cheadle Center is able to now gather seed from just within these plots for future burns and other restoration projects.



Blue Toadflax (*Nuttallanthus texana*) and Red maids (*Calandrinia menziesii*) at the 2022 burn plot. Photo by Susan Cook.

Follow-up weeding in and around these burn plots is critical to their success and the hard work of many UCSB undergraduates makes this work possible. Hand-weeding of the few grasses that survive the burn is important to keep invasive grasses from recolonizing these burn plots. Other invasive species such as wild radish (*Raphanus sativus*), scarlet pimpernel (*Lysimachia arvensis*), stork's bill (*Erodium botrys*), windmill pink (*Silene gallica*), and (unfortunately) many more, are released from the invasive grasses that formerly out-competed them. Persistent, yearly weeding by students and staff keeps these species in check and allow native wildflowers to flourish and coastal sage scrub plants to slowly establish over time. Additionally, the use of plastic tarps to solarize the edges of these burn plots helps to suppress weeds and creates new spaces for wildflowers to seed into.



This area of non-native, invasive grasses shows what the burn plot zones consisted of prior to burning and subsequent restoration of native coastal sage scrub and wildflower meadow habitat.

To date, about 3.3 acres of the ~16 acre Lagoon Island has been burned, with many species of wildflowers found beyond the bounds of burn plots. Combined with iceplant (*Carpobrotus edulis*) removal, other coastal sage scrub plantings, and Oak woodland restoration, a majority of the Lagoon Island now has significant native plant cover on it, representing a major success in habitat restoration. Just 20 years ago, Lagoon Island was almost entirely invasive grasses and non-native iceplant. At this point there are only a few significantly grassy areas left to burn. The prescribed burns have provided dozens of UCSB undergraduates with paid, hands-on experience in fire ecology and habitat restoration. Much of this experience and work has been generously funded by UCSB students through the Coastal Fund. With continued stewardship, Lagoon Island will be a beautiful, healthy habitat, brimming with native wildflowers and coastal sage scrub into perpetuity.



Red maids (*Calandrinia menziesii*) at the 2022 burn plot. Photo by Susan Cook.



2022 controlled burn with supplemental, woody fuel in the foreground.



Aerial view of the 2022 controlled burn.

Volunteer Opportunities



"Second Saturdays" at NCOS

May 13th, 9:00 - 12:00

Please RSVP to ncos@ccber.ucsb.edu

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



Thursdays - CCBER Greenhouse Associates

Thursdays 9:00 - 12:00

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



Nature Guide Tour

May 20th, 9:30 - 11:00

Come take a walk around NCOS and learn about native plants and animals with a trained Nature Guide.

Community Photos

We are interested in any observations of wildlife activity on NCOS, as well as plants and landscapes. Please send your observations, with or without photos, to ncos@ccber.ucsb.edu. Thank you!



Red fox pup seen on Lagoon Island. Video by Rosie Manner.



Reddish Egret at NCOS. These active, animated foragers frequently employ their wings when hunting by opening the wings briefly to startle prey, or by keeping the wings extended to coax prey to take shelter in the shade provided. Photo by Susan Cook.



Cattle Egret at NCOS. Cattle Egrets are native to Africa but somehow reached northeastern South America in 1877. They continued to spread and arrived in the United States in 1941 and were nesting by 1953. Over the next 50 years they became one of the most abundant of the North American herons. Photo by Susan Cook.



Ash-throated flycatchers live in dry scrub, open woodlands, and deserts in the West from sea level to about 9,000 feet elevation. Photo by Susan Cook.



Red-shouldered Hawk at NCOS. Photo by Susan Cook.



California Thrasher at NCOS. Photo by Lynn Scarlett.



Western Bluebird trying its best to match a Goleta WEST sign at NCOS. Photo by Lynn Scarlett.



Large Gopher snake seen on the Marsh Trail. Photo by Frank DiMarco.





First known sighting of a Desert Cottontail at NCOS! This young individual has the strong salt and pepper dorsal coloration indicative of the species. Desert Cottontails also have slightly longer ears compared to Brush Rabbits and often will have a darker tip to the ear as adults. Photos by Sally Colman and identification assistance provided by Paul Collins.



Cliff swallow with a mouthful of mud that will soon be added to its gourd-shaped nest. A finished nest typically contains between 900-1,200 individual mud pellets. Photo by Jeremiah Bender.



Great Horned Owlets in the Eucalyptus grove at the western border of NCOS. Mated pairs of Great Horned Owls are monogamous and vigorously defend their territories, especially in the winter before egg-laying and in the fall when their young leave the area. 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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