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UC SANTA BARBARA
Cheadle Center for Biodiversity & Ecological Restoration

Restoration Register

July 2024

Gadwall chicks feed on algae in the Devereux Slough at the North Campus Open Space.

Updates

Tidewater Goby Survey

Tidewater Goby caught during this year's fish survey.

Great news! Tidewater gobies (*Eucyclogobius newberryi*) were once again found in the NCOS portion of the Devereux Slough during our annual survey on June 11th. This is their second appearance at NCOS since the restoration began, the first being last year. These small fish, ranging from 0.6 to 2 inches, inhabit brackish water lagoons, estuaries, and marshes along the California coast. Historically, they occupied 150 lagoons and estuaries, but their numbers declined significantly by the 1980s. In 1994, the tidewater goby was classified as endangered under the Endangered Species Act.

Cheadle Center staff seining near the mouth of the Devereux Slough.

This year's annual survey, which involves seining and dip-netting at eight locations on Coal Oil Point Reserve and the North Campus Open Space, yielded 94 tidewater gobies! We also found several other species, including 7 California killifish (*Fundulus parvipinnis*) and 436 topsmelt (*Atherinops affinis*).

Map showing sampling locations.

Ellwood Marine Terminal Restoration Project: Shaping the Future of Public Access and Use

The Ellwood Marine Terminal Restoration Project is now underway! We are excited to announce that the demolition phase of the restoration will begin July 29th. This phase includes removing existing tanks, pipes, and buildings which will open up 360-degree views of the ocean and mountains. The restoration phase will involve, recreating the historic high point leveled in 1929 and restoring diverse native habitats, including grassland, wetlands, scrub, woodland, and coastal dunes.

An important part of this project is understanding how the Chumash community and the broader Santa Barbara public would like to enjoy the site once it's restored. In June, we invited community members to site tours to learn about the restoration plan and share perspectives and connections to this space. We're grateful to the more than 130 people who participated and shared their initial thoughts and ideas on public use.

If you could not attend one of the site tours, don't worry! We continue to seek input on potential public access and use options to ensure the site meets the community's needs and desires. Initial maps were designed to spark ideas and discussion. These maps propose various features such as gathering areas, overlooks with benches and bird-watching blinds, interpretive signage, and trails of varying difficulty, width, and length.

Please take a few moments to review the draft public access designs on the website and complete this survey to provide your feedback.

We aim to foster effective communication and collaboration and will continue to gather feedback and engage Chumash and local community members. As the project progresses, we will host gatherings and webinars to keep everyone informed and involved. If you have questions, please contact us at ncos@ccber.ucsb.edu. Together, let's create a space that reflects the spirit and needs of our community!

Salt Marsh Bird's Beak

Salt marsh bird's beak (*Chloropyron maritimum ssp. maritimum)* is now flowering! This state and federally endangered annual plant in the Orobanchaceae is hemiparasitic and derives most of its nutritional needs from the roots of host plants such as saltgrass. In the spring of 2023 these seeds were introduced into numerous experimental sites around the newly restored marsh in collaboration with Tidal Influence and the USFWS. This experimental trial with 5,000 seeds allowed us to identify the sandy zone on NCOS as the most successful.

Based on those results we experimentally distributed more than 50,000 seeds in the winter and spring of 2024 and are now monitoring approximately 1,800 flowering individuals. Check out our new Rare Plant sign on Venoco Road and look into NCOS for the blooming flowers!

'Ap Construction

You may have seen racks of California Bulrush (*Schoenoplectus californicus*), or stapan, drying in the Whittier Parcel area near the NCOS parking lot. This is part of the process for building a Chumash house, or 'ap, overseen by Frank Arredondo. You are welcome to come by and chat with Frank to learn more on Mondays and Wednesdays in July from 5-7pm.

Gopher Snakes

Of all our beloved wildlife, one of our favorites to come across is the beautiful and benevolent gopher snake (*Pituophis catenifer*). More specifically, the gopher snakes in our area are San Diego gopher snakes, *Pituophis catenifer ssp. annectens*, one of 5 subspecies found in California. Completely harmless and usually quite docile, these beautiful snakes can grow to 9 feet, although this is rare. Many snakes and

lizards are being seen more regularly now, based on our ongoing coverboard monitoring project. This year has been a particularly good year for them and we have enjoyed many sightings, including several large adults displaying reproductive behavior. Despite their common name, they probably feed on mice, voles, and rats as much as they do gophers, all of which they kill by powerful constriction.

Somewhat similar in appearance to rattlesnakes, they have different patterning, are generally longer and not as stout, have smaller, narrower heads, round pupils, and are generally more glossy/shiny. They also lack rattles and the typical black and white banding near the tail that rattlers sometimes do. Gopher snakes will hiss and vibrate their tails in dry leaves to mimic rattlesnakes, but it's all bluff. While rattlesnakes occur north of the 101 in our area, there has only been a single rattlesnake record on campus in recent decades from Coal Oil Point in the early 1980's.

Gopher snakes have it tough in today's world around campus, where they are preyed on by hawks, herons, skunks, raccoons, bobcats, coyotes, and more. What's worse, they now face threats they have no evolutionary wisdom against, like cars and other machinery, plastic bird netting which ensnares and kills them, and people who would do them harm out of fear or bias.

Across the channel, Santa Cruz Island has its own, smaller subspecies, *P. c. pumilis*, which rarely gets over three feet. Pumilis means dwarf in Latin. Contrary to popular and confident opinion, there are no bull snakes (*P. c. sayi*), in California. Mary Yee, the last first speaker, said the Chumash believed all land animals had their counterparts in the sea, and vice versa. Gopher snakes, she said, were the barracuda of the land, and barracuda the gopher snakes of the sea.

Eagle Scout Project

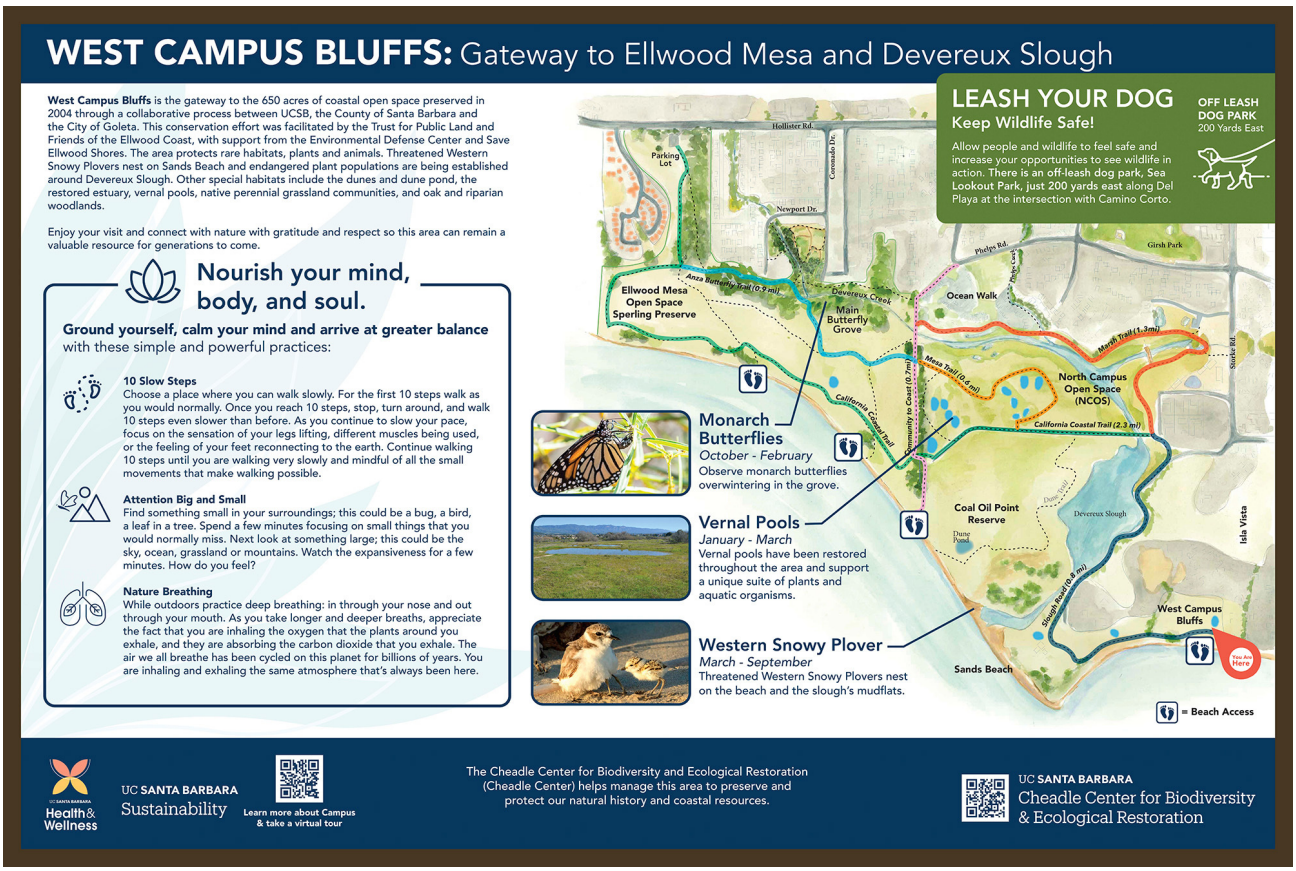
There's a new bench at NCOS! This is thanks to Mitchell Maskrey (second from left), who constructed the bench as part of his Eagle Scout Project for Troop 26. This beautiful wood bench is sheltered from the rain and looks out onto the eastern salt marsh transition.

Feature Story

New Educational Signage

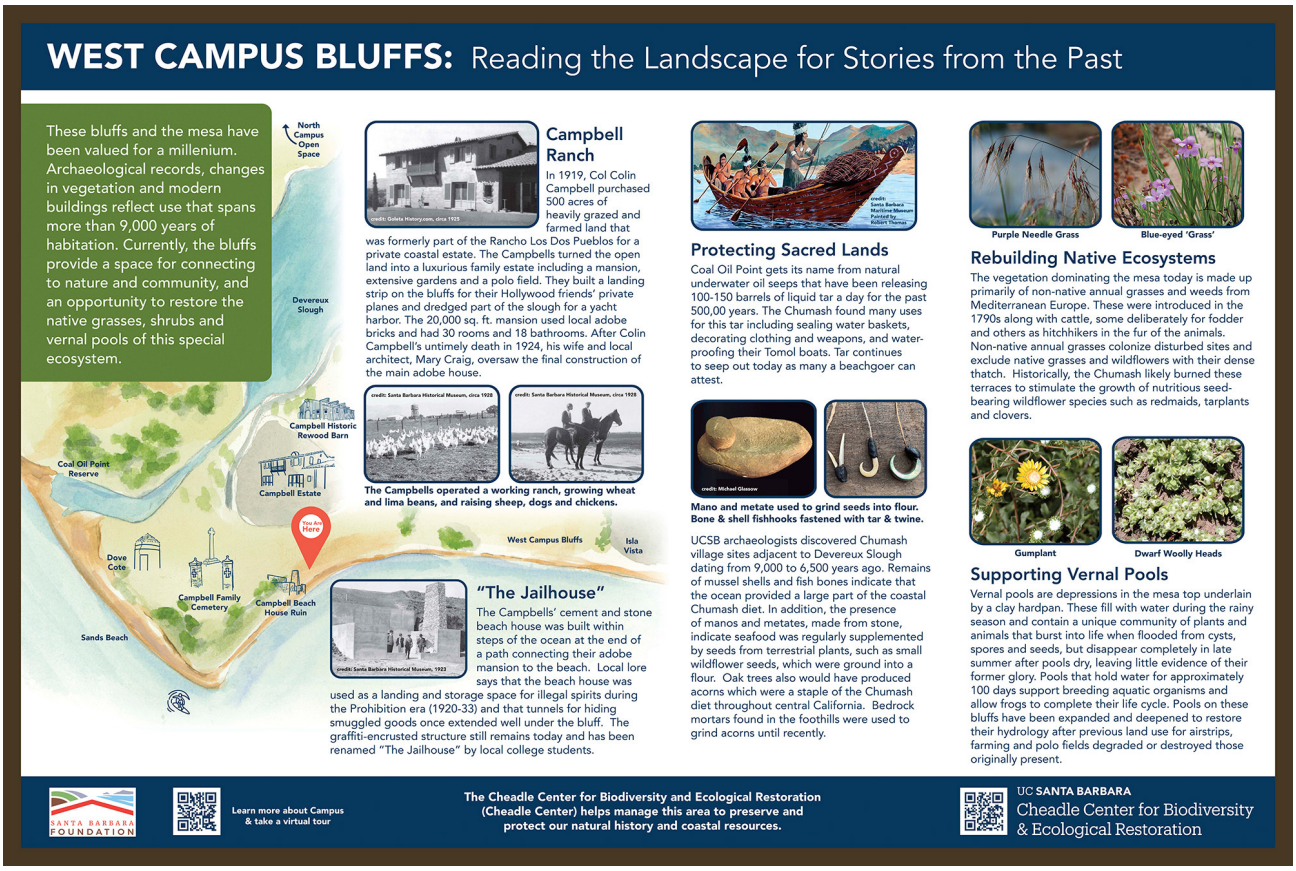
At the Cheadle Center, a key aspect of our work is educating the community and site visitors about the ecology, biology, and land use history of our management areas. One of the ways we achieve this is through the use of informative signage. Recently, we completed several new signs in collaboration with the Santa Barbara Foundation and UCSB's Sustainability and Health and

Wellness departments that will be installed at the West Campus Bluffs, Campus Lagoon, and UCSB Greenhouse and Gardens area.



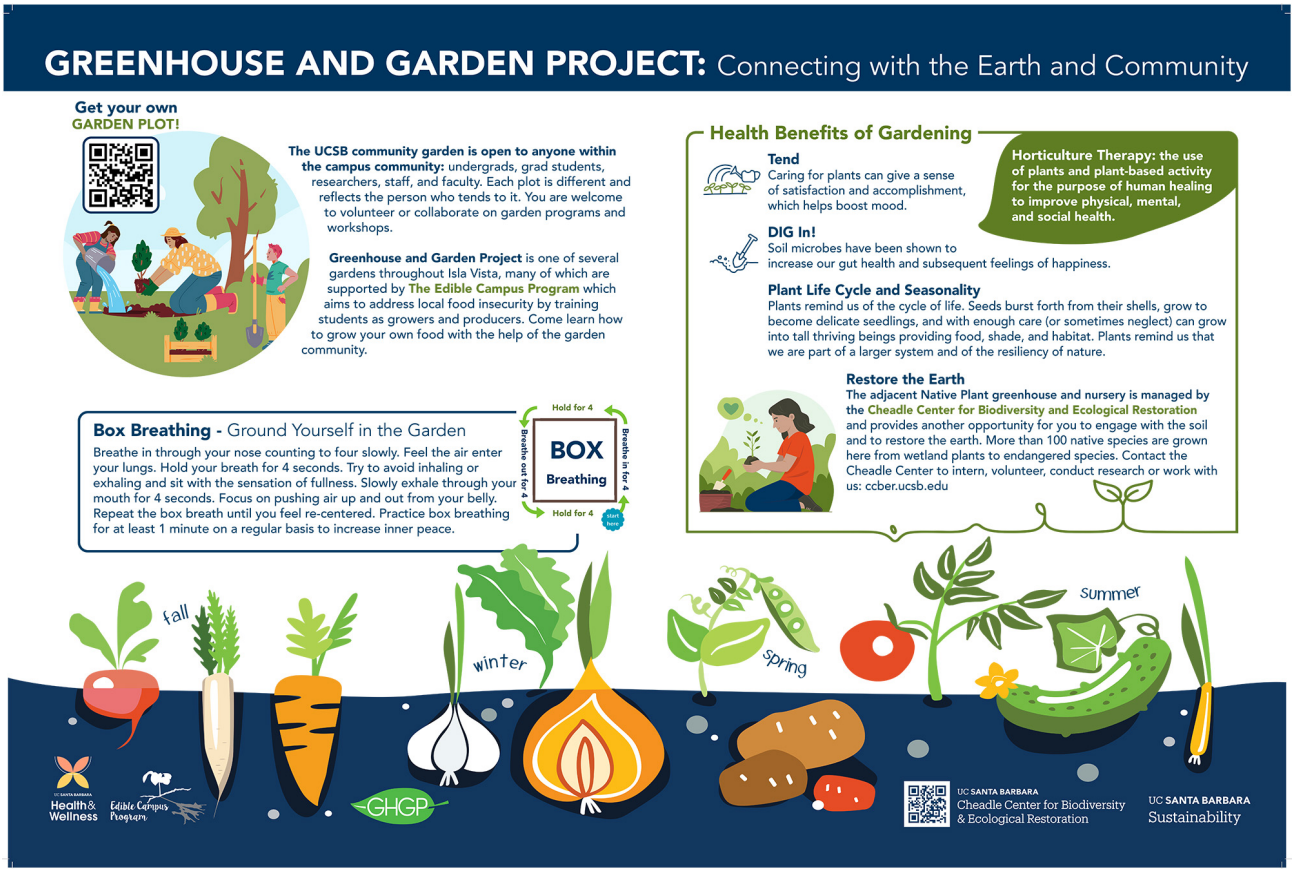
The West Campus Bluffs are a diverse ecological and historically significant area, serving as a gateway to Ellwood Mesa and Devereux Slough. Preserved in 2004, the bluffs provide a gateway to connection to a variety of plant and animal species, including threatened ones like the Western Snowy Plover on Sands Beach. Spanning over 9,000 years of human habitation, the bluffs feature notable historical sites such as Campbell Ranch, converted into a luxurious estate in 1919, and "The Jailhouse," utilized during Prohibition.

Archaeological findings reveal Chumash villages dating back millennia, showcasing artifacts like grinding tools and fishhooks. Ecologically, ongoing restoration efforts focus on native vegetation and vital vernal pools, crucial for supporting diverse habitats. Managed by the Cheadle Center, the bluffs are safeguarded for their natural and cultural heritage. Visitors are encouraged to engage with nature responsibly, practicing mindfulness and environmental respect to ensure preservation for future generations.



The UCSB Campus Lagoon is a 31-acre wetland, separated from the ocean by berms, offering a serene environment perfect for mindfulness and wellness activities. Visitors can practice grateful contemplation, engage their senses on a Five Senses Mindfulness Walk, or enjoy deep belly breathing by the ocean. The area features several trails, including the Lagoon Loop, Lagoon Island Loop, Manzanita Trail, East Bluff Walk, and Ocean Walk, each showcasing diverse habitats and scenic views.

The UCSB Community Garden is an inclusive space open to undergraduates, grad students, researchers, staff, and faculty, offering unique plots and providing opportunities for volunteering and collaboration in garden programs and workshops. Supported by The Edible Campus Program, the Greenhouse and Garden Project is one of several gardens in Isla Vista, aiming to address food insecurity by training students as growers and producers, teaching them how to grow their own food with community support.



Gardening offers numerous health benefits, including a sense of satisfaction and accomplishment, improved gut health through soil microbes, and insights into the plant life cycle, fostering resiliency and a sense of connection to the larger ecosystem. Additionally, the adjacent Native Plant greenhouse and nursery, managed by the Cheadle Center, provides further opportunities to engage with the soil and ecological restoration. Horticulture therapy, which uses plants and plant-based activities, enhances physical, mental, and social health. The practice of box breathing—an exercise involving a rhythmic pattern of inhaling, holding, exhaling, and holding—can be used in the garden to increase inner peace.

Volunteer Opportunities

"Second Saturdays" at NCOS

July 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 - 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

July 20th, 9:30 - 11:00

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

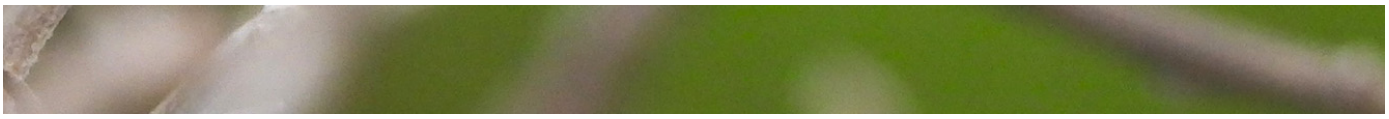
Community Photos

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!

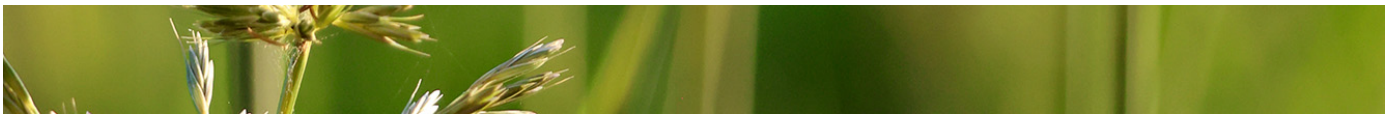
Ruddy Duck in algal camouflage. Photo by Sally Colman.

Song Sparrow at the North Campus Open Space. Photo by Sally Colman.

Anna's Hummingbird on nest at Campus Lagoon. Photo by Lynn Scarlett.



Orange-crowned Warbler at Campus Lagoon. Photo by Lynn Scarlett.



Giant Wild Rye catching the light at NCOS. Photo by Karen Lunsford.

A tiny Black-necked Stilt chick forages in the NCOS saltmarsh. This chick is one of at least four successful nesting efforts by this species. High water levels provided safe island refuges, supporting successful nesting by killdeer, mallards, geese, gadwalls, and stilts. Photo by Jeremiah Bender.

A flock of Yellow-headed Blackbirds on the NCOS Mesa. Photo by Jeremiah Bender.

Yellow-headed Blackbird in flight over the NCOS Mesa. Photo by Jeremiah Bender.

Hooded Oriole at the Campus Lagoon. Photo by Jeremiah Bender.

A Great Egret swoops through the mist at the Campus Lagoon. Photo by Jeremiah Bender.

Saltmarsh Dodder (*Cuscuta salina*) flowering on the shores of the Campus Lagoon. This parasitic plant produces haustoria, rootlike structures that penetrate the cell walls of green plants and absorb nutrients and water. This individual has made its home on Alkali Heath (*Frankenia salina*). Photo by Jeremiah Bender.

A tiny jumping spider balances on Bush Sunflower (*Encelia californica*) on the NCOS Mesa slopes. Photo by Jeremiah Bender.

A Yellow-faced Bumblebee (*Bombus vosnesenskii*) approaches Common Phacelia (*Phacelia distans*) at the NCOS Visitor Plaza. Photo by Jeremiah Bender.

A hungry hoverfly feeds on Clustered Tarweed (*Deinandra fasciculata*). Photo by Jeremiah Bender.

A *Diadasia sp*. bee pollinates Coastal Bushmallow (*Malacothamnus fasciculatus*). Photo by Jeremiah Bender.

A crab spider lies in wait on Coastal Bushmallow (*Malacothamnus fasciculatus*). Photo by Jeremiah Bender.

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North Campus Open Space Restoration Project, Click here, or email ncos@ccber.ucsb.edu

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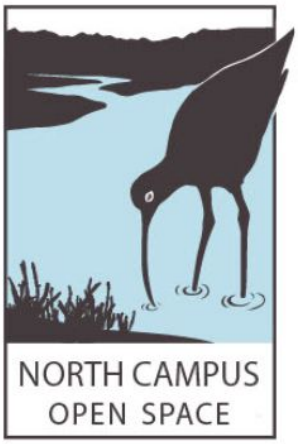

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