

# UC Santa Barbara

## Newsletters

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UCSB Restoration Register - July 2024

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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](mailto: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.

## WEST CAMPUS BLUFFS: Gateway to Ellwood Mesa and Devereux Slough

**West Campus Bluffs** is the gateway to the 650 acres of coastal open space preserved in 2004 through a collaborative process between UCSB, the County of Santa Barbara and the City of Goleta. This conservation effort was facilitated by the Trust for Public Land and Friends of the Ellwood Coast, with support from the Environmental Defense Center and Save Ellwood Shores. The area protects rare habitats, plants and animals. Threatened Western Snowy Plovers nest on Sands Beach and endangered plant populations are being established around Devereux Slough. Other special habitats include the dunes and dune pond, the restored estuary, vernal pools, native perennial grassland communities, and oak and riparian woodlands.

Enjoy your visit and connect with nature with gratitude and respect so this area can remain a valuable resource for generations to come.

**Nourish your mind, body, and soul.**

Ground yourself, calm your mind and arrive at greater balance with these simple and powerful practices:

**10 Slow Steps**  
Choose a place where you can walk slowly. For the first 10 steps walk as you would normally. Once you reach 10 steps, stop, turn around, and walk 10 steps even slower than before. As you continue to slow your pace, focus on the sensation of your legs lifting, different muscles being used, or the feeling of your feet reconnecting to the earth. Continue walking 10 steps until you are walking very slowly and mindful of all the small movements that make walking possible.

**Attention Big and Small**  
Find something small in your surroundings; this could be a bug, a bird, a leaf in a tree. Spend a few minutes focusing on small things that you would normally miss. Next look at something large; this could be the sky, ocean, grassland or mountains. Watch the expansiveness for a few minutes. How do you feel?

**Nature Breathing**  
While outdoors practice deep breathing: in through your nose and out through your mouth. As you take longer and deeper breaths, appreciate the fact that you are inhaling the oxygen that the plants around you exhale, and they are absorbing the carbon dioxide that you exhale. The air we all breathe has been cycled on this planet for billions of years. You are inhaling and exhaling the same atmosphere that's always been here.

**LEASH YOUR DOG** Keep Wildlife Safe!

Allow people and wildlife to feel safe and increase your opportunities to see wildlife in action. There is an off-leash dog park, Sea Lookout Park, just 200 yards east along Del Playa at the intersection with Camino Corto.

**Monarch Butterflies**  
October - February  
Observe monarch butterflies overwintering in the grove.

**Vernal Pools**  
January - March  
Vernal pools have been restored throughout the area and support a unique suite of plants and aquatic organisms.

**Western Snowy Plover**  
March - September  
Threatened Western Snowy Plovers nest on the beach and the slough's mudflats.

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Sustainability

[Learn more about Campus & take a virtual tour](#)

The Cheadle Center for Biodiversity and Ecological Restoration (Cheadle Center) helps manage this area to preserve and protect our natural history and coastal resources.

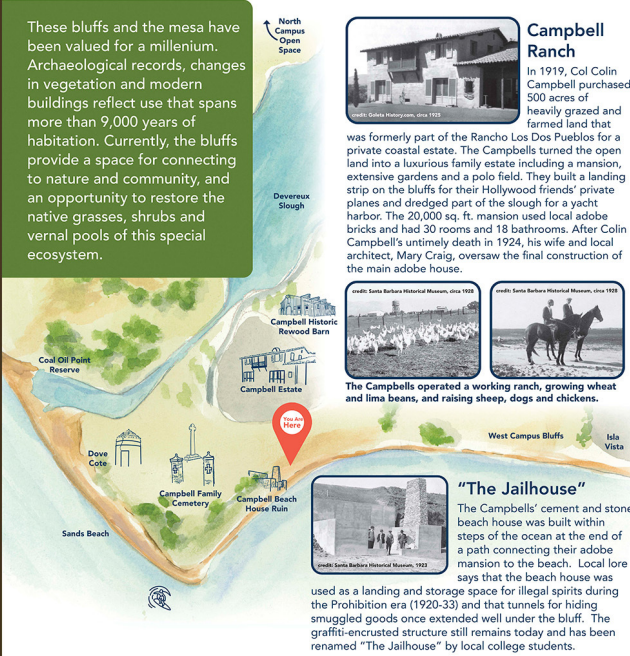
The West Campus Bluffs are a diverse ecological and historically significant area, serving as a gateway to Ellwood Mesa and Devereux Slough. Preserved in 2004, the bluffs provide a gateway to connection to a variety of plant and animal species, including threatened ones like the Western Snowy Plover 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.



# WEST CAMPUS BLUFFS: Reading the Landscape for Stories from the Past

These bluffs and the mesa have been valued for a millenium. Archaeological records, changes in vegetation and modern buildings reflect use that spans more than 9,000 years of habitation. Currently, the bluffs provide a space for connecting to nature and community, and an opportunity to restore the native grasses, shrubs and vernal pools of this special ecosystem.



### Campbell Ranch

In 1919, Col Colin Campbell purchased 500 acres of heavily grazed and farmed land that was formerly part of the Rancho Los Dos Pueblos for a private coastal estate. The Campbells turned the open land into a luxurious family estate including a mansion, extensive gardens and a polo field. They built a landing strip on the bluffs for their Hollywood friends' private planes and dredged part of the slough for a yacht harbor. The 20,000 sq. ft. mansion used local adobe bricks and had 30 rooms and 18 bathrooms. After Colin Campbell's untimely death in 1924, his wife and local architect, Mary Craig, oversaw the final construction of the main adobe house.

### Protecting Sacred Lands

Coal Oil Point gets its name from natural underwater oil seeps that have been releasing 100-150 barrels of liquid tar a day for the past 500,000 years. The Chumash found many uses for this tar including sealing water baskets, decorating clothing and weapons, and waterproofing their Tomol boats. Tar continues to seep out today as many a beachgoer can attest.

### Rebuilding Native Ecosystems



The vegetation dominating the mesa today is made up primarily of non-native annual grasses and weeds from Mediterranean Europe. These were introduced in the 1790s along with cattle, some deliberately for fodder and others as hitchhikers in the fur of the animals. Non-native annual grasses colonize disturbed sites and exclude native grasses and wildflowers with their dense thatch. Historically, the Chumash likely burned these terraces to stimulate the growth of nutritious seed-bearing wildflower species such as redmaids, tarplants and clovers.

### "The Jailhouse"

The Campbells' cement and stone beach house was built within steps of the ocean at the end of a path connecting their adobe mansion to the beach. Local lore says that the beach house was used as a landing and storage space for illegal spirits during the Prohibition era (1920-33) and that tunnels for hiding smuggled goods once extended well under the bluff. The graffiti-encrusted structure still remains today and has been renamed "The Jailhouse" by local college students.


### Supporting Vernal Pools

Vernal pools are depressions in the mesa top underlain by a clay hardpan. These fill with water during the rainy season and contain a unique community of plants and animals that burst into life when flooded from cysts, spores and seeds, but disappear completely in late summer after pools dry, leaving little evidence of their former glory. Pools that hold water for approximately 100 days support breeding aquatic organisms and allow frogs to complete their life cycle. Pools on these bluffs have been expanded and deepened to restore their hydrology after previous land use for airstrips, farming and polo fields degraded or destroyed those originally present.

Learn more about Campus & take a virtual tour

The Cheadle Center for Biodiversity and Ecological Restoration (Cheadle Center) helps manage this area to preserve and protect our natural history and coastal resources.



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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.

# WELCOME TO THE LAGOON OVERLOOK: Gateway to Nature Connection

**The 31 acre Campus Lagoon is a naturally formed wetland** with brackish water that historically would have been intermittently connected to the ocean at very high tides and after large rain events. It is currently separated from the ocean by berms which provide access to Lagoon Island and Campus Point.

**Nourish your mind, body, and soul.**

Pause for a quiet moment of reflection on your walk.

**Grateful Contemplation**  
Find a comfortable spot outside and spend the next 5 minutes reviewing positive things that happened today. This trains your brain to recognize good things, however small, that occur each day. Practice daily and you will begin to notice positive things in your environment and life that you hadn't noticed before.

**FIVE Senses Mindfulness Walk**  
Counting and engaging the senses are two great ways to practice mindfulness. As you walk, make a special effort to be aware of your surroundings and count:  
5 things you can see  
4 things you can hear  
3 things you can feel  
2 things you can smell  
1 thing you can taste

**Belly Breathing**  
Place one hand on your belly and the other on your chest. Take a deep breath in through your nose; feeling your chest swell with air. Exhale through your mouth feeling your belly constrict and push all of the air out. Find a comfortable place to watch the ocean and match your breath to the wave cycle.

**Explore the Campus Lagoon**

- Lagoon Loop (1.5 mi):** Salt marsh, dunes, restored coastal bluff scrub and wildflowers; observe how these habitats change with the seasons.
- Lagoon Island Loop (0.5 mi):** Enjoy wildflowers and an oak woodland established from acorns planted in 2005.
- Manzanita Trail (0.5 mi):** Explore restored vernal pools and bioswales that capture rainfall and runoff, respectively, and support unique wetland plants and animals.
- East Bluff Walk (0.75 mi):** Take in mountain and ocean views.
- Ocean Walk (1.5 mi):** At low tide you can bypass rocky headlands on the beach from Isla Vista to Goleta Beach.

**MEET OUTSIDE!**  
Have a walking meeting.

This spot connects you to more than **3 miles of trails** and **several miles of low tide beach walks.**

**Pacific Ocean**

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Health & Wellness

Learn more about Campus & take a virtual tour

The Campus Lagoon is managed by the Cheadle Center for Biodiversity and Ecological Restoration (Cheadle Center) in order to provide opportunities for the community to connect with nature and to restore our native biodiversity. Learn more from signs along the trails, the virtual tour, and through our website: [www.ccbier.ucsb.edu](http://www.ccbier.ucsb.edu)

COASTAL FUND  
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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.

# GREENHOUSE AND GARDEN PROJECT: Connecting with the Earth and Community

## Get your own GARDEN PLOT!



The UCSB community garden is open to anyone within the campus community: undergrads, grad students, researchers, staff, and faculty. Each plot is different and reflects the person who tends to it. You are welcome to volunteer or collaborate on garden programs and workshops.

Greenhouse and Garden Project is one of several gardens throughout Isla Vista, many of which are supported by The Edible Campus Program which aims to address local food insecurity by training students as growers and producers. Come learn how to grow your own food with the help of the garden community.

## Box Breathing - Ground Yourself in the Garden

Breathe in through your nose counting to four slowly. Feel the air enter your lungs. Hold your breath for 4 seconds. Try to avoid inhaling or exhaling and sit with the sensation of fullness. Slowly exhale through your mouth for 4 seconds. Focus on pushing air up and out from your belly. Repeat the box breath until you feel re-centered. Practice box breathing for at least 1 minute on a regular basis to increase inner peace.



## Health Benefits of Gardening



**Tend**  
Caring for plants can give a sense of satisfaction and accomplishment, which helps boost mood.



**DIG In!**  
Soil microbes have been shown to increase our gut health and subsequent feelings of happiness.

### Plant Life Cycle and Seasonality

Plants remind us of the cycle of life. Seeds burst forth from their shells, grow to become delicate seedlings, and with enough care (or sometimes neglect) can grow into tall thriving beings providing food, shade, and habitat. Plants remind us that we are part of a larger system and of the resiliency of nature.

### Restore the Earth

The adjacent Native Plant greenhouse and nursery is managed by the Cheadle Center for Biodiversity and Ecological Restoration and provides another opportunity for you to engage with the soil and to restore the earth. More than 100 native species are grown here from wetland plants to endangered species. Contact the Cheadle Center to intern, volunteer, conduct research or work with us: [ccber.ucsb.edu](http://ccber.ucsb.edu)



**Horticulture Therapy:** the use of plants and plant-based activity for the purpose of human healing to improve physical, mental, and social health.



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](mailto: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](mailto: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](mailto: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.



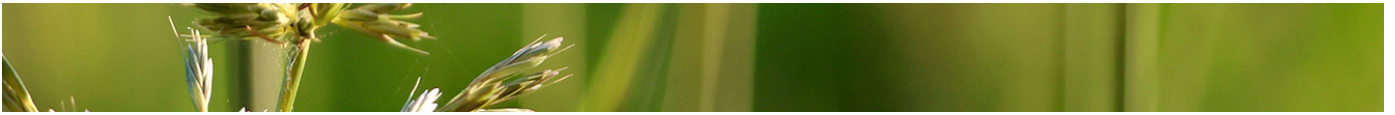




Orange-crowned Warbler at Campus Lagoon. Photo by Lynn Scarlett.







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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