

UC Santa Barbara

Newsletters

Title

UCSB Restoration Register - September 2024

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UC SANTA BARBARA
**Cheadle Center for Biodiversity
& Ecological Restoration**

Restoration Register

September 2024



Forster's Tern taking a dive into the Devereux Slough.

Updates

[*Lagoon Prescribed Burn*](#)



Another successful burn has been conducted on Lagoon Island! Since 2009, the Cheadle Center has carried out eight prescribed burns on Lagoon Island to control non-native, invasive grasses and restore native coastal sage scrub and wildflower meadow habitats. These burns are based on research by former EEMB graduate student Alice Levine, who conducted several small-scale experimental burns at the Campus Lagoon from 2006 to 2008. Alice found that by using supplemental woody fuel to increase the intensity of the burn to temperatures of 200°C, the seedbank of invasive grasses (primarily *Bromus diandrus*, or ripgut brome) could be reduced by up to 99%.

Following the burns, remaining grasses were weeded, and native coastal sage scrub species were planted or seeded, resulting in the successful restoration of areas once dominated by ripgut brome into healthy, diverse sage scrub. This method of burning, weeding, and planting was repeated several times in the following years, leading to a significant conversion of Lagoon Island from non-native grassland to native coastal sage scrub.



In 2016, a different approach was taken with the fifth and largest burn to date. Instead of planting more coastal sage scrub after the burn, large quantities of locally sourced native wildflower seeds were spread over the burned area. The main species used in the 2016 burn included California poppy (*Eschscholzia californica*), common popcorn flower (*Cryptantha clevelandii*), miniature suncups (*Camissoniopsis micrantha*), blue toadflax (*Nuttallanthus texanus*), Nuttall's snapdragon (*Antirrhinum nuttallianum*), and red maids (*Calandrinia menziesii*). Red maids are particularly notable as they are early bloomers and known as fire-followers, meaning their germination and growth are enhanced in recently burned areas.

Building on the success of the 2016 burn plot, the Cheadle Center has continued to focus on wildflowers in the four subsequent burns, with little to no additional planting and an even greater variety of wildflower species added to the mix. This year, we tried something new— in addition to burning a 1/4 acre of invasive grassland, we also burned a small portion of the 2016 burn plot to study how this previously restored area responds to fire. The photos below show the before and after of this experimental burn.



Before and after images of the experimental burn conducted on the 2016 burn plot area.

We would like to thank the Associated Students Coastal Fund for their continued support of the prescribed burn.

Ellwood Marine Terminal Restoration Project



Things are rapidly changing at the EMT project! This week, the demolition of the oil tanks began, and contractors are already making swift progress on the northern tank. Check out the videos below to watch the process.



EMT Tank Demolition Timelapse - 9/10/2024. Video by Elliot Lowndes.



EMT Tank Demolition - 9/11/2024. Video by John Fitzgerald.

Community engagement and outreach for the EMT project are ongoing, with the most recent event being a community webinar that occurred on Monday, September 9th. In case you missed it, the video is available here.



EMT Community Webinar - 9/09/2024.

Additionally, below is the most recent plan for the EMT restoration project. Please send any comments or suggestions to ncos@ccber.ucsb.edu.



RESTORE NATURE & CULTURE

GATHERING AREA
 Open multi-use area with circular seating, entrances at cardinal directions, nested into the scrub, tucked into the trees, and discovered upon arrival. Flexible space for educational lectures, to practice ceremonies and build traditional Chumash cultural elements such as the 'sp'.

OVERLOOK WITH BENCH
 Culturally important themes and natural elements can be expressed in the overlook amenities. Overlooks are sited for quiet contemplation and nature observation.

INTERPRETIVE SIGNAGE
 Educational signage to highlight native animals and plants of the area, natural processes, and Chumash culture & history. Including whale migration themes, star knowledge, and plant knowledge and uses. QR codes can show deeper dives into topics and self-guided tours.

BIKE PARKING AND CHUMASH CULTURAL THEME: WHALE OR DOLPHIN

ENTRY SIGN

CEREMONIAL GATE - TRAIL CAN BE CLOSED OFF AT THIS LOCATION FOR PRIVATE OR CULTURAL EVENTS

CHUMASH HISTORY OF THE SITE INTERPRETIVE AREA WITH OVERLOOK & BENCH

EDUCATIONAL OPPORTUNITY: IMPORTANCE OF WETLANDS, USES OF WETLAND PLANTS

ENCLOSED PORTABLE ADA RESTROOM, RESTRICTED PUBLIC USE FOR EVENTS AND REGULAR LOCAL VISITORS (CODE ACCESS)

EDUCATIONAL OPPORTUNITY: IMPORTANCE OF GRASSLANDS, CHUMASH CULTURAL BURNS AND HABITAT MANAGEMENT PRACTICES

EDUCATIONAL OPPORTUNITY: COASTAL PROCESSES, COASTAL RESOURCES, TRADITIONAL CHUMASH CULTURE RELATED TO THE OCEAN

BALLAST POND OVERLOOK, EDUCATIONAL OPPORTUNITY FOR RECENT SITE INDUSTRIAL HISTORY, RE-USE PARTS OF TANKS

START OF COASTAL ACCESS BOARDWALK & STAIRS, ADA ACCESSIBLE OVERLOOK PLATFORM WITH BENCHES, INTERPRETIVE SIGNAGE.

COASTAL ACCESS BOARDWALK & STAIRS, OVERLOOK PLATFORM WITH BENCHES, INTERPRETIVE SIGNAGE.

COASTAL ACCESS BOARDWALK WITH OVERLOOK PLATFORM TRANSITIONS TO SIMPLE TRAIL TO THE SAND

REPAIR EROSION AND RESTORE HABITAT

SCALE: 1"=50' 0" 0 10 20 30 40 50 FEET
 9/1/2024

The restoration work should begin mid November and there will be weekly opportunities for tree planting in Winter and Spring quarters with Your Children's trees so stay tuned! We would like to thank the State Coastal Conservancy for funding the EMT outreach program and the Wildlife Conservation Board for supporting the EMT restoration work.

Farewell to Johnny



Cheadle Center staff member Johnny Alonzo will be leaving the team in late September—but don't worry, he won't be going far! Johnny will be joining the restoration management team at Coal Oil Point Reserve. Reflecting on his time with the Cheadle Center, Johnny says, "During my time at the Cheadle Center, I've gained valuable knowledge in ecological restoration and developed a deeper connection with the land we work to protect. I'm grateful to my coworkers, whose passion and dedication have made this journey so memorable."

Oak Group at NCOS

The premiere local Plein Air Art group known as the Oak Group has selected North Campus Open Space as the beneficiary of their October art show which will be at the Faulkner Gallery (Main Library) October 2nd - 31st, 2024 with the Opening on Thursday Oct 3rd from 5:30PM - 7:30PM. All are invited and we encourage you to attend and perhaps purchase art work featuring NCOS, Devereux Slough/COPR, Campus Lagoon, and Ellwood Mesa.

THE OAK GROUP

presents

Art is Restoration

"the idea is to repair the damages that are inflicted in life, to make something that is fragmented... into something whole."
Louise Bourgeois

An Exhibition of art benefiting the UCSB North Campus Open Space Project

October 2 - October 31

Faulkner Gallery

Artists' Reception Thursday Oct 3, 5:30pm to 7:30pm

North Campus Open Space is an extensive restoration of the upper arms of Devereux Slough, which represents an unprecedented turning back of the clock for over 100 acres of historic wetlands and native habitats. The site is managed by UC Santa Barbara's Cheadle Center for Biodiversity & Ecological Restoration and reflects a 10% increase in the total acreage of coastal wetlands along the Santa Barbara south coast. With its popular public trail system and affiliation with UC Santa Barbara, it is a celebrated community amenity and a living laboratory that provides expanding opportunities for research that help us better understand the positive impacts of restoring native habitats, their endemic species, and the effect of climate change on their ability, and ours, to thrive into the future.

For more information please visit: www.ncos.ccbber.ucsb.edu



VIEWABLE ONLINE OCT. 2 AT: WWW.OAKGROUP.ORG AND WWW.NCOS.CCBBER.UCSB.EDU

photo by Rick Garcia

Sheep grazing on the NCOS Mesa

This fall, the Cheadle Center will be using sheep in an experimental grazing effort on the mesa to: 1) reduce the biomass and seed volume of two nitrogen-fixing invasive plants (bur clover and sweet clover), which the sheep apparently prefer; and 2) decrease overall plant cover, allowing wildflowers and other species to germinate in the spring. This year's particularly wet conditions have stimulated significant clover germination and growth. Additionally, we chose not to mow the grassland this summer to observe bird interactions with the taller vegetation, resulting in more biomass than in other years. We observed several sparrow nesting events and hope that birders are submitting their breeding records to the [SB County Breeding Bird Study!](#) Thank you!

In preparation for the arrival of the Cuyama Lamb sheep next week, we have taken multiple biomass samples from five species (two native and three non-native) and will re-sample these communities after their three-week visit to assess how selective the sheep are and how much biomass they can remove. We will also be "growing out" any seeds found in their droppings to understand seed passage through their digestive systems.

We welcome your support for this project and any observations you might have about the sheep's

behavior. A shepherd and guard dog will be on-site at all times, and the sheep will be moved within electric fences. Please do not touch the fences!

Feature Story

A New Chapter for Monarch Butterflies: The Transformation of Goleta Butterfly Grove

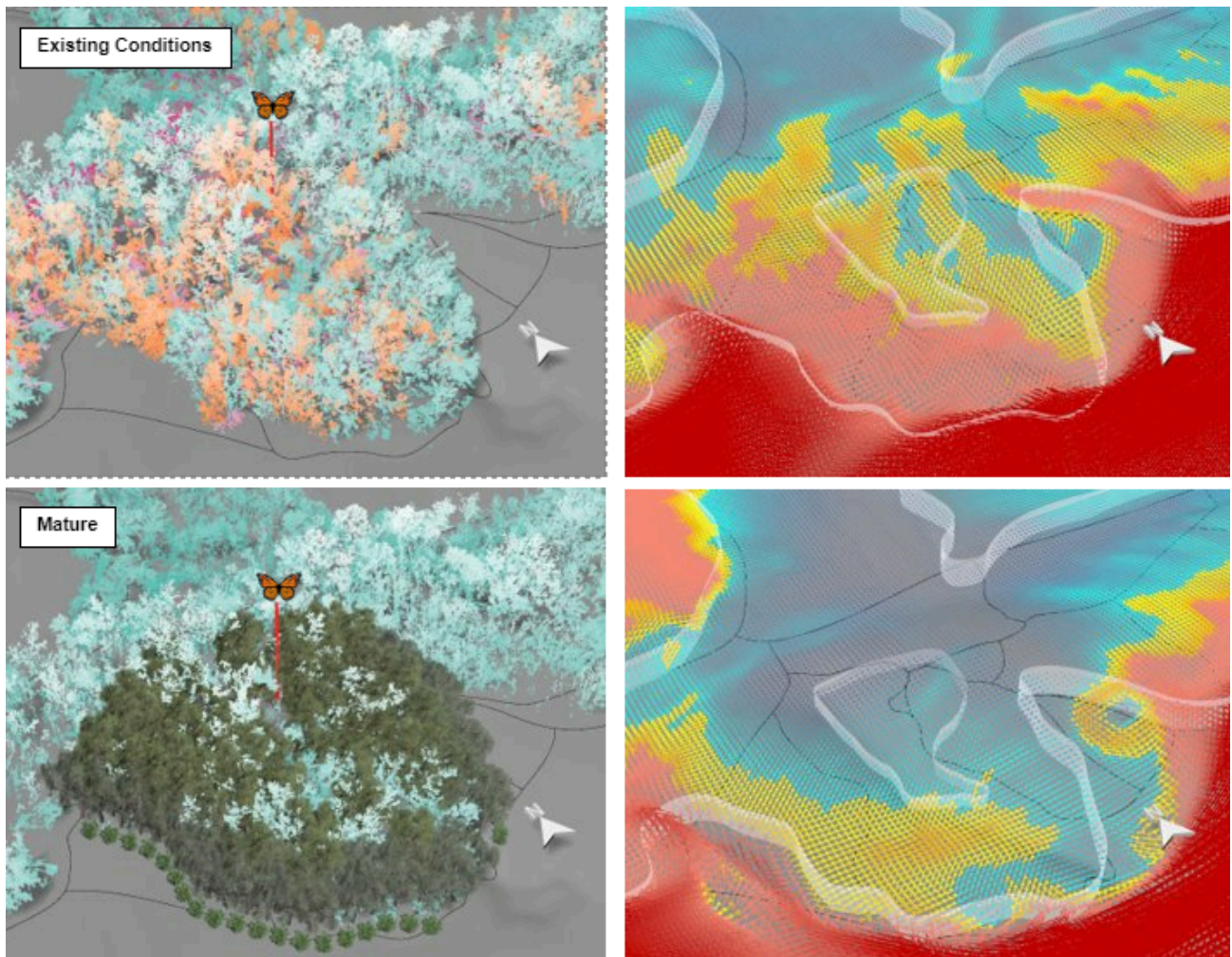


The monarch butterfly, an iconic symbol of Goleta, is facing a critical challenge in the United States. Their population is rapidly declining due to habitat loss, historic drought, and increased insecticide use. A crucial local habitat for monarchs is the Butterfly Grove at Ellwood Mesa, where they migrate every fall to spend several months in the coastal eucalyptus forests. However, this habitat is under severe threat due to the effects of climate change and environmental degradation.



Western monarch butterflies rely on the Goleta Butterfly Grove for shelter from winter storms. However, drought and widespread tree die-offs have caused significant declines in the butterfly population at Ellwood and throughout the western United States. Photo Credit - City of Goleta.

The severe drought from 2012 to 2016, the worst in over 1,200 years, devastated the eucalyptus tree population at Ellwood. Eucalyptus trees are crucial to monarch overwintering sites because they grow taller than most native trees and provide the necessary branching and canopy structure to support monarch aggregations during winter. The drought resulted in a significant loss of canopy cover, which reduced the overall overwintering habitat and made the grove more vulnerable to strong winds from multiple directions. This threatens the delicate balance needed for monarchs to overwinter successfully.



Dead trees (shown in pink and orange in the upper left) were mapped using a drone and LiDAR technology. A computer model was then created to simulate the removal of these dead trees and identify the optimal tree planting arrangement to minimize wind speeds within the Butterfly Grove. Low wind speeds (illustrated on the right in shades of blue) are essential for monarch butterfly habitat. Photo Credit - City of Goleta.

In response, the City of Goleta has approved the Ellwood Monarch Butterfly Habitat Management Plan, a strategic initiative developed over three years of community input and scientific research. The plan aims to balance reforestation of the Ellwood eucalyptus grove with wildfire risk reduction while also improving recreational trails and educational opportunities for visitors.

The management plan involves replanting over 1,200 eucalyptus and native trees in monarch habitat areas and installing more than 100,000 native plants to provide nectar sources for butterflies and other wildlife. A new irrigation system will be set up to support plant growth and offer emergency watering for trees. To mitigate wildfire risks, thousands of dead eucalyptus trees will be removed and chipped. Accessibility improvements will include building a new wooden footbridge across Devereux Creek for all-weather access, while recreational trails will be upgraded with a new signage program to minimize site impacts and enhance educational opportunities.

Additionally, two butterfly viewing areas will be created to promote learning and appreciation of nature, and wildlife and nesting bird management plans will be put in place to protect sensitive environmental resources during construction. The restoration effort will also focus on improving riparian areas to enhance wind protection and temperature regulation, creating a better

microclimate for monarchs.



Enhancements to the butterfly habitat areas will feature new trees and native plants, along with natural log benches and educational signage at the viewing sites. Photo Credit - City of Goleta.

The restoration of Goleta Butterfly Grove is not just a city effort; it is a community endeavor. Local organizations, volunteers, and university students are all contributing to the planting and maintenance of the site. The Cheadle Center is partnering with the City of Goleta to provide on-the-ground land stewardship, including native seed collection and grow out, invasive plant removal, erosion control, and other activities necessary to restore the Butterfly Grove. Cheadle Center staff will also lead volunteer work days and assist with a new community stewardship program.



With the community's support and a robust restoration plan in place, there is hope that this essential habitat can once again flourish, providing a safe haven for monarch butterflies during their migration. This project is a testament to the resilience of nature and the power of collective action, offering a renewed future for the butterflies and the people who cherish them.

Volunteer at Ellwood!

If you're passionate about helping monarch butterflies and want to get involved, consider volunteering for planting events or contributing to local conservation efforts. From October 5th to November 30th, you can join Your Children's Trees to plant trees in the Monarch Grove every Saturday from 8:15 a.m. to noon. The meeting spot will be the [Ellwood Mesa parking lot](#). Please RSVP using [this link](#). We'll also be hosting a volunteer day on September 28th as part of [Creek Week](#), focusing on the restoration of Devereux Creek. The meeting spot for the Creek Week volunteer day will be at the [SB Shores Gate at Ellwood](#). We hope to see you there!

Volunteer Opportunities

"Second Saturdays" at NCOS

September 14th, 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.

Saturdays at Ellwood

Saturdays, 8:15 - 12:00



From October 5th to November 30th, you can join Your Children's Trees to plant trees in the Monarch Grove every Saturday from 8:15 a.m. to noon. Meet at the [Ellwood Parking Lot](#). Please RSVP using [this link](#).



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

September 21st, 9:30 - 11:00

Come take a walk around NCOS and learn about native plants and animals with a trained Nature Guide. This month's tour will be a [Creek Week](#) event! Check out the [events calendar](#) for more fun outdoor events.

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!



Lark Sparrow at NCOS. Photo by Daniel Forseth.



White-faced Ibis in the seasonal pond at NCOS. Photo by Daniel Forseth.



Egret congregation in the seasonal pond at NCOS. Photo by Daniel Forseth.



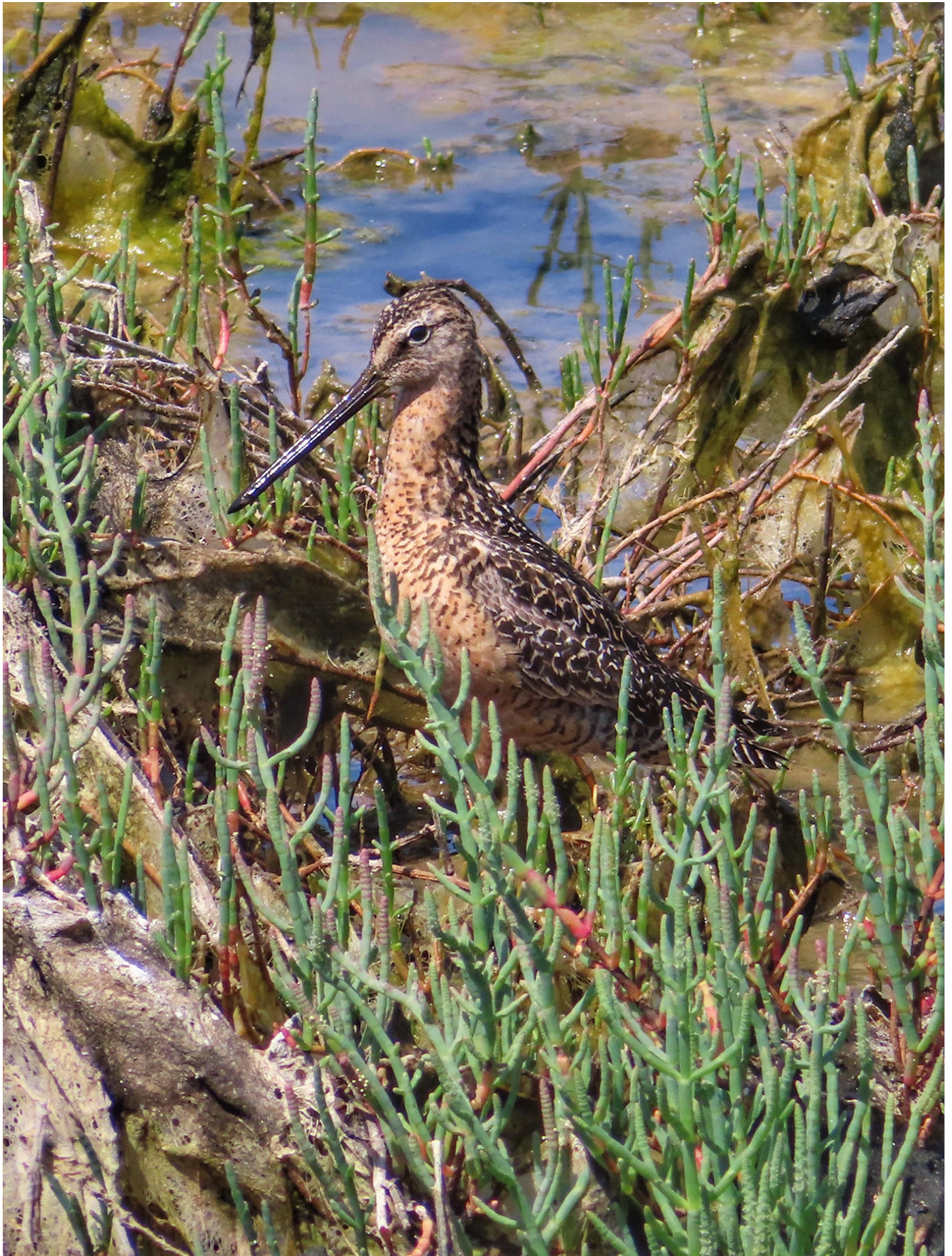
Egret, herons, and ducks oh my! A large gathering of birds in the main channel at NCOS. Photo by Daniel Forseth.



Red Fox at the Campus Lagoon. Photo by Daniel Forseth.



Sunrise over NCOS. Photo by Daniel Forseth.



Long-billed Dowitcher in the salt marsh at NCOS. Photo by Sally Colman.



Black_crowned Night-heron at Whittier Pond. Photo by Lee Ann Palmer.



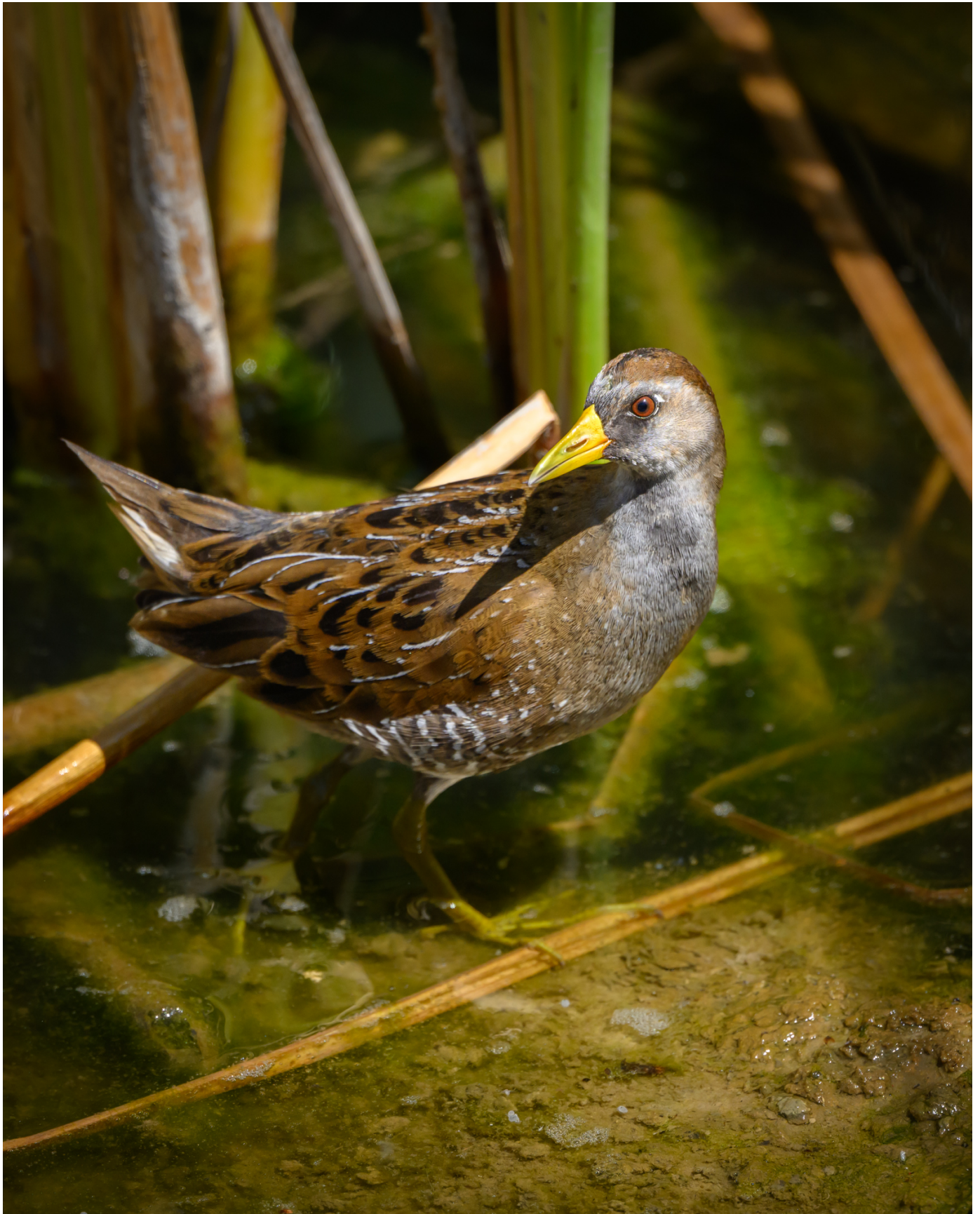
Semipalmated Sandpiper at NCOS. Photo by Steve Colwell.



Forster's Tern after a successful dive into the Devereux Slough at NCOS. Photo by Jeremiah Bender.



Loggerhead shrike on the NCOS Mesa. Photo by Jeremiah Bender.



Sora in Phelps Creek at NCOS. Photo by Jeremiah Bender.



Western Pygmy Blue butterfly on Western Sea Purslane (*Sesuvium verrucosum*) at NCOS. Photo by Jeremiah Bender.



Native bee pollinating Salt-marsh Bird's-beak (*Chloropyron maritimum* ssp. *maritimum*). Photo by Jeremiah Bender.



Wilson's Phalaropes foraging in the slough at NCOS. Video by Mark Holmgren.



Virginia Rail at Phelps Creek. Video by Jeremiah Bender.

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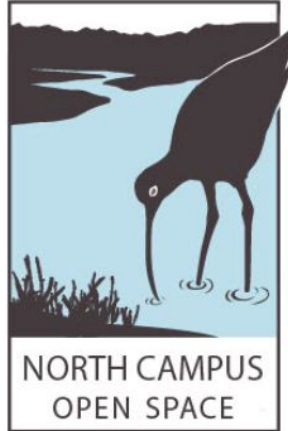
For more information on the North Campus Open Space Restoration Project, [Click here](#), **or email** ncos@ccber.ucsb.edu

To support our work [click here](#)

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