

UC Santa Barbara

Newsletters

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NCOS News - April 2020

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UC SANTA BARBARA

North Campus Open Space Restoration Project

NCOS NEWS

April 2020



California sunflower (*Encelia californica*) blooming along the Marsh Trail.

UPDATES & EVENTS

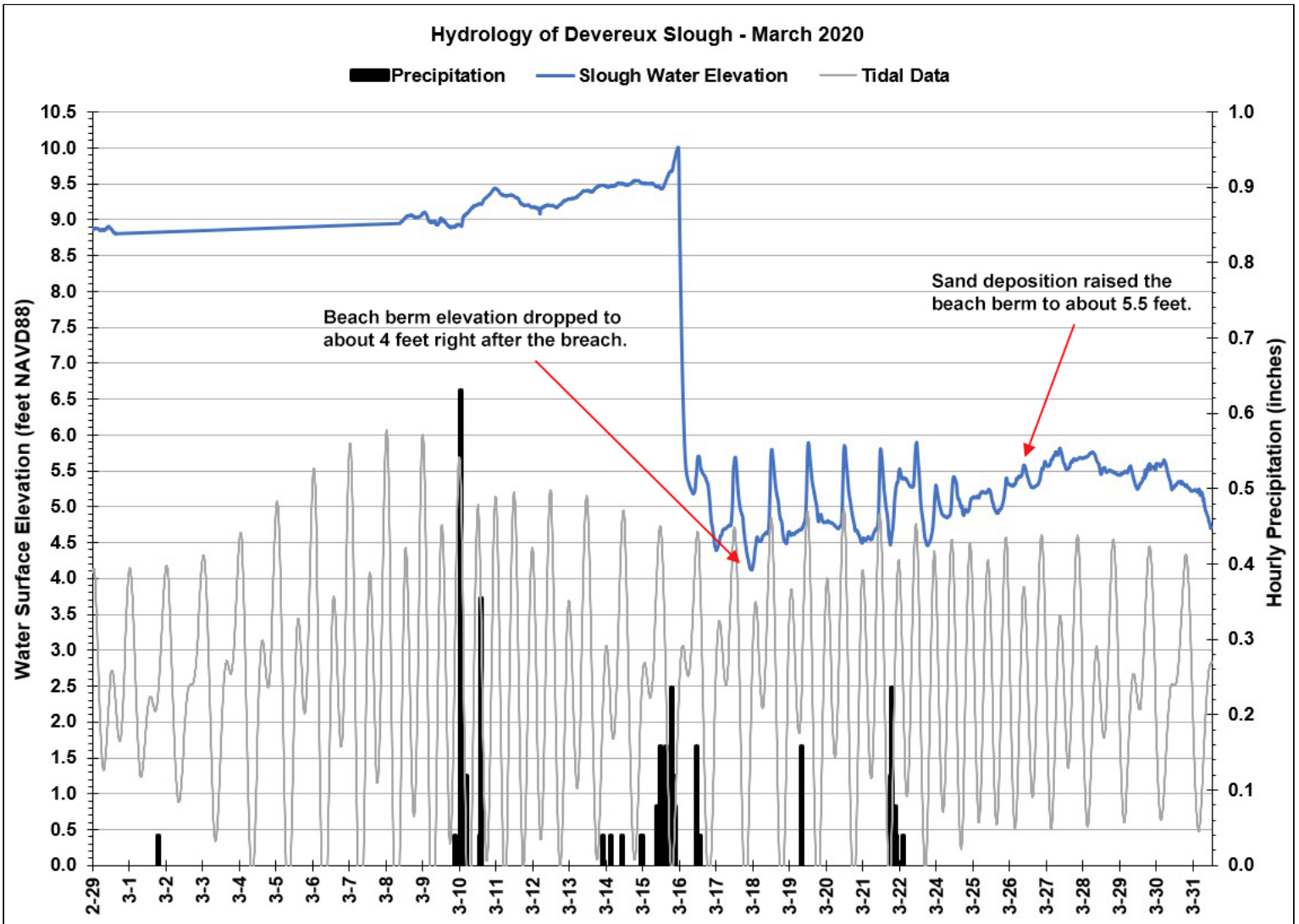
No Second Saturday Planting

Due to the COVID-19 shelter at home orders, we will not be having Second Saturday planting days until it is considered safe to do so. We hope to see you at NCOS soon!

Where did all the water go?!

If you have been out to NCOS recently, you likely have noticed that the water level has dropped significantly. How and why did that happen? During a rainstorm on March 16th, the water level in the slough was already at 9.5 feet in elevation (above sea level) and very close to the top of the sand berm at the mouth. By 3:30 PM, the water level had risen enough from the rain that it began to leak over the sand berm, and by 4:30 PM this trickle became a raging river with water gushing out to sea at a rate of about 16.3 million gallons per hour. Over 6 hours, nearly 98 million gallons of water in the slough flowed out of the system and the water level elevation dropped by nearly five feet, from a high of 10 down to 5.4

feet. Following this, tidal flows came into the slough for 8 to 9 days, as can be seen by the fluctuating water level in the chart below. Sand deposition on the berm raised its elevation to about 5.5 feet by March 27th, cutting off the tidal flows.



This plot shows the Devereux Slough water level elevation, hourly rainfall, and tide data for the month of March. The moment when the water in the slough breached the sand berm is exhibited by the steep drop in water level elevation on the 16th.



This photo shows the water in the slough just beginning to trickle over the sand berm at the beach.



So much water! This video shows the breach of Devereux Slough in full swing at Sands Beach.



Pickleweed (*Salicornia pacifica*) in the eastern arm of the NCOS wetland that was under water for 3 months is now exposed after the slough breach.

As the water receded at NCOS, plants in the salt marsh that had been submerged for months were finally exposed. Many plants would die in this situation, yet the species that were planted in these areas are halophytes that can tolerate highly variable salinity and water levels, and these hardy plants are sprouting back already (see photos below)!



Jaumea (*Jaumea carnosa*)



Alkali Heath (*Frankenia salina*)



California Sea Lavender (*Limonium californicum*)



Pickleweed (*Salicornia pacifica*)

NCOS Photo Documentation & Monitoring Report

CCBER has been conducting quarterly photo monitoring of NCOS since December 2016, just before the restoration project began, and you can now view all of the photos through a web map! [Take a look](#) and see how much NCOS has changed over the years.

The photo-documentation is just one of many components of monitoring being conducted at NCOS to assess progress towards the key goals of the project. These goals include the restoration of native vegetation and habitats that benefit wildlife, creating a functioning estuary that serves as a flood plain, establishing a refuge for threatened and endangered species, and providing an opportunity for the community to experience nature through walking, research, educational programming and experiential learning. Read all about how we are monitoring the progress towards accomplish these goals in our [2nd Annual NCOS Monitoring Report](#).



06/30/2017



01/22/2019

04/16/2018



01/08/2020

Trail Construction

As you walk the Marsh Trail, you will see work happening along the trail edge where we are constructing overlooks with benches for enjoying the views. The Discovery trail is also under construction and will feature several little bridges, check dams to reduce erosion, and large rocks - some weighing as much as 30,000 lbs!



Overlook under construction on the Marsh Trail.

Minimal Field Staff

To comply with campus shelter-at-home guidelines, CCBER has been working with a minimal field crew at NCOS. We hope everyone will stay healthy and continue to honor the ecological goals of the project site while also enjoying the open space.



String trimming is an efficient method of invasive plant removal that can be utilized with minimal field crew.

FEATURE STORY

[A Short Guide to Distinguishing Four Key Native and Non-Native Plants at NCOS](#)



Native or Invasive? The bud on the left is a Silverpuff, a California native, while the right bud is the common invasive Sow thistle.

At NCOS, one of the main challenges with the timing of the COVID-19 pandemic is that this is the time of year when non-native weeds are growing fast and flowering, and CCBER staff and students are focused keeping them at bay. The goal is to remove invasive plants before they drop seeds in order to reduce their spread and to give native plants an advantage over resources. Due to the current shelter at home orders, our team of students is not available and only a very minimal crew of staff are able to be on site, which makes it challenging to keep up with all the weeding. So, next time you're out on the Marsh trail and if you feel inspired to pull a weed or two, [here is a short guide](#) to differentiating four key weeds from their similar looking native counterparts.

[This feature story is continued on page 17.](#)

VOLUNTEER OPPORTUNITIES



"Second Saturdays" at NCOS

Second Saturdays at NCOS will resume as soon as it is safe to do so.



Saturday Tree Plantings

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



Thursdays - CCBER Greenhouse Associates

Thursday mornings at the CCBER greenhouse & nursery will resume as soon as it is safe to do so.

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!



Pied-billed Grebe in Whittier Pond. Photo by Jeremiah Bender.



Adult and Juvenile (right) Cooper's Hawks. Photo by Jeremiah Bender.



Hoverfly on Cliff aster (*Malacothrix saxatilis*). Photo by Jeremiah Bender

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



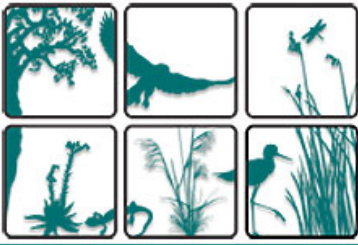
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A SHORT GUIDE TO DISTINGUISHING FOUR KEY NATIVE & NON-NATIVE PLANTS AT NCOS

At NCOS, one of the main challenges with the timing of the COVID-19 pandemic is that this is the time of year when non-native weeds are growing fast and flowering, and CCBER staff and students are focused on keeping them at bay. The goal is to remove invasive plants before they drop seeds in order to reduce their spread and to give native plants an advantage over resources. Due to the current shelter at home orders, our team of students is not available and only a very minimal crew of staff are able to be on site, which makes it challenging to keep up with all the weeding. So, next time you're out on the Marsh trail and if you feel inspired to pull a weed or two, here is a short guide to differentiating four key weeds from their similar looking native counterparts:

One of the common invasive plants found at NCOS is [Sow thistle \(*Sonchus sp.*\)](#), a small dandelion-like flowering plant that could easily be confused with two of our native species, [Cliff aster \(*Malacothrix saxatilis*\)](#) and [Silverpuffs \(*Stebbinsoseris heterocarpa*\)](#).

Native



[Cliff aster \(*Malacothrix saxatilis*\)](#)

Native



[Silverpuffs \(*Stebbinsoseris heterocarpa*\)](#)

Non-native



[Sonchus \(*Sonchus sp.*\)](#)

Although [Cobweb thistle \(*Cirsium occidentale*\)](#) and [Italian thistle \(*Carduus pycnocephalus*\)](#) may appear similar, Cobweb thistle is endemic to California while Italian thistle is native to Northern Africa, Asia, and Western and Southern Europe.

Native



[Cobweb thistle \(*Cirsium occidentale*\)](#)

Non-native



[Italian thistle \(*Carduus pycnocephalus*\)](#)

Not all mustards are invasive! The diminutive [Western tansy mustard \(*Descurainia pinnata*\)](#) is native to North America and can be found along the edges of the Marsh Trail at NCOS. It has deeply lobed fern-like leaves and is much smaller than the invasive [Wild mustard \(*Hirschfeldia incana*\)](#).

Native



Non-native



[Western tansy mustard \(*Descurainia pinnata*\)](#)

[Wild mustard \(*Hirschfeldia incana*\)](#)

[Purple needlegrass \(*Stipa pulchra*\)](#) and [Ripgut brome \(*Bromus diandrus*\)](#) can appear similar from afar, but differences become apparent as you take a closer look. An easy test to tell these two apart is running your fingers from the tip of the seed head towards the stem along the length of the seedhead, but be careful! Ripgut brome has tiny barb-like hairs that will catch on your fingers while Purple needlegrass will feel smooth.

Native



Non-native





[Purple needlegrass \(*Stipa pulchra*\)](#)



[Rippgut brome \(*Bromus diandrus*\)](#)

Date:
Monday, April 6, 2020 - 09:00

[Contact Us](#)

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