

# UC Santa Barbara

## Newsletters

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NCOS News - November 2017

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# UC SANTA BARBARA

## North Campus Open Space Restoration Project

**NCOS NEWS**

*November 2017*



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Aerial image of the NCOS restoration project site on the morning of October 26, courtesy of Bill Dewey.

### **PROJECT UPDATES**

#### ***Getting NCOS into shape and ready for winter with vernal pools, drill seeding, and more:***

Contractors have completed all but some minor details of the newly re-shaped topography of NCOS. This included some precise contouring to create a series of vernal pools on the mesa (these can be seen in the aerial photo above). We look forward to these pools filling up when the winter rains arrive!

Using a drill seeding machine, we've made a head-start on planting some of the native grassland habitat on the upper mesa (see photos below). We had enough seed of our local coastal genotype of the California state grass, purple needle grass (*Stipa pulchra*), to plant an area of nearly 4 acres (the dark brown area on the aerial photo above, and around the perimeter of the three largest vernal pools). Now we wait in heightened anticipation for the roughly 200,000 seeds to germinate!

As mentioned in previous editions of NCOS News, a sterile wheat hydro-mulch has been applied to most of the upper slopes of the project site. This, along with a few additional measures, will help minimize erosion during the coming winter rains.

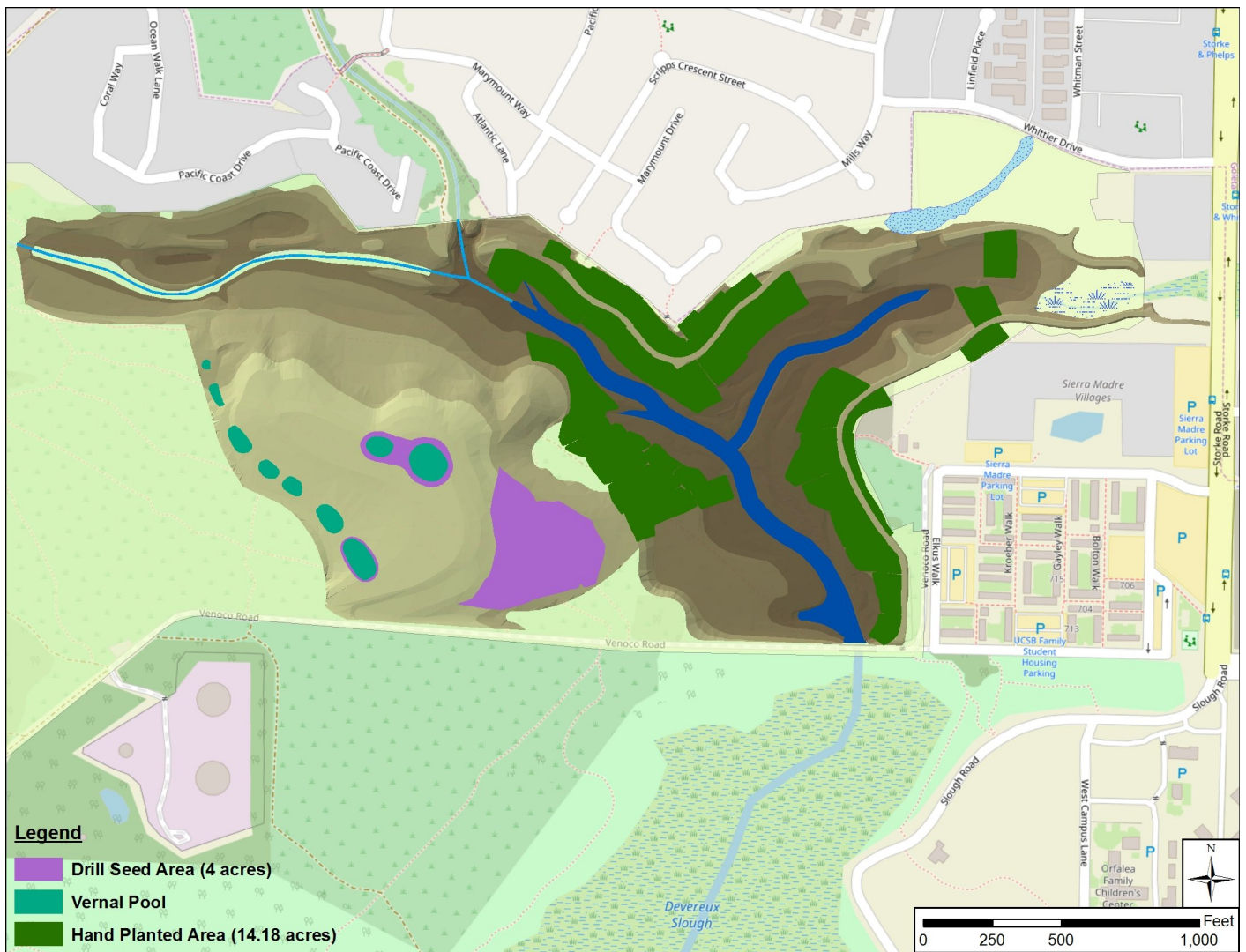
Last, but not least, Granite Construction will shortly be on site to install the bridges and finish the trails.



Photos of the drill seed machine in action, planting purple needle grass seed on the NCOS mesa.

### ***NCOS plants and planters by the numbers:***

We've ramped up the planting over the last month - with many thanks to all of our volunteers, we've installed 30,223 plants in the last month, bringing the total to 44,473! The majority of the plants consist of salt marsh species, such as pickleweed (*Salicornia pacifica*), of which about 20,050 individuals have been planted to date. And the area planted so far is already more than 18 acres (including the 4 acres of drill seeded purple needle grass). The map below shows the areas that have been planted by hand with salt marsh, grass and/or shrub species, as well as the area where purple needle grass was planted using drill seeding.



This map of the NCOS restoration project shows the areas planted to date by hand (green), by drill seeding (purple), and also the vernal pools recently graded on the mesa (turquoise).

We are fortunate and grateful for the many wonderful volunteers that have been invaluable in helping us progress this far. The October "Second Saturday" planting day saw up to 40 volunteers from the local community help us install 800 plants. And a hard working team of 15 with the California Conservation Corp have been planting with us for the past two weeks.

Trees are being planted too - [Your Children's Trees](#) has started planting oaks, sycamores and willows in the area of NCOS near Whittier Drive. They'll be planting trees at NCOS for the next few Saturdays, and would gladly welcome some helping hands - see the Volunteer Opportunities section of this newsletter for more information.



Local community members and CCBER staff at the "Second Saturday" planting at NCOS on October 14<sup>th</sup>.

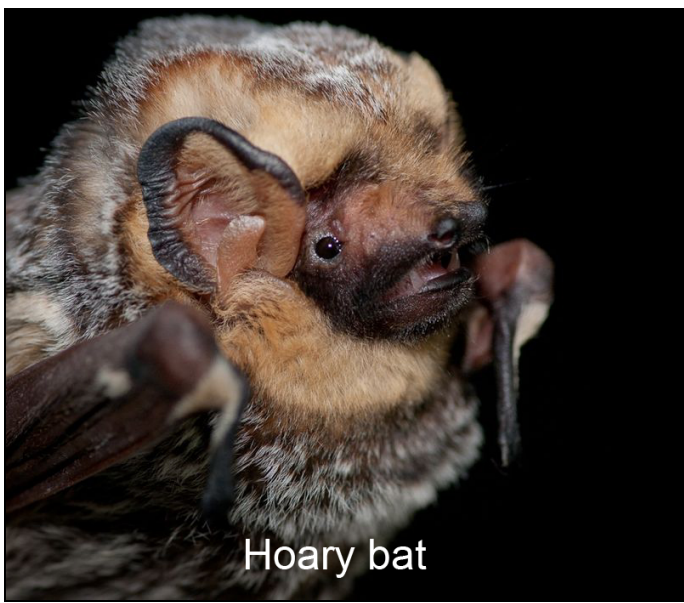


Members of the California Conservation Corps helping plant salt marsh at NCOS.

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## **FEATURE STORY**

***NCOS was all aflutter with bats this Halloween!***



Hoary bat



Mexican free-tailed bat

The Hoary bat and Mexican free-tailed bat are two of eleven species detected at NCOS this year.

Although bats were initially identified as a species that would benefit from the NCOS restoration project, the diversity of species on site was expected to be low... However, a much different picture of the bat situation at NCOS has emerged from data collected and analyzed this year.

[This feature story is continued on page 9.](#)

## VOLUNTEER OPPORTUNITIES



### Second (or Third) Saturday Plantings at NCOS

In observance of Veterans Day, we're scheduling November's "Second Saturday" planting on the third Saturday of the month! Come help us plant natives at NCOS on November 18, from 9:30 – 12:00. Bring water and wear a hat and good shoes! Please RSVP to [ncos@ccber.ucsb.edu](mailto:ncos@ccber.ucsb.edu).



### Tree planting with Your Children's Trees

Come help local non-profit, [Your Children's Trees](#) plant oaks, sycamores and willows at NCOS. Opportunities to help are available the following Saturdays: November 11 and 18, and December 2. Bring water and wear a hat and good shoes!

Please contact [yourchildrenstrees@gmail.com](mailto:yourchildrenstrees@gmail.com) to RSVP.



## 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](mailto:ncos@ccber.ucsb.edu).



## Thursdays - CCBER Greenhouse Associates

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](mailto:ncos@ccber.ucsb.edu).

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## COMMUNITY FORUM & PHOTOS

Have a plant, wildlife, or other photo of the project site you'd like to share? We welcome submissions of photos of the project site and/or the adjacent Ellwood-Devereux area to share with NCOS News readers. Please email a photo you would like to share along with a brief description to [ncos@ccber.ucsb.edu](mailto:ncos@ccber.ucsb.edu).

Migratory visitors are beginning to arrive for the winter or a stopover at NCOS on their way further south. Along with the migratory bat species highlighted in [this month's feature story](#), there are some visitors of the feathered variety worth reporting, such as a Vermilion Flycatcher spotted and photographed by David Levasheff at NCOS on October 22nd.



Vermilion Flycatcher at NCOS, photographed by David Levasheff on October 22, 2017.

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

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## NCOS was all aflutter with bats this Halloween!

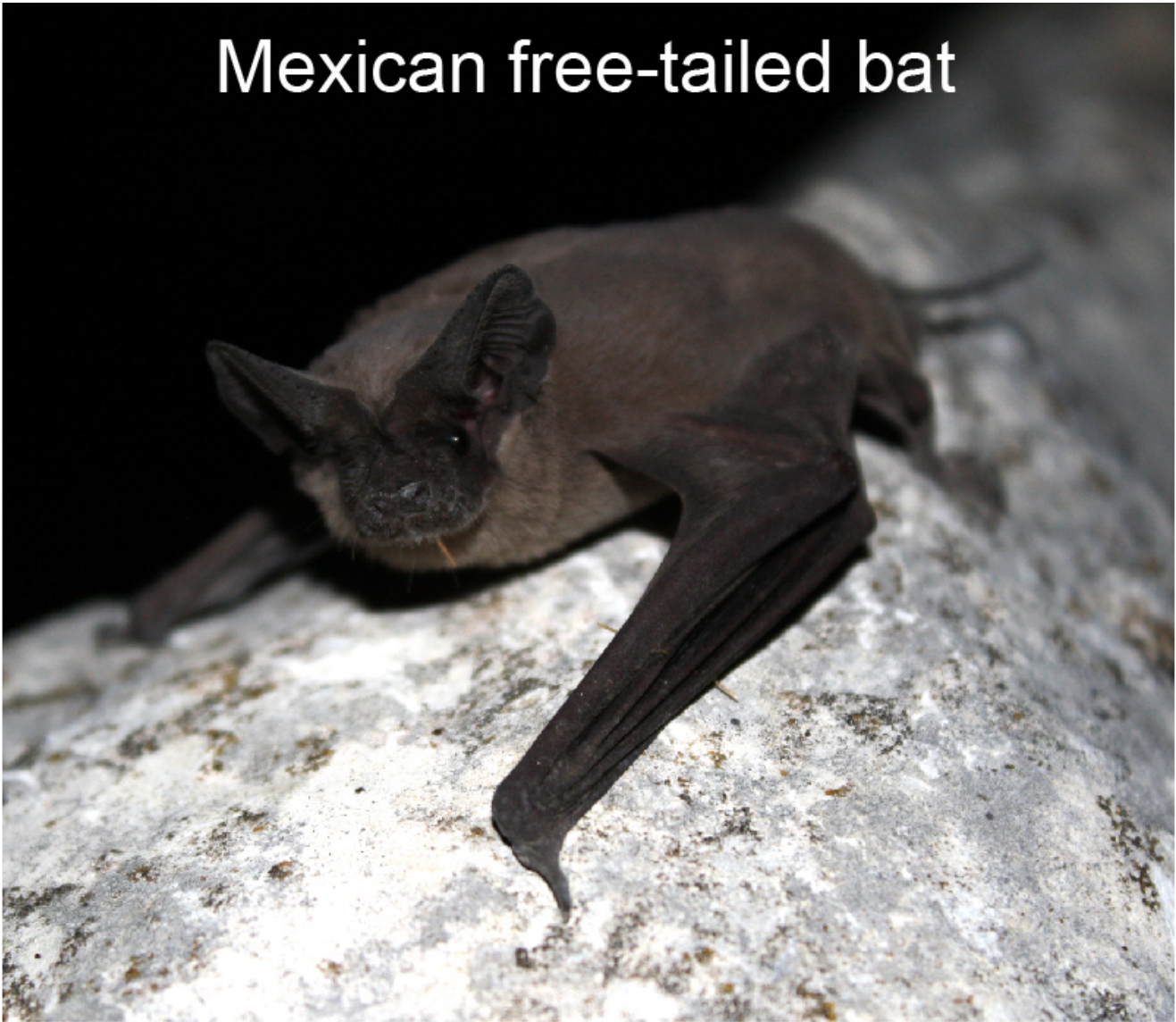
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[ccber.ucsb.edu/news-events/ncos-was-all-aflutter-bats-halloween](https://ccber.ucsb.edu/news-events/ncos-was-all-aflutter-bats-halloween)



Hoary bat

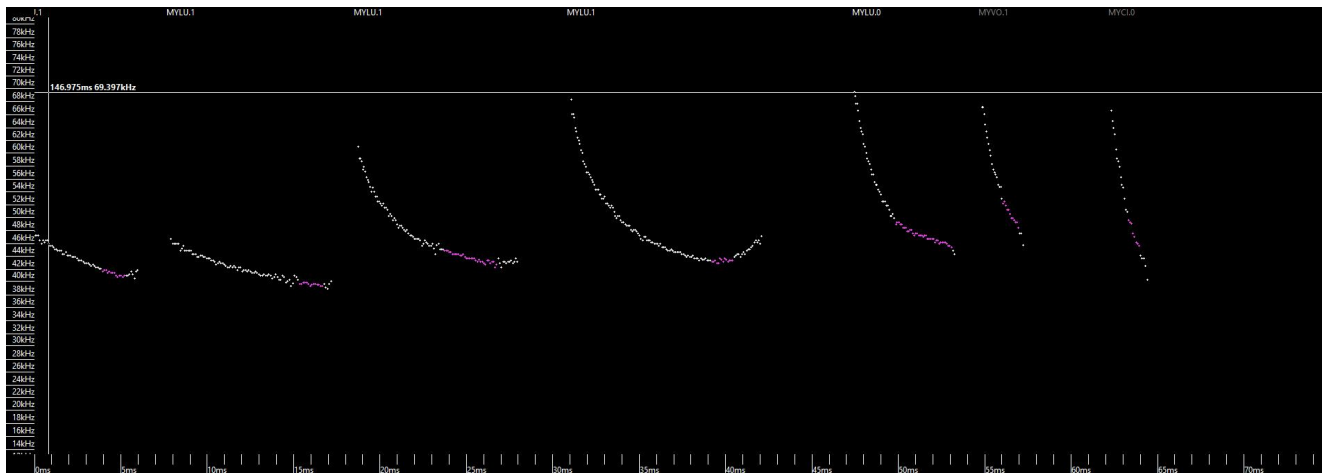
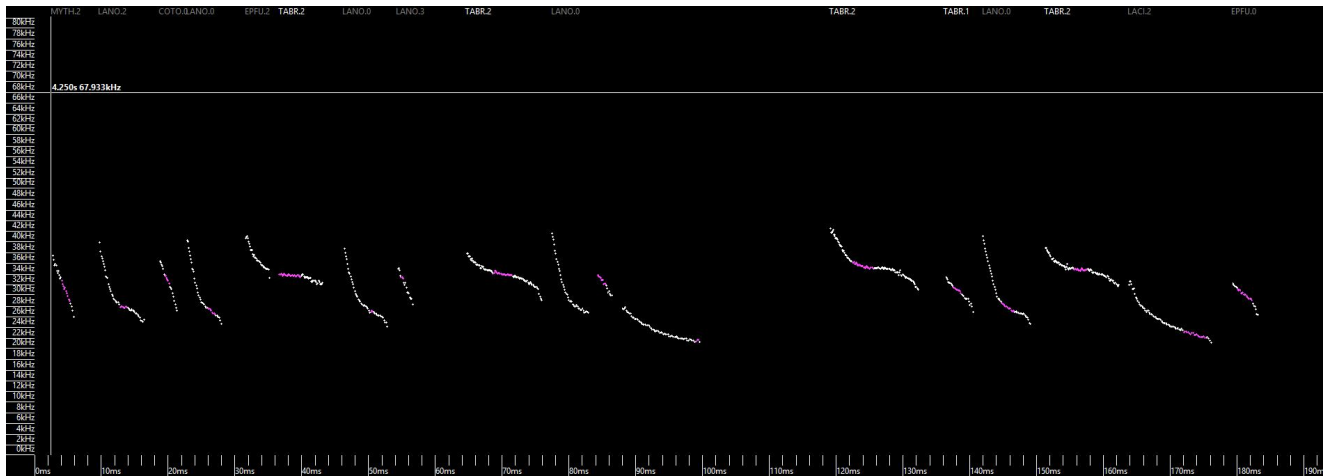
# Mexican free-tailed bat



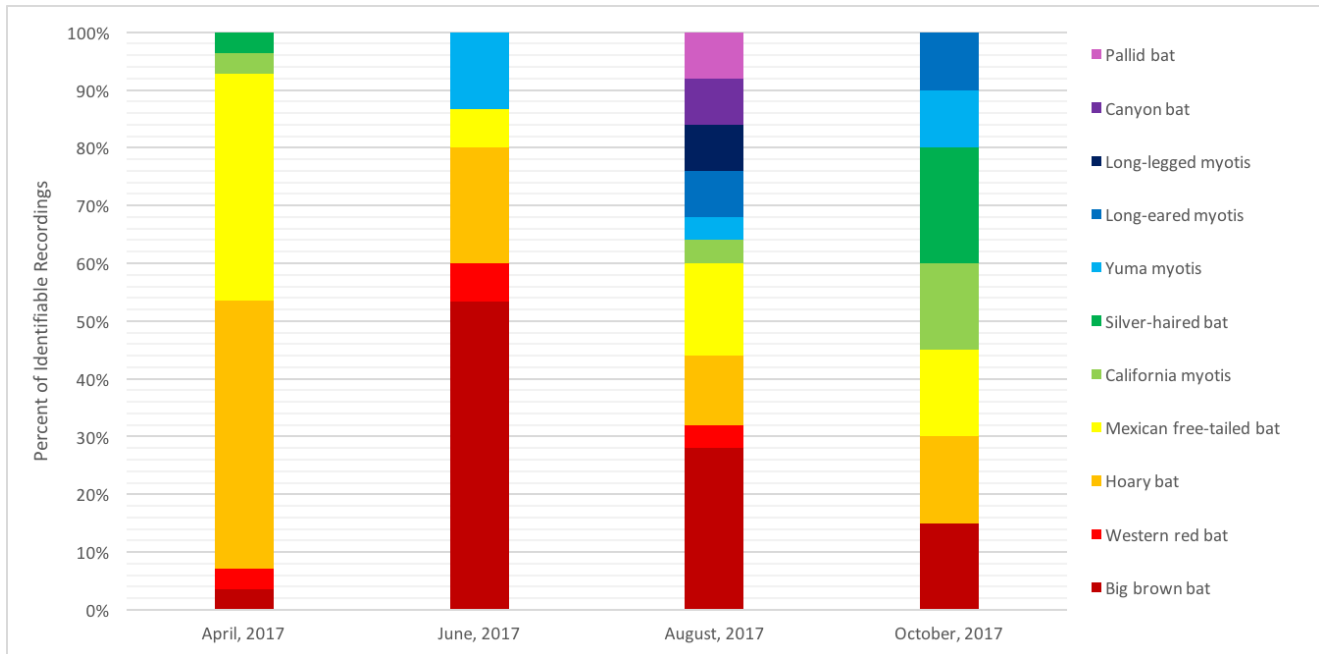
One of the goals of the North Campus Open Space (NCOS) restoration project is to both enhance habitats that support a broad diversity of wildlife and to understand how those habitats function through the process of restoring them. Bats, though nocturnal and seldom seen, provide an important ecosystem service of pest control. However, many North American bat species face population declines. Most California bats are insectivorous and will benefit from the increased open space provided by NCOS.

Although bats were initially identified as a species that would benefit from the NCOS restoration project, the diversity of species on site was expected to be low. Only one breeding bat species was identified as likely to occur, the California Myotis. However, a much different picture of the bat situation at NCOS has emerged from data collected and analyzed this year by Cuyler Stapelmann, an Environmental Scientist from WRECO consulting. The data have been collected using a bat detector installed on a tree for 1 week at a time every two months, starting in April. The detector collects high frequency sound in the range of bat calls and echolocation sounds that we can't hear (see figure 1). Cuyler's dedicated surveys have revealed that at least eleven different bat species visited NCOS since April 2017, and

there is seasonal variation in the diversity of bats in the area (Figure 2). Due to the challenges in reading the sonograms and collecting the data, these findings are providing valuable insights into the distribution of bat species in the area, according to Paul Collins from the Santa Barbara Museum of Natural History.



**Figure 1. The different echolocation calls of the Pallid Bat (left) and Western Red Bat (right) are visualized as lines in these sonograms.**



**Figure 2. This graph shows the percentage of recordings for the bat species identified during each of the four weeklong surveys at North Campus Open Space. The greater number of bat species recorded in August (10) and October (7), than in April (6) and June (5), indicate that the bat diversity at NCOS changes seasonally, possibly due to migratory behavior.**

The bats detected at NCOS vary greatly in size and appearance, from the miniscule Canyon bat (the smallest species in the US - wingspan of 7 to 8 inches) to the relatively large Pallid Bat (wingspan of 15 to 16 inches). The most frequent flyers detected so far at NCOS are the Hoary bat and Mexican free-tailed bat (pictures of these two species are at the top of this story). While both of these species are relatively common, the Mexican free-tailed bat is typically a year-round resident in the Santa Barbara area, while the Hoary bat tends to migrate seasonally. Some of the less common species detected are the special status western red bat, and the silver-haired bat, which is known to migrate from the north to spend the winter down in warm and sunny Santa Barbara. More information about these and other bat species is available on the websites of the [Western Bat Working Group](#) and [Los Padres Forest Watch](#), as well as other online sources.

Canyon bat



Pallid bat





The NCOS restoration project doesn't have a monopoly on bats – back at the Cheadle Center, the vertebrate collection boasts an impressive array of native species. Several of the species detected at NCOS, such as the Pallid Bat and Long Legged Myotis, can be examined here in greater detail.

Restoring the NCOS site from the bottom up supports an enormous variety of species, and the variety of bat species detected is especially exciting as it was unexpected. The presence of a diversity of species is great news, and CCBER is building roosting boxes to help support the resident and visiting bats at NCOS. In addition, we have submitted an application for a grant to help carry out more bat research in the coming years – so it looks likely that the bat story at NCOS will continue!

Date:

Monday, October 30, 2017 - 22:15

[jeremiahbender's blog](#)