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# Science by the Sea

Natural Resources and Science in the Mediterranean Coast Network  
Spring/Summer 2018

## Cabrillo Peregrine Pair Raises Four More Chicks



A male peregrine falcon chick receives one of his two new leg bands. NPS / Don Endicott.

Starting each February, Cabrillo National Monument volunteers and natural resources staff eagerly await low or minus tides, but not for the excellent tidepooling as you might expect. Rather, it is the opportunity to hike out on otherwise submerged rocks for a view of the cliffs above. There, they can record sightings of a pair of the world's fastest animals, peregrine falcons, which have nested on the cliff since 2014.

This year, Cabrillo's peregrine observers got their first view of the peregrine pair in late February. In early March, they recorded numerous courtship and breeding interactions. They confirmed the presence of chicks, known as eyases, by

watching the female apparently feeding them in mid April. These observations helped them plan for a nest visit on April 30 to band the young birds at around 20 days old, the optimal age for banding. On banding day, everyone got their first look at the eyases themselves: two males and two females, just like last year! [Get the whole story.](#)



## Biologists Document Seabird's Journey from Rare Visitor to Breeding Resident

In 2014, Channel Islands National Park biologists began to notice a new and impressive seabird roosting on East Anacapa Island, and on Sutil Island, off of Santa Barbara Island. They recognized the birds as brown boobies, which had been occasionally seen passing through over the years. That fall, the boobies began congregating in colonies of 100-200 birds. Since then, the colonies have dispersed at times in search of food, but they have continued to return in similar numbers. Last fall, David Mazurkiewicz and his fellow seabird biologists counted 102 birds on Sutil Island, and in an exciting new development, they discovered four active brown booby nests!



Brown boobies on Sutil Island, including one bird sitting on a nest. Brown boobies are the only booby species that builds an actual nest. © Andrew Yamagiwa.

What became of the nests is a mystery. When the team conducted a follow-up survey in February, they counted 20 brown booby adults, but could not find any of the young birds that would have been there if the nests had succeeded. It is not uncommon for new breeding colonies to have a rocky start, and there are several possible reasons the nests might have failed. [\*\*Keep reading.\*\*](#)

## Can Higher Densities Help Native Plants Gain a Disturbed Area Advantage?



A high density plot planted with woolly aster. NPS / Alexandra Cherroff Getches.

Several years ago, in his former role as a field monitor, restoration ecologist Joey Algiers started noticing dense clumps of native plants in Santa Monica Mountains National Recreation Area fuels reduction areas that were otherwise oceans of invasive species due to annual mowing. That got him wondering if higher densities of native plants might be able to help keep invasive species in check in those areas. Now, park biological technician Alexandra Cherroff Getches is leading a study to put that theory to the test.

The study involves planting three different native species, at three densities, in a whole bunch of plots at three different locations. This spring, community volunteers joined forces with

park staff and interns to plant 777 purple needlegrass and 567 woolly aster seedlings, and 50,000 slender tarweed seeds in randomly assigned plots at each site. After some weeding followed by the usual mowing regime, the native plants will be on



their own for the remainder of the year. Next spring, Alexandra will lead revisits to each site, where staff and interns will measure how much of each plot is covered by native, versus invasive, species. [Find out more.](#)

## This Shrub is Not Getting Enough Fire. Humans and Hot Water are Helping Out.

As the heat of the early summer sun bears down on Ranger Adam Taylor, he makes his way down the hillside within Cabrillo National Monument in search of his quarry—the wart-stemmed ceanothus (*Ceanothus verrucosus*). This plant is endemic to San Diego County and Northern Baja California. It is an evergreen shrub reaching up to 3m in height and found in the coastal chaparral and coastal sage scrub. The leaves are alternately placed along a bumpy stem and are about 1.5cm in length.

This plant is one of many species Ranger Taylor and his volunteers seek out to collect seed from in the park. Wart-stem ceanothus is important for propagation and restoration work because it is fire dependent, germination occurs with intense heat, and with fire suppression and urbanization, this species is noted as threatened here in San Diego County.

[Read on.](#)



A view of the flower clusters on the branches of the wart-stem ceanothus. NPS / Andrew Rosales.

## Channel Islands Bald Eagles Have Their Best Year Yet



Two newly hatched eaglets in the Sauces Canyon bald eagle nest wait to be fed before their third sibling hatches.

In the middle of March, biologists and bald eagle fans watched with excitement as a live webcam captured three eggs hatching within a few days of each other on a nest in Sauces Canyon, Santa Cruz Island. A second webcam at another nest on Santa Cruz Island's Fraser Point captured a similar scene: three more eggs hatching in close succession. By early June, the eldest of the Sauces Canyon eaglets had successfully fledged (flown from her nest). The other Sauces Canyon and Fraser Point eaglets soon followed. That a full three chicks hatched and fledged from two different nests was itself an uncommon victory for the bald

eagle population on the Channel Islands, following many years of active restoration efforts. The bigger picture this year is brighter still. Those six were among a total of 19 eaglets to be successfully raised by a record 20 breeding bald eagle pairs across Santa Cruz, Santa Rosa, Santa Catalina, and San Clemente Islands. [Get the full scoop.](#)

## Events & Announcements

## New Video Explores Importance of Monitoring in Mediterranean Coast Network Parks

The Mediterranean Coast Network's new video, *Monitoring California's Mediterranean Ecosystem*, features staff in each of the three network parks discussing how monitoring works, why it is important, and what it has already helped to achieve. Check it out [on the new Mediterranean Coast Network website](#), or [on the NPS Inventory and Monitoring YouTube channel](#).

## Cabrillo's *Drawing Connections* Video Sketches Out Stress in the Rocky Intertidal

The Rocky Intertidal Zone at Cabrillo National Monument is one of the most extreme ecosystems on earth, where plants and animals are tested every day. From the crashing waves on the shore at high tide to the intense wind and sun when the water recedes, this is an environment characterized by stress. If anything is to survive the daily strain of life along the waterline, preparation is essential. Today, ocean temperatures and pH levels are affected by increasing atmospheric concentrations of carbon dioxide. [Find out how the inhabitants of the Rocky Intertidal Zone will pass the high stakes test of changing ocean chemistry.](#)

## Cabrillo National Monument "Naturally Speaking" Science Education Series

- [Tolerating the Flames: Understanding Wildfire Management](#), Dr. Keith Lombardo - September 20, 6 – 8 pm

Additional Cabrillo National Monument events and event details are available from the park's [schedule of events](#).

## Channel Islands "From Shore to Sea" Lectures

- [Impacts of Microplastic Debris on Coastal Ecosystems](#), Clare Steele - September 13, 7 pm
- [Island Scrub Jay Connection to Native Oak Populations](#), Mario Pesendorfer - October 11, 7 pm
- [Sea Cow Discovery on Santa Rosa Island](#), John Hoffman - November 8, 7 pm

For further details about these free talks at the the Channel Islands National Park Robert J. Lagomarsino Visitor Center, visit <https://www.nps.gov/chis/planyourvisit/from-shore-to-sea.htm>.

## Upcoming Santa Monica Mountains Events

- [San Fernando Valley Audubon Bird Walk](#) @ Malibu Creek State Park - Aug 19, Sep 16, Oct 21, Nov 18, 8:00 am – 11:30 am
- [Park After Dark: The Stars of Paramount Ranch](#) @ Paramount Ranch - August 25, 8:00 pm – 9:00 pm
- [Birds of the Santa Monica Mountains at the King Gillette Ranch](#) @ Anthony C. Beilenson Interagency Visitor Center - Sep 1, Oct 6, Nov 3, 8:30 am – 10:00 am
- [Sunday Bird Walk](#) @ Sepulveda Basin Wildlife Reserve - Sep 2, Oct 7, Nov 4, 8:00 am – 11:00 am

Additional events and event details are available from the Santa Monica Mountains National Recreation Area [schedule of events](#).

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