



For an online version click [here](#)

Science by the Sea

Natural Resources and Science in the Mediterranean Coast Network

June, 2017

Rare Frogs Breed in New Home



California red-legged frogs had not been seen in Santa Monica Mountains streams since the 1970s. The species is listed as threatened under the Endangered Species Act, and the ongoing effort to translocate egg masses aims to give them a boost.. NPS.

In 2014, National Park Service biologist Katy Delaney hoped for the best as she helped release hundreds of California red-legged frog tadpoles from protective rearing pens into two streams in the Santa Monica Mountains. The tadpoles were reared from partial egg masses translocated from a thriving but isolated frog population in the nearby Simi Hills. The species is listed as threatened under the Endangered Species Act, and the ongoing effort to translocate egg masses aims to give them a boost by re-establishing self-sustaining populations. The project was expanded to include two more streams in 2016, but a question remained. Would enough frogs survive the 2-3 years it typically takes them to mature, and start laying egg masses of their own? This March, biologists got their answer. Cheers and tears ensued

as field teams reported finding nine egg masses in one of the original translocation streams! **And that is not all...**

A New Species for Cabrillo National Monument

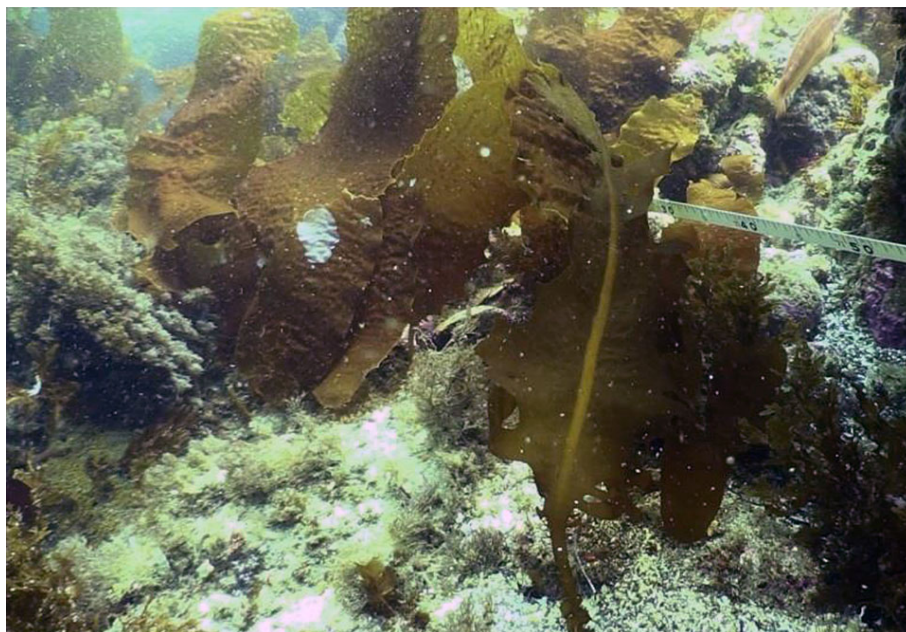
Each month on a Monday, a team of Cabrillo National Monument biologists and volunteers head out to the field to uncover over 100 five-gallon buckets. Located throughout the park and adjacent US Navy land, the buckets have been sunk into the earth, their rims even with the ground. The buckets serve as pitfall traps, arranged in groups of seven, and connected by low drift fencing. They work by catching small animals that fall in while trying to go around the fencing.

Most often, the team, led by Cabrillo biologist Stephanie Root, finds common lizards such as western fence lizards and side-blotched lizards in the traps. They also find and record a lot of small mammals such as desert shrews and western harvest mice. Sometimes, a bucket will contain a snake or a salamander. This season, diversity has been high. The team also found a species in March that had never been recorded in more than 20 years of pitfall trapping: a Botta's pocket gopher. [Get the full scoop.](#)



Captured in March, this was the first Botta's pocket gopher found during more than 20 years of pitfall trapping in and around Cabrillo National Monument. The species was not known to still occur in the area. NPS / Warren Tam.

Invasive Kelp Spreads to New Territory



Undaria plants were discovered in June 2016 during an annual Kelp Forest Monitoring Program survey of a monitoring site on the north side of West Anacapa Island. The infestation is the first to be recorded in Channel Islands National Park islands. NPS.

Do you know that seaweed from your miso soup? Tasty as it is, Wakame, or *Undaria pinnatifida*, is not only known as a celebrated staple of some Asian cuisines. It is also a notorious marine invader. *Undaria* was first found in California in 2000 in Long Beach Harbor. Since then it has been inadvertently carried by boat to other harbors up and down the California coast. In 2008, it was discovered in Ventura Harbor, the mainland home of Channel Islands National Park. Still, the park's islands seemed to remain infestation-free. That changed in June 2016 when Kelp Forest Monitoring Program (KFMP) biologists discovered the invader during their annual survey of a permanent monitoring site on the north side of West Anacapa Island. What might the discovery mean

for Channel Islands National Park? Check out the [full article](#) to learn more.

Channel Islands Serve As Reptile Evolution Laboratory

What do pygmy mammoths, Channel Islands foxes, and Santa Cruz Island gopher snakes have in common? Sure, they're all vertebrates found at one time or another in Channel Islands National Park, but there's something else. All are dwarf species with larger mainland counterparts (Columbian mammoths, gray foxes, and Pacific gopher snakes). Recent research by Dr. Greg Pauly has found that they are not the only Channel Islands dwarfs. The park's southern alligator lizards and western yellow-bellied racers are also dwarf species, smaller than their mainland brethren. Another researcher, Dr. Amanda Sparkman came to similar conclusions. She is now studying all three dwarf reptiles along with their full-sized mainland relatives to better understand how dwarfism evolves. [Read on](#) for more details.



Southern alligator lizard on Santa Rosa Island. Dr. Amanda Sparkman recently found that island populations of this species exhibit dwarfism. © Angel Galvan, some rights reserved ([CC BY-NC](#)).

Other Colors at Cabrillo National Monument



Western tussock moth caterpillars are found across many of the Pacific States and often seen in the spring at Cabrillo National Monument. NPS / Andrew Rosales.

Winter rains have brought color to Cabrillo National Monument in more ways than one. Most of all, monument staff have been noticing bright spots of orange and red moving among the amazing display of flowers. Some of the spots are covered in black and white fuzz and organized in a long series of rows. Other dark orange spots appear at either end of a smooth, black, orange-lined body. Upon closer inspection, these bursts of color belong to two different kinds of caterpillars. Though stunning as caterpillars, both are destined to become not flashy butterflies, but mostly brown western tussock moths and white-lined sphinx moths. [Get to know them better](#) on the web.

Using Cameras to Study Wildlife After the Springs Fire

Around 14,000 acres of park land in the Santa Monica Mountains were left scorched after the 24,000-acre Springs Fire in May 2013. In the ashes, Santa Monica Mountains National Recreation Area biologists saw an opportunity. They had long wondered how wildlife handle burned landscapes. With wildlife cameras available from the conclusion of another project, they began the Springs Fire Wildlife Project that fall to find out.

Now in its fourth and final year, the project got going with the help of several volunteers. For the past two years, one volunteer, Keith Boden, has taken on most of the work. He single-handedly rotates the project's 30 wildlife cameras once a month among the 90 different camera sites, and changes out their memory cards. The cameras have collected thousands of wildlife images so far.

Biologists, meanwhile, have been able to do a preliminary analysis on the first year of image data. They found that coyotes, for instance, were caught on camera more in the burned area than in nearby unburned areas. The opposite was true for foxes, though both species started turning up in burned areas from the start. [Dig in to the details](#) on the web.



Coyotes were among a handful of species captured on camera in burned areas as soon as the project started. They were also the only species to turn up in burned areas in greater numbers than in unburned areas in a preliminary analysis of the first year of camera trapping. NPS.

Events & Announcements

Upcoming Cabrillo National Monument Events

- [Science Education Series: The Rise and Fall of the Great Black Abalone](#) - July 1, Noon – 1 pm
- [Science Education Series: For the Love of Sea Slugs](#) - August 5, Noon – 1 pm

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

Upcoming "From Shore to Sea" Lectures

- [Whale Protection and Vessel Speed Reduction in the Santa Barbara Channel](#), John Calambokidis - July 13, 7 pm
- [An Administrative History of San Miguel Island](#), Ian Williams - August 10, 7 pm
- [Influenza A Virus Infection in Southern California Marine Mammals](#), Pamela Yochem - September 14, 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

- [Birds of the Santa Monica Mountains @ the King Gillette Ranch](#) - July 1, Aug 5, & Sept 2, 8:30 – 10 am
- [Night Sky Festival @ Paramount Ranch](#) - July 22, 7:30 – 10:30 pm
- [The Wiley Coyote @ Rancho Sierra Vista](#) - July 1, 15, & Aug 5, 7:30 – 8:45 pm

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

Disclaimer: The National Park Service shall not be held liable for improper or incorrect use of the data described and/or contained herein. These data and related graphics (if available) are not legal documents and are not intended to be used as such. The information contained in these data is dynamic and may change over time. The National Park Service gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. For more information: <http://www.nps.gov/disclaimer.htm>.

To submit updates or to subscribe/unsubscribe to future issues, please contact jessica_weinberg@nps.gov.