



THE BALK BUZZ

THE OFFICIAL NEWSLETTER OF BALK BIOLOGICAL, a DBE, WBE, SLBE/ELBE, and SB/MB company

This Just In...

- Nesting bird season begins January 15th. Hawks are especially active in these early months of the year. Keep an eye out for raptors claiming territory and building nests! This gorgeous red-shouldered hawk was spotted in Jennifer's Oceanside neighborhood.



Rain, Rain, Go Away, Come Again Another Day!

With rainy season upon us, I must disagree with this classic nursery rhyme. Rain brings cozy moments, hot drinks, warm clothes, and of course, rainbows. Not to mention, a small relief from serious a drought. Rain brings puddles and the opportunity to splash once the sun comes out! While it's fun to splash around in a puddle, they are often short lived. Soils drain and hot pavement facilitates quick evaporation. But did you know vernal pools are a different? Vernal pools are depressions in soils that retain water for part of the year after wet season storms. A layer of impermeable hardpan soil or clay lies beneath the vernal pools and prevents the water from draining into the soil. Vernal pools rely entirely on rainfall as a water source and often drain into one another through vernal swales, creating a closed system of vernal pool complexes. Pooling water can remain for days, weeks, or even months, to create a unique wetland habitat for rare plants and animals. These are some of the few defining characteristics



Animal species like fairy shrimp would not have a chance at life without the unique characteristics of vernal pools. Fairy shrimp are crustaceans less than an inch long that produce dormant eggs known as cysts. These cysts need optimal conditions for survival. Optimal water temperature is achieved only through vernal pools due to their shallow depths and extended pooling times. Fairy shrimp have no other aquatic

of a vernal pool, and more are pointed out below.

After winter storms have subsided, spring can bring a host of colorful blooms to vernal pools. Specific plants are known to grow within vernal pools and the presence of these plants indicate a vernal pool. These plants are defined “obligate” species. San Diego mesa mint (*Pogogyne abramsii*; shown below) is a state and federally endangered plant that resides specifically in vernal pool habitats, and therefore is considered an obligate species. Its purple blooms pop in the spring after a wet winter. Once the summer heat hits, these plants aren't the only thing becoming crispy critters. Plant seeds are dropped into dry vernal pool soils that are often cracked and crusty from months of baking in the sun.



predators because another defining characteristic of a vernal pool is the lack of fish. San Diego fairy shrimp (*Branchinecta sandiegonensis*) are listed as federally endangered and require special training and a recovery permit for biologists to survey for them.

San Diego's mesas were once prime habitat for vernal pools; however, the majority of this habitat has been lost in the last few decades to development. Many vernal pools in San Diego existed atop ocean view mesas which are prime real estate for offices, warehouses, and residences. Endangered and threatened species often result from loss of habitat, and vernal pools are no different. According to the EPA, more than 90% of California's vernal pools have been lost. With such scarce habitat remaining, many fairy shrimp are now considered threatened or endangered. Therefore, the City of San Diego has teamed with the U.S. Fish and Wildlife Service to identify remaining vernal pool complexes. A total of 10 general geographic locations have been named including: Del Mar Mesa, Carmel Mountain, Mira Mesa, Nobel Drive, Kearny Mesa, Mission Trails Regional Park, urban San Diego areas, Otay Mesa, Otay Lakes, and Marron Valley. Balk Biological, in coordination with Dudek, has the pleasure of monitoring a vernal pool mitigation site in the Kearny Mesa area over the next five years. The data collected will help to better understand the functionality of these constructed pools and how they contribute to sustaining rare and endangered species in San Diego.

Written by staff biologist
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HELLO FROM SOME OF OUR TEAM



RECENT BLOG POST:



January: Winter garden was going bonkers, spring garden was planned.

Michelle's Photographic Year in Review

by | Jan 3, 2022 | Notes From The Field |

Read more
www.balkbiological.com



December: Visit to tide pools, visit from red-shouldered hawk, removal of beetle larvae from garden.



MICHELLE'S RARE PLANT CORNER

Upcoming Holidays

January 20 National Cheese Lovers Day

Although technically considered a spring-blooming plant by the California Native Plant Society (CNPS), I have observed Nuttall's acmispon (*Acmispon prostratus* [= *Lotus nuttallianus*]) blooming in December. This herb is an annual in the Fabaceae (Pea) family. It bears clusters of yellow-orange and red flowers on long peduncles, and it grows generally along the ground (prostrate). It prefers sandy scrub and dunes along the immediate coast, between Oceanside and the California/Mexico border. It also occurs in Baja California, Mexico. It is a California Rare Plant Rank 1B.1 plant (rare, threatened, or endangered in California and elsewhere; seriously threatened in California [over 80% of occurrences threatened / high degree and immediacy of threat]). While unusual in the northern portion of its range, the plant can be found in abundance along the Silver Strand south of Coronado, and on Coronado itself. Due to the long peduncles, this species is unlikely to be confused with other annual species of *Acmispon*. Nuttall's lotus not flowering may be confused with young seedlings of the perennial shrub deerweed (*Acmispon glaber*), although the latter grows in a much more upright fashion.



Nuttall's acmispon shown in photo above

February 12 Darwin Day

March 1 World Music Therapy Day

March 20 International Day of Happiness

Where to Find Us

January 13: Women in Transportation Small Business Executive Women Mentoring Program Celebration of 2021/Kickoff of 2022 event

Date TBD: California Rapid Assessment Method Training



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