

NCC Quarterly

July 2023 | Issue 13

Coordinating Science and Land Management across the Nature Reserve of Orange County

Saddleback Wilderness Opens

On March 27, 2023, Saddleback Wilderness, a 430-acre conservation easement located near the Santiago Canyon Road and Highway 241 intersection, was officially opened for hiking, biking and equestrian use. The protected lands and its trails are designated as permanent open space and strictly managed for conservation purposes. The property was donated to the County by the Irvine Company in 2014.

Prior to its designation as Saddleback Wilderness, the location was famously recognized as Saddleback Park Motor Playground. From 1967-1984, Saddleback Park Motor Playground was Southern California's premier motocross and off-road racing venue, which regularly hosted competitions such as motorcycle trials, hill climbing, and short track events. The park also facilitated off-road truck and buggy races while accommodating RV camping. The closure of the Saddleback motocross site came in 1984 due to liability insurance requirements and environmental compliance issues.

After years of rest and restoration, the new Saddleback Wilderness site serves as home to a variety of native plant and animal species which are listed under the Natural Community Conservation Plan/Habitat Conservation Plan. Monitoring studies have revealed the location is an active nesting site for the coastal California gnatcatcher, coastal cactus wren and California quail.

For recreational use, Saddleback Wilderness offers five trails which cover 3.3 miles. The trails are rated as easy to moderate in difficulty. In addition, the site offers picnicking facilities, portable restrooms, parking for horse



Saddleback Wilderness Grand Opening

trailers and delivers one of the most spectacular 360-degree viewpoints in the County. All public access to Saddleback Wilderness is managed through a registration process. Please go to letsgooutside.org to sign up for future use.

Saddleback Wilderness is the result of a multi-year collaboration involving the Irvine Company, OC Parks, Irvine Ranch Conservancy, and Orange County Parks Foundation. The benefits of this land acquisition and conservation easement serve the current and future needs of Orange County residents by providing systems which filter clean water, enhance biodiversity, provide an aesthetic break from residential development, and connect people to the awe-inspiration of nature.

The Humanizing Impacts of

Nature

What is it about nature which seems to make people happier and friendlier?

If you are a frequent visitor to the Nature Reserve of Orange County, you have likely experienced the positive, approachable and respectful behaviors most trail users demonstrate while spending time in the wilderness. When contrasting this experience to walking in urban areas, such as shopping malls, or bicycling along busy roadways, why is it people are predictably congenial in nature and randomly erratic outside of it?

In the search to find an answer to this question, the term “biophilia” popped up. Evidently, biophilia is a combination of two words from ancient Greek meaning “life” (bio) and “love” (philia). German psychologist Erich Fromm and American biologist E.O. Wilson both used the word biophilia in their work. For Fromm, biophilia was used to describe the psychological orientation to being attracted to all that is alive and vital. Wilson’s view of biophilia is that it’s the innate human connection to and affinity for nature. Wilson believed humans have an instinctive bond with the natural world, and that this connection is crucial for overall well-being and the functioning of society.

In addition to human behaviors on trail systems, biophilia is noted as an influential factor in a variety of other domains, such as urban planning and design, education and learning, and health and well-being.

Biophilic design principles are often utilized in urban planning and architecture to create more sustainable and livable cities. Integrating green spaces, urban forests, and other

natural elements into urban environments can improve air quality, regulate temperatures, mitigate noise pollution and enhance urban aesthetics. The United States Green Building Council and its standardization of LEED (Leadership in Energy and Environmental Design) principles have significantly advanced biophilic design throughout Orange County.

Biophilia can serve a valued role in education and learning. The inclusion of nature-based experiences and environmental education in curricula can strengthen students’ understanding of ecological systems, promote environmental literacy, and inspire ongoing sustainable behaviors. The opportunity to connect young people to nature has the promise to instill a lifelong appreciation and respect for the environment.

Scientific studies over the past decade have revealed nature exposure has a positive impact on health and well-being. Some of the findings include nature reduces stress, improves mood, enhances cognitive function, and heightens physical and mental well-being. The biophilic elements in our surroundings, such as open spaces and natural lighting, promote a healthier living and working environment.

Next time you are out on the trails and you happen to intersect with others who are friendly and enjoying the moment, you can logically reason biophilia has something to do with it.



Least Bell's Vireo



Least Bell's Vireo

The least Bell's vireo is a small gray migratory songbird which is showing positive signs of recovery after a forty-year decline, which nearly resulted in its extinction. The bird was first listed as endangered in 1980 by the California Fish and Game Commission and again listed as endangered in 1986 by the United States Fish and Wildlife Service. In addition, the least Bell's vireo is also considered a conditionally covered species in the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) for Central and Coastal Orange County.

The least Bell's vireo breeding range is strictly limited to coastal southern California (including NCCP/HCP of Central and Coastal Orange County) and northern Baja California, Mexico. The vireo migrates in winter to the southern end of Baja California Peninsula, Mexico

The removal of riparian vegetation for development, flood control projects and water diversions, and lowered water tables due to groundwater pumping, eliminated most of the vireo's habitat. Additional factors, such as habitat fragmentation, brood parasitism, and emergence of invasive plant and animal species have made the bird's recovery an ongoing challenge.

Conservation efforts and land management actions focused on species recovery have included monitoring studies, habitat restoration, predator control (such as trapping brown-headed cowbirds), captive breeding programs and public awareness campaigns. Efforts to remove exotic invasive plants such as the giant reed (*Arundo donax*) have been hampered in some locations due to the limitations of herbicide use among landowner integrated pest management plans.

A 2020 study compiled by United States Geological Survey (USGS) ecologists, analyzed the suitability of California habitat for the least Bell's vireo. The report identified several important features common to the birds' habitat, such as having greater than 60% riparian vegetation, little to no slope, and being within 130 meters of water. Per the USGS study, only 6% of the riparian habitat in California was identified as suitable for the least Bell's vireo.

The latest monitoring studies of vireo recovery rates are providing a positive sign, but it is clear there is still much work to do to support the species persistence in the future.

The Year of The Western Spadefoot Toad

The heavy rains of 2022-23, which soaked the Nature Reserve of Orange County, produced more than a spectacular wildflower season. The rains also provided a thorough drenching of the vernal ponds in the Reserve, which are home to the western spadefoot toad, which happens to be one of the species receiving regulatory coverage in the NCCP/HCP of Central and Coastal Orange County.

The western spadefoot toad habitat in Orange County is conserved at a variety of sites within the Nature Reserve of Orange County. Since the 1950's, the western spadefoot population is believed to have declined by 80%. The causes include loss of habitat, absence of viable breeding areas and drought.

In 2019, a multi-agency collaboration, including Natural Communities Coalition, California State Parks, University of California, Los Angeles, United States Geological Survey, Land IQ, and Nakae and Associates began work on restoring 12 seasonal ponds. These ponds today are active breeding sites for the western spadefoot toad.

Katherine L. Baumberger, Wildlife Biologist at United States Geological Survey, who has been monitoring the western spadefoot toad for multiple years, has provided some recent updates on the spadefoot habitat and recovery. In March 2023, Baumberger informed NCC, "Unsurprisingly, this has been a great year for spadefoot. We detected breeding in all of the created pools in the San Joaquin Hills (even sites where we had not seen breeding previously). We also saw breeding in three of the pools at Shoestring Canyon, although one of the pools may have a hole in the liner because it is emptying faster than expected."

In addition, Baumberger provided some insight on a recent monitoring visit. She noted, "We took advantage of the rain to do a night survey at San Joaquin Hills and Shoestring. We caught 15 adult spadefoot in San Joaquin Hills, including a male we first captured in 2019. At Shoestring we caught five male spadefoot in two of the pools. We saw many spadefoot egg masses, so the females are there somewhere."

The western spadefoot toad will continue to be closely monitored at all of the restored vernal ponds in the Nature Reserve of Orange through 2025.



Western Spadefoot



Western Spadefoot Tadpoles