

Valley Wilds

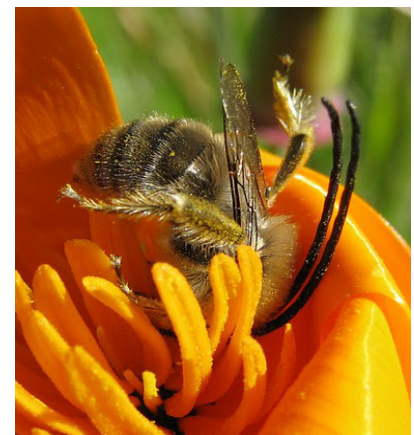
A publication of the LARPD Open Space Unit

Volume 20 | Issue 3

The Buzz About Bees

On an early morning hike a few years ago, a little girl named Anna wandered away from the group to look at a flower. We didn't notice until we heard her squeal "A bee! A bee! A bee!"

By Ranger Amy Wolitzer



We came back and looked at the poppy she had clasped between her hands. She carefully folded back a petal and sure enough, there was a beautiful, fuzzy bee inside! Anna was not afraid of being stung and it turns out she didn't need to be. This was not your normal "bee"!

It was bigger and fuzzier than a honey bee and had marvelous long antennae folded back over its body. A little research revealed that this was a male "long-horned bee", a member of the *Eucera* genus. This bee does not live in a hive - it is solitary and spends much of its life underground.


When it is cold or he must rest, he finds a nice place to sleep. These bees appear to especially like poppies, and checkerblooms - their petals show great hospitality by closing nicely around the bee when night comes. However, the bees are easiest to find on the sunflower-like blooms of the mule's ears plants, hunkered down in the notches where the petal meets the base, sometimes two or more together.

Anna's bee probably recently awoke in an underground cell. Last year, his mother dug a burrow and laid eggs, each in their own cell. Being a good mother, she stocked each cell with a ball of pollen and nectar for the hungry hatchling to eat. At first he looks like a little worm-like grub but he soon matures into an adult bee and leaves the hole.

Anna had found the bee taking a break from a very important mission, perhaps his only mission in life - to mate. He flies around sustaining himself with nectar and looking for a female.

But the flowers are not providing shelter out of selfless kindness. They welcome the bees into their house because those furry little legs come bearing a housewarming gift of pollen

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Spring Wildflower Guide

Livermore Area Recreation and Park District

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Ranger Office: 925.960.2400

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Ranger-led Programs

Experience nature and history in a special way. Programs are generally 1 - 2 hours in length. A \$2 donation is requested. A \$5 parking fee is charged at both park entrances.

March Programs

Quick Look:

Treasure Hunt
Saturday, March 5th
10:00 am

Red-Shouldered Hawks in Love
Sunday, March 6th
7:00 pm

Funky Fish
Saturday, March 12th
6:30 pm

Wildflower Wonders
Sunday, March 13th
10:00 am

Spring Stars
Saturday, March 26th
8:00 pm

Bugs and Blooms
Sunday, March 27th
8:00 am

Treasure Hunt

Saturday, March 5th 10:00am

There's gold in them thar' hills! Well, maybe not gold, but certainly other treasures. Someone's hidden clues along the foot trail in Sycamore Grove. On this exciting family adventure we'll work as a group to solve the clues and see where they lead. There will be treasure enough for all, and we might even learn something along the way! Be prepared for muddy trails. Please RSVP by calling (925) 960-2400. Canceled if raining.

Ranger Jamie Morris

Sycamore Grove Park
Wetmore Road Entrance

Red-Shouldered Hawks in Love

Sunday, March 6 7:00 pm

You may have read about the Red-tailed Hawks in New York's Central Park ("Red-tails in Love"), but do you know there is great documentation of Red-shouldered hawks in love in our own Sycamore Grove Park? One of the park's regular visitors, Polly Krauter, who also happens to be a talented amateur photographer, documented the Red-shouldered hawks' nesting season last year in SGP. She has put together a wonderful presentation of her photographs, which she graciously offered to share with all of us tonight. You won't want to miss this special presentation. Reservations are requested, but not required, by calling (925) 960-2400.

Ranger Patti Cole

The Barn
3131 Pacific Avenue



Funky Fish

Saturday, March 12th 6:30pm

The oceans are home to many creatures, both great and small. Join us this evening for a powerpoint show to look at some of the unusual, or just outright goofy looking, fish that swim in the oceans and seas around the world.

Ranger Dawn Soles

The Barn
3131 Pacific Avenue



More March Programs

Wildflower Wonders

Sunday, March 13 10 am

A hike into the hills is always an exciting venture, but this time of year it is especially rewarding. There are jewels to be found of all colors and shapes - yellow Buttercups, purple Blue Dicks, shy Johnny Jump-ups, the elusive shooting star and more. Join us for this 4 - 5 mile slow paced walk. This walk will last about 3 hours. If that sounds too long for you, join us anyway and head back whenever you like.

Ranger Amy Wolitzer

Sycamore Grove Park
Wetmore Road Entrance

Spring Stars

Saturday, March 26th 8 pm

The spring equinox has just passed, and the moon is setting late. With some luck we may even catch a warm, clear evening to enjoy the spring constellations and maybe some lingering winter ones too! Saturn will be bright in the eastern sky as it is only a week away from its closest approach to earth for the whole year. If we get clear skies we will be walking about three quarters of a mile into the park. If it is cloudy we may be walking up to two miles hoping for a gap in the clouds. Please remember to dress warmly. Cancelled if raining.

Ranger Glen Florey

Sycamore Grove Park
Wetmore Road Entrance

Bugs and Blooms

Sunday, March 27 8 am

Have you ever seen a sleeping bee? Most people haven't but here's your chance! Our gorgeous native bees spend the chilly nights wrapped in the closed petals of poppies and other flowers. We will need to get an early start so that we can peek in on them while they're still asleep. Bring your cameras and prepare to be awed! The hike will be about four miles and last about 3 hours.

Ranger Amy Wolitzer

Sycamore Grove Park
Wetmore Road Entrance

The Buzz About Bees

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from previous flowers the bee has visited. In the morning, the impregnated flower will bid goodbye to the bee, sending off some of its pollen for the bee's next host.

As Anna's bee travels, he will encounter females who are frantically flying from flower to flower. They are not only fueling themselves with nectar but also collecting pollen and nectar to leave in the burrows with the eggs they will lay. If he is lucky, he will get to mate and his lady will soon be off to deposit their progeny in underground cells like the one he came from not that long ago.

After the group had marveled at Anna's find I encouraged her to breathe gently on the bee to "wake him up". She does and he uncurls. After an unsteady moment, he takes off and flies away, to continue his most important of missions.



Come and witness this miracle and learn more about native bees by joining us on our annual "Bugs and Blooms" hike to the hills of Sycamore Grove Park. Meet at the Wetmore Road Entrance at 8 am on Sunday, March 27th.

When Green Isn't Green

By Ranger Dawn Soles

March. When shamrocks, green beer and, if you aren't careful, pinches abound. On the 17th you will be asked "Where is your green?" and you had better be wearing some - or else. However, in nature wearing green is easier said than done. To quote Kermit - "It's not easy being green." Very few animals can actually manufacture green color pigment.

But what about frogs, birds, snakes, lizards and butterflies, to name a few - they're all green? Well, not really. They just look green. To figure out why this is so let's first figure out how color works.

The sun emits energy over a wide spectrum. The energy that we think of as "light" is known as the visible spectrum. The visible spectrum is a combination of many different wavelengths that when combined, give what most of us refer to as white light. The components of white light can be broken down into 7 primary color categories that most of us are familiar with from rainbows - Red Orange Yellow Green Blue Indigo Violet.

Our eyes have components in them, called cones, that perceive specific wavelengths, which are combined in the brain and translated into a color for us. The color of an individual object is determined by the wavelength(s) of light that it absorbs and reflects. In a simple case, if an object's physical make-up causes it to absorb all wavelengths but red, which it reflects back, we will perceive that object as red.

The green in plants is a pigmented color, that will be perceived as green regardless of the angle viewed and, to some degree, light level. In animals, with very few exceptions, green is a structural, not pigmented, color. If you view a green bird in low light conditions, or at an angle where light isn't directly striking feathers, the bird loses its color and becomes gray/black.



Animals have a variety of cell types that give them their color - xanthophores (yellow), iridophores (reflective/iridescent), melanophores (black/brown), erythophores (red/orange), leucophores (white), cyanophores (blue). Different species may have one or more of these types of cells. Mammals and birds primarily only have melanophores (actually called melanocytes in these two animal groups), though there are a few exceptions.

Amphibians usually have 3, and sometimes more, types of pigment cells.

So, how does all this come together to make a frog that isn't really green look green? Let's use the bullfrog as an example. Bullfrog skin contains three kinds of color cells in layers in the skin. The top layer is made of xanthophores, the

middle layer is made of iridophores and the bottom layer has melanophores. When atmospheric light hits the frog it penetrates the top layer and is scattered into a bluish color that reflects off the iridophores back through the xanthophores. And, as we all learned in elementary school, yellow and blue make green. The green color of the frog that we perceive is a combination of blue light blending with yellow pigment in the frog skin.

Green is rare as a true pigment in the animal kingdom. Turacos (a type of bird) make a green pigment known as turacoverdin. Eider ducks also have a green pigment that has yet to be fully analyzed and identified. A few moths are also known to produce a green pigment. There are a couple of others out there but they are few and far between.

Regardless of how an animal gets the color that it shows to the rest of the world I think we can all agree, as long as it looks green, they can do without a St. Patrick's Day pinch.

Early Spring Wildflowers



Fiddleneck

Amsinckia menziesii
var. intermedia



California Poppy

Eschscholzia
californica



Redmaids

Calandrinia ciliata



Dove Lupine

Lupinus Bicolor



Buttercup

Ranunculus
californicus



Johnny Jump-up

Viola pedunculata



Blue Dick

Dichelostemma
capitatum



Scarlet Pimpernel*

Anagalis arvensis



Shooting Star

Dodecatheon
hendersonii



Blue-eyed Grass

Sisyrinchium bellum



Filaree*

Erodium sp.



Wild Cucumber

Marah fabaceus



Prickly Popcorn Flower

Cryptantha muricata



Checker mallow

Sidalcea sp.

*not native to California