Edgewood EXPLORER
FRIENDS OF EDGEWOOD • WINTER 2024

The Case of the Mysterious Edgewood Feline

In August, visitors to Edgewood Park and Natural Preserve reported seeing a mysterious feline that sometimes behaved quite strangely, and even seemed aggressive at times. On Aug. 8, Head Ranger Rogelio Castaneda said there were several recent reports of a bobcat in Edgewood spooking folks by standing its ground on the trails, and, in one case, walking towards people. Some people wondered whether it was truly a bobcat – suggesting that, because of its demeanor, perhaps it was a domestic cat. Plus, the tail seemed notably longer and the fur less mottled than would be expected for a bobcat. One observer noted white markings on the ears, but this is consistent with bobcats.

Bobcats typically have bobbed tails and weigh 15-25 pounds – about twice the size of a domestic cat. Other notable characteristics of bobcats are round faces and pointed ears.

Swapnil Ghiware, who visited Edgewood on Aug. 17, reported seeing a mysterious cat and took these photos.

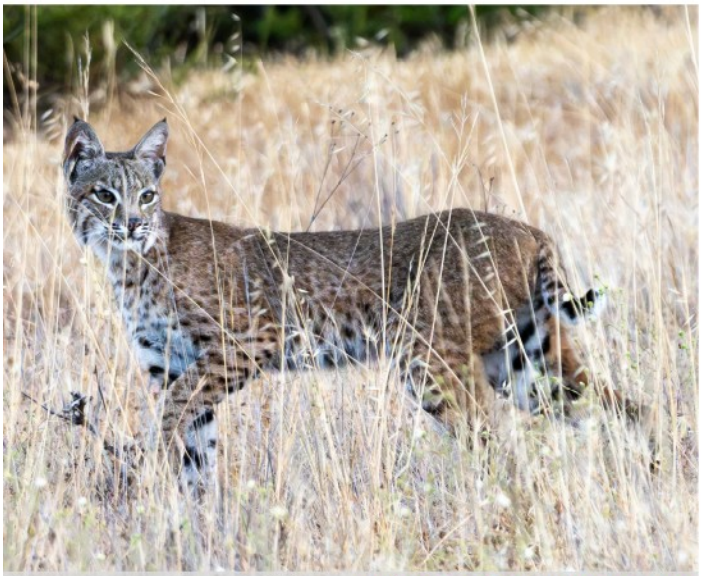
Swapnil said, “My encounter was near the intersection of Sunset and Clarkia trails. I had just turned into the Sunset trail (from Clarkia trail) when I noticed the bobcat a bit further up on the Sunset trail. It was walking toward me and noticed me when it got a bit closer. I took a few steps back to give him a bit more space. It stood on the trail for maybe a minute, unsure of what to do, and then hopped on to the wooden rail next to the trail and then went into the bushes up in the hill. It was definitely an encounter that I will fondly remember for a long time.”

Swapnil agreed with Roger Brinton who encountered the bobcat in late August and described it as wary but not fearful. Swapnil suggested it seemed like a young male who has established his new territory.

Ronnie Eaton said, “Some of these cats can appear quite mellow and tame, but if you stare them down, you might get the hiss!!” Roger did indeed experience a hiss and yowl in his encounter. As for the cats ‘strange’ behavior that some park visitors described, Ronnie said, “It is likely not strange but just unfamiliar to the observer,” adding that although bobcats are not rare, we don’t often see them.

Roger Brinton confirmed that the cat in Swapnil’s photos is definitely the animal he also observed, but was unsure at the time whether it was a bobcat. Roger attributed the differences from his own observations of the tail and fur compared to Swapnil’s, to variations in setting (shade vs full sun) and viewing angles.

After seeing Swapnil’s photos, Ann Kircher commented, “The mystery seems to be solved.” ❖



Photos © 2024 Swapnil Ghiware, sgphotography.7exposures.com

Compiled by Michele W. Conway from emails among Alf Fengler, Swapnil Ghiware, Roger Brinton, Ann Kircher, Sandy Bernhard, and Ronnie K. Eaton regarding the feline.

Members Celebrate Our Many Connections

by Michele W. Conway

Friends of Edgewood held its 32nd annual general meeting Oct. 6. Thirty members and many guests attended despite the temperature that reached 101°F that day. FoE president Peter Ingram introduced the meeting theme "Edgewood Connects," explaining that Edgewood connects us to nature, to our community, and to each other. He said, "We are here to celebrate the ways we work to preserve Edgewood's natural beauty and the ways Edgewood works to rejuvenate our spirits."

Wes Radiz, editorial director and publisher of *Bay Nature* magazine, was the guest speaker. He talked about plans to keep *Bay Nature* going at a time when many print publications are struggling or have stopped publishing altogether. He described how *Bay Nature* is now offering membership in a community rather than only a magazine subscription. Membership in the *Bay Nature* community includes the magazine as well as opportunities to participate in activities and events, such as guided hikes and online seminars. (See page 7 for details about a *Bay Nature* discount for Friends of Edgewood.)

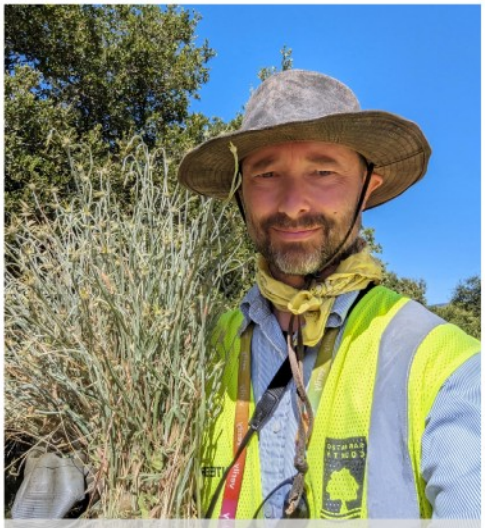
2024 Best Friend of Edgewood: James Higbie

The Best Friend of Edgewood award is an eagerly awaited announcement at the annual meetings. This year James Higbie was honored as 2024 Best Friend of Edgewood. Sandy Bernhard read the following commendation.

> For his leadership of the TERTELS* project since its inception in 2022:
>
> - Conducting extensive and challenging field work to document Edgewood's rare and locally-significant plants.
> - Creating a specialized e-map that facilitates viewing historical and current plant observation data.
> - Managing – initiating, conducting, documenting, and reporting on – conservation efforts for Edgewood's fragrant fritillaries.
>
> For contributing his expert analytical skills to our Green Grass project, providing guidance on site selection and monitoring protocol.

*TERTELS = The Edgewood Rare/Threatened/ Endangered and Locally Significant plants team

And for his years of service as a Weed Warrior, Docent in partnership with his son Eddy, and for stepping up to become our new Docent-training Shrublands Instructor.



James Higbie

James is a keen observer, a brilliant analyst, and a thoughtful, productive colleague with a calm, inclusive leadership style. He combines a deep love and knowledge of plants with a kind, self-effacing manner with humans. His dedicated efforts in support of Edgewood make him our 2024 Best Friend of Edgewood.

The afternoon concluded with a business meeting re-electing incumbent board members. Many thanks to the board members and friends who set up shade canopies, greeted members and guests, organized a delicious buffet, and cleaned up everything at the end of the day. ❖

Oct. 29 in Edgewood. *Photo by Caroline Bowker*

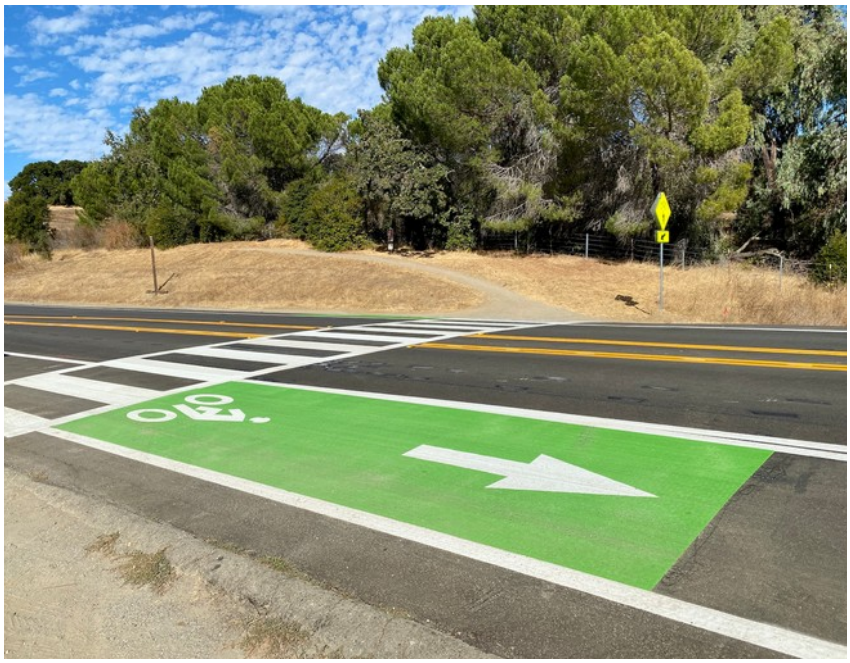
Clarkia Trailhead Gets a Much Needed Safety Update

Story and photo by Barrie Moore

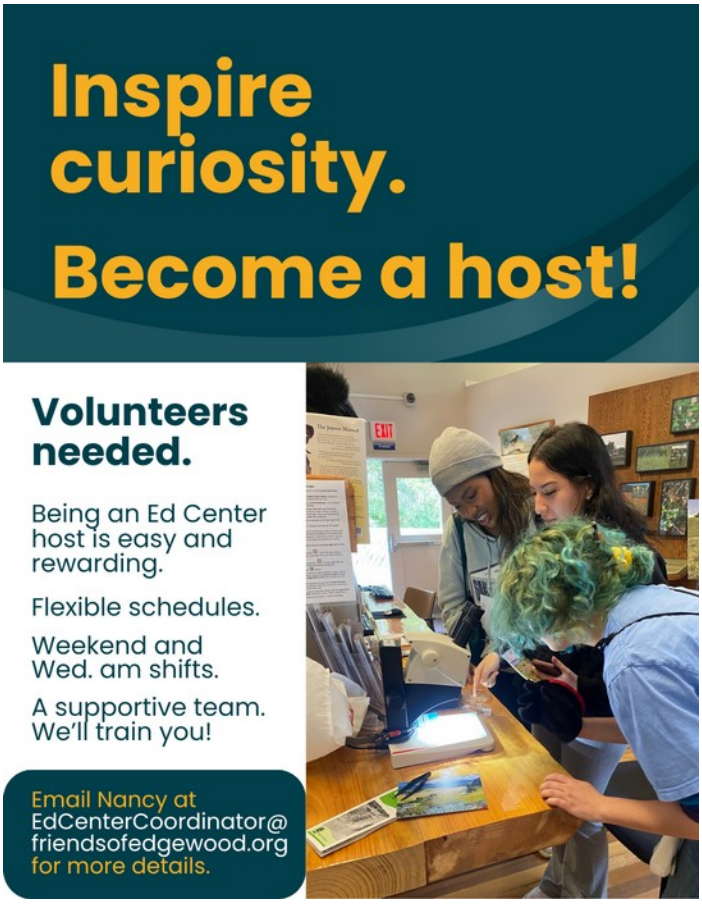
Friends of Edgewood has long been advocating for better visibility and safety for pedestrians at the Clarkia trailhead entrance.

With support from San Mateo County Parks Director Nicholas Calderon, we were able to convince San Mateo County Public Works to install new directional signage to the Clarkia trail along Cañada Road and add a new crosswalk that includes pedestrian crossing signs and painted bike lanes at the preserve entrance.

We hope that these improvements will help drivers become more aware of the thousands of visitors who enter Edgewood from the Clarkia trailhead each month and make it easier for the public to find one of our most beloved and beautiful trails. ❖



Get Involved with Friends of Edgewood



Take a Winter Hike

Winter rains wake up beautiful mosses! Learn about these tiny and fascinating plants on a free hike with FoE docent Rebecca Reynolds. We will meet at the Ed Center at 9:00 a.m. on Saturday, Jan. 18, and spend some time looking closely at 10-20 of the easily accessible examples and learning a few fascinating details about mosses in general.

We will amble at a moderate pace and make frequent stops to take a closer look at what we find along the trail. This event is geared toward adults and older children interested in learning more about mosses found at Edgewood Park and Natural Preserve. Signups for the Mosses for Beginners hike begin Jan. 2 on Eventbrite. ❖

Join the Wildflower Docent Team!

If you're inspired by the beauty of Edgewood, curious about the natural world, and would love the chance to share your enthusiasm with others, consider becoming a Friends of Edgewood docent. Training for 2025 begins in early January and runs through the end of April. We'll teach you everything you need to know; no prior training required.

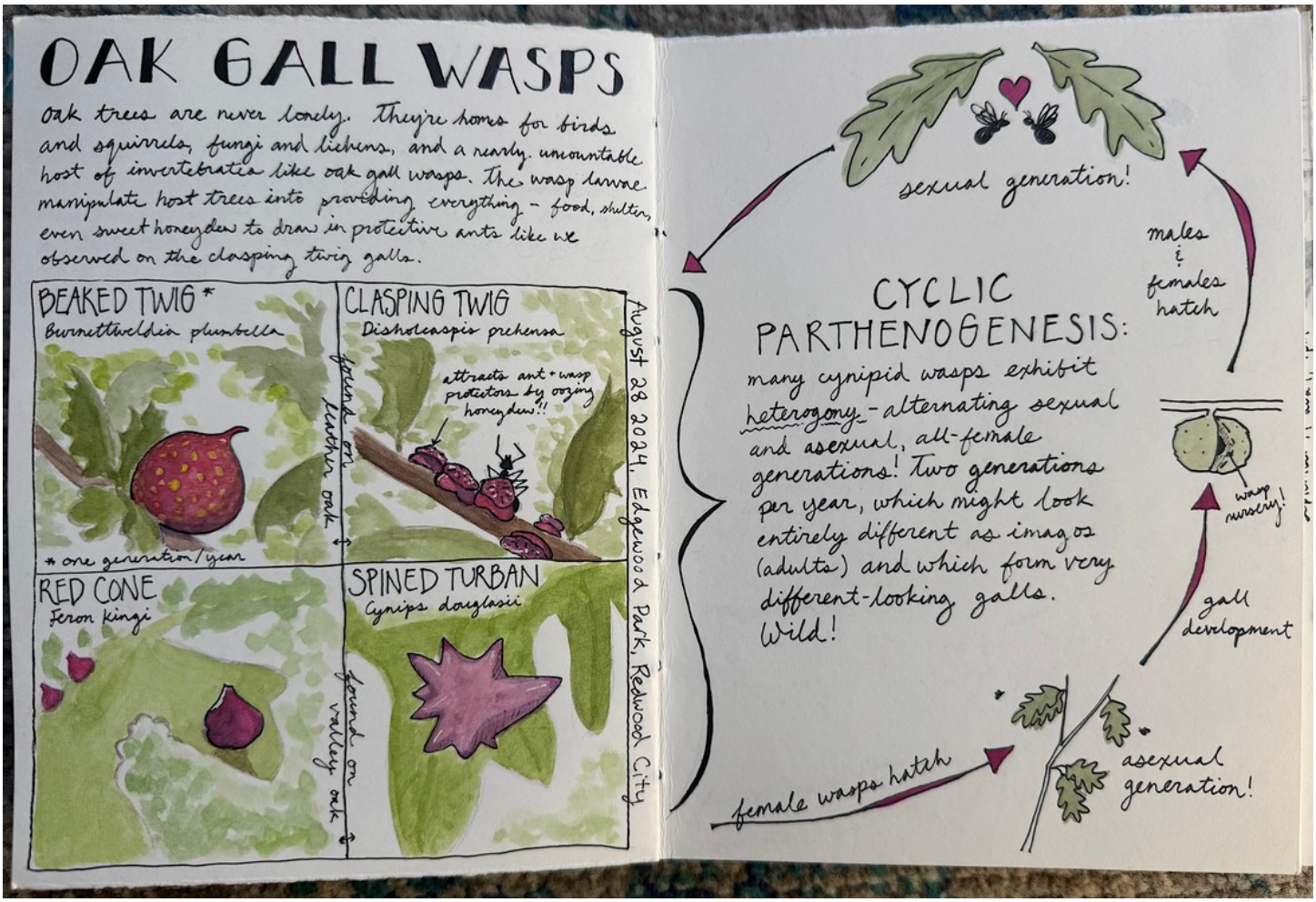
Learn more on our website at friendsofedgewood.org/become-a-docent; then email Sandy at docent-training-coord@friendsofedgewood.org to sign up. We've got only a few spots left! ❖

Why Are Oak Trees Never Lonely? Think Galls …

by Bruce Homer-Smith and Vicky Stein

Oak trees are home for birds, squirrels, fungi, lichens, and a nearly uncountable host of invertebrates like oak gall wasps. Over thousands of generations of insect-tree interactions, wasps and trees have evolved together. Each oak gall wasp lays its eggs on a particular part of a particular oak species. Then, a chemical injected by the wasp triggers a response in the plant, which creates a distinctive gall structure around the growing wasp larvae.

Vicky's journal page, below, shows four oak galls observed this fall at Edgewood.



These galls are produced by tiny Cynipid wasps. Some of these wasps make one generation per year, but others – including several species commonly found at Edgewood – undergo cyclical parthenogenesis. That means their annual life cycle has two alternating phases: In the fall, a generation of all-female wasps hatch from their galls. Without mating, those females lay their eggs and prompt their host trees to produce a totally different gall from the kind that sheltered the female generation. These galls will protect a new generation of wasps through the winter, this time both males and females. When the wasps emerge, they procreate, and start off a new set of galls.

The Gall Habitat

Oak wasp galls are complex habitats, hosting many species beyond the original gall-inducing wasp larvae. Some members of the Figitidae wasp family lay their eggs inside existing galls, where they eat the original larvae. Other species of wasps, beetles, and moths penetrate galls to eat gall tissues from the inside. Galls can support dozens of species in complex layers of parasitism.

continued on page 5

Galls, *continued from page 4*

Deterring Herbivores and Parasites

Galls often produce a chemical defense to deter herbivores. Some build up tannins, which bind to microbial enzymes, reducing the digestibility of the gall's cell walls. The tannins also taste bitter to many animals, a signal that tannic material isn't good to eat. In addition, some galls, such as the clasping twig gall, produce a sugary liquid. Ants and yellowjackets are attracted to it and defend their food source, warding off any herbivore or parasite that investigates the gall.

Coevolution

Plants respond to outside stimuli – such as light, for example. Plants that grow toward light survive better than plants that don't, so most have evolved to seek the sun. Similarly, they respond to pathogens and attacks. Often, an attacked plant produces a set of simple chemicals called growth hormones that prompt the development of particular plant tissues.

Back in their evolutionary history, a wasp ancestor's genes mutated just enough to cause her to add a simple chemical along with her eggs as she laid them on an ancestral oak. The chemical happened to mimic plant growth hormones, triggering tissue growth in her host.

The accidental gall that her chemical produced gave her offspring a huge evolutionary advantage: a concealed and protected place to feed. Her successful descendants, carrying her mutated gene, continued to lay their eggs on the same host plant. Then, future generations mutated further to produce slight variants on the original chemical. Those variations prompted new responses from the plant tissues, all while the plants responded with genetic innovations of their own. The relationship between wasps and their hosts unfolded year after year, for tens of millions of years.

Other living things evolved to take advantage of the relationship. Parasitic wasps fed on the larvae of the gall wasp, while inquiline wasps, moths, beetles, and midges simply cohabitated in the same gall tissue. Tiny bacteria and large predators like birds came to rely on gall systems, too. Organisms continued specializing to do well in this specific habitat, eventually becoming unable to survive without it.

This is called coevolution.

(1) Beaked twig gall on live oak in fall. (2) Clasping twig gall on live oak in fall.
(3) Red cone and spined turban galls on valley oak in fall. *Photos by Vicky Stein*
(4) Spined turban gall from valley oak in spring. *Photo © 2013 Joyce Gross*

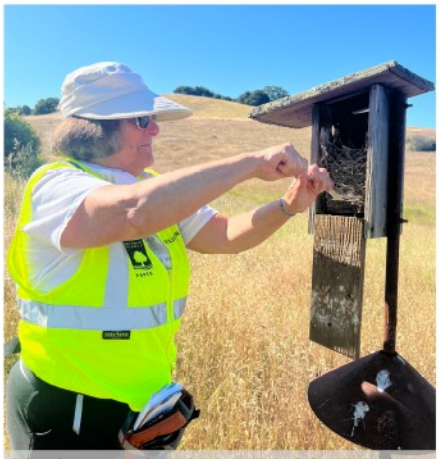
Oak trees are never lonely. They provide homes and layers of habitats for organisms like these gall wasps. Oaks at Edgewood are teeming with life in forms that are easily visible, alongside many that are easily overlooked. Take a closer look at a gall and join the oak tree community!

Want more? See joycegross.com/galls_ca_oak.php for beautiful photos of dozens of oak galls. ❖

Nest Box Report: High Yield Amid Concerns

by Frances Morse

Team Bluebird has completed another successful season. Weekly, from a cold early March through a very hot July, Diane Campbell and Marie Stosz covered the 12 nest boxes on Route 1. John Morse, Caroline Bowker, and I handled the 14 boxes on Route 2. Former nest box monitor Whitney Mortimer (now living in Sebastopol) again did the data analysis and consulted with us about some of our unusual or puzzling findings. Perry McCarty helped in creatively repairing some of our boxes. We totaled over 300 volunteer hours during this season. We are very grateful for the rangers' help in mowing the unusually tall grass that was hindering a safe climb to some of our boxes. Way to go, Team Bluebird! Here are our results.



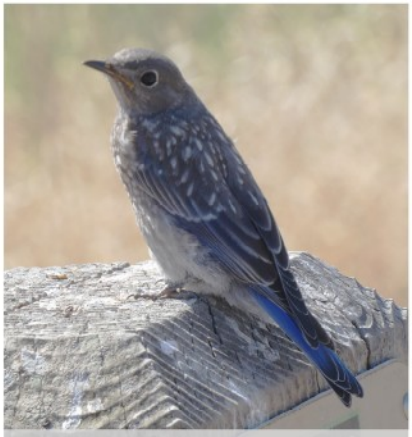
Marie opening box with bluebird nest. *Photo by Diane Campbell*

2024 Nest Box Summary (27 Boxes)

Species	*Nests*	*Eggs*	*Hatched*	*Fledged/Yield*
WEBL	11	54	50 (93%)	46 (85%)
TRES	1	4	4 (100%)	4 (100%)
ATFL	1	3	3 (100%)	3 (100%)
OATI	1	6	4 (67%)	4 (67%)
Total	14	67	61 (91%)	57 (85%)

Overall, we had 14 nests and 67 eggs from four species of cavity-nesting birds. There were 11 nests built by Western bluebirds (WEBL), 1 nest each built by tree swallows (TRES), ash-throated flycatchers (ATFL), and oak titmice (OATI). As a result, 57 new fledglings (46 bluebirds) are now flying around Edgewood. These 57 newbies gave us an overall 85% yield (i.e., more than 8 of every 10 eggs produced a new bird for our park).

As I usually do, I reported our findings to the California Bluebird Recovery Program (www.cbrp.org), which analyzes results from across California.



Fledgling. *Photo by Caroline Bowker*

Looking Forward

Much has been written about the effects of climate change on bird populations. Research shows that rising temperatures are causing birds to migrate to cooler climates. Drought has caused declines in available bird food such as insect populations. Higher temperatures are making nest boxes hotter inside.

Our 'back of the napkin' analyses (e.g., 14 of our 27 boxes were empty this year) suggest that we are seeing fewer nests and fledglings in Edgewood than in early years. It also appears that our tree swallow population is declining. Since we have Edgewood data dating back to 2013, Whitney Mortimer and I plan to take a deep dive into this data to analyze in more detail what has been happening over time here. This analysis may show us that we need to move some of the boxes to shadier spaces, paint them white, or perhaps insulate them.

We all can be thankful that we have Edgewood Park and Natural Preserve to wander in when life seems a bit overwhelming. Seeing bluebirds can help in trying times. Even ChatGPT (an artificial intelligence chatbot) knows their value, and quite poetically told me:

Western bluebird. *Photo by Caroline Bowker*

"Bluebirds, with their serene presence and bright colors, can be a gentle reminder of simplicity and resilience amid the weight of stressful events. Watching bluebirds can offer a sense of peace, taking us out of the whirlwind and grounding us in nature's rhythm." ❖

'Tis the Season for Giving

We have many great Edgewood-themed gifts including hats, t-shirts, books, and postcards available for purchase at the Bill and Jean Lane Education Center!

Consider giving a Friends of Edgewood membership or making a special donation in someone's honor. Go to friendsofedgewood.org/donate or complete and mail the form on this page.

Our friends at Bay Nature are also offering Explorer readers a $10 discount on a Bay Nature annual membership. Just enter the code EDGEWOOD when joining on their website at baynature.org.

Become a Friend of Edgewood

Help support FoE's habitat restoration programs and activities that connect people to the beauty of nature at Edgewood Park & Natural Preserve.

A donation of any amount is greatly appreciated! Consider becoming a sustaining member by signing up to make a monthly donation of $5 or more.

Pay by credit card at foew.org/donate, or complete the form below and mail with your check.

Thank you for supporting **Friends of Edgewood**.

Please circle your donation amount:

$25 $50 $100* $150* 250* $500* $_____

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EXPLORER newsletter preference: ☐ email ☐ mail

*Check if you wish to receive eligible thank you gifts:

☐ 6 Edgewood greeting cards for donations of $100+

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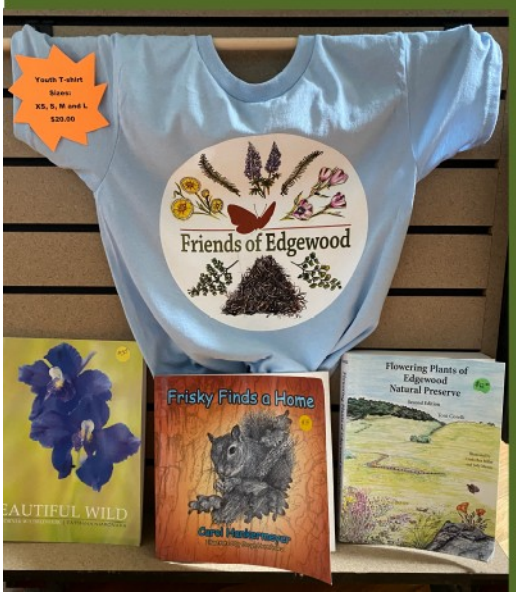
Mail with your check to **Friends of Edgewood,** 3 Old Stage Coach Rd, Redwood City, CA 94062-3801.

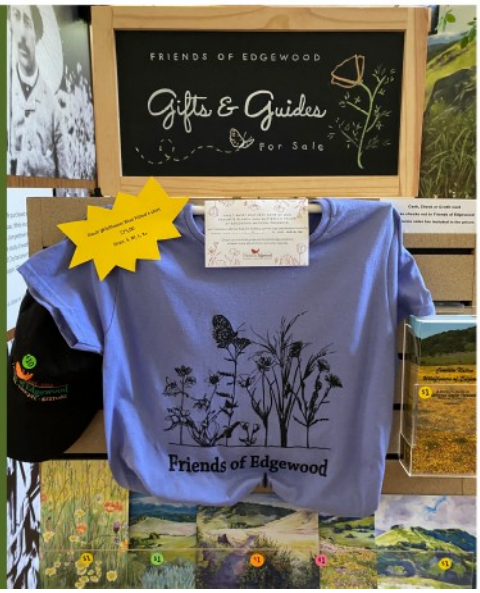
Donations are tax-deductible as allowed by law.



Come Shop at the Ed Center!

New Items

Extra cute onesie, bunny not included



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Bill and Jean Lane Education Center
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Open Wednesdays, 9:30 a.m. – 12:30 p.m. and
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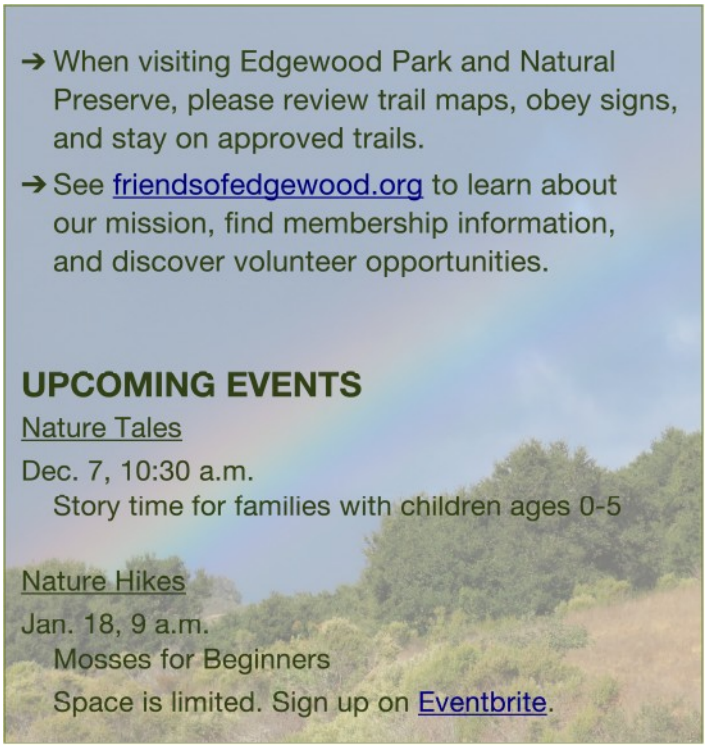

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