



Edgewood Explorer

PRESERVE • EDUCATE • RESTORE

September 2016

Volume 23 Number 3

Edgewood Park and Natural Preserve Nature Hikes

by Todd Reimche

How does spending a Saturday in the Park sound? In Edgewood Park and Natural Preserve, that is. What a great idea! Get outside, take in the fresh air, and get some exercise. Come learn some new things about Edgewood Park. Go out with family and friends, or meet some new friends at the Park. Leave the chores at home for later. Saturday in the Park – sounds like fun!

Edgewood Park and Natural Preserve offers free Third Saturday Nature Hikes every month from July through February. Hikes are led by Friends of Edgewood docents, begin at 10 a.m., and are 3 hours in duration. This season we have some exciting themed Nature Hikes planned. For example, have you ever wondered what those big piles of



sticks are just off the trail? They are Dusky-Footed Woodrat nests. Come to Edgewood Park on Saturday, November 19, to learn all about Dusky-Footed Woodrats (*Neotoma fuscipes*) with docent Kathryn Strachota. Or what about that green lacy stuff hanging from the trees? It's Lace Lichen (*Ramalina menziesii*), the California State Lichen. Join docent Alf Fengler on Saturday, January 17, for a 'What's not to like about Lichen?' hike. If you are interested in geology, birds, moss, and more, then come to Edgewood and join a Third Saturday Nature Hike. In addition, this season we are offering two additional hikes: 'Wintering Birds at Edgewood' on Saturday, November 5, and 'Start The New Year Off On The Right Foot' on Sunday, January 1, 2017.

Our August 20 hike was 'Thriving in California's Mediterranean Climate' led by docent Cynthia McLaughlin. Check out the list of Nature Hikes from September 2016 to February 2017:

- September 17: Geology – Jake Lowenstern
- October 15: Fallen Leaves, Fruiting Trees – What All Is Afoot in the Fall – Trevlyn Williams
- November 5: Wintering Birds at Edgewood – Gina Barton.
Note: 8 a.m. start for birding.
- November 19: Dusky-Footed Woodrats – Kathryn Strachota

- December 17: What About All The Moss – Rebecca Reynolds
- January 1: New Year's Walk 'Start the New Year Off On the Right Foot' – Todd Reimche
- January 21: What's Not to Like About Lichen? – Alf Fengler
- February 18: Preview of the Coming Attractions – Kathleen Goforth

All of our Nature Hikes start at the Bill and Jean Lane Education Center in Edgewood Park at 10 a.m., unless otherwise noted. ✎

Ride the Shuttle!

San Mateo County Parks Department's two-year pilot shuttle program will start September 10, 2016 and run through August 31, 2018. (<http://parks.smcgov.org/ParkShuttle>)



Above: Bill Korbholz presents Mary Wilson with a "President's Award for 10 Years of Service".

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The Rattlesnakes' Rattle

by Paul Heiple



Photo by Gary M. Stolz, USFWS, 2013

The North and South American genera *Crotalus* and *Sistrurus*, of the group pit vipers, are the only snakes in the world that have a rattle. This unique trait allows such snakes to warn potential predators and enemies, helping the snakes to survive encounters that could cause them to be injured. So the questions I want to answer are, "What makes the rattle, and how did it evolve?"

[Cut open a rattlesnakes' rattle \(https://www.youtube.com/watch?v=1pyfMnF6j_g\)](https://www.youtube.com/watch?v=1pyfMnF6j_g) and you will find that it is made of interlocking segments of thick keratin. Each segment is connected to the two segments that are ahead of and behind it. The segment behind connects to a male end, while the underside of the segment ahead (i.e., toward the head of the snake) connects with a female end. This structure results from shedding old scales.

A newly born rattlesnake (rattlesnakes are ovoviviparous¹) does not have a rattle. The end of its tail has a button-like scale. After the first shed (all of the scales on the snake are renewed), the young snake still has a button that does not rattle, but it now has a constriction that will hold onto the next scale under it. The second shed starts producing the loose but attached scales that form the rattle. Each shed adds a new segment to the rattle.

The evolution of the rattle involves the development of a single extra thick scale over the last three segments of the tail. As with all vertebrates, the tail consists of decreasing sized vertebra bones. The bones are where the scale is widest, and the constrictions are the locations where the bones form a joint.

The rattle does not get increasingly longer through the life of the snake. The scales weather and become brittle, eventually breaking with the loss of all the segments behind it. The rattlesnake has evolved a behavior that helps preserve the rattle: when the snake is moving or resting, the tail and the rattle are held up away from the ground.

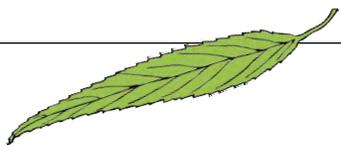
The rattle serves the snake as a warning, alerting animals that could potentially step on it that the snake is there and is dangerous. Rattlesnakes do not "rattle" to be aggressive; it is just that they are slow snakes and have a hard time getting out of harm's way.

¹ **Ovoviviparity, ovovivipary, or ovivipary**, is a mode of reproduction in animals in which embryos that develop inside eggs remain in the mother's body until they are ready to hatch.

Can you name six California State Symbols or Species that are found at Edgewood County Park and Natural Preserve?

- California State Flower
- California State Bird
- California State Tree
- California State Lichen
- California State Rock
- California State Grass

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Bluebird Monitoring Report 2016

by Frances K. Morse and Whitney Mortimer



Photo: Whitney Mortimer films nestbox activity in the distance.
© 2016 Frances K. Morse



Photo: Bluebird fledglings. © 2016 Frances K. Morse

We recently completed our 2016 Edgewood nest box monitoring season. Along with Chris O’Connell, we checked our 24 nest boxes weekly from early March until early July. John Morse and Laurie Alexander enthusiastically filled in as substitutes when needed. Park rangers (Stephen Kraemer, Corri Frazier, and Joel Cervantes) helped us relocate 8 boxes, removed unfriendly poison oak, and constructed predator guards – always with smiles and enthusiasm.

This year was an unusual season. We had a slow start (no nests until April) and a weak finish (only 2 second nests but no fledglings). We experienced cool and drizzly weather, more mice nests than usual, and unfortunately, more human tampering with the boxes. Compared to previous years, there was much less activity -- nests, eggs, and fledglings. In fact, 9 of our 24 boxes had no activity (3 more compared to last year.)

For the first time in recent memory, we had no Ash-throated flycatcher (ATFL) nests, but we did have a House Wren (HOWR) nest whose noisy parents produced 8 eggs - all of which fledged. House Wrens make their nests entirely of sticks, making them look more like a small woodrat house than a bird’s nest.



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2016 Nest Box Data Summary (24 boxes)

Bird	Total Nests	Total Eggs	Total Hatched	Total Fledged
WEBL	9	40	34 (85%)	28 (70%)
TRSW	6	30	17 (57%)	17 (57%)
HOWR	1	8	8 (100%)	8 (100%)
TOTAL	16	78	59 (76%)	53 (68%)

As you can see from the table of 2016 data, we had 16 nests, 78 eggs, 59 hatchlings, and 53 fledglings. Although the Tree Swallow (TRSW) results were similar to previous years, we had a distinct decline in Western Bluebird (WEBL) results.

The decline in WEBL production can be seen in the table showing results for the last four years, 2013 to 2016. This year’s 9 WEBL nests and 40 eggs were about half of normal. But, the success rate (70% fledged) was about the same as the last few years.

Four-Year Results: Bluebirds (WEBL)

	2016	2015	2014	2013
Nests	9	17	15	17
Eggs	40	74	74	79
Hatchlings	34 (85%)	59 (80%)	63 (85%)	64 (81%)
Fledglings	28 (70%)	54 (73%)	52 (70%)	50 (63%)

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It is hard to know what has caused this decline. We were struck by how few bluebirds we actually saw in the park as we did our work this spring. There are several possible explanations – the cool and rainy weather, prolonged drought effects, or tall grasses coming early which may have made it difficult for the birds to find insects for food.

As we usually do, we will report our results to the California Bluebird Recovery Program (CBRP) (<http://www.cbrp.org>) which monitors the bluebird population across our state. We will also check with other WEBL monitors in San Mateo County to see if they also experienced a decline in WEBL activity this year.

On a negative bird note, with more people coming to our park, there was an increase in tampering with our boxes this year. For example, someone repeatedly opened one WEBL box without replacing the nail that keeps it closed. The culprit ignored our notes to please refrain from this activity so as not to interfere with the nesting and research. Happily, in spite of this recurring meddling, mama WEBL fledged her entire first nest of four eggs and even built a second one (although that nest was not successful.) Additionally, we had a Monet moment. Unbelievably, some artist painted the side of one of our boxes with a brown branch and green leaves (see picture). This artist may have had good intentions, but she/he had to go off trail and remove our box from its tree to paint the box. The box is now more visible from the trail, and it is highly unlikely that our birds will appreciate it (GRIN), and they may even avoid this box.



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Finally, as a last tampering example, we occasionally leave a nest box open to air out for a week (e.g., after removing a mouse nest or cleaning out a particularly poopy or parasite-infested nest). Several times this season, we returned the following week to find our open boxes closed. All of these tampering activities really impact our results. If you see someone going into a nest box, please call a ranger or kindly speak to the culprit and explain what impact their actions can have on our bluebird research and population.

Monitoring the nest boxes is intense work for 4 months each season but is highly rewarding and fun! Words can't describe the feeling you have when making eye contact with a mama bluebird as you open a box. That feeling makes up for the occasional rattlesnake or bat you encounter! If you



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have ideas for the program or are interested in helping, please contact Frances at info@FriendsOfEdgewood.org.

Let's hope our 53 new fledglings and their parents will thrive in our park and hang around for a better year in 2017. 🐦



Photo: Hungry chick. © 2016 Frances K. Morse

DID YOU KNOW????

by Laurie Alexander

From January through July, 2016, our hosts in the Education Center greeted about 5,900 visitors, made more than \$1000 in sales, and collected over \$900 in donations.

We know this thanks to Peter Alley, who did the accounting for Ed Center sales, donations, and visitor counts for the last two years. Peter retired from this job this summer, but thankfully Angela Mallett graciously stepped in to assume these essential tasks.

Special thanks go out to both Peter and Angela, for sharing their time and analytical skills to support Friends of Edgewood and the Bill and Jean Lane Education Center!!!

Editor's Note: As newsletter editor, I have the privilege of being included on a number of Edgewood-related email distribution lists as I am always on the lookout for items that might be shared with a broader audience as newsletter space is available. Some readers may not know that Edgewood docents write reports following each docent-led walk, to share ideas with other docents and to report on the latest trail conditions so that other docents can prepare for future walks. I hope Edgewood Explorer readers will enjoy the following reports as much as I did.



Docent Walk Report for 4/10/16

by Sandy Bernhard

(reprinted with permission)

Two moms and four children (a 10-year-old girl, two boys, 4 and 5, and a 3-year-old girl) arrived for a prearranged family hike. The entire party was bilingual, French/English. Roger Humphrey had kindly showed up to help with the expected larger group, but we let him go off to other adventures.

Todd Reimche gave our little band a quick, friendly welcome, asking each person to tell us their name and favorite flower or animal. Todd got right down to the children's level to hear their

answers. The 4-year-old boy said "butterfly" and stepped forward to touch the butterfly logo on Todd's badge. *Enchanté.*

Having known I was leading a group with small children, I had brought a little tub filled with plastic-coated paperclips in a bouquet of colors: pink, magenta, yellow, light blue, dark blue, white, purple, and red. I almost left the green ones out, but, happily, thought better of it. Sitting at my desk with my coffee that morning, I'd been thinking about how to engage the very young. I noticed my dish of brightly colored paperclips and, *voilà*, the idea was hatched: I would let the children choose a paperclip for each flower species we found, and we would grow a paperclip chain as we went along. The chain making was entrusted to the oldest child: first the 10-year-old and then, when she had to leave early as her foot, just out of a cast, had begun to ache, to the 5-year-old boy. The children took turns (of a sort) choosing the correct color clip to match the color of the flower we had just spied. Finding a satisfactory match was a job the children took seriously. The desire to be the first to see a new flower and help grow the chain proved a strong incentive to keep forging ahead.

Of course, my adult ideas of choosing one clip for each new species of flower we encountered made no sense to the children. The little 3-year-old, ensconced in her mom's carrier, cried "I see a yellow flower" at each new patch of buttercups. My initial response, "Oh, we've seen that type before, so no new paperclip," sounded ridiculously pedantic and Scrooge-like the second it left my lips. The chain grew as the children saw fit. We used green clips for Pacific sanicle and hound's tongues, whose dry burs caught a brief test-ride on fleece. The 5-year-old

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boy was keen to find red flowers. Their lack prompted him to begin spotting other bits of red in the woodland--a leaf, a stem--and so we had red clips on our chain.

The mud on the trail was a great delight to the children, who had come prepared with brightly colored rain jackets and rubber boots. The children loved all the smelly and sticky leaves and the many woodrat stick houses we encountered. We were on the Edgewood Trail, and at the junction of the service road (or Old Stage Road), we decided to walk carefully down the steep road to catch the red columbine and make a quick return for lunch. The 5-year-old noted the drainage cuts, thinking them trail starts; he was deeply impressed by my explanation of their purpose and stopped at each new cut to note to us all how the water had its own trail.



By now, he was the keeper of the chain, which he wore proudly round his neck. When we arrived back at the Ed Center about noon, his mother's insistence that he return the chain was resisted.

In an effort to diffuse the situation, I asked him if we should count the clips before returning them. That did the trick: he carefully counted, proclaimed the total--35--and magnanimously surrendered the chain.

As we said our good-byes, we asked the children what had been their favorite color of flower. 3-year-old Chloe replied last; after a thoughtful pause, she whispered, "all of them."

I did a quick walk back over our route to check that no paperclips were on the trail; I did not find any, but I apologize if any are found. I am not sure this paperclip game would work with a boisterous group; too many opportunities for clips to fall or fly. These children, though, were exceptionally well behaved.

Cheers,
Sandy



Medicinal Plant Walk, 8/13/14

by Barb Erny

(reprinted with permission)

Despite the extremely dry conditions, I was able to identify 23 plants that are edible, medicinal, or had uses for the Ohlone.

We had several docents on the walk, which was nice for me. One group of visitors left early because they thought the walk was "from 9:30 to 11:30."

The "Virgin's Bower" had showy seed pods. The Ohlone used the foliage of that plant to make heated compresses for chest pain, while the Spanish used it to cleanse the wounds of animals.



© 2006 Kathy Korbholz



© 2006 Kathy Korbholz

The Yarrow was just barely identifiable and has other uses besides our well known one of treating Achilles' soldiers. It contains flavinoids that help improve digestion by increasing saliva and

relaxes smooth muscle to relieve cramps. The heated leaves can be put in the mouth to lessen toothaches, and the tea can have a slight sedative effect.

Did you know a pillow made of California Cudweed helps cure inflammation of mucous membranes?

© 2006 Elgin Kennedy/Frances K. Morse



To learn more, Toni Corelli's book, *Flowering Plants of Edgewood Natural Preserve*, is a great source of information! 🌿

**California State Symbols or Species
at Edgewood County Park and Natural Preserve**

		
<p align="center"><i>Eschscholzia californica</i> or Golden Poppy</p>	<p align="center"><i>Lophortyx californica</i> or California Valley Quail</p>	<p align="center"><i>Sequoia sempervirens</i> or California Coast Redwood</p>
 <p data-bbox="224 936 505 989">Photo by Stephen Sharnoff, The California Lichen Society</p>		
<p align="center"><i>Ramalina menziesii</i> or Lace lichen</p>	<p align="center">Serpentine</p>	<p align="center"><i>Nassella pulchra</i> or Purple Needlegrass</p>

Yes, I'd like to become a Friend of Edgewood!

Here's my membership donation to support preservation, education, and restoration:

Join or renew online at FriendsOfEdgewood.org

- \$25 Friend
- \$50 Advocate [®]
- \$100 Steward [®]
- Other: \$ _____

[®] Donors of \$50 or more receive a set of six Edgewood greeting cards; donors of \$100 or more also receive a one-year subscription to *Bay Nature Magazine*.

I'd like to get the newsletter by email mail.

- Please keep my thank-you gifts.
- Please keep my donation anonymous.

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For volunteer opportunities, visit
www.FriendsOfEdgewood.org/Get-Involved



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**Calling
 all Friends to the**
 ANNUAL MEETING
 Sunday, Oct. 16, 2016; 11:30 AM
Details will be mailed soon!
 Food - Fun - Festivities
 FREE!!!

Mission Statement of The Friends of Edgewood — To protect and celebrate Edgewood as a unique treasure by promoting exemplary stewardship, and by reaching out with informative public programs. www.FriendsOfEdgewood.org

PRESERVE • EDUCATE • RESTORE

**Bill and Jean Lane
 Education Center -
 Autumn Hours and By
 Appointment***

Wed	9:30 am to 12:30 pm
Sat	9:30 am to 4 pm
Sun	9:30 am to 4 pm

*Subject to volunteer staffing.

**2016
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 Directors**

Laurie Alexander
 Alice Kaufman
 Bill Korbholz
 Kathy Korbholz
 Linda Leong
 John Morse
 Todd Reimche
 Mickey Salgo
 Howie Smith
 Mary Wilson



UPCOMING EVENTS

General Meeting
 10/16 (Sun); 11:30 AM



Adopt-A-Highway

Next Sessions: 9/11, 10/1, 11/6, 12/3
 To volunteer or get more information, contact
 Dave Hershey at [adoptahighway-
 coordinator@FriendsOfEdgewood.org](mailto:adoptahighway-coordinator@FriendsOfEdgewood.org)

Third Saturday Nature Hikes*
 9/17, 10/15, 11/19, 12/17 - 10 AM @ BJLEC
 *Bonus! 11/5 @ 8 AM - Wintering Birds

Second Sunday Bird Walks
 9/11, 10/9 - 8 AM @ BJLEC

For more event info, see
www.FriendsOfEdgewood.org/events

The Edgewood Explorer is published quarterly by the Friends of Edgewood Natural Preserve, a nonprofit organization dedicated to preserving and restoring Edgewood and to educating the public about its treasures. The newsletter is edited by Linda Leong and is supported by contributions from many Friends. For more information about the Friends of Edgewood, visit our website at www.FriendsOfEdgewood.org, mail us at PO Box 3422, Redwood City, CA 94064-3422, leave a message or fax us toll-free at (1-866) GO-EDGEWOOD (1-866-463-3439), or email us at info@FriendsOfEdgewood.org.