

Edgewood Explorer



PRESERVE • EDUCATE • RESTORE

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Edgewood Seniors' Outing – April 1

by Norma Jean Bodey



Thanks to the generosity of many volunteers, nine no-longer-ambulatory seniors were able to have an experience never previously possible, i.e., getting to visit the serpentine wildflowers at

Edgewood at or near peak bloom. In the process, a long-cherished dream of mine was fulfilled.

The proposal to make possible this opportunity was enthusiastically supported by Ranger Stephen Kraemer of the San Mateo County Department of Parks (Dept.), who spearheaded it through to approval by his Dept. but who wanted this to be a Friends of Edgewood project. The FoE Board added its support. A small pilot program for this year, limited to one day, April 1st, was agreed upon.

The Sequoias retirement community in Portola Valley was invited to pioneer this project. Due to the need for each participant to sign our liability waiver, they ended up limiting invitees to those in assisted living, since they could sign for themselves, whereas others they initially had considered including (high functioning residents from their memory unit and skilled nursing facilities) could not.

You, wonderful docents, responded by stepping forward to fill multiple roles, for which I am enormously grateful.

The original plan to transport groups of just 3 visitors at a time in each of 2 Ranger-driven Rugged Terrain Vehicles (RTVs) was altered at the last minute due to one of those RTVs being out of commission. This led to last-minute changes in vehicles, routes, timing, and which docents would be needed where. This all turned out for the better for our guests, but it required a lot of good-natured patience and flexibility on the part of docent volunteers, all of whom rose to the occasion.

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2015 Wildflower Walk Report

by Todd Reimche



“There were also a lot of oohs and ahhs in the Serpentine meadows where the tidy-tips and goldfields are putting on quite a show at the moment! And, every time we saw a butterfly they wanted to know if they had just seen a Bay checkerspot“. “The day was warm and sunny and we started the day with 24 eager guests. Only about 3 or 4 of them had been to Edgewood before“. “Our whole group was very engaged and help spot new wildflowers hiding in the grass“. “Besides the usual, we saw small Blue Witch plants in flower, Monolopia, and Chaparral Pea in bloom“. “Highlights included - spectacular Globe Lilies, Blue Dicks and Golden Yarrow“. *(continued on Page 7)*

2015 Docent Class Grads

by Mary Wilson



Docent Training graduated 8 new docents this year. This was a very determined and well-educated class. Two members are also Jasper Ridge docents or training to be Jasper Ridge docents. Two more are also Midpeninsula Regional Open Space District (MROSD) docents. Several members of this class have accompanied and/or led hikes already this year. Please welcome Isabelle de la Tullaye, Dionne Dettmer, Ashley Eastman, Sonny Mencher, Rebecca Reynolds, Padma Satish and John Wertzler.

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Bluebirds of Crabbiness Shape the Future

by Carolyn J. Strange



Photo: Livermore female western bluebird.

Competing for housing in a tight market can stress bluebird moms enough to kick off a series of changes affecting the next generation and their ecological community.

Science has shown that mothers—and their circumstances—can have powerful influences over their offspring. Many species provide their young with more than just a standard package of genes and may vary nutrients, hormone mixtures, as well as other additions that can all influence life for the next generation. In so doing, mothers can provide a link between current environmental conditions and offspring traits.

Long-term studies of bluebird battles are providing glimpses into how mothers' circumstances affect their hormone contributions to their eggs, which directly shape their sons' behaviors, and in turn cause higher-level changes in ecological communities. The findings also fill in some details in a well-known ecological succession cycle.

Western bluebirds (like the ones at Edgewood) and mountain bluebirds both thrive in Northwest forests where periodic fires leave open spaces for hunting bugs and trees with cavities for nesting. But post-fire

forests are temporary habitats that last only about 20 bluebird generations. So bluebirds need to regularly colonize new post-fire habitats, a situation which sets up cycles of species replacement. Mountain bluebirds disperse readily and colonize burns first. Aggressive western bluebirds then invade, displacing the mountain bluebirds. Aggression among western bluebirds then declines, until fire or crowding resets the cycle.

Researchers followed up on evidence for maternal influence on the changes in western bluebird aggression, and the evidence revealed more about underlying processes that propel the observed ecological cycle: female western bluebirds who get harassed over nesting space tend to lay eggs spiked with more testosterone and related compounds. Such clutches of “eggs with attitude” produce more early-hatching, aggressive sons. These restless, aggressive sons are more likely to leave their parents' home range. They invade neighboring territory, driving out more easy going species, like mountain bluebirds, in just five or six generations. (Daughters leave home even without their moms' hormone doping. All the young in such clutches lean toward being more aggressive, but researchers don't yet know how it plays out for daughters.)

Aggressive males disperse readily, but they're deadbeat dads, apparently more interested in new frontiers than feeding their chicks. In time, more fatherly males take over. As nest competition dies down in the new 'hood, moms stop hormone-doping their eggs, and the more mild-mannered sons that hatch become stable, stay-at-home dads.

The timing of the females' housing harassment matters. Bluebirds tend to settle their nesting squabbles with each other before eggs form. Aggravation during egg formation comes from other species of cavity-nesting birds.

How all this relates to Edgewood's western bluebirds is unclear, except perhaps earning more respect from us—their lives are even more complex than we realized! But then, that's a given.

There's more to this story at <http://www.futurity.org/bluebirds-competitive-sons-865542/> 

(Docent Class...continued from page 1)

I especially want to thank our trainers who do such a great job for us! Thank you John Allen, Ty Freiberg, Alf Fengler, Paul Heiple, and Ken Himes. Thanks also to those who helped get the training going by putting the docent binders together and/or helping set up tables and chairs for the training evenings. Thank you Deanna Schiel, Anita Stewart, Ellen Wang, and Eric Anderson. It was wonderful to have so much help this year!

Bay Checkerspot Butterfly

(*Euphydryas editha bayensis*)

By Christal Niederer



Photo: Adult Bay checkerspot butterflies feed on the nectar of wildflowers like this Tidy-tip (*Layia platyglossa*).

Did you know that the Bay checkerspot butterfly was instrumental in saving Edgewood? Back in the 1980s, plans were underway to create a golf course at Edgewood, but the presence of this federally-listed animal was a key argument in turning Edgewood into a natural preserve instead. With this critical role, the butterfly has become an unofficial mascot of this place we all love.

Drive-By Extinction

There were about 4500 butterflies at Edgewood in 1997, but the butterflies suffered a local extinction in 2002 due to a decrease in their larval host plant, dwarf plantain (*Plantago erecta*). Ecologist Dr. Stuart B. Weiss dubbed what happened to the Bay checkerspot butterfly as a “drive by extinction” when his research showed how exhaust fumes (nitrogen oxides and ammonia) from cars driving by on Interstate 280 (I-280) actually act as a fertilizer on the grasslands. The fertilizer boost given to the

non-native grasses, which do not normally grow well in the nutrient-poor serpentine soils, allows them to outcompete the native wildflowers. In time, the wildflowers were reduced to such small numbers they no longer supported the butterfly.

Restoring Habitat

Habitat restoration experiments showed that a rotational mowing program could be used to restore abundant host plant and nectar sources, even though the highway is still a source of pollution. With adequate habitat in place, the U.S. Fish and Wildlife Service granted a permit to transfer butterflies, in both the caterpillar and adult form, from a robust population at Coyote Ridge in south San Jose to 30 acres of prime habitat at Edgewood. The reintroductions began in 2007, and supplemental animals were translocated in 2011–2014. In 2014 we estimated about 4000 larvae in the serpentine grasslands.

Checking Results via Citizen Science

During flight season, designated checkerspot monitors are allowed to walk a course through the butterfly habitat, recording the adults they see. Other monitors record data on amount of host and nectar sources. The height of the flight season is compared with the timing of host plant dry out to determine whether numbers are likely to boom or bust the next year. Survival is tied very closely to phenology, or the effects of weather on the timing of animal and plant life cycles.

Life and Behavior

The butterflies live for about a year, but each individual exists in the stage we know as an adult butterfly for about a week, although it is unlikely they even make it to that stage. The majority of the year they are larvae (caterpillars). They do not migrate, but spend their entire life cycle usually within a few hundred meters. The Edgewood butterflies pretty much stay at Edgewood.

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Adults fly in spring, usually in March or April. Although individual adults have very short lives, the flight season can last four to six weeks or more as individuals emerge at different times. These adults mate, and females lay 20–150 eggs on dwarf plantain or owl's clover (*Castilleja* spp.). The eggs hatch in about 7–10 days. Tiny prediapause larvae emerge, and begin the race to become large enough to reach diapause (a dormant state) before their host plants dry out. They enter diapause in the fourth instar (molting stage). It is common for even 99% of larvae to starve to death because their host plants have dried out before they can reach this stage. A good owl's clover year can be a boon to checkerspots, because this plant doesn't dry out as quickly as dwarf plantain.



Photo: Bay checkerspots spend about 11 of 12 months in the larval, or caterpillar, stage.

During the long, hot, and dry summer, larvae that have made it to diapause exist

in soil cracks and under rocks. This is one reason it is so important to stay on trails at Edgewood. When the rainy season begins (usually November or December), dwarf plantain germinates. This triggers the larvae to emerge from diapause. Dwarf plantain is the only thing the postdiapause larvae will eat. When they reach their seventh instar, they become large enough to form a chrysalis on vegetation or rocks low to the ground. After 10–20 days, they will emerge as an adult butterfly, and the cycle continues.

Keys to Success

Bay checkerspots can do well in both wet and dry years. More important than total rainfall is timing and March–April temperatures. Usually early rain is best because it allows diapausing larvae to emerge and begin their race against the clock. Cool temperatures in early spring are more important than precipitation in maintaining fresh host plants. Heavy rains during pupation can damage the chrysalis, and can limit adult flight time and therefore mating. Larvae are pretty durable, but all stages need sunlight to develop quickly.

The restored Bay checkerspot population at Edgewood has been increasing slowly, and we hope to reach a stage soon where introductions are no longer regularly needed. This project has taken place thanks to many partners, including San Mateo County Parks, Creekside Center for Earth Observation, San Mateo County Parks Foundation, U.S. Fish and Wildlife Service, Pacific Gas & Electric Company, the JiJi Foundation, Microsoft, REI, the California Native Plant Society, and of course, the Friends of Edgewood Natural Preserve. ❖

Christal Niederer is a biologist for Creekside Center for Earth Observation, where she has worked with Dr. Stuart Weiss since 2005.

(Seniors...continued from Page 1)

Rangers Stephen and Dinora Dunsmore-Bertoni arrived early, Dinora surprising me by bringing a table and tablecloth, a flowering plant, coffee, tea and luscious refreshments to greet our visitors, for whom they had cordoned off parking in the inner lot.

Dave Hershey and Diana Quon were there VERY early, preparing to host 2 consecutive subgroups of seniors' visits to the Education Center.

For those seniors unable to manage the step up into one of the substitute vehicles Ranger Stephen had prepared for use, he had two alternates at the ready, and helped our guests into whichever worked, that turning out to be a second smaller van, driven by Dinora.

Carol Hankermeyer (back from a desert trip for less than 24 hr.) and Mary Wilson (already immersed up to her ears in docent training activities), heroically volunteered to hike in to the junction of the Sunset and Serpentine Trails to provide what was planned to be 10-minute interpretive talks of what our visitors were seeing at that point in their outing. Due to all the last-minute changes, both were left standing out there (a tough place to have to stand this time of year, as Mary later pointed out), surely wondering whether any seniors were actually going to show up.

We snuck up on them from behind in the two Ranger-driven vans, caravanning in through the Sunset gate, with one docent ending up riding along to provide interpretation en route, something we had not anticipated being possible. Carol was able to do the same with the second van's riders. None of our guests stepped out for a closer view of the serpentine flora, but very happily enjoyed the view through rolled down windows, listening to a docent standing outside the van, walking alongside to point things out, or riding with them while providing interpretation.

The seniors ended up getting to make The Grand Circuit along the service road, from one serpentine grassland to the other, and back down to the Education Center, after which the Rangers made extra trips returning Carol and Mary to where they had parked their cars & expected to have returned on foot.

Spent, extremely happy, and reportedly hungry, the first returnees, after their visit to the Education Center, plopped down in the amphitheater and started in on the picnic lunches they had brought, rather than being driven up to the group picnic area as we had intended, where they could have enjoyed better views and additional interpretive talks from Nan Baum and Leah Moffatt who had been using their long wait time to

watch butterflies. Our wonderful Education Center hosts and lunch-time docent interpreters swiftly shifted gears, and we got tour guests out into the dappled shade of the back deck of the Education Center, to picnic at tables and chairs, their time there curtailed by their driver's next engagement.

Before they departed, we learned that one couple had often hiked at Edgewood long ago, their current reliance on walkers and canes not having suggested that their whole family had been avid backpackers. Others had never done any such thing and simply reveled in the novelty of being outside on an absolutely perfect day, amidst such floral splendor, in the company of considerate, enthusiastic and attentive Rangers and docents bent on assuring that this would be a good experience for them.

Shining eyes, enormous smiles, and multiple expressions of gratitude testified to how unique and very special this day's outing turned out to be for our guests, whose appreciation and keen interest was apparent throughout.

I can't adequately express my appreciation to both the Rangers and FoE volunteers who made this pilot program possible. Ranger Stephen had indicated, months ago, that if this first-ever effort on the part of SM County Parks proved successful, the Parks Dept. would like to make it an annual event. Since this has been a vision of mine for well over a decade, I was thrilled to see my own dream realized in the process and our visitors so delighted with the opportunity afforded them.

My vision for this project was borne out of my sorrow at not ever having succeeded at getting my beloved parents, from whom I'd learned my love of nature, out to experience its restorative powers after they became invalids in L.A. (there proved to be no place I learned about through the wildflower hotline, before flying down to L.A. that I was able to drive them, wheelchairs, double shifts of caregivers and all, through L.A. freeway towards green areas, before their energy ran out and they sadly had to ask me to drive them back home to their respective hospital beds within the 4 walls of their home). That and having tried desperately to find a way to get a one-time colleague of mine, dying of metastasized cancer, out to visit the wildflowers at Edgewood that she longed to see, which was the one thing I could do for her and wanted intensely to succeed in doing but was unable to do before she died.

Many of us will, most likely, although unimaginably, find that we gradually become, due to any number of



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Junior Explorers (JE), Spring 2015

by Carol Hankermeyer

One of the great benefits of leading children's field trips is that they often offer us a fresh view of what we think we know well. What *we* see so often on Edgewood trails, and thus take for granted, may be completely new and full of wonder in the eyes of a child. Referring to a recent Girl Scout hike, Todd Reimche reports: "The girls are so smart, fun, interested and interesting. They see and point out things from their perspective that I often do not see. Many of them bring field journals to draw pictures of flowers. (They) enjoy touching and smelling the aromatic plants and trees such as yerba buena and bay laurel...the Jr. Explorer hikes are really interactive in this manner."

Here are some of the techniques used by JE docents to engage children and stimulate interest. Martha Vercoutare used compasses (introduced and donated by Mickey Salgo) to help students orient themselves on their maps, drawings to aid leaf identification by shape (especially poison oak!), and a Silent Alone Walk to help them focus and observe nature closely. I have used flower picture cards to get each child to identify with his or her own flower. On one of Kate Connors' hikes, she asked students what they would name certain flowers. One child thought the globe lilies looked like light bulbs, another thought it would be a good place for fairies to hide. So they came up with "Fairy Light Bulbs." Amazing! Laurie Alexander and I both recommend Joseph Cornell's book *Sharing Nature with Children* as one of the superior resources for interactive involvement with kids in nature.

As of April 30, several Girl Scout troops and 3 schools have participated in our program this spring: Seasons Playhouse, Mount Carmel, and Central Middle School. Recent field trips have been led by JE docents Laurie Alexander, Kate Connors, Barbara Erny, Carol Hankermeyer, Leah Moffatt, Suzanne Redell, Todd Reimche, Peggy Smullin, and Martha Vercoutare.

The Junior Explorers Program would really benefit from your support. We are definitely seeking more *active* docents and hope to recruit some of *you* Friends of Edgewood who enjoy children and leading walks for them. Todd Reimche says: "I believe that hiking in the field and experiencing nature is very positive for these girls" (and children in general). "In addition, being a Jr. Explorer docent has been rewarding for me also." Remember, you don't need to be a flower expert to become a Junior Explorers docent! We would also welcome ideas for expanding the program and getting more schools to participate. Please contact:

JuniorExplorers-coordinator@friendsofedgewood.org



Photo: FoE board member, Todd Reimche, is a Junior Explorer docent.

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ways in which the body can let us down, seniors who cannot reach the so-restorative scenes of natural beauty under our own power that we give nary a thought to currently, as we set out on the trail. Keeping that in mind, I hope that others will see the value in making this an annual FoE program and carrying it on. That, for me personally, would be the legacy I'd most like to leave.

[Link to sweetclipart.com.](http://www.sweetclipart.com)



Photo: Alf Fenger and Mary Wilson hard at work training a new class of docents.

(Walks...continued from Page 1)

“My group expanded and contracted like a dieter’s waist size, but all were very interested, fully engaged”. “Incidentally, we saw 5 different butterflies - Anise Swallowtails, Common Ringlets, Common Buckeyes, Sara Orangetips, and a tiny blue butterfly, probably Acmon Blue”. “It was a fun hike, the weather was perfect, and everyone was very engaged”.

These are just some of the comments from Friends of Edgewood Docents’ reports on their Wildflower Walks with visitors this spring. What wonderful, interesting, descriptive and exciting reports. New and returning visitors keep coming to see and experience Edgewood County Park. Between March 14 and April 30, 427 people participated in one of our Edgewood Wildflower Walks. Friends of Edgewood docents keep sharing their knowledge and love of the preserve with the public. So far this season, 37 Friends of Edgewood docents have led Wildflower Walks. Engaging Edgewood visitors by interpreting nature, viewing wildflowers and exploring various habitats are just a few of the things Friends of Edgewood docents do every weekend throughout the wildflower

season. (And don’t forget about having the kids count dusky-footed woodrat nests!)

The Friends of Edgewood Natural Preserve exists to protect and celebrate Edgewood as a unique treasure by promoting exemplary stewardship, and by reaching out with informative public programs. Both Friends of Edgewood docents and park visitors reap the rewards as we all enjoy Edgewood County Park and Natural Preserve during the springtime.

Edgewood Wildflower Walk Haikus:

Friends of Edgewood Park

Restore preserve and protect

Serpentine treasure



Springtime wildflower walks

At Edgewood Park and Preserve

Quercus lobata



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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.friendsofedgeswood.org

PRESERVE • EDUCATE • RESTORE

**Bill and Jean Lane
 Education Center -
 Summer 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.

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UPCOMING EVENTS

Wildflower Walks
 Sat/Sun Until 6/7

Bird Walk

Sun 6/14 @ 8 AM (BJLEC)

Third Sat Nature Walks

Resume 6/20 @ 10 AM (BJLEC)

Adopt-A-Highway

Next Sessions: 6/6, 7/12, 8/1, 9/13

To volunteer or get more information, contact
 Dave Hershey at [adoptahighway-
 coordinator@friendsofedgeswood.org](mailto:adoptahighway-coordinator@friendsofedgeswood.org)

For more, see
<http://www.friendsofedgeswood.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.friendsofedgeswood.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@friendsofedgeswood.org.