FRIENDS OF EDGEWOOD NATURAL PRESERVE

Edgewood Explorer

September 2008 Volume 15 Number 3

INTERPRETIVE CENTER TO BENEFIT EDGEWOOD'S DOCENT AND OUTREACH PROGRAMS

by Carol Hankermeyer and Kate Finnigan

Everyone is so looking forward to the new Interpretive Center being planned for Edgewood, especially

those of us in the Interpretive Program, who so closely interact with the public through the Outreach work with the children and the Docent-led walks.

Of primary importance is the fact that the interpretive center will be located at the entrance to the preserve, which could not be more ideal, as it will provide a clearly defined area for docents, visitors and students to gather for hike orientation or group discussion. It will also be a good safe distance from the cars cruising the inner parking lot, which is

always a worry with the children. The outdoor amphitheatre will be particularly useful for organizing and addressing those hikes attended by a large number of people. And, of course, the Center will have restrooms, which will be a welcome convenience for everyone. The Interpretive Center will also be a secure place to store all the reference materials we provide to the docents and the public, such as maps and flower lists. It will also serve as a safe and secure place to send anyone who might need to leave a hike that turned out to be too demanding forthem.

Inside the Center, there will be exhibits designed to give an overview of the entire Edgewood experience, as well as much detailed information on what there is to discover in the preserve, and these exhibits will, hopefully, capture the interest of students and adults alike. And, of course, these exhibits will also provide

invaluable interpretive tools for the docents.

The Interpretive Center will give us a home base to post our activities and efforts, making information clearly visible to all visitors and inviting them to get involved in a variety of volunteer opportunities.

Finally, as it is being designed as a "green" building,

the building itself will serve as a model of environmental conservation.

Now all we have to do is raise the money. To date, we have raised well over half of the funds needed for the building. exhibits, and parking-lot improvements. We hope to complete funding in time to break ground next summer after the wildflower-walks season has ended. The

Species that Spe

A rendering of some of the proposed exhibits for the Interpretive Center

goal is to have the Center operational in 2010. For more information about the Center, its exhibits, and the current funding status, contact Julia Bott, Executive Director, San Mateo County Parks Foundation, at 650-321-5812, or visit www.supportparks.org.

EDGEWOODIANA — AQUESTION ABOUT GRASSLANDS MANAGEMENT

by Carolyn Strange

Edge woodiana recently received this question from a visitor to Edgewood:

Dear Edgewoodiana,

Recently while hiking at Edgewood, my family and I have noticed areas sprayed with blue dye close to the parking lot. Usually this means that an herbicide has been sprayed in the area. Is someone using herbicide in a nature preserve, and if so, how can this be? Thanks.

Nona

I am delighted to have a guest writer answering the question this issue. Christal Niederer is a Staff Biologist with Creekside Center for Earth Observation, and project coordinator for San Mateo County's Grasslands Management Project.

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Yes, the blue dye near the parking lot is an additive applied with an herbicide that is being used to treat the invasive, non-native perennial, Harding grass (*Phalaris aquatica*). Harding grass treatments at Edge wood are part of the Grasslands Management Project funded by the San Mateo Weed Management Area.* After we had initial success in the open grasslands areas of Edgewood, we widened our attention to larger infestations of the grass under the 280 overpass and in the Day Camp area of the park.

Invasive, non-native species such as Harding grass are a major threat to biodiversity at Edgewood. Harding grass can be particularly hard to treat because of its system of rhizomes, which are underground stems that store large amounts of energy. Consequently, repeated treatments are usually needed to wear down this plant's reserves.

Because of its known tenacity, Harding grass at Edge wood is being treated with a variety of techniques, including mowing, digging, tarping, and applying an herbicide. Herbicidal treatment was included for two reasons: 1) it is known to be one of the more effective ways of treating this weed and 2) it was to be used on only relatively small areas. In order to minimize impacts to non-target species, we chose to use the grass-specific herbicide, Envoy. Envoy also has the advantage of having no "re-entry time" requirement, meaning that people do not need to be excluded from a treated area for a specified

amount of time after the herbicide has been applied.

The dye makes the herbicide visible, which helps the person applying the herbicide spray with greater precision, which is especially useful in areas where the



native
invader is
interspersed
with desirable
natives.
Also,
being
able to
clearly

Harding Grass (Phalaris aquatica) at Edgewood © Kathy Korbholz

see a treated area pre-

vents under- or over-application; it also improves safety by making spills obvious.

The knowledge and training of the person working with an herbicide is also of great importance, of course, and at Edgewood, only certified park staff were allowed to apply the Envoy.

We are hopeful that by being able to use all the appropriate tools against this weed, including occasional herbicide spraying, we can eventually eliminate it from Edgewood.

*To learn more about Weed Management Areas, please visit their website at www.cdfa.ca.gov/phpps/ipc/weedmgtareas/SanMateo/SanMateo_hp.htm ®

What do you want to know about Edge wood? Send your questions to: Edge woodiana@friendsofedge wood.org ①

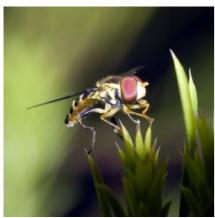
A flower falls,
even though we love it,
and a weed grows,
even though we do not love it.
~Dogen,
Japanese Buddhist monk
and philosopher
1200-1253

EDG EWOOD FLIES THAT YOU MIGHT LIKE by Paul Heiple

Whenever one thinks of flies, it is usually an unpleasant image that comes to mind—decay loving pests that spread disease and filth. And those people who also know that mosquitoes and gnats are flies, can add "bloodthirsty" to the list. All of these are insects that can make life in the out-of-doors miserable. However, this article is to show that not all flies are bad. A group you may not even recognize as flies is actually beautiful, and for most of the species in the group, completely beneficial. These flies are the hover flies, members of the family *Syrphidae*.

The Syrphid flies are so varied that it seems only two statements can be made that cover all the species: they have a false vein in their wing that is only pigment, and they commonly hover in the air completely motionless except for their wings. Other than that, they vary from small to moderately large flies, are usually brightly colored, and may or may not be hairy. Many so resemble bees and wasps, it can require a careful look to tell the difference.

The flight pattern of these insects is very distinctive:



Hover Fly(Metasyrphus americanus) © Dan Parsons

so much so that they can be identified even from very blurry videos. Such was the case at Jasper Ridge, Stanford's biological preserve located between the towns of Woodside and Portola Valley. Web Cam videos were taken of the Western Leatherwood plant to see

what species pollinated the flowers. The small dot that flew into the picture was easily identified as a Syrphid fly because it flew in quickly, stopped in midair, and then approached the flower. This video also showed that these flies are active all year round, since the Western Leatherwood flowers in January and February.

The adult Syrphid flies feed on nectar and pollen, (which gives them another common name, the flower fly). This makes them one of those native pollinators

that are so often ignored but are so very important to native plants.

The larvae of these flies are even more varied than the adults. One of the most common types of Syrphid fly larvae is a predator that feeds on soft-bodied insects such as aphids. This larva often looks like a headless caterpillar, and is frequently green with white or yellow strips, which make it blend in with a plant's stem. It



Syrphid Fly Larva

hunts by tapping about the stem like a blind person with a cane, moving back and forth in an arc, and then moving forward a bit to tap out another arc. When it encounters prey, it uses a hook in its mouth to grapple its victim and lift it off the plant stem. And then, as it prefers its meal in liquid form, it sucks the juices out of its prey before casting the drained body aside and moving on to repeat the process with the next victim. One larva can eat hundreds of aphids during its two-week growth period.

Syrphid fly larvae that are not predators are plant feeders and scavengers, but they have little else in common with each other. One plant-eating group has taken to eating bulbs, and, like most fly larvae, looks like white maggots. Another larva scavenges in the nests of social insects such as ants, and is round and flat. And yet another lives and feeds in polluted water so low in oxygen, it has evolved a long tail that it sends up to the surface of the water and through which it breathes.

It is estimated that there are over three hundred species of Syrphid fly in California. I have not collected all these species locally, so I do not have an estimate on how many are actually here, but I do know I have seen at least ten very distinctively different Syrphid flies in this area.

For those of you who want to look for these flies, watch for the adults around flowers. See if you can pick up the clues that indicate they are not bees or wasps—look for two wings, short antennae, and large eyes with straight-line sides along the back of the head. As for the larvae, they are often found with groups of aphids—look for elongated forms near the aphids as well as lots of liquid-free aphid skins.

MAD AS A MARCH HARE

by Anne Koletzke

So where does that phrase come from, "mad as a march hare"? And what does it mean? "Mad" as in temper tantrum, or "mad" as in crazy? And what about Edgewood's black-tailed jackrabbits (*Lepus californicus*), who are hares, you'll recall; are they mad? The answers to the first two questions lie, as is so often the case with mysteries, in England.

In England, people have been intrigued by the strange behavior of the Brown Hare (*Lepus europaeus*) in March (beginning of the Brown Hare's breeding season) since Norman times (1066, give or take a few years). They had probably been intrigued before then, but no one bothered to write about it until Norman times, so that's all we have to go on.

But it was in 1529 that the great Sir Thomas More himself, only six short years before being beheaded by Henry VIII for not supporting the king's desire to be Supreme Head of the Church of England, wrote in his *supplycacyon of soulys* that some poor soul was "as mad not as a march hare but as a madde dogge," and so introduced the actual phrase "mad as a March hare" into English idiom.



The March Hare by Sir John Tenniel

And then in 1885, with the publication of *Alice's Adventures in Wonderland*, Lewis Carroll transformed the phrase into one of literature's most endearingly barmy characters, the Mad March Hare, good friend of the Mad Hatter and tea-drinker extraordinaire.

So that's where the phrase comes from, and "mad" as in crazy is what it means, but what do these hares do exactly to make the fine

folk of Britain think them mad? This: Come mating season, Brown Hares, forgetting all about being shy and timid, not to mention nocturnal, throw all caution to the wind and chase each other through open fields and meadows *in broad daylight!* Some scientists believe this is dominance competition among the males, or bucks, but others are sure the females, or does, are out there running around, too. In any case, when you consider that nearly every meat-eating predator on the planet enjoys hare on the menu, such uninhibited, look-at-me behavior does seem a little, well, mad.

And it gets madder. Whether or not the does participate in all that dashing about, they are most definitely on the scene. And lest you think these ladies are passively and submissively waiting to be claimed by the long-eared equivalent of Prince Charming, think again, for when Mr. Hare Apparent bounces up to claim his bride, what he's most likely going to get is a punch in the nose. Let the boxing begin!

Some authorities speculate that the doe boxes with the buck to let him know she is not ready to mate. Others think she is testing his determination. I think she is expressing her opinion about the single parenting she knows awaits her.



Brown Hares (Lepus europaeus)
Boxing©Mick Green

Not that she goes out of her way to be a doting parent. Far from using a burrow, as do her bunny relatives, the doe hare barely builds a nest at all, but simply scrapes a shallow depression, or form, in the dirt under cover of some brush. Once the babies, or leverets, are born, she puts them in different forms that are scattered about, so that if a predator comes along, he or she doesn't get the whole litter. The doe regularly stops by to feed her children, but otherwise leaves them on their own—good thing they are born fully furred and with their eyes wide open!

One can only imagine what Freud would make of all this.

But I digress. The question remains, are Edgewood's jackrabbits ever "mad," or is that just an English thing, like "colour" and driving on the left side of the road? And if the former, are they mad in March or in January, the beginning of the jackrabbit breeding season in the Bay Area? And if the latter, do we then say "Mad as a January Jackrabbit?" Hmmm.

References:

Wild Mammals of North America ,George A. Feldhamer, Bruce Carlyle Thompson, Joseph A. Chapman–Google Books

Brown Hare, www.naturalengland.org.uk
"As Mad as a March Hare,"www.phrases.org.uk
"March Hare," "European Hare,"& "Black-tailed
Jackrabbit," Wikipedia

THE HEALING PLANTS OF EDG EW OOD Yerba Santa (Eriodictyon californicum)

by Mary Anne Leary

The Spanish referred to Yerba Santa as the "Holy Herb." Since it is a plant that has been discussed recently via email amongst Edgewood docents, I thought it would be an interesting plant to highlight in this newsletter. Yerba Santa is an evergreen plant that grows in chaparral habitat and is native to California , northern Mexico, and other areas of the Southwest. Other common names for Yerba Santa are Mountain Balm, Bear's Weed, Gum Plant, Consumptive Weed, and Sacred Herb.

The leaf of the Yerba Santa plant has been used in its herbal form as an expectorant and bronchial dilator, being particularly useful in treating upper respiratory ailments such as asthma, pneumonia, and coughs. The herb is known to have warming, anti-bacterial and expectorant qualities with strengthening influences for the Lung/Spleen meridians.

Yerba Santa was once officially listed in the U.S. Pharmacopoeia. As noted in the *Rodale Herb Book*: "In 1875 the wild herb [Yerba Santa] was introduced to the medical profession. It was listed, then dropped, then relisted, and redropped from the official pharmacopoeias. But it is still listed in the National Formulary as a useful expectorant." If you google Yerba Santa, you can see it listed in the National Formulary of 1909. It is also listed in the FDA's Generally Recognized as Safe (GRAS) list for use as a food flavoring: Yerba Santa - FL/ADJ, REG, GMP, in conjunction w/flavors -172.510. Rodale states the Native Americans smoked or chewed the leaves like to bacco for asthma conditions, and would brew the leaves as a tea to treat colds. The leaves were also rolled into balls, dried in the sun, and then chewed for a mouthwash—the taste was described as being bitter at first, but once a drink of water was taken, the taste would turn sweet and cooling.

Toni Corelli writes in her book, Flowering Plants of Edgewood Natural Preserve, that not only was Yerba Santa used for respiratory ailments, but also for chronic gastritis and urethral irritation. This is also well documented in Michael Moore's Medicinal Plants of the Pacific West. Toni continues to write about Yerba Santa's use as a poultice being applied to wounds to keep swelling down, as an aid in mending fractures, and for pain relief. Another reference claims that, before the availability of sterile bandages, the sticky leaves were used to bind wounds.

Matthew Wood has written an interesting book, *Seven Herbs/Plants as Teachers*, in which he writes about Yerba Santa. Through his study of the Ojibawe Grand Medicine Society of the Great Lakes area, he learned of the concept that there are seven steps on the path of life, and that each of these steps has a corresponding herb that helps teach that particular step or lesson. Though the herbs he used were different from those taught in the Ojibawe tradition, Matthew



Eriodictyon californicum at Edgewood © Kathy Korbholz

felt the spirit
was identical:
"This is the
spirit which
always whispers to us
about the mysteries and
challenges in
the human
condition. Part
of the beauty
of teachings
which have

inner reality is that they are remade by every student and culture." In Wood's book, Yerba Santa serves as the second guidepost in the natural progression of unfoldment as told in the story of Cain and Able. He speaks of Yerba Santa assisting the process of inner purification by allowing impurities to be removed as they rise to the surface, bringing health to every part of the individual.

When leading our wildflower walks and speaking about the medicinal qualities of the plants, I think it would be wise to tell people not to try these remedies themselves. Although many of the plants have been well studied and documented, unless an individual has first-hand experience working with the plant, or is under the care of an experienced practitioner, it is best to be conservative and not experiment. Of course in Edgewood Preserve we do not want people picking plant material anyway. But what people might not realize is that master herbalists or homeopaths who write in current times or historically about these herbal, homeopathic or essential oil substances, are fully aware of the possibility of adverse results. Consequently their decisions on how these substances are to be used are made with great care and are based on many years of training and experience. It is best for those who are unfamiliar with the medicinal uses of plants to have a healthy respect for them, and to en-

(Continued on page 6)

(Continued from page 5)

joy the stories of their healing qualities only as a point of interest.

Most herbal medicine manufacturers certify through laboratory testing that their products contain the stated amount of specified constituents. This laboratory testing is usually done through liquid chromatography (according to Wikipedia, high-performance liquid chromatography, or high pressure liquid chromatography, HPLC, is a form of column chromatography used frequently in biochemistry and analytical chemistry to separate, identify, and quantify compounds). Standardization of herbal products provides more consistency in potency and helps to ensure the correct plant is being used in the product.

Flower Essences, on the other hand, are non-toxic and safe for all ages of people, including children and the elderly, and also for the treatment of animals. There is no physical plant matter in a flower essence, and thus there are no contraindications, ill side effects, or allergic reactions. Yerba Santa flower essence addresses feelings of sadness and grief that are



Eriodictyon californicum at Edgewood © Kathy Korbholz

held in the heart/
chest/lung area. It is
quite common that
when we are holding
on to deeply held
emotions, we tend to
hold our breath. If
such emotions are
not dealt with in a
conscious manner,
they can become buried within, causing

disturbances in breathing, lung congestion and an inner sadness that can turn into profound melancholy. Yerba Santa, the Holy Herb, can help us release these deeply held emotions, and reclaim equilibrium and emotional harmony within our hearts.

As I was completing this article, I came upon two students at Skyline College, Constance-Joi Calonge and Carmina Harris, who are completing a science project where they are evaluating the antimicrobial activity of Yerba Santa or *Eriodictyon californicum*. They are publishing their work for The Society for Advancement of Chicanos and Native Americans in Science (SACNAS). Here is the abstract of their work:

"Chemical preservatives have been used in foods for

many years. However, with changing health concerns, consumers desire additive-free products. The present study is to evaluate the antimicrobial activity of *Eriodictyon califomicum*, a Native American herbal remedy, and to analyze it as a possible safe natural food preservative. Our hypothesis is that *E. californicum* possesses potentially useful antimicrobial properties that can be used in food preservation. Extracts of *E. californicum* were prepared by crushing leaves in 95% ethanol or distilled water.

Well diffusion, disk diffusion and microdilution assays were performed against gram-positive and gram-negative bacteria and fungi to determine the inhibitory effects. The organisms used were Salmonella enterica, Staphyloccocus aureus, Escherichia coli, and Bacillus subtilis bacteria, and Aspergillus niger and Saccharomyces cerevisiae fungi.

The aqueous extract showed no antimicrobial activity, while the ethanolic extract inhibited growth of both the gram-positive bacteria and yeast. The minimum inhibitory concentration against *S. aureus* and *B. subtilis* is 500 mg/ml and the minimum bactericidal concentration is 1000 mg/ml.

Standard plate counts were conducted to evaluate the plant's effectiveness as a food preservative for dairy products. The plant extracts prevented the growth of *S. aureus* in cottage cheese, killing all bacteria in 8 hours.

E. californicum possesses antimicrobial properties that inhibit the growth of the gram-positive bacteria and may be useful in food preservation."

References (not including the SACNAS abstract): Flower Essence Repertory, Patricia Kaminsky & Richard Katz

Seven Herbs/Plants as Teachers, Matthew Wood Handbook for Herbal Healing, Christopher Hobbs Medicinal Plants of the Pacific West, Michael Moore

Flowering Plants of Edgewood Natural Preserve, Toni Corelli

The Rodale Herb Book: How to Use, Grow, and buy Nature's Miracle Plants &

It is not so much for its beauty that the forest makes a claim upon men's hearts, as for that subtle something, that quality of air that emanates from old trees, that so wonderfully changes and renews a weary spirit.

~Robert Louis Stevenson

Check out the inserted flier inviting you to a talk by Dr. Stuart Weiss at Filoli Gardens on global environmental change and what that means for Edgewood and other parklands on the Peninsula—places we all love. Using the Bay checkerspot butterfly as an example, Dr. Weiss will highlight how 21st-century conservation techniques are helping us identify and adapt to the global changes affecting us locally.

Part of the excitement associated with Edgewood's future Interpretive Center are the opportunities it will provide for supporting research and providing public education. Dr. Weiss' talk is the start of programming that is planned to take place in the Center once it is built—programming that will always include sharing stories of Edgewood.

Can't find your insert? Or just want to know more? Go to www. Support Parks.org.



MEMB ERSHIP DUES

New or renewing members may clip and complete this section to pay **tax-de du cti ble** annual membership dues. Please send your check payable to **Friends of Edge wood Natural Preserve** to the return address on the back of this panel. Renewing members can determine their membership expiration date by checking the six-digit code to the right of their name on their mailing label. For example, if the code is 06/2006, membership runs through June 2006.

Questions? Call (866) GO-EDGEWOOD or contact membership-coordinator@friendsofedgewood.org.

Name	
Address	
City	State Zip
Day Telephone	Eve Telephone
Email	

ADOPT-A-HIGHWAY

Ten Road Warriors volunteered in June, July, and August to help keep I-280 adjacent to Edgewood looking clean and beautiful.

These Tenacious Ten—Carolyn Dorsch, Dave Hershey, Bill and Kathy Korbholz, Jane Kos, Margaret Marshall, Ken Seydel, Jan Smith, Lisa Tough, and Michael Yantos—collected 27 bags of trash for CalTrans and a whole bunch of treasures for themselves, including 3 snake skins, multiple bungee cords, and one St. James Place Monopoly card.

You, too, could be a Road Warrior. We'll give you a training video and your very own hard hat, gloves, goggles, official vest, and picker. We meet once a month (or sometimes every other month), and generally spend 2 ½ hours per session. The upcoming dates are 9/7, 10/4, 11/2, and 12/6. For more information contact Ken Seydel.

ADO PT-A-WEEDWAY

Want to be an Edgewood Weed Warrior? Go here to learn more: http://edgewood.thinkersrus.net/

\$10 Student/Retired (includes quarterly newsletter)		
	\$25 Friend (newsletter)	
	\$50 Advocate (newsletter, set of 6 Edgewood photo	
_	greeting cards)	
Ц	\$75 Supporter (newsletter plus choose one):	
	☐ Set of 6 Edgewood photo greeting cards and 1-	
	year subscription to BAY NATURE magazine	
	☐ Toni Corelli's Flowering Plants of Edgewood	
	\$100 Steward or \$\Bigcup\$ \$250 Guardian (newsletter, set	
of 6 Edgewood photo greeting cards, plus choose		
	one):	
	☐ 1-year subscription to BAY NATURE magazine	
	☐ Toni Corelli's Flowering Plants of Edgewood	
☐ Please do not send any premiums.		
☐ I am enclosing a gift of		
Please send copies of Common Native Wildflowers of		
Edgewood (\$2.50), copies of the Edgewood Vascular		
Plant List (\$3.00), copies of the Apr-Jun 2004 BAY		
NATURE magazine (\$6.00), copies of Flowering		
Plants of Edgewood Natural Preserve (\$25.00). Includes		
tax, S&H All items subject to availability.		
I would like to participate in the following:		
<u> </u>	Docent program	
	GIS/GPS mapping Schools outreach	
	Public relations	

A LITTLE SOMETHING FOR ALL YOU "BELLY BOTANISTS" OUT THERE

Nature will bear the closest inspection. She invites us to lay our eye level with her smallest leaf, and take an insect view of its plain.
—Henry David Thoreau

I believe a leaf of grass is no less than the journey-work of the stars. —Walt Whitman

To see a world in a grain of sand And Heaven in a wild Flower, Hold Infinity in the palm of your hand And Eternity in an hour ~William Blake

Small is beautiful. ~E.F. Schumacher



UPCOMING EVENTS

- NATIONAL PUBLIC LANDS DAY SEP TEMB ER 27. The San Mateo County Parks Department. is celebrating this day with 2 projects at Junipero Serra & Huddart County Parks. You must register to participate. For details, please go to http://eparks.net and click on "Volunteers" in the index on the left.
- □ **BIRD WALKS.** Bird walks will be on 9/28, 10/26, & 11/23 starting at 8:00 AM at the Stage Coach parking lot. For more information, contact Marilyn at birdwalks@friendsofedgewood.org
- ADO PT-A-HIGHWAY. The next sessions are scheduled for 9/7, 10/4, 11/2 & 12/6. To volunteer or get more information, contact Ken Seydel.

The Edgewood Explorer is published quarterly by the Friends of Edgewood Natural Preserve, a nonprofit organization dedicated to preserving Edgewood for the human, plant, and animal generations to come. The newsletter is produced by Anne Koletzke with contributions from many Friends. For more information a bout the Friends of Edgewood, visit our web site at www.friendsofedgewood.org, mail us at PO Box 3422, Redwood City, CA 94064-3422, call or fax toll-free at (866) GO-EDGEWOOD (866-463-3439), or email info@friendsofedgewood.org.

