FRIENDS OF EDGEWOOD NATURAL PRESERVE

Edgewood Explorer

December 2002 Volume 9 Number 4

BIOCONTROL REPORT III: SETBACK, DISAPPOINTMENT, OR ON TRACK

By Paul Heiple

I looked back at last year's article and noted that it ended with the following paragraph:

> This year's battle will rage for the next few months, then all will be quiet again. Early next spring we will be able to assess the damage to YST and Italian thistle to determine the strategy for next year's battle. Perhaps this year was the last big battle with YST for the grasslands of Edgewood.

It was not the last big battle with YST as any of you walking through the park would quickly notice. YST is still a common site in many areas and the plants this year look large and healthy. So what if anything did the biocontrol do to YST, is it likely to be effective, and how did it do this summer?

The first observation this year is that it was a good year for YST since the plants are so large and healthy. We did get good rains in December which let the early sprouting plants get a good start and develop deep roots. Another reason may be that the plants were not as crowded. Many of the plants grew without touching another YST plant. This may be due to the reduced seed production caused by the biocontrol that actually helps individual YST plants by reducing competition from it own kind. I believe this to be the case when one considers how many seed heads were damaged last year and produced few seeds.

To test this idea, I went to an area where from 95% to 100% of the seed heads showed damage due to one or more of the biocontrol agents. I

(Continued on page 5)

GENERAL MEETING AND MEMBERS APPRECIATION BBQ A SUCCESS

By Kathy Korbholz

This year's general meeting and BBQ attracted over 50 people, including Julia Bott (Executive Director, Parks Foundation), Nita Spangler (Former Parks Commissioner), Don Mayall (President, Santa Clara Valley Chapter, CNPS), and Edgewood Rangers Ricardo Trejo, Shawn Witaschek, and Katie Beltrano. It was terrific to see so many Friends who actively support us.

Besides celebrating the year's accomplishments and recognizing the efforts of our dedicated volunteers, we also got a report from Julia on the Interpretive Center, including viewing the architect's rendition of the building plan.

At the meeting, the following people were elected to the Board: Toni Corelli, Peter Ingram, and Bill Korbholz. They join continuing Directors John Allen, Katherine Greene, and me.

The highlight of the meeting, as always, was the presentation of the Best Friend award, which this year went most deservedly to FoE founding member, dedicated weed warrior, and past President John Allen. `

INSIDE THE EXPLORER

Our Woodpeckers 2
President's Message 3
Photo Exhibit 3
Interpretive Center Update 3
Docent Training 3
Ranger Roundup 6
Natural Resources DataBase 6
Adopt-A-Highway Update 6
Edgewoodiana Holiday Gift Ideas 7
Membership Dues 7
Upcoming Events 8
Newsletter Available on Web 8

OUR WOODPECKERS

By Lee Franks

When we think of bird sounds, singing is the first thing that comes to mind. But many birds have found other ways of generating acoustical signals to serve functions usually accomplished by songs. Some bird sounds are produced with their bills, feet, wings, or tails. The best known use of bills to produce auditory displays among North American birds is the **drumming** of several woodpecker species. They do this by striking their bills against a hollow or dried tree branch, or, to the annoyance of many homeowners, metal gutters, drainpipes or even trashcans.

Why do woodpeckers peck wood? They want to get the insects hiding underneath the bark. Woodpeckers have extremely acute hearing and are capable of hearing bugs crawling around under bark. If they don't hear them, they surely can feel the vibrations the insects create as they move about. Powerful muscles and a tough bill are necessary to produce the tremendous force needed to break through the bark. But while the woodpecker is pounding away at the bark, its brain is being subjected to hundreds of pounds of force. Any other bird's brain would be turned to mush, but the woodpecker's brain has a cushion that absorbs this pounding. The apparatus that supports the use of the bill is impressive: strong, grasping feet (2 toes pointed forward, and 2 backward) that work in concert with stiff tail feathers to form a triangular brace, allowing the bird to position itself for its strenuous pecking.

After the hole is drilled into the tree, how does the woodpecker get the bug out? It can't grab it with its bill, because the bill is the same size as the hole. What it does is insert its long, sticky tongue, which is 3 times longer than its bill, into the hole, catch the insect, pull it out and eat it. But where does it put this long tongue when it's not using it? It's too long to keep in its bill, but it can't be left hanging out. What the woodpecker does is stick its tongue into a nostril up inside its skull and wrap the tongue around its skull, under its skin.

We're most aware of woodpeckers in the early winter months when the woods are pretty much silent except for a solitary **tap, tap, tap.** It's not a loud tap, but it is distinct. Often it will be the Downy Woodpecker (*picoides pubescens*), the smallest woodpecker in North America (7"), and one of 5 woodpecker species present in the Park. It is usually alone, as they don't associate with their own kind until spring.

As spring approaches, the Downies with their black and white-striped head, black upperparts with white in center of back and white spots on their wings, change their behavior toward each other. For one thing, their tapping becomes a quite different unbroken **trrrrrrrrr** lasting several seconds. This tapping, known as **drumming**, is no longer simply an effort to get food, but a means of communication to other Downies that this is "my" territory. It is also the first attempt to attract a mate. Both sexes drum. After the drumming unites the pair, courtship begins, resulting in a bonding of the pair and excavation of a cavity in a living or dead tree as high as 50 feet above the ground. It requires quite a bit of work for both birds, over a week or more, to carve a gourd-shaped cavity, into which the female lays 4-5 pure white eggs that both parents incubate for 12 days until they hatch.

A close relative of the Downy is the rather shy Hairy Woodpecker (*picoides villosus*). White backs generally identify both a Downy and a Hairy, but the Hairy is much larger (9-12"), and forages on taller trees. Hairy Woodpeckers have bills that are equal to or

(Continued on page 4)

PRESIDENT'S MESSAGE

By Kathy Korbholz

For this year's general meeting in October, I chose Recognizing Our Volunteers as the theme, and asked attendees to identify on their name tags the activities in which they volunteer.

It was a delight for me to name off all of the fine volunteer projects in which Friends are involved, and to recognize participants by a show of hands for each project:

- our dedicated crew of Weed Warriors led by Ken Himes, which will probably exceed 2000 weeding hours this year,
- the Executive Committee in general, which contributes close to 2000 hours, the equivalent of a full-time employee,
- the folks whose support of Stuart Weiss's serpentine grassland restoration project was

(Continued on page 5)

PHOTO EXHIBIT FINISHERS ANNOUNCED; EXHIBIT CONTINUES

About 50 people attended the opening reception of **Expressions of Edgewood**, our exhibit of photos taken at Edgewood by Bay Area amateur photographers. The reception took place on September 19 at the San Mateo County History Museum, where the exhibit continues to be featured in the rotunda through December 31.

The top 3 finishers were announced at the reception. They are (1) Herb Steinhardt ("Lone Tree"), (2) Bruce Wyckoff ("Edgewood Poppy"), and (3) Jan Simpson ("Swallowtail Respite").

Unframed 11x14 copies of any of the entries are available for purchase for $100, of which $50 is applied as a tax-deductible donation to the Parks Foundation, earmarked for the Edgewood Interpretive Center.

These photos make great holiday gifts, and bring us a little closer to having an Interpretive Center at Edgewood. `

INTERPRETIVE CENTER UPDATE

The Conceptual Plan for Edgewood's Interpretive Center has been completed and delivered to the Parks Commission. This plan is the culmination of 12 months of work by the Acorn Group teamed with Ron Yeo, FAIA Architect. It was funded by the Parks Foundation, which received contributions from many Friends of Edgewood.

The Conceptual Plan represents Phase 1 of the IC project. In this phase, 2 public workshops were held to involve stakeholders and interested parties in the development of the concept.

Phase 2 consists of further community involvement and environmental reviews, and will again be led by a consulting team. If deemed feasible, the IC will be built in Phase 3.

The Interpretive Center project must be funded entirely by private and public contributions. There is no money available in the County's budget to support this project.

If you are interesting in donating toward this cause, you may send your donation to San Mateo County Parks and Recreation Foundation, 215 Bay Road, Menlo Park, CA 94025, or contact Julia Bott, the Executive Director, at (650) 321-5812 or julia@supportparks.org. `

DOCENT TRAINING

Training for new docents is scheduled to start in February, 2003 and run through April. The training is tentatively planned for the 1st and 3rd Wednesday evenings of each month, with a Saturday morning hike following each class session.

This schedule is considerably later than in previous years, when it has started in November, so that trainees will have more opportunity to see the plants and animals at the Preserve.

If you are interested in becoming a docent, please contact training coordinator Julie Foster at docent-coordinator@friendsofedgewood.org. `

(WOODPECKERS, Continued from page 2)
longer than the length of their head, whereas the Downy bill length is shorter than its head.

The Nuttall's Woodpecker (*picoides nuttallii*) is generally similar to and only slightly larger than the Downy, but is readily distinguished by the presence of white/black barring on the back (mid-back pure white on the Downy). Nuttall's have similar forage preferences as Downies and will defend their territories just as aggressively as the Downies. While they are often seen foraging in the oaks, acorns make up only a small part of their diet. Insects such as beetles, caterpillars, ants and bugs are sought among the oaks with the most abundant foliage. They creep diagonally as they forage in crevices and underneath bark, often hanging upside down as they probe. While probing, an individual often turns its head from side to side and peers into crevices.

Walkers strolling through the Park may be surprised by a woodpecker flushing from the ground before them. As the jay sized Northern Flicker (*colaptes auratus*) beats a hasty retreat, it reveals an unmistakable white rump and red wing linings, contrasting strikingly with its rich brown/black-barred back. The center of their chest sports a black crescent and the face and upper breast is gray with a prominent red moustache stripe. The Northern Flicker is the least arboreal of our woodpeckers, and it spends more time feeding on the ground than in the trees. They are the "anteaters" of the bird world. In addition to eating ants, they squash them and then preen themselves with the remains. Ants contain concentrations of formic acid, which is believed to kill small parasites living on the flickers' skin and in their feathers.

Northern Flickers do not have the super-hammering apparatus of most woodpeckers. This means they can't drill into hard wood, and need rotten or soft trees for nest cavities.

Last, but not least, is the highly social Acorn Woodpecker (*melanerpes formicivorus*) a cooperative breeder that lives in family groups of up to a dozen. Only a pair or two may actually breed, and the remainder of the group help the parents raise the young. Acorns are probably best known for their unique method of storing acorns in specialized trees called granaries, which are available to all family members. Group living and acorn storage are not however characteristics of the population in Edgewood, which appear to be a splinter group from a family group located somewhere outside the Park boundaries. Insects are their preferred food and are eaten at any time of the year when weather permits. Acorns are supplemental and are eaten, rather than stored.

This woodpecker is medium sized (9"), clown-faced, black and white with a distinctive red crown, glossy black and white head, white eyes, and a yellow throat. They have a limited presence (winter only) in the Park, but when you hear **waka, waka, waka,** their most common vocalization, you can be sure they are not very far away.

References

The Birds of North America; No 194,1995; No 166, 1995; No 555, 2000.

Cornell Lab of Ornithology; various pubs.

Birds of San Francisco & the Bay Area; Chris Fisher, Joseph Morlan. `

(BIOCONTROL, Continued from page 1)
took five plants from this heavily infested area near Edgewood and counted the number of flower heads, number infected and the number of viable seeds in each head. The five plants had a total of 51 flower heads; only one was undamaged. The affected flower heads had between zero and 7 viable seeds per head, the average I got was 1.51 seeds per head (1.37 excluding the undamaged head—it had seven seeds still in it, and probably more that dropped before I collected the plants). I did not do a seed count on YST flower heads before the biocontrol arrived so I must rely on the published numbers of between 20 and 30 seeds per average undamaged seed head. These numbers indicate a reduction of seeds produced in the range of 90% to 95% in affected heads in this area. I should also note that the average of ten heads per plant may be the result of damage to the buds by *Eustenopus* and *Bangasterus*. The damaged buds never flowered. I do not know how many flowers would have been produced if they had not been destroyed as buds; it seems reasonable to think they may have produced more flower heads. One thing is certain, they would have produced the seeds earlier. I have noted a delay in the first seed drop of about a month over the last two years.

Another factor I noted this fall is that the damaged heads do not open to drop their seeds. This may be a strategy employed by the false peacock fly (*Chaetorellia succinea*) since they over-winter in the seed head as a pupa. If the phyllaries are damaged in such a way that they stay on the flower head, they protect the insect inside. They also hold the seeds inside so that they cannot germinate in the soil. Some may germinate in the closed seed heads causing an even greater reduction in plants in subsequent seasons.

I do not know how many seeds are needed to maintain a population, but it can be seen that the insects are greatly reducing seed production. My small study seems to indicate each plant is producing about fifteen seeds. Only one is needed to replace this year's plant to maintain the population, but many hazards are still to be faced before seeds turn into flowering plants. Birds and rodents eat some seeds, some do not find a good location to grow, others are out-competed or killed by gophers, hikers etc.

I seem to be seeing YST pulling back from marginal areas were one would expect higher mortalities of young plants. For those areas, the seed production may be too low already.

In areas of recent invasion by YST and in areas where it was invading poor soils, the number of plants is greatly reduced. In the recently invaded areas, a seed bank did not have time to build up to high levels, so a drop in seed production for one year makes a big difference in the number of plants the next year. In marginal areas, seed production had always been less and mortality higher, so the effects of biocontrol are more noticed. Even areas where YST has been thick for years like the Clarkia Trail, the patches appear to have some holes in them not seen in previous years.

An article on the web about biocontrol of knapweed stated that biocontrol took up to five years to build up to levels that caused the population of knapweed to collapse. Since the biocontrol agents have been in Edgewood in large numbers for only three years, there is still hope. We may also see the introduction of a crown weevil in the near future that would attack the YST at a different point in its life cycle. How much can this weed take? `

(PRESIDENT'S MESSAGE, Continued from page 3)
valued at over $13,000 in matching funds from the National Fish & Wildlife Foundation,

- our fine docents and training coordinator Julie Foster and walks coordinator Malini Kaushik, who led over 900 walkers on 71 walks,
- Carol Hankermeyer and her fellow Schools Outreach volunteers who help youngsters to appreciate nature,
- our great crew of Trail Patrollers,
- our newsletter editor, Bill Korbholz, and all

(Continued on page 7)

RANGER ROUNDUP

By Katie Beltrano

All the Edgewood Park Rangers agree that the Friends of Edgewood barbecue picnic was a fun, enjoyable event and the food was outstanding. Thank you for making Shawn and me feel welcome as the newcomers. The passion and support shown for Edgewood Park and Preserve is amazing, and an event like this only reaffirms our dedication by celebrating it with others who share the same appreciation for Edgewood Park and Natural Preserve.

An extraordinary example of dedication is represented by the efforts of Bob and Elly Hess, who are the recipients of the 2002 Volunteer Recognition Award. This award was presented to the Hess' by Park Supervisor, Ricardo Trejo, Ranger III, at the Friends of Edgewood picnic. Bob and Elly are members of the Friends of Edgewood, California Native Plant Society, and the Edgewood Volunteer Trail Patrol. On behalf of park staff, many thanks and appreciation to Bob and Elly Hess, especially for providing an inspiring model of environmental stewardship for all of us.

On November 12, 2002, Stuart Weiss, Ph.D. presented results from the Bay Checkerspot Butterfly study in the western serpentine grasslands. To view a hard copy of these results, please refer to the San Mateo County Parks website at http://www.eparks.net. Thank you to all the Edgewood supporters who attended this workshop. `

ADOPT-A-HIGHWAY UPDATE

By Ken Seydel

Did you ever have your cell phone fail to operate properly and feel like throwing it out the car window? Well someone *did.* One of the many interesting items gleaned from the freeway adjacent to our park on our Oct. 5th cleanup was a cell phone. We also found the usual money (only $1.25 this time), the usual hubcap (Ford Taurus), a stop sign, a masonry trowel, a check to PG & E, one piece of a jigsaw puzzle, and 29 bags of other litter.

A new treasure hunter was added to our list this time, welcome to Dee Eduardo! Our regulars in attendance were: Sandra Cooperman, Sarah Divine, Carolyn Dorsch, Bill & Kathy Korbholz, Margaret Marshall, Susan Russell, and Ken Seydel.

Once again the mowing machine made our task more difficult. One sheet of Styrofoam had become at least 400 small pieces. But we may be making progress. The mowing sub-contractor is required to notify the Cal-Trans supervisor before they mow, and Cal-Trans in turn has indicated they will notify us.

If you would be interested in joining our hearty group of treasure hunters, please contact me. We will see that you are safety trained and equipped with your very own Picker, hard hat, goggles, gloves, and bright orange vest. Our next scheduled outings will be February 1st and April 5th. `

The Natural Resources DataBase, a web-based inventory of plants and animals on Peninsula preserves, is now available for public use at www.nrdb.org. Edgewood Natural Preserve is one of the 26 preserves featured in the database. You can look up plants, birds, and animals found at Edgewood, including all of the plants in Toni Corelli's book, and Lee Frank's bird inventory. You can customize your search to plants, animals, or even species families, and then print out a checklist for field use. The database and web were co-developed by Dennis H. Smith and Bill Korbholz. We are interested in your feedback, and especially in any sightings that you would like to report, at Edgewood or at the other preserves. `

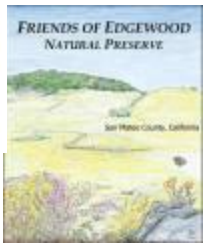
(PRESIDENT'S MESSAGE, Continued from page 5)
of the folks who contributed articles, especially Bob Young, Lee Franks, and Paul Heiple,
- our Adopt-A-Highway Road Warriors under Ken Seydel's leadership,
- the Expressions of Edgewood Committee of Katherine Greene, John Allen, and Bill Korbholz, and
- the Friends who have contributed to the Interpretive Center Concept Plan.

It is more apparent than ever how much the success of our organization depends on our volunteers, who find so many different ways to support us and Edgewood.

Consider making a New Year's Resolution to join us in one of these rewarding activities. Not only will you gain personal satisfaction from knowing you have contributed to a worthy cause, but you can help preserve Edgewood for the human, plant, and animal generations to come. `

EDGEWOODIANA HOLIDAY GIFT IDEAS

- Edgewood T-Shirt. These come in 2 styles: the classic butterfly photo or the new sketch of Edgewood done by Judy Mason. Both sell for $20.



- The Flowering Plants of Edgewood Natural Preserve, Toni Corelli's fully-illustrated flora. Supplies of this book are extremely limited. The books sell for $25.
- An 11x14 photo of Edgewood from our **Expressions of Edgewood** photo exhibit. Half of the $100 price is treated as a tax-deductible contribution to the Parks Foundation. See the article on page 3.

Order any of these items from our website or by calling toll-free 1 (866) GO-EDGEWOOD. `

MEMBERSHIP DUES

New or renewing members may clip and complete this section to pay **tax-deductible** annual membership dues. Please send your check payable to **Friends of Edgewood 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 06/2001, membership runs through June 2001.

Questions, call Bob Young.

Name

Address

City State Zip

Home Telephone Work Telephone

- o $15 Basic Membership (includes newsletter)
- o $25 Family Membership (newsletter)
- o $7 Student/Retired Membership (newsletter)
- o $50 Supporting Membership (newsletter, *Edgewood Checklist of Plants*, and Edgewood photo greeting cards (boxed set))
- o $100 Benefactor Membership (above premiums plus Toni Corelli's 360-page fully-illustrated Flowering Plants of Edgewood Natural Preserve *while available*)
- o $250 Patron Membership (above premiums

- o I am enclosing a gift of _____.
- o Please send ___ copies of the *Edgewood Checklist of Plants* ($2), ___ copies of the 28-minute video *Saving Edgewood Park* ($15), ___ copies of Flowering Plants of Edgewood Natural Preserve ($25). Includes tax, S&H.

I would like to participate in the following:

o Docent program o Weed management
o Trail patrol o School outreach
o Publications o Habitat restoration

UPCOMING EVENTS

o *Continuing through Tuesday, December 31st*, **EXPRESSIONS OF EDGEWOOD EXHIBIT**. Visit the San Mateo County History Museum to view and purchase photographs taken at Edgewood on exhibit at the museum. See page 3 for details.

o *Saturdays, February 1st, April 5th*, **ADOPT-A-HIGHWAY CLEANUP DAY**. New and veteran Road Warriors are welcome. For more information contact Ken Seydel.

o *February through April*, **DOCENT TRAINING**. For details contact Julie Foster at docent-coordinator@friendsofedgewood.org.

o *Last Sunday of Every Month*, **SUNDAY BIRD WALK**. Meet Audubon Society docent Lee Franks at the Day Camp kiosk at 8:00 am.

NEWSLETTER AVAILABLE ON WEB

By Bill Korbholz

Did you know that every issue of the *Edgewood Explorer* is available on the Friends of Edgewood web? The archive goes all the way back to Volume 1 Number 1, published in February, 1994.

Not only that, the archive is searchable, making it easy to find articles on your favorite subject. And most of the pictures are in color.

The newsletter web can be accessed directly at www.friendsofedgewood.org/newsletters. `

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 Bill Korbholz with assistance from Laverne Rabinowitz and contributions from many Friends. For more information about 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, or email info@friendsofedgewood.org.

Friends of Edgewood Natural Preserve
PO Box 3422
Redwood City, CA 94064-3422

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