Friends of Edgewood Natural Preserve

Edgewood Explorer

April 1994 Volume 1 Number 2

WILDFLOWERS ABOUND AT EDGEWOOD

By Laverne Rabinowitz

April and May are perhaps the most splendid months at Edgewood Park and Natural Preserve for wildflowers. Visitors are attracted from miles around to enjoy the variety and beauty of the flowers in bloom. Here is a partial list of some you might see in the later spring. Happy walking!

Continuing in April:

Farewell-to-Spring
Yellow Mariposa Lily
Four-Spotted Clarkia (Godetia)
Western Larkspur
Cream Sac
Ithuriel's Spear
Yarrow
Indian Pink
Blow-Wives
White Globe Lily or Fairy Lantern
Crimson Columbine
Innocence/Chinese Houses
Bee Plant
Poppy
Brodiaea
Linanthus
Lupines
Tidy Tips
Goldfields
Mule's Ears
Owl's Clover
Blue-Eyed Grass
Cream Cups

And in May:

Coronary and Harvest Brodiaea
White Mariposa Lily
Large Godetia
Nievitas
Soap Plant
Pennyroyal
Chaparral Mallow
Yerba Buena
Leopard Lily
Coyote Mint
Yerba Santa
Sticky Monkeyflower

EXPLORE THE EDGE -- RUN/WALK IN EDGEWOOD NATURAL PRESERVE

The second annual Explore the Edge run/walk will be held on Saturday, May 21, at 8:30 a.m. Sponsored by the Emerald Lake Homeowners Association, this event features an 8K (5 mile) run and 4K (2.5 mile) walk through upper Edgewood, along the Serpentine and Ridgeview trails. Participants will receive a commemorative T-Shirt and a raffle ticket for prizes donated by local merchants. Support this event--all proceeds will be donated to the Friends of Edgewood Natural Preserve. See the enclosed entry form for details.

NEEDED MORE THAN EVER: BOARD OF DIRECTORS

The campaign to make Edgewood a preserve was carried forward by a group of eight to fifteen people who met every week or two for a couple of years until the task was done.

Now that Edgewood is a preserve, we need another body with the authority to make decisions. This group would be elected by ballot and would need to meet at least once a year to elect officers. Besides that, it would meet only as required by the circumstances. Votes could probably be rounded up by phone. So, you see, being on the board doesn't have to involve a lot of meetings.

Currently, Carolyn Curtis is holding things together, but she has an obligation to be president of the local chapter of a large local organization starting January 1995, and thus won't be able to do justice to being the point person for Edgewood. Mostly, though, questions come up that should be decided by a group of people who speak for Edgewood, not just one person.

Please help your Preserve. It needn't take much time, it needn't be forever, your fellow board members are dedicated, convivial people (it's fun), and it's rewarding and satisfying.

Positions:

- President
- Vice President
- Corresponding and Recording Secretary
- Treasurer
- Directors at Large
- Escaped Exotics Committee
- Membership Committee
- Revegetation Committee
- Newsletter Committee
- County Parks and Recreation Division Liaison
- Publicity Manager
- Exhibits Committee

We owe a debt of gratitude to Bob Young, Elly Hess, Jessie Schilling, Susan Sommers, Bill Korbholz, Carolyn Curtis, Laverne Rabinowitz, and Angela Sutton for filling some of these positions on an interim basis.

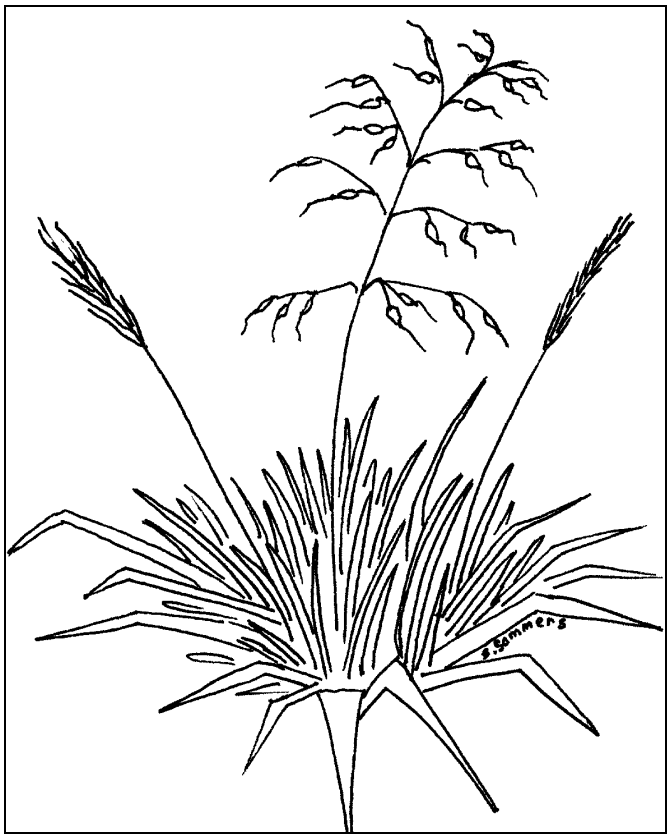
Please call Carolyn Curtis (326-2726) if you're interested in any of these positions or have ideas for additional ones.

REVEGETATION UPDATE

by Mary McMahon

Saturday, February 26, was a misty rainy day but the weather was no deterrent to Susan Sommers, Bill Edwards, Chris Romano and Susan Thrasher. On that morning, these dedicated volunteers met at Edgewood and actually began the revegetation project. The erosion track on the south-facing slope of the central ridge visible from the Sunset entrance was their area of focus. This area is well known to any one familiar with the Preserve as human damage has totally denuded the slope.

The work party began efforts on three sub-projects. First, they surveyed the area, placing stakes every 50 feet to create an easily readable grid for the planting and monitoring process. Secondly, they reviewed the effectiveness of the rock filters previously placed last October in the major erosion track. They were pleased to find that these rock filters appear to be working, holding silt caused by recent rains. These rock barriers duplicate nature's mechanisms and will help insure that the new plantings will not be washed away.



Finally, the team planted 85 Stipa bunch grass seedlings! These seedlings, locally gathered and grown, should have a good chance of thriving. A check four weeks later indicated that most of the plants were doing well. While the lack of recent rain

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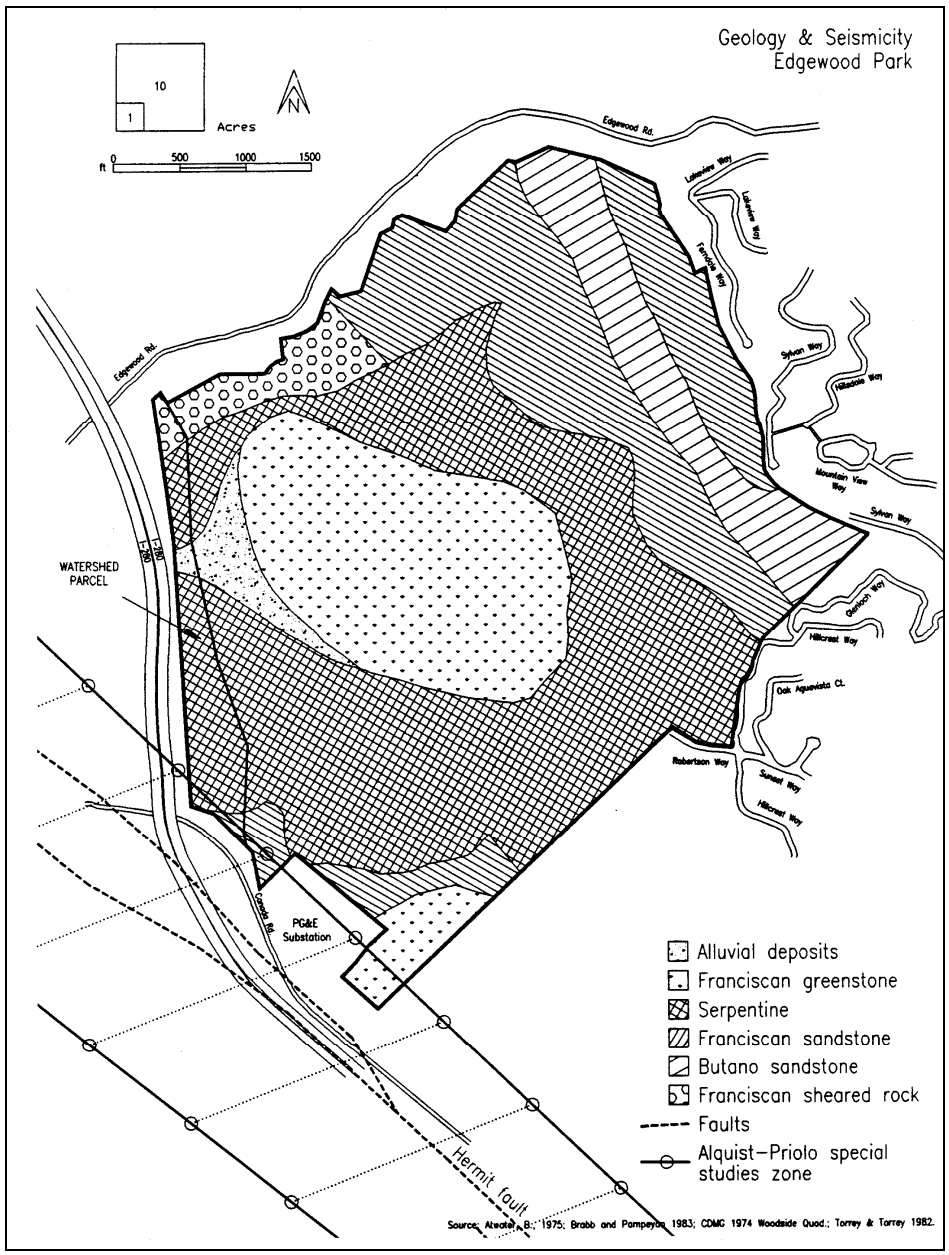
THE LAND OF EDGEWOOD: WHAT'S IT ALL ABOUT?

By Bill Korbholz

Typical of much of the land in this geologically active corridor along the San Andreas Fault, Edgewood Natural Preserve consists of a hodgepodge of rock and soil types. Within the Preserve are found rocks from volcanic lava, sand from beneath the sea, and a distinguished form of rock that, because of its slippery nature, oozed up from deep within earthquake fault traces.



Prepared byThomas Reid Associates, July 1993

The central ridge, the Preserve's most striking topographic feature, consists primarily of Franciscan greenstone. Red in color due to oxidation, this type of rock has volcanic origins and consists chiefly of basalt. If you follow the Ridgeview Loop, you will be trekking through deep red soil which has eroded from Franciscan greenstone.

Surrounding the central ridge's greenstone, you'll find a lot of rock which is greenish-gray to bluish-green in color, and often very slick. This of course is serpentinite (serpentine rock) and Edgewood has the largest exposed formation of serpentine rock on the peninsula. Because this type of rock is relatively soft and slippery, it tends to squeeze up through rock fissures caused by earthquake faults, and that is the reason it is so prominent in this area. You can enjoy the beauty of serpentinite, our state rock, along the Serpentine Loop, which circumnavigates the central ridge. For an in-depth description of serpentine rock, see Carolyn Curtis' article "What is Serpentine?" beginning on the next page of this newsletter.

In the northeast quarter of the Preserve you'll find concentrations of Franciscan and Butano sandstone. This soft rock consists of graywacke sandstone with imbedded mudstone, siltstone, and shale. The Sylvan Trail, perhaps the most beautiful trail in the Preserve, takes you through these sandstone concentrations and past the Preserve's only year-round running spring.

Also in the Preserve you will find alluvial deposits that have drained down the western slope of the central ridge, and Franciscan sheared rock along the northwestern boundary.

ARTICLES NEEDED

Would you be interested in writing an article on your favorite plants, animals, or sites in the Preserve? Please send articles, or suggestions for articles, to the newsletter committee at the return address on the back of this newsletter. For details, please contact Bill Korbholz. Deadline for submitting articles for the July issue: July 1.

WHAT IS SERPENTINE?

By Carolyn Curtis

Serpentine is not a rock, but a group of minerals, which can include chrysotile asbestos. *Serpentinite*, the term that probably makes most sense to use when referring to the rocks and soils at Edgewood, is a type of metamorphosed sedimentary rock.

The type of metamorphism known as serpentinization can happen in many ways. Many minerals can be transformed into serpentinite, as, for example, when olivine and orthopyroxene combine, which happens mainly on land. For other serpentinites, the parent mineral, such as peridotite, a tan, blocky mineral, can crystallize when it is brought up from the sea floor through the crust of an opposing tectonic plate.

Chemically, serpentinites are at the heavy end of the metal spectrum, containing relatively large amounts of magnesium and/or iron. Because of these elements, serpentinite is referred to as ultramafic (Mg + Fe). Serpentinite and peridotite can have a rusty-looking crust because of the oxidation of the iron (magnetite) they contain; California has many a "Red Hill" and "Red Mountain" as a result.

Origin and Distribution

The parent rock to serpentinite started out on the sea floor, in the lateral grooves between ridges in the deep trench off the margin of continents. As the sea floor moves up and encounters another plate, the leading edge goes down under the other plate, which is known as subduction. The lighter components of the sea floor are scraped up on top of the other plate; on the West Coast, the result became the Franciscan formation. When the subduction ceases, sedimentary rock forms in the normal way, and lots of ultramafic rock comes to the surface.

Most serpentinite in California's inner coastal ranges, such as the serpentinite in the Oakland-Berkeley hills, results from subduction. The layers of younger sedimentary rock that formerly covered this serpentinite have weathered away, exposing the serpentinite. The coast ranges are a big compression zone; the Sierra is moving west, pressing the Great Valley rocks. In this situation of moving layers, the slippery and easily mobilized serpentinite pops up along fault zones. In addition, there is tremendous hydrostatic pressure, so the serpentinite also rises along thrust lines as well.

Serpentinite and Vegetation

These serpentinite chemical characteristics inhibit plant growth:

- relative lack of the elements plants need to grow, such as calcium, nitrogen, phosphorus, potassium, and trace elements such as molybdenum
- concentrations of iron, magnesium, and other heavy metals, such as nickel, chromium, and cobalt, that are toxic to most plants
- lack of water; lack up buildup of organic matter

The crystal structure of serpentine won't allow calcium, so this element comes out in the ground water. Serpentine seeps are calcareous water, resulting in travertine aprons where native orchids sometimes grow. The cobbles in stream beds near serpentinite areas can be cemented with this calcium.

Plants have adapted to this lack of calcium in serpentinite soil in various ways: some require little calcium, others accumulate it. Calcium is highly important for plant growth; plants growing in serpentinite areas tend not to be tall.

Likewise, some plants adapt to the concentrations of iron and magnesium by accumulating it. The magnesium in the serpentinite is not buffered because of the lack of calcium there, so it is toxic to most plants.

Studies have shown that toxic metals aren't the problem, but rather the low nutrient levels and dryness of serpentinite areas. Plant adaptations to low nutrient levels and to aridity look the same.

Despite the superficial aridity of serpentinite areas, water comes out all over serpentinite areas, drained from adjacent places; however, because serpentinite is so fractured and sheared, the water's availability is problematic. Most serpentinite areas can have persistent streams and springs, unlike the surrounding sandstone, which dries up.

LOOKING FOR A FEW GOOD...

...volunteers at various times in the year to repair trails, barriers, and signs. Please contact Ron Weaver if you would like to participate in upcoming projects at Edgewood.

REVEGATION (continued from page 2)

caused a few to seem a bit dry, the majority of the plants are growing with a green healthy color. We chose Stipa as the first plant for revegetation because it is natural to the area, grows quickly, and will be an effective barrier to further erosion.

However, this is only a small beginning by a small group of people. We see the need in the immediate future for three major projects:

1. A plant survey must be done to determine exactly which plants are most native to the Preserve and have the best chance of success.

2. The County Master Plan for the Preserve must be revised so that the revegetation project can be authorized.

3. The goals of the revegetation project must be formalized.

An update to this revegetation project will appear in the next newsletter. To get involved, please contact Susan Sommers.

LETTERS TO THE EDITOR

March 2, 1994

Congratulations! I just received my copy of the Edgewood Explorer. What a wonderful publication!

It is exciting to know that the Friends of Edgewood Natural preserve are interested in doing public information regarding Edgewood Park. Hopefully, our partnership will continue to make Edgewood Park Natural Preserve a wonderful place to visit.

The newsletter is great!

Respectfully,

Patrick H. Sanchez, Director
Parks and Recreation Division
Environmental Services Agency
County of San Mateo

UPCOMING EVENTS

❑ **Weekends through June 12**. Wildflower Walks at Edgewood. Sponsored by the Santa Clara Valley Chapter of the California Native Plant Society, docent-led walks start at 10 a.m. and last about 3 hours. Call John Allen or Jan Simpson for details.

❑ **April 23, 24**. Hikes at Edgewood. Ron Weaver will lead hikes of 2 to 3 hours, starting at 10 a.m. Meet at the Edgewood Road Park-and-Ride and bring water and a windbreaker. Ron Weaver.

❑ **May 21**. Explore the Edge Run/Walk. Harvey Bondar.

❑ **June 4**. Trail Days at Edgewood (to coincide with National Trail Day). Ron Weaver will lead a group to install additional habitat barriers near the Clarkia trail. 9 a.m. - 1 p.m. Meet at the Sunset/Hillcrest entrance. Bring a sturdy pair of gloves and water. Ron Weaver.

Drawing by Jean Sorenson

The Edgewood Explorer is published four times yearly by the Friends of Edgewood Natural Preserve, a not-for-profit organization dedicated to keeping Edgewood Park and Natural Preserve a place where all can enjoy the natural beauty and habitat. The newsletter is produced by the interim Publishing Committee: Carolyn Curtis, Bill Korbholz, Laverne Rabinowitz, and Angela Sutton. To submit articles or suggestions, contact Bill Korbholz.

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