Santa Clara Valley Chapter

THE BLAZING STAR

January-February 2000

GENERAL MEETING
MEMBER'S NIGHT
Friday, January 28, 2000 7:30 P.M.

Saratoga Library Community Room
(Saratoga Ave. at Fruitvale)

This is the time to bring your best slides of the past year, special plants, special places, special times. Anyone with one or more pictures of a special plant or a special place is welcome. We have to limit you to about five minutes so that there will be time for everyone. Please plan your slides accordingly. If you are bringing slides, please arrive early so we can set things up. If you have a slide tray, load it and bring it. If not, bring your slides, sorted in order. We will have a tray. There will also be space for displaying prints, drawings, and other plant related material.

Please contact Mary Simpson by either email: marysimpson@earthlink.net or phone 408/370-2177, before Wednesday January 19, and let her know what you plan to bring.

Directions to Saratoga library: Exit highway 85 on Saratoga Avenue. Head southwest, toward the hills, and take the first driveway on the left after Fruitvale, into the library parking lot.

PRESIDENT'S MESSAGE

I am an optimist, I expect the sun will rise on January 1, 2000 and things will be pretty much the same. My social security check will be deposited at the bank, which will quickly dispatch the funds to pay accumulating bills. I will take a walk on the beach at Año Nuevo State Park with members of our chapter, enjoying the elephant seals, the dune habitat and the Monterey pine forest in the background. By Monday, the 3rd, I expect I will be back on the phone, worrying about the threats to these endangered species and habitats.

I am pleased and encouraged by the actions of fellow chapter members. We have a high level of activism in our chapter. Significant turnouts of volunteers staff our successful Wildflower Shows and Plant Sales, grow the plants for our sales, pull invasive exotics. And we have just started training a whole new crop of field trip leaders. This activism has increased our ability to make a difference in protecting threatened species and habitats. It has made funds, especially from plant sales, more dependable, enabling us to take on projects that previously seemed impossible.

In response to this, the chapter board of directors at its December meeting approved a budget for the coming year including items such as: two scholarships at $1,250 each for students at local colleges engaged in plant related research; increased support for work with K-12 schools, support for research, monitoring, and public education on invasive exotics; and an agreement with the Stanford Center for Conservation Biology for acquisition of a database on the serpentine areas of the Santa Clara Valley. This latter item will be an enormous help to us in producing the planned report on *Resources of Coyote Ridge.* The Stanford Center data is only the beginning; we have plants to count, vegetation to survey. We need your help! If you haven't yet signed up my number is 650-856-7579, my email is seleve@netcom.comter yet, talk to me on the beach año Nuevo on New Year's Day!
~Don Mayall

CHAPTER ACTIVITIES

GARDENING WITH NATIVES
Join us Thursday, January 6, 7:30pm at De Anza Environmental Study Area to hear Alrie Middlebrook present "Landscaping with Natives." Our speaker and Glenn Keator are co-teaching a

course at Strybing Arboretum for the third winter – "California Natives in Style" – this is also the title of their upcoming book. The next meeting on Thursday, February 2 is undetermined at this point. For details, call Wendy Winkler at (650)851-2596 or send e-mail (please include your phone number) to w_winkler@hotmail.com to be added to the group's e-mail listFONT face="Palatino" size=1 >Please join us at our nursery on the grounds of Hidden Villa. You don't have to have any specialized knowledge to contribute. Someone will always be on hand to show you what needs doing, and how to do it. We meet every Wednesday around 11 a.m. and work till 2 or 3. It's a great way to learn about native plants and how (and how not) to grow them. For more details, call Ray Deutsch at (650)365-6136.

Arbutus menziesii – Pacific madrone

(artwork by Jean Struthers)
Pacific madrone ranges from southern British Columbia to southern California, generally in coastal areas. This broadleaf evergreen is noted for its shiny thick leaves, peeling reddish bark, and orange-red berries. The symmetrical habit of this tree in Oregon is replaced with twisted trunks in California.

CONSERVATION

BROOM BASH AT FOOTHILLS PARK
Almost all of the large broom plants have been removed in the park. Thanks to all who aided this effort! Now, we must attack the seedling stage. On Saturday, January 8 we will meet at 9am in the Orchard Glen picnic area. Tell the ranger you are here for the broom pull and you will not need to pay admission. Begin the new millennium by coming out for a scenic hike and to help a worthy purpose. Details call Ellie Gioumousis (650)494-6276.

SAN FRANCISCO BAY, CONSERVATION BIOLOGY SYMPOSIUM
Registration is required for this full day, January 29, of presentations at Stanford on current research in our area. Visit the symposium web site for details.
http://www.stanford.edu/group/CCB/SFBACBS

ANNOUNCEMENTS

♥Wish List♥

Are you ready to upgrade to a new laptop or do you have a laptop you could donate to the Chapter? We would use it at plant shows and educational fairs to demonstrate our website and native plant related educational CDs such as Cal Alive! Lugging full size PCs to shows has not worked out for us, and having a laptop available to "get the word out" would be very helpful.

The minimum requirements are:
Macintosh: Power PC, System 7.1 or later, 12 MB RAM, 8x CD, color screen -or-
Windows PC: Pentium processor, Windows 95/98, 16MB RAM, 8x, SoundBlaster compatible sound card, color screen

If you have a laptop you would like to donate, please contact Don Mayall (seleve@netcom.com) or Nora Monette (nmonette@aol.com or (408) 244-5153), Steve Edwards February 19, Pollination partnerships, Ron Russo

Coyote Ridge Volunteers and Equipment Needed

Our chapter is actively working on the preparation of a Conservation Report on Coyote Ridge. This is a worthwhile project aimed at preserving the serpentine area south of San Jose. Technical skills are always appreciated, but only a willingness to work is required. If you don't already know about this area, check out the chapter web site on Coyote Ridge at http://www.stanford.edu/~rawlings/coyote/index.htm. This web site has captured some of the dramatic spring wildflower displays. Our chapter has already protected eight acres of this area as a result of a settlement with a developer. There are many more acres to protect. Your assistance in this effort can make a difference.

•Grant Writing – There are often opportunities for our Chapter to expand the scope of its activities, but many of them require funding. If you have any experience writing grant proposals, or are willing to learn this skill, we would like to hear from you.

•Corresponding Secretary – Our Chapter is also presently without a Corresponding Secretary. If you have limited time, but still would like to contribute to our Chapter's work, please consider this important position as a possibility.

•Equipment – We need the following equipment for our activities at Coyote Ridge and elsewhere. If you have equipment you would be willing to donate, or know of someone who does, please let us know. It would be of great assistance if you could contribute any of the following:
~ A laptop computer capable of accessing and storing information off the Internet
~ A color printer
~ A desktop computer
~ GPS equipment and Palm Pilot to assist in mapping vegetation at Coyote Ridge and elsewhere

If you have any time to volunteer for any of the above projects, or have equipment or technical expertise which you are willing to contribute to CNPS, please contact Mary Simpson either by email:marysimpson@earthlink.net or phone 408/370-2177ons made for the care of the plants for at least two years, with a particular emphasis on irrigation.

Schools or groups must be located in Santa Clara or San Mateo Counties. Our Board meets every two months and grant requests will be considered as they are received. If you are interested in preparing a plan and asking for a grant, please contact Nora Monette at (408) 244-5153 or nmonette@aol.com.

Donation to Yosemite Association

Our chapter recently sent a $100 donation to the Yosemite Association in memory of Dr. Carl W. Sharsmith as a contribution to the much-anticipated "An Illustrated Flora of Yosemite National Park." Due to be published in May 2000, this is the first new flora for Yosemite in almost 90 years. Dr. Sharsmith was a beloved member of our chapter until his death in 1994. He always gave willingly of his time and expertise for everything from leading field trips to identifying specimens for our annual wildflower shows. Carl was also a ranger-naturalist in Yosemite for 62 summers.

For this who wish to help with this fundraising effort, send your donations to Yosemite Association, PO Box 230, El Portal, CA 95318. Include a note that your contribution is for publishing the flora, and provide a name if there is someone you wish to honor or memorialize with your donation. ~Georgia Stigall

Santa Clara Valley Dudleya Serpentine Habitat Scholarships Update

In the spring of 1999 our Chapter awarded four $1,250 scholarships to graduate students doing research related to serpentine endemics and serpentine habitat. This scholarship program was established as part of a settlement agreement stemming from the legal challenge to a residential development in the City of San Jose. Updates on two of the four projects follow.
~Nora Monette and Sara Timby, Scholarship Committee

Erin Esperland, San Jose State University
Research Topic: Interpopulation variation in *Eschscholzia californica* (California poppy).
As you may remember, my research focuses on the differences between three populations of California poppy (*Eschscholzia californica*). Two sensitive areas are included in the study: a site in the Ben Lomond sand hills and a serpentine site on Tulare Hill in San Jose. Field data from 1998 showed that the sand hills population was different from both the serpentine and the coastal populations for many of the characters measured, both floral and leaf phenology, but the serpentine and coastal populations were not different from each other for these characters. Differences between the populations included: width of torus rim (smaller in the sand hills), flower color (more single-color flowers in the sand hills while the other populations had more yellow-tipped, orange-based flowers), white-spotted leaves (more often in sand hills), purple leaves (more often in sand hills), and visible green pigment in leaves (the sand hills had some plants on which no visible green was present on the leaves). No differences were seen in the presence or absence of red tips on the *E. californica* leaves between the populations.

In 1999, I set out to confirm the differences between the populations by taking measurements from fewer plants. I was lucky to be working in two very different climactic years: an El Niño year in 1998, and a La Niña year in 1999. Because flower color is known to change over time, I took floral character measurements from the three populations every two weeks throughout their flowering season. By looking at these characters over time, I hoped to show that differences I saw in 1998 were not due to sampling the populations at different times.

The serpentine population had a shorter flowering period than the other two populations. The coastal population was in full flower (I could find a plant within 4 feet of each of my randomly selected sampling points) for the entire ten weeks (Apr 1 to Jun 10) of my monitoring period. The sand hills population was in full flower for the last six weeks of my monitoring period and appeared as though it would continue to be beyond my monitoring window. The serpentine population was in full flower for only the four weeks in the middle of my monitoring window. Over the ten weeks of my monitoring window, the composition of the serpentine population changed from mostly orange flowered, to two-color flowered with yellow tips and orange bases. This population was the only population to shift from one-color to two color flowers over time, and because of the change in distribution of flowering plants, I believe the change over time is due to the earlier flowering of one-color plants rather than the plants changing from one-color to two color flowers. None of the populations showed a change in torus rim width over time.

Data from the common garden experiment where coastal and sand hills seed were planted in their own and each other's soil have not yet been analyzed. However, sand hills plants did keep their purple leaf coloration, even when grown in coastal soil, and coastal plants did not gain purple leaf coloration from being planted in sand hills soil. For the genetic analysis using Randomly Amplified Polymorphic DNA, over 20 polymorphic sites have been identified using a $(GTG)_5$ primer. I hope to be able to see differences in polymorphisms between the three populations once I analyze the distributions of these sites. I would like to take this opportunity to thank the Chapter once again for the scholarship. It has been a great aid to me in the process of completing my degree.

Jessica Jane Hellmann, Stanford University
Research Topic: Predicting the effects of regional climate change: dynamic resource use in a threatened butterfly.
On the serpentine grassland near Morgan Hill, California, I study the interaction between a threatened butterfly, the Bay Checkerspot butterfly (*Euphydryas editha bayensis*), and its native, annual host plants. The serpentine grassland is a fascinating system for examining the sensitivity of species interactions to environmental variation and human-caused environmental change. In this community, we find an important temporal overlap of butterfly larval development and plant growing season that may teach us something about a wide variety of plant-animal interactions.

Each year, butterfly larvae feed on a few select plant species from early spring until the grassland senesces in the late spring. If the plants die before larvae have sufficiently matured, we see extraordinarily high rates of larval mortality and declines in butterfly population size. In contrast, when plants stay green long enough for larvae to complete their growth, higher numbers of larvae survive to adulthood and the butterfly population expands. I hypothesize that climate change and other environmental stresses might alter the temporal interaction between larvae and their plants by accelerating the senescence of vital larval resources, possibly affecting butterfly population size.

In the final stages of my doctoral dissertation, I am piecing together several empirical studies to predict how environmental conditions determine butterfly population size and how climate change may alter butterfly population viability. (This work has been supported in part by the California Native Plant Society.) In greenhouse experiments, I studied the rate of senescence of grassland plants and showed that increased temperature can accelerate plant death. I also found that host plant species differ in their time to senescence, suggesting that how butterfly larvae choose hosts is important to larval survivorship. I have also shown in field experiments that larvae forage very actively, changing host plants often. This contrasts with previous conjectures that pre-diapause larvae are relatively sedentary (especially when young) and are at the mercy of one or a few natal host plants. Finally, I have studied how different rates of host plant senescence affect larval performance. In laboratory experiments, I demonstrated that access to several alternative food sources is critical to supporting individual larvae through development. Again, this finding suggests that larvae should actively search their environment and that a habitat with diverse food sources promotes larval survivorship.

The picture of larval survivorship is not complete without examining the dynamics of host plants because the abundance and distribution of serpentine plants is very variable among years. For example, the host plant, *Castilleja* spp., is sometimes widely distributed throughout the grassland (and readily available to larvae) and at other times is sparse and rare. Alternative food plants (e.g., *Plantago erecta*), in contrast, are typically widespread and relatively equal in abundance among

years. Therefore, I have surveyed the grassland over multiple years and environmental conditions to determine the variability of host plant availability. With further analysis of these data, I will be able to determine how the total abundance of plants combines with the larval race against time to regulate butterfly abundance. In turn, this knowledge may help inform management of this threatened species and teach us about how stresses in the environment may affect population persistence in this and other species.

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FIELD TRIPS FOR 2000

All trips are open to the public but sign-ups are sometimes necessary where we have space or parking limitations. Bring lunch, water, warm clothing and walking shoes. Heavy rain cancels. Call field trip leader for questions.

January 1, Año Nuevo State Park Our first annual Año Nuevo picnic. Meet at the parking lot at **11am**. The guided trips to the elephant seal area require reservations, but are not required to go to the little beach to the south. We might see some seals and we will see coastal prairie, sea cliff plants. Bring a lunch to join our picnic. Details: Andy Butcher 408-252-5591.

January 15, Stevens Creek County Park Joe Cernac will emphasize plant communities as we stroll through riparian, grassland, and chaparral communities. Learn why one flora favors a particular community type. Possible first sighting of the year of *Dirca*. Meet at **10am** at the first parking lot, (with the orchard) left turn off Stevens Canyon Rd. Info: Joe 408-292-5465

January 29, Lichens Join the Mycological Society of San Francisco and the California Lichen Society on this exciting trip to the area around Five Points and lake Pilarcitos in the San Francisco watershed (San Mateo county). This location is rarely visited due to access restrictions but is notable for both its natural beauty and historical remains. Space is limited so call Marck Menke at (415) 824-8959 to sign up.

January 30, Pescadero Marsh Natural Preserve Show up at Pescadero Marsh and Dunes for a combined field trip and light work party led by CNPS State President, Jake Sigg and CNPS Yerba Buena Vice President, Roland Pitschel. Enjoy the day learning about this special place and removing pampas grass and cape ivy. Meet at **10 am** at the trailhead lot on Pescadero Road near Highway 1. Bring lunch, liquids, gloves, and clippers if you have them. Heavy rains will cause postponement to Sunday, February 6. Call Roland 415-282-5066 or Jake Sigg 415-731-3028 for more information.

****JOIN CNPS TODAY****

Name

Address

State Zip Phone

CHAPTER AFFLIATION
Santa Clara Valley other

February 5, Weed Ecology and Biology, Edgewood Park Ken Himes & Paul Heiple will describe the ecology of invasive exotics in this easily accessible park. Ken will apply his appreciable botanic knowledge, while Paul explains why soil and geology play such a large factor in the distribution of plants. Meet at **10am** at the park and ride at I-280 and Edgewood Road. Info: Ken 650-591-8560, Paul 650-854-7125.

February 12, Rancho San Antonio Open Space Preserve Stella Yang leads this walk to spot early colors of the year. Following an approximately two mile walk to see *Dirca*, you may either return to the parking lot, or continue with Stella for an additional vigorous six mile hike through mixed deciduous

forest to a vista point. Meet by the restrooms at the north parking lot at Rancho Antonio County Park at **8:30am.** Info: Stella 408-255-6233.

February 19 & 20, Point Montara Lighthouse Hostel overnight
Note: this confirmed date is one week earlier than listed in the Nov-Dec Blazing Star. Although we couldn't reserve our first choice for weekends, we will still have two full days to explore the Montara Mountain region. Saturday evening will be a potluck followed by a special slide show of Ken Himes' favorite botanical areas in California. Space is limited. Call Ken Himes for reservations and an information pack, 650-591-8560.

March 12, San Bruno Mountain County Park
This early spring trip takes you through one of the last intact remnants of the Franciscan flora on the peninsula. The endemic San Bruno Mountain manzanita, coast rock cress, Franciscan wall flower, and footsteps of spring will be in flower. Take 101 N, exit Brisbane. Proceed on Old Bayshore and pass Brisbane. Turn left onto Guadalupe Parkway to park entrance and meet **10 am** in the parking lot just beyond the park entrance station. Details call Ken Himes.

March 17, San Mateo Creek
Join Ken Himes at **2pm** for a short hike to an unnamed special site with several unique plants. Call Ken for details, 650-591-8560

Membership categories:
Limited income/Retired/Student, $20
Individual/Library, $35
Household/Family or Group, $45
Supporting, $75
Plant lover, $100
Patron, $250
Benefactor, $500
Life, $1000

Mail this form with check payable to CNPS to:
Stella Yang, Membership Chair, PO Box 19232, Stanford, CA, 94309-9232

Recording Hotline for CNPS Events
415/853-5634

Deadline for the next newsletter is 18 February 2000. Cynthia Gilbert, editor, 2216 St. Francis Dr. Palo Alto, CA 94303
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