Native bees are diverse and ecologically important in California. In natural ecosystems, native bees are the primary pollinators of most plants. However, native bees are in decline around the world, with introduced diseases and pesticides the likely cause of the decline. Although humans as a whole are ultimately responsible for bee decline, individuals can promote bee diversity by smart native plant gardening techniques that promote pollinator diversity.

This program will be held on Tuesday, May 22, at 7 PM at the Planning Commission Room, Building C, 2850 Fairlane Court, Placerville. The program is free to both members and the public.

**PLANTS TO ATTRACTION BUMBLE- BEES AND OTHER NATIVE BEES**

There are one thousand species of California native bees, 26 of these are bumblebees and most of the rest are solitary bees. That is, they do not live in a hive with drones and all the rest.

Solitary bees usually nest in the ground, in holes they excavate themselves or in old rodent holes. A single female will prepare her earthen nest, build a few cells, lay her eggs, and collect pollen for them. Sound familiar? Although they nest alone, many females may lay in the same area. So if the area is good for native bees you may end up with bumblebee, digger bees and mier bees all living next to each other. Because many bees nest in the ground, don’t disturb the soil by tilling or scraping. These actions will also encourage more weeds.

To attract native bees, try to plant lots of different shaped flowers. Bees vary in body size and feeding parts, so plant accordingly.

Try to plant things with different flowering times so there will always be something to eat at your house. Manzanitas are a good plant for early in the season. This is an important time for bees as they have just started nesting and there aren’t a lot of things flowering.

Native plants favored by native bees:
- California manzanitas (Arctostaphylos sp.)
- California wild lilacs (Ceanothus sp.)
- California buckwheats (Eriogonum sp.)
- California penstemons (Penstemon sp.)
- California currants and gooseberries (Ribes sp.)
- California sages (Salvia sp.)

Summarized from Las Pilitas Nursery (http://www.laspilitas.com/wildlife/California_Bumble_bees.html)
Every three years the CNPS holds a Conservation Conference; this year it was at the LAX Marriott for three days. Unlike as it seems, it was a great venue for the conference, with excellent soundproofing. As there were four concurrent sessions running at all times, there was something for everybody but no single body could see it all. By pe-rusing the abstracts you can virtually attend the Conference by following this link: https://conference.cnps.org/technical/abstracts/. The El Dorado Chapter presented a poster on our survey work last year at Pine Hill (https://www.eldorado.cnps.org/images/newsletters/ED CNPS poster Feb 2018.pdf). Here are the highlights from the sessions I attended.

**Plant natives to make baby birds**

To have a yard full of birds, one should create a garden that grows baby birds, according to opening plenary speaker Doug Tallamy. He said that if all the lawns in the US were cut in half and the remaining half replanted with native plants, the nature areas created would exceed in area ALL the US National Parks (including Glacier). In addition to fruit for frugivorous birds, like robins, native plants provide food for native insect larvae (“worms”), which are collected by insectivorous birds, like western bluebird, and fed to baby birds, making more birds in your yard. Those larvae may also become butterflies if they survive the birds’ feeding. A chewed up leaf is a badge of honor; “pest-free” exotic plants, like Ginkgo, support little to no insect life. This searchable website lists the best plants for birds and the number of insects they support - https://www.nwf.org/NativePlantFinder/About.

John Rowden, from the LA Audubon Society, discussed planting local native plant species to make habitat for local native birds. If you enter your email and zip code here: https://www.audubon.org/native-plants you can get a list of local plants that will grow baby birds. You can’t go wrong with oak, alder, and native *Prunus* trees; coffee-berry, Ceanothus, toyon, California roses, and coyote bush shrubs; and perennial lupines and monkey-flowers.

**Phytophthora Update**

Sudden Oak Death is caused by a disease organism called *Phytophthora ramorum*. Its primary symptom is the sudden death of oaks, and other woody plants (http://ipm.ucanr.edu/PMG/PESTNOTES/pn74151.html).

The “Good” News: *Phytophthora ramorum* is spreading like uncontrolled wildfire within forests from California to Oregon, killing oaks and other species.

The “Bad” News: Genetic fingerprinting has revealed the presence in California of at least seven exotic species of *Phytophthora*, including a hybrid species, which kill plants.

Sudden Oak Death seems confined to coastal areas in California and Oregon due to 1, higher rainfall; 2, higher humidity; and/or 3, lower summer temperatures along the coast. Some combination of these factors seems to have kept El Dorado County, and other Sierra foothill counties east of the Central Valley, free of the disease. How the different species of *Phytophthora* will respond to environmental factors, or the effects of global climate change, or dispersal through potted plants or firewood, suggest an uncertainty whether El Dorado County can remain free of Sudden Oak Death and its variants.

“Best Management Practices” for native and commercial nurseries is still the only recommended way to prevent the spread of *Phytophthora* diseases in El Dorado County as there is no treatment. https://sites.google.com/site/cnsphtothoraresources/

For a well-written perspective on the Phytophthora talks at the cnps conference check out this note from a member of the Shasta Chapter CNPS: https://shastacnps.org/images/recordsearchlight/Conference-CNPS-Conservation-2018-Phytophthora-Article.pdf

**Chaparral**

A full day at the conference was devoted to chaparral - the most misunderstood vegetation in California. On the one hand, chaparral is a dynamic, high diversity plant community composed of amazing plants that survive high-temperature fires every few decades to spring forth as seedlings or sprouts from the charred soil. Alternatively, chaparral vegetation is the cause of residential housing conflagrations. While the climate, with all its uncertainty, is blamed when developers place housing developments in hurricane flood zones, a vegetation, chaparral, known to be highly flammable, is blamed for conflagrations that consume developments embedded within it. Unfair? Poor planning? Bad press?

One way of “Connecting Californians with native ecosystem” is through well-thought out nature centers, according to chaparral cheerleader Richard Halsey.

**Pollinator Diversity**

Dylan Burge spoke about the diversity of pollinating insects found near diverse versus less diverse sites on Pine Hill. His preliminary work “revealed that the more diverse plant communities support more native bee diversity for a longer period of the year than do plant communities with less botanical diversity.” This work will continue, so if you see some odd-looking structures on Pine Hill, let them alone as those are Dylan’s insects traps. Dylan also discussed how many new plant species are discovered – no, not growing in nature but on herbarium sheets! He illustrated this with his discovery of three new Ceanothus species in Socal.

**Promiscuous plants or not in the chaparral? New Genetic Evidence.**

A newly described species, Van Zuuk’s morning glory, *Calystegia vanzukiae*, first thought to be a hybrid species between rare Stebbins’s morning glory, *Calystegia stebbinsii*, and common chaparral bindweed, *C. occidentalis*, is NOT a new hybrid species. Instead it is a bona-fide new species without any evidence of hybrid origins, so said Sandra Namoff. And, she detailed, the genus *Calystegia* is within the genetic family tree of the genus *Convolvulus*, meaning that ALL Calystegia will soon be called *Convolvulaceae*. Get used to it.

*Arctostaphylos mewukka*, for 25+ years thought to be a hybrid species between two diploid species, *Arctostaphylos patula* and *A. viscida*, was found by Steven Serkanic to NOT be a hybrid as it is genetically distinct from these purported progenitors, with three distinct types (=clades).

Hybrids between rare Pine Hill *Ceanothus roderickii* and common *C. cuneatus* DO exist – mostly as seeds in the soil seed bank. The one thing that keeps the hybrids from potentially taking over is a lack of seedling regeneration sites. These sites occur when the chaparral burns or when disturbance occurs, like during bulldozing. Newly disturbed sites will be colonized by a mixture of pure and hybrid seedlings, according to a conversation I had with Dylan Burge. It is uncertain whether the Pine Hill *Ceanothus* will become genetically compromised by these hybrids.

Debra Ayres
Chapter Vice President
PLANT WALKS

Please contact the trip leaders by the Wednesday prior to the hike to let them know you will be attending.

May 18 (Friday) Quarry Trail, Middle Fork American River
WHERE: Meet Ginna Meyer to carpool at the Northwest Park ‘n Ride at the Ponderosa Rd exit off Highway 50 in Shingle Springs at 8:30 AM. We will carpool to the site from here. If you need to return early, please let the leaders know.
BRING: A knapsack with your lunch or snack, water bottle; wear suitable hiking boots or shoes; sunscreen and insect repellent.
WHAT TO SEE: This trail runs along the south side of the middle fork of the American River and is within the Auburn Recreation Area. There are seven different species of oaks to see, including the shrubby form of Quercus garryana, Oregon white oak. There are wonderful banks with many species of wildflowers and ferns, and, of course, many shrubs, including snowdrop bush (which should be in bloom!). Styrax redivivus, and skunk bush, Rhus aromatica.
CONTACT: Ginna Meyer (vcmeyer@me.com) if you are interested in joining this walk.

May 19 (Saturday), Lava Caps, Eldorado National Forest
WHERE: Meet Shellie Perry and Ginna Meyer at 10 am at the Pollock Pines Safeway parking lot at the northeast corner. We will carpool from there to a Lava Caps site. This will be an easy-moderate hike.
BRING: A knapsack with your lunch or snack, water bottle; wear suitable hiking boots or shoes. You may want to have a hand lens, binoculars, field guides, insect repellant and sunscreen.
WHAT TO SEE: Lava caps are volcanic tabular ridges formed from andesitic lahars or mudflows of the Mehten formation. The soils are rocky and thin, very subject to erosion. The eroded areas provide habitat for many spring annuals. Special plants to see: Pleasant Valley Mariposa lily (Calochortus clavatus var. avius), Yellow bur Navarretia (Navarretia prolifera sp. lutea), and Pratten’s buckwheat (Eriogonum prattenianum). Mewuk manzanita (Arctostaphylos mewukka sp. mewukka).
CONTACT: Shellie Perry (seperry55@comcast.net)

May 27 (Sunday), Independence Trail, South Yuba River State Park (Nevada County)
WHERE: Meet Ginna Meyer to carpool at the Northwest Park ‘n Ride at the Ponderosa Rd exit off Highway 50 in Shingle Springs at 8:30 AM. We will carpool to the site from here. If you need to return early, please let the leaders know.
BRING: A knapsack with your lunch or snack, water bottle; wear suitable hiking boots or shoes; sunscreen and insect repellent. The insect repellant is a must. The mosquitoes can be quite bothersome here!
WHAT TO SEE: This wheelchair accessible trail has been developed in an old water diversion canal. This is great, since so many of the wildflowers grow on the banks of the canal, and as you walking in the canal, the plants are at eye level - much less bending over! This is on a north-facing slope with lower montane conifers, broad-leaved trees, shrubs and herbs. We will see gorgeous canyon oak, Quercus chrysolepis; madrone, Arbutus menziesii, western spice bush, Calycanthus occidentalis; and wildflowers, including, I hope, Washington lily, Lilium washingtonianum! There are rocky slopes, too, with succulents including Sedum spathulifolium, Pacific stonecrop.
CONTACT: Ginna Meyer (vcmeyer@me.com) if you are interested in joining this walk.

June 9 (Saturday), Traverse Creek Special Interest Area, Eldorado National Forest
WHERE: Meet Ginna at 9 am at the Placerville Raley’s parking lot at the southeast corner. We will carpool from there. This will be a relatively easy hike.
BRING: A knapsack with your lunch or snack, water bottle; wear suitable hiking boots or shoes. You may want to have a hand lens, binoculars, field guides, insect repellant and sunscreen.
WHAT TO SEE: A leisurely hike along a trail through mixed-conifer forest and open granite outcrops will lead you to this magnificent, 120-foot waterfall.
CONTACT: Ginna Meyer (vcmeyer@mac.com)

June 28 (Thursday), Bassi Falls, Eldorado National Forest
WHERE: Meet Ginna at 9 am at the Pollock Pines Safeway parking lot, at the northeast corner. We will then travel on Highway 50 to Ice House Road, then north to Millionaire Camp Road; parking and hiking to the falls. No sedans; high clearance vehicles strongly recommended. This will be a relatively easy hike.
BRING: A knapsack with your lunch or snack, water bottle; wear suitable hiking boots or shoes. You may want to have a hand lens, binoculars, field guides, insect repellant and sunscreen.
WHAT TO SEE: You will encounter open granite, mountain meadows, and fir-lodgepole conifer forest, all under the shadow of the beautiful Crystal Range. The wildflowers are gorgeous in the early summer.
CONTACT: Rich Wade (richwade@att.net)
The California Native Plant Society is a statewide nonprofit organization of amateurs and professionals with a common interest in California's native plants. The mission of the Society is to conserve California's native plants and their natural habitats, and increase understanding, appreciation, and horticultural use of native plants. Membership is open to all.

Membership includes the quarterly journal, *Fremontia*, the quarterly *Bulletin*, which gives statewide news and announcements of Society activities and conservation issues, and the chapter newsletter *Gold Field Notes*. To join, call our main office in Sacramento, (916) 447-2677, or visit www.cnps.org to join online.