

CALIFORNIA NATIVE PLANT SOCIETY
San Diego Chapter Newsletter

CHAPTER MEETING

**Tuesday, September 24; 7 p.m.
Room 101, Casa del Prado
Balboa Park**

(Please note: This is the 4th Tuesday of September and the meeting is in Room 101)

Native Plants for Gardening and Landscaping

Carolyn Martus will show pictures of some of the plants that will be available at our plant sale in October and discuss some of their uses in landscaping situations.

6:00-7:00 p.m. California Native Plant Mini-Trade Show in lieu of natives for novices. Come and meet some of the local native plant landscaping resources. Bring your questions, get some free advice, and get your shopping list ready for the fall sale.

7:00 p.m. – refreshments, book browsing, & socializing.

7:30 p.m. – presentation.

Voting: The chapter will vote at this meeting on the amendments to the By-Laws. If you haven't sent in your ballot that was in the June newsletter, please do so or vote at the chapter meeting.

Announcing the 2013 San Diego
Native Gardening Symposium

Saturday, September 28
Girl Scouts Balboa Campus
1231 Upas Street, Balboa Park

*Learn to garden with native
plants, even if you are new!*

LearnNativeGardening.org

Pre-ordering plants for this year's plant sale:

CNPS members - preorder your plants and have them waiting for you on sale day! Details and information are posted on the chapter's website and preorders are due by

September 15, 2013.

Native Gardening Symposium

We are all so excited! Please save the date for our first full-blown Native Gardening Symposium. September 28th - at the San Diego Girl Scout Balboa Campus, 1231 Upas St, San Diego, CA 92103. The day-long event, sponsored in partnership with the Friends of Balboa Park, will offer exclusive access to five tracks of information, education and hands-on gardening. The Symposium is 8 a.m. to 2:30pm. For tickets, information and registration, visit: www.learningnativegardening.org. For more information, email gardening@cnpsd.org or call 619-318-4590.

Topics include:

- Landscape Basics
- Maintaining the California Native garden
- Fire-safe landscaping
- Fruit & veggies in the landscape
- Schoolyard Habitats
- Ocean-Friendly Gardening
- Nature-based Learning Right Outside the Classroom
- Overview of the 30 best California native plants
- "LOOSE PARTS" directed play for kids
- All-day hands-on: 'Planting CA Natives on a Slope'

The sessions are appropriate for people who are new or nearly-new to native plant gardening, although more experienced gardeners will still find worthwhile content.

"Gardening with native plants is becoming more and more popular, particularly as our water bills rise. Home owners interested in learning basic techniques, plant choices, and water-wise strategies will find this program to be invaluable," said botanist Jake Sibley, co-director of the 2013 San Diego Native Gardening Symposium.

The symposium will be located at the San Diego Girl Scout Balboa Campus, 1231 Upas St, San Diego, CA 92103. Classes will be in session from 8 AM to 2:30 PM. Parking is available onsite and ride sharing is encouraged. Tickets are \$35 per person and are non-refundable. Children are welcome and those under 12 years of age will be admitted free.



Big-leaf maple (*Acer macrophyllum*) leaves.

See "Searching for Representatives of Previous Eras; A Mysterious Canyon", starting on [page 7](#). Photo by Tom Oberbauer.

Announcing: **The California Native Plant Society Educational Grant** application period has opened. Proposals are due on **September 30**. We have a new online application system. Please see details at: <http://www.cnps.org/cnps/education/grants.php>.

GARDENING WITH CALIFORNIA NATIVES

BOARD MEETING

Wednesday, September 4, 6:30 - 8:30 p.m. 4010 Morena Blvd, Suite 100, San Diego (Thomas Guide 1248 C4). Board meetings are always the first Wednesday of the month. Future 2013 Board Meeting dates are Oct. 2, Nov. 6, and Dec. 4. Members are welcome to attend as observers. If you wish to discuss an issue, please email president@cnpsd.org to get your issue on the agenda.



Gardening Committee

The Gardening Committee will meet on **September 11** at the home of **Greg Rubin**, 25950 Los Arboles Ranch Road, Escondido CA 92026.

The big news is the [Gardening Symposium](#) - registration is open, so log onto the site and pick your favorite classes: five tracks and topics for the whole family. \$35 per person; children under twelve are free. Thanks to the [Girl Scouts](#) and the [Friends of Balboa Park](#) for their support of this event.

We should be hearing back on Arne's candidacy for the top spot at the [Cox Conserves Heroes](#) grant program. When **Arne Johanson** retired from project managing large software installations, he had two goals: get away from the keyboard and be around kids. He has met both

of those goals in the Greater Rancho Bernardo open spaces. That one man could do so much: it is staggering! As Arne said recently, “With very little money we are bringing back all kinds of wildlife. When the Gnatcatcher, Least Bell’s Vireos, and Harrier Hawks show up, then I know that the right things are being done.”

The [Garden Tour](#) progresses. **Steve Miller** and **Hei-ock Kim** are doing a great job organizing the event. We are up to around 17 gardens for your delight - some old favorites and a bunch of brand-new venues. Stay tuned.

Email me at gardening@cnpssd.org if you would like to be involved.

~ **Susan Krzywicki**, Native Gardening Chair

2013 Fall Plant Sale Saturday, October 12

Mark your calendars! The CNPS-SD fall plant sale will be on October 12 at the courtyard next to the Casa del Prado, across from the west entrance to the Natural History Museum in Balboa Park. The plant sale committee is always looking for help. We need volunteers on Friday, October 11, to help set up the sale and also on Saturday, October 12, at the sale.

Packaging and labeling seeds. Dates are:

- o Sunday, September 22, 9:00-12:00
- o Sunday, October 6, 9:00-12:00

If you’d like to get involved with one of the chapter’s largest fundraisers, please join us. Plant Sale Committee Chairs are Carolyn Martus & Mary Kelly; contact them at plantsale@cnpssd.org.

What is a “Native Garden” Plant?

This is an easy question to answer you might think – until you ask for a definition or examples, when you realize that people’s understanding of this term varies considerably.

“Any species native to California”, is a common reply, which imposes a political boundary on a biological issue. Does a plant at home in the Sierra Nevada, such as spice bush (*Calycanthus occidentalis*) for instance, really belong in a San Diego native garden, where it will need regular irrigation, versus a species growing about the same distance from here but in Arizona, under conditions similar to ours (e.g. the showy and drought-

resistant Parry’s penstemon [*Penstemon parryi*]?)

On the other extreme, a purist will reply that even a widespread California species like California encelia (*Encelia californica*) should not be considered native, if it hails from the northern part of the state, since its introduction might “contaminate” the local gene pool.

And then there are of course “natives” like *Ceanothus* “Sierra Blue” and many other hybrids or clones, which are commonly planted but grow nowhere in the wild, only in nurseries and “native gardens”.



“Pseudo-native” *Ceanothus* “Sierra Blue” with non-native *Opuntia* sp. and native white sage (*Salvia apiana*) in front.
Photo by Jürgen Schrenk

Don’t bother to look for an answer to this simple question in native plant nurseries, which will offer you palo verde (a desert tree – native here?), and usually not the California species (*Parkinsonia florida*), but the one from Mexico (*P. aculeata*). And if you look at the list of native plants recommended by our local CNPS chapter, you will find plants like giant coreopsis (*Leptosyne gigantea*), certainly not native to San Diego County.

So the final decision of what to plant in a native garden is up to the individual gardener, whether to limit the choice to strictly natives at home in a given area and habitat, or to include “near-natives” from Baja California and Arizona, and/or “pseudo-natives” such as cultivars and other horticultural products derived from wild species.

I personally find this an easy decision to make, since if I want to enjoy only truly native plants, I take a hike in our local chaparral, mountains or desert. In my garden on the other hand, waterwise is a more important criterion, and Palmer’s penstemon (*Penstemon palmeri*) from Arizona and the Baja live-forever (*Dudleya ingens*), fit in quite well with bladderpod (*Peritoma* [*Isomeris*] *arborea*), and our common chalk live-forever (*Dudleya pulverulenta*).

Whatever your personal preference might be, just don't look for guidance about creating a habitat for native wildlife. Our (5 species of) hummingbirds love even *Lantana* species and cape honeysuckle (*Tecoma capensis*) just as much as the adjacent bee plant (*Scrophularia californica*) and Cleveland sage (*Salvia clevelandii*), and Cedar Waxwings gorge themselves during a migration stop-over on the fruit of pepper trees (*Schinus molle*) as well as on those of toyon (*Heteromeles arbutifolia*). Wildlife by necessity has to be opportunistic - just watch native carpenter bees collect pollen from lavender star plant (*Grewia caffra*), Parasitic (California) Mice harvest the fruit of pygmy date palm (*Phoenix roebelenii*), or Anise Swallowtail caterpillars devour the leaves of a fennel (*Foeniculum vulgare*) plant. And Bushtits so far have ignored our native oaks (*Quercus* spp.) and willows (*Salix* spp.), but preferred to build their elaborate nests in my wife's rose bushes and our orange trees.

~ Jürgen Schrenk, member

Work Parties

Old Town Pre-contact Native Plant Landscape

Saturday, September 14, 1:00 to 3:00 p.m. Tend the Natives at an Old Town Native Plant Landscape

The stinking melon gourds may be ripe for harvest with an eye to making rattles in a workshop; and the coyote brush shrubs will need yet another haircut. They grow faster than my cat's fur. If we have enough shovels, we'll gang up on the shrubby mallow colony and tighten up its boundaries. It wants to take over the landscape!

This small park of California native plants includes many plants that were used by the Native Americans who lived in this region before contact with Europeans. In years to come, these plants will provide materials for workshops on edible food harvesting, fiber for clothing, twine and rattle making, flutes and basketry, or for beauty and fragrance.

The Old Town Native Landscape is at the far west end of Old Town State Historic Park, at the corner of Taylor and Congress Streets, opposite the Trolley/Train/Bus station. If you drive, park for free in the shady lot at CalTrans across the street from the Native Plant Landscape. Enter the CalTrans lot at Taylor and Juan Streets, park, then cross Taylor Street and walk to the corner of Taylor and Congress and enter by the adobe sign. Bring gloves and hand tools if you have them and have sun protection and water on hand. Restrooms are nearby. Questions? **Kay Stewart:** fieldtrips@cnpsd.org.

Point Loma Native Plant Garden: Sep 7 & 15, 9:00 a.m. – noon. Rain cancels; bring water; no facilities; tools/supplies provided. Usually the first Saturday and third Sunday of each month. Richard@sandiegoriver.org.

INVASIVE PLANTS

22nd Annual Cal-IPC Symposium October 2-5, 2013 Lake Arrowhead Resort

<http://www.cal-ipc.org/symposia>

CNPS-SD donated \$500 to Cal-IPC to help sponsor this symposium. Join fellow land managers, researchers, and conservationists for autumn colors and the 22nd Cal-IPC Symposium on the shores of Lake Arrowhead in the San Bernardino Mountains! The Symposium will feature presentations and discussion groups covering the latest information in land management, including new management tools and techniques, Southern California deserts and mountains, innovative funding through valuation of ecosystem services, and stewardship projects supporting climate adaptation and novel ecosystems. Pre-Symposium training is on Wednesday, paper and poster sessions on Thursday and Friday, and field trips on Saturday.

CONSERVATION

Acts of God? Or, um, oops?

Thinking about it, I'm not sure if it's smart to write about fire in September. Perhaps it's tempting fate, at a time when fate is seeking a distraction? Personally, I'm hoping for an incredibly uneventful fall, with no Santa Ana winds to speak of, no more monster fires for the rest of the year. This will, of course, be a massive change from the average 1,000 homes that have burned every year for the last decade. But one can hope.

That said, I've been thinking a bit about how we deal with fires in southern California. This particular iteration of the ruminative process was sparked by a nice website (<http://www.werc.usgs.gov/socalfirerisk>) that I recommend to everyone. Yes, you too.

Here's the situation. There are, crudely, two types of fires in Southern California: those without Santa Ana fires, and those with Santa Anas. The fires without the high powered wind feeding them are generally (though

not universally) easy for fire fighters to contain. They are generally tame little monsters that stay within the bounds of fire breaks and can be readily contained with enough water and fire retardant. They do, rarely, turn into catastrophes that take down houses, but most of them stay small.

Then there's the Santa Ana-driven fires, which are the exact opposite. High winds can blow embers miles past fire breaks. Firefighters can attack the upwind flanks of the fire, but there's little they can do to stop the damn things from spreading until the wind dies or the fire hits the ocean. Despite what a few experts say, the fuel doesn't particularly matter: grass, chaparral, trees, buildings, it all burns when it's dry enough and the wind is strong enough.

Yes, this is not news to almost everyone who's reading this newsletter, but there are some hidden complexities in our response to fires. For one thing, firefighters use the same sets of tools and techniques on each of these fires, and they tend to think of them the same way. This latter is a bit surprising, because every firefighter out in the hills knows that Santa Ana-driven fires are different, but what can they do? They have to fight with the tools they have, and so they do. I think we all wish they had more and better options.

So what do we do about Santa Ana-driven wildfires? The website above recommends treating them like earthquakes, acts of God (in the insurance industry sense of the divine). The best way to protect homes is not to depend on an infinite supply of firefighters to save our bacon, but to make at-risk buildings fire-safe: box the eaves, screen the vents, make the roof, walls, and windows as non-flammable as possible (yes, energy-efficient plastic windows can melt, letting in those nasty flames), and landscape so that falling embers smolder and go out, as Greg Rubin recommends. Personally, I favor everyone moving into hobbit holes, but I've been told this design would violate most HOA guidelines, as well as good taste. And it's not just the homes, it's their locations: windswept ridges have awesome views, but you couldn't ask for a better place to snag a few embers wafting in on a wild wind. Places like Malibu Canyon face the Santa Anas and channel the winds just like hair dryers, and this makes them, um, suboptimal places to build. Or rather, rebuild, since most of them have burned already.

But what of all these proposals to make the fires less monstrous? Perhaps, if we get rid of all the fuels, they won't be so bad. This is reasonable advice in ponderosa country, or even in the juniper lands of Arizona, or in the prairies, places where grass fires burn along the ground and Santa Anas do not blow. The mistake, of course, is

thinking that this applies everywhere, and it most emphatically does not. Now that the prairies are gone, southern California is the most fire-prone place in the US, and the rules are different here. When the Santa Anas blow, it doesn't matter whether a fire is burning weeds growing on a fire break or torching century-old chaparral. It's all flammable.

However, there is a bit of a paradox here: a ridiculous majority of fires in southern California (95 percent or more) are caused by humans. Some few are deliberate arson, but a majority are mistakes. They come from motors catching fire on uphill, brakes overheating on downhill, mufflers dragging and spraying sparks, power lines swinging into each other in high winds, wind turbines shredding, workmen grinding (or sawing, or welding) on metal without adequate fire extinguishers, kids out target shooting or experimenting with smoking materials, pickup trucks parking long enough on dry grass that the exhaust system ignites something. And the list goes on. It seems that every fire has some different, head slapping, origin story.

Three paragraphs back I said that Santa Ana fires should be treated like acts of God, and now I'm saying they're mostly human mistakes? Yes, and this contradiction is a bit of a problem, at least for managers, insurance companies, and people who care about natural ecosystems, which might include you. Ideally, if we could get rid of all those mistakes, we could reduce the incidence of monster fires by perhaps 95 percent. Wouldn't that be great? We could, for example, exclude people from the back country, have California subsidize nicotine patches or e-cigarettes during fire season to cut down on outdoor smoking, and require more insurance or regulations on anyone doing metalwork in the hills. Or we could, as CalFire wants to do, prescribe dozens of (hopefully) little fires each year as controlled burns, in an attempt to keep the big burns from happening. Not that controlled burns always stay controlled (here's looking at you, San Felipe). Or we could, um...

The fundamental problem is that, as a number of thinkers have observed, every time you make something idiot proof, nature evolves a plethora of new idiots to fill the void. Natural systems are very vulnerable to human ignorance and mistakes, especially when those mistakes involve fire and high winds. It's just that there's a difference between cause and treatment. The cause of the fires is generally human idiocy, but the result is best treated as an Act of God by everyone downwind. It's kind of bizarre to think that human idiocy has become a force of geologic proportions, but it certainly has, at least here during fire season. Stay sharp, everyone.

~ **Frank Landis**, Conservation Chair

Pollinator Conservation Handbook

Review by Pat Pawlowski

For more info see: <http://www.helpabee.org>

Insects, like Rodney Dangerfield, get no respect. Sure, butterflies get generally good press; likewise, cutesy-wootsy ladybugs and fireflies get their share of appreciation. However, there are many other insects that deserve our kind regard, and among them are native bees. Many of us know how important the act of pollination is. According to the *Pollinator Conservation Handbook*, published by the Xerces Society, "...approximately one out of every four mouthfuls of food and beverage that you consume required the presence of a pollinator." It's true that an array of animals such as bats, hummingbirds, and even some mammals can perform the act of pollination--but 99% of pollinators in the U.S. and Canada are insects. And of that 99%, the major pollinators are bees.

Honey bees, of course, are extremely important to modern agriculture. They even get ferried around in trucks at certain times to pollinate commercial crops. However, honeys are not native to the Americas, and are declining due what is called Colony Collapse Disorder. The *Pollinator Conservation Handbook* discusses honeys briefly, as it does other types of pollinator insects such as butterflies, beetles, wasps, flies etc., but it concentrates on the subject of our native bees and what we can do to help them survive.

Really impressive is the section entitled "Providing Foraging Habitat". Wow--there were lots of things I didn't know (not, in itself, very remarkable). For instance, a grouping of 8 or more species of appropriate plants grouped together tend to attract a much greater abundance and diversity of bee species. And--here it comes--native plants are FOUR TIMES MORE LIKELY to attract native bees than are non-native plants. Bingo! Another reason to plant natives (as if we needed an extra excuse). The book also mentions the importance of flower color, plus other enticements you can provide such as muddy puddles, animal carcasses, and dung (apparently no need for extreme tidiness in the garden).

The descriptions of various types of native bees are helpful and interesting--who knew that bees came in so many sizes and colors? By the way, nervous persons need not worry about being stung--native bees are what typical Californians are supposed to be--laid-back.

There is a chapter on nesting and egg-laying sites. Many bee species nest in the ground. All you need to do is put away your trowel, leave some bare earth for the bees to tunnel into, and go to the movies instead. Or, you could

build a nesting block for those bee species that prefer a nesting place above ground. The book describes how to make some of these (for inspiration, creative types can visit www.inspirationgreen.com/insect-habitats)

Another chapter deals with threats to pollinators, such as habitat loss and the extensive use of pesticides, which is having a disastrous effect on both honeybees and wild bee populations. It very helpfully offers alternatives to try, instead of using the toxic brews that eventually do more damage to us than to our crop-chomping, daffodil-devouring insect adversaries.

Conservationists will be enthralled with all of the suggestions given in the book, dealing with protecting and restoring habitat, taking political action, and providing learning opportunities for children and grownups. Plus, appendix addicts will appreciate sections covering educational ideas, plant lists, resources, etc.

So, we see that you should get this book. After all, don't you want to find out what all the buzz is about?

RARE PLANTS

Time To Shake Up The Spurges

If you pick up an older botanical reference, you know, the ancient stuff from the 1970s and 1980s, the spurges (genus *Euphorbia*) was a broad concept that included nearly every member of the Spurge Family (Euphorbiaceae) found in California. However, a generation of botanists in California have learned most of our plants as members of the genus *Chamaesyce*. *Chamaesyce* had traditionally been treated as a subgenus of *Euphorbia*. Here in California, most of ours are fairly easy to recognize as many have flattened or mat-like growth forms.

In 1984, Daryl Koutnik published a paper in the South African Journal of Botany (3:262-264) outlining reasons for recognizing *Chamaesyce* as a full genus. Among those features that stood out were a specialized growth form and a different photosynthetic pathway. Daryl Koutnik was invited to write the Jepson treatment in 1993 and again in 2012. He was pushing for the genus in 1993. However, by 2012, Daryl was no longer a big fan of *Chamaesyce*. I suspect he made an argument for not using the name in the second edition because he knew publications were close that would argue differently, and lost. In fact, globally, the concept never got a lot of traction. If you look at newly described species across

the globe and papers regarding plant physiology that included members of *Chamaesyce*, the papers referred these plants to *Euphorbia* subgenus *Chamaesyce*, not as members of the genus *Chamaesyce*. California was one of the few places where most spurges were recognized under that name consistently over the last 20 years.

The upcoming Flora of North America treatment will include all those *Chamaesyce* spurges under *Euphorbia*. The citation everyone is using is a paper written by Ya Yang and five other contributors with the title: Molecular phylogenetics and classification of *Euphorbia* subgenus *Chamaesyce* (Euphorbiaceae) published in *Taxon* [61(4): 764-789. 2012]. Recent genetic work has shown that *Chamaesyce* is monophyletic but no more so than many Old World groups, and to recognize it as a full genus, the entire Old World portion of *Euphorbia* would require drastic reworking and the establishment of many new genera. It is less complicated and we don't lose many benefits simply retaining it as a subgenus. The authors provide a more substantial argument than that but I am sure many of you are thinking I am already providing more information than you need. As recognized by the authors, *Euphorbia* would contain about 2,000 species, with about 600 of these belonging to the subgenus *Chamaesyce*. I've read through the paper and it appears to be well done and convincing.

At the 2012 CNPS Conference, Bruce Baldwin, lead editor for the second edition of the Jepson Manual warned us that we should expect changes but it seems they are coming at a fast pace and have been impacting important California genera rather than a handful of obscure groups.

How does this affect our San Diego plants? Jon Rebman and Michael Simpson list 14 members of *Chamaesyce* in their 2006 checklist of San Diego plants. All of them would have new names. Fortunately, in the case of *Euphorbia* and *Chamaesyce*, many names are available for either genus so these will not look so unrecognizable as *Acmispon glaber* (*Lotus scoparius*) and *Acmispon prostratus* (*Lotus nuttallianus*). For those of you interested in keeping up. Here is a list of the changes:

- Chamaesyce abramsiana* (L.C. Wheeler) Kotnik = ***Euphorbia abramsiana*** L.C. Wheeler
- Chamaesyce albomarginata* (Torr. & A. Gray) Small = ***Euphorbia albomarginata*** Torr. & A. Gray
- Chamaesyce arizonica* (Engelm.) Arthur = ***Euphorbia arizonica*** (Engelm.) Arthur
- Chamaesyce hyperifolia* (L.) Millsp. = ***Euphorbia hyperifolia*** L.
- Chamaesyce maculata* (L.) Small = ***Euphorbia maculata*** L.
- Chamaesyce melanadenia* (Torr. & A. Gray) Millsp. = ***Euphorbia melanadenia*** Torr. & A. Gray

- Chamaesyce micromera* (Boiss.) Wooton & Standl. = ***Euphorbia micromera*** Boiss.
- Chamaesyce nutans* (Lag.) Small = ***Euphorbia nutans*** Lag.
- Chamaesyce pediculifera* (Engelm.) Rose & Standl. = ***Euphorbia pediculifera*** Engelm.
- Chamaesyce polycarpa* (Benth.) Millsp. = ***Euphorbia polycarpa*** Benth.
- Chamaesyce serpens* (Kunth) Small = ***Euphorbia serpens*** Kunth
- Chamaesyce serpyllifolia* (Pers.) Small subsp. *hirtula* (S. Watson) Kotnik = ***Euphorbia serpyllifolia*** Pers. var. ***hirtula*** (Engelm.) L.C. Wheeler
- Chamaesyce serpyllifolia* subsp. *serpyllifolia* = ***Euphorbia serpyllifolia*** var. ***serpyllifolia***
- Chamaesyce setiloba* (Engelm.) Norton = ***Euphorbia setiloba*** Engelm.



Arizona spurge
(*Chamaesyce arizonica*)

Two of these species, *Chamaesyce abramsiana* (Abram's sandmat), and *C. arizonica* (Arizona spurge) are included in the CNPS Inventory of Rare and Endangered Plants of California. For those of you who have seen it, we are using this arrangement in our recently published *Wildflowers of Orange County and the Santa Ana Mountains* (Robert L. Allen & Fred M. Roberts, Jr., Laguna Wilderness Press, 2013). Michael Simpson and Jon Rebman will also be using this arrangement in their soon to be published and much anticipated 5th edition of a *Checklist of the Vascular Plants of San Diego County*.

~ Fred Roberts, Rare Plant Botanist

TECOLOTE CANYON NATURAL PARK



September 1; 9 a.m. to noon. A relaxed opportunity to learn plant lore of this coastal natural reserve from a CNPS member. Meet at the Tecolote Nature Center. Wear sun protection and comfortable walking shoes; bring water. Rain at 8 a.m. cancels the walk. Directions: exit I-5 at Seaworld/Tecolote exit. Go east (away from Mission Bay) on Tecolote, past the ball fields, along the driveway to the very end. Free and open to the public, and parking is also free. The walk is repeated the first Sunday of each month.

Searching for Representatives of Previous Eras; A Mysterious Canyon

One of the first things I did when I found the Ethel Bailey Higgins' "Annotated Distributional List of the Ferns and Flowering Plants of San Diego County" at the SDSU Library was look at the trees. Growing up in San Diego County, maple trees in my mind were something associated with the east. Maples generate the beautiful oranges and reds of the fall colors in New England, not something typically associated with San Diego County. Some small maples in the Rocky Mountains and Box¹ elder (*Acer negundo*) which grows across the entire country were familiar to me, but Box elder doesn't have what most people would think of as maple leaves since they are broken into three leaflets. However, Ethel Bailey Higgins' small book published by the San Diego Natural History Museum in 1949 only listed one for San Diego County, *Acer macrophyllum* (Bigleaf or Broadleaf maple) and it was listed for a place called Castro Canyon. I did have a vague recollection of *Acer macrophyllum* from the Santa Cruz Mountains years before, but never dreamed it would grow in San Diego County. (Box elder has since also been found in a few places in San Diego County.) The Higgins list had a small scale map in the back, but the map did not provide much detail and it did not show Castro Canyon. In the days before GIS and the internet, the only really useable maps of San Diego County were the American Automobile Association map, a Forest Service Map and USGS Quad maps that had to be sought out in special library map rooms or purchased by mail from USGS.

After searching all of these sources, I found Castro Canyon on the maps. It is a deep gash down the south side of the Agua Tibia Mountains, the western extension of Palomar Mountain. It was remote and forbidding. Its lower parts were on private land and the Pala Indian Reservation, passing into Cleveland National Forest in the upper parts. It appeared to me that it had no access. I recall driving on Highway 76 near the Pala Reservation and looking for the crossing of Magee Creek, the lower end of the stream course that came from the merger of Castro Canyon with Magee Creek. After passing over the giant alluvial fan at the base of the mountains, by the time it reached the highway it appeared as a feeble reminder of a major stream. I had hiked up to the top of the Agua Tibia Mountains at close to 5,000 feet in

¹ At the request of the author, the first word of the common name is capitalized, and scientific names, rather than common names, are used throughout the article.

elevation, but from the north on a public access wilderness trail. From the top looking down, the south side seemed absolutely impenetrable, a series of deep canyon ravines with Castro Canyon being the most notable. Castro Canyon was a mythical location, far away and unreachable, yet it was in San Diego County.

Deep canyons in the side of mountains are comparable to wounds in the normal ecological boundaries for plants. Montane species ooze down the canyon to lower elevations than they would otherwise be found, following their environmental parameters down the canyon slopes and stream beds. As illustrated by the presence of *Acer macrophyllum*, they also may harbor plants left from previous eras. Not only was Castro Canyon the home for *Acer macrophyllum*, but it was also known as a location for *Arbutus menziesii* (Pacific madrone) in the upper parts, as I mentioned in a previous newsletter, as well as Humboldt lilies (*Lilium humboldtii* ssp. *ocellatum*).



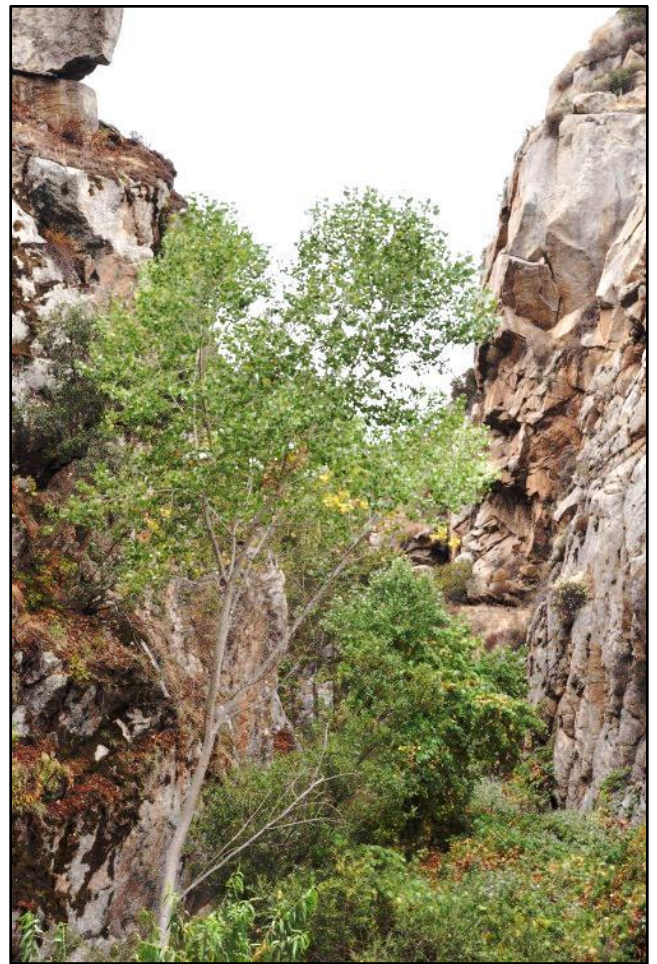
Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*).
Photo by Tom Oberbauer

I gave up on any further thoughts of Castro Canyon. During the late 1960s, years after the Ethel Bailey Higgins book, *Acer macrophyllum* was also found at Oasis Spring on the northern end of Mount Laguna overlooking the desert. I remember visiting that tree during the 1980s and wondering if it was naturally occurring or planted. A small old pump house of corrugated metal was nearby. Was it growing there before the pump house was placed there or was it planted when the pump house was built? I am still not sure. It was over 60 feet tall and it produced copious seeds. The Pines Fire in 2002 burned through that area. It had been many years since I had seen it, so in May of this year (2013), I thought I would hike out to the tree to see how it was affected by the fires. It was not so easy to get to the maple now because

the *Ceanothus leucodermis* (Chaparral whitethorn), *Quercus berberidifolia* (Scrub oak) and *Adenostoma fasciculata* (Chamise) had grown over the old access trail (the same trail to the *Umbellularia* I mentioned in the July Newsletter). The skeleton of the old tree still stood but several trunks of the resprouts had grown to over 12 feet tall, appearing very healthy and with many flowers. Unfortunately, as I write this, the Chariot Fire burned through that area within the last few days and I don't know how it affected the spring area. Often fires will jump around grove areas when coming up from the canyons below. One can only hope.

As summarized in Fryer (2011), *Acer macrophyllum* is the dominant maple along the Pacific Coast from British Columbia and maybe even the Alaska panhandle all the way to San Diego County. It is listed as most common in upland riparian zones and mesic upland forests, including the rain forest in Olympic National Park. In southern California, it is associated with riparian and spring areas where the soil remains moist most of the time and it grows up to 7,000 feet in elevation. In central and northern California, it is particularly plentiful in mixed-evergreen forests, which are dominated by a mix of Douglas-fir (*Pseudotsuga menziesii*) and the evergreen broadleaved species Tanoak (*Lithocarpus densiflorus*), California bay, and Pacific madrone.

Throughout its range, *Acer macrophyllum* typically grows to 50 feet tall with occasional trees reaching 80 feet tall, making it the largest Maple in North America out of the 13 species that occur here. The champion tree from Oregon is 88 feet tall and has a diameter of 8 feet and a 104-foot spread. Bigleaf maples are thought to live 50 to 200 years, though since they resprout after fires, the individual root base for the trees may actually be older because of the repeated resprouting ability. Living up to their name, the leaves may grow to 14 inches across in the more northerly moist areas. Fossils that are similar to *Acer macrophyllum* date back to the late Miocene, roughly 5 million years ago (MacGinitie 1969) with the oldest maples of any kind from 67 million years ago. There are thought to be around 128 species world-wide, with many in Asia where viewing their fall colors is also a tradition like in New England.



Bigleaf maple photos by Tom Oberbauer.

Bigleaf maple wood is described as moderately hard but porous and not strong (Fryer 2011) though it is commercially harvested and the wood is used for a number of purposes including furniture, flooring and gun stocks (Mariscal 2001). Sap from *Acer macrophyllum* has been harvested to make syrup as well. The sugar content of the sap is slightly less than the eastern varieties, so it takes more sap to be steamed off to make the syrup but it is reported to have a strong flavor (blmaple.net 2013).

Bigleaf maple is most common in its northern distribution but there are some locations not too far away outside of San Diego County. The closest is roughly 33 miles away in other deep canyons in the Santa Ana Mountains in Orange County. However, it is easily seen in springs and canyons on the upper slopes of the San Bernardino Mountains on the Rim of the World Highway, roughly above 5,000 feet. It is also quite common in the western end of Yosemite Valley where it provides some of the bright green lushness to the forests. In fact, the Yosemite webcam that faces Half Dome shows a Bigleaf maple growing into the image frame as the spring turns to summer. In northern California, among many places, it grows in the coincidentally named Castro Valley, actually extending down the slopes to the edge of the

freeway (Interstate 580) on the eastbound side. Most of the trees seen in these locations are nicely pyramidal or cone shaped and densely draped with leaves.

As a result of the vegetation mapping project for San Diego County conducted by AECOM in 2012, I became familiar with the area of Castro Canyon from viewing aerial images in detail. The Google Earth images provide nice definition of the location, and the aerial views from December 2006 even depict the area with fall coloration so that the deciduous trees are identified as yellows and orange. It is clear from the images that the middle portion of the canyon consists of a narrow area with steep cliff walls of solid rock with a broader portion that has steep but not vertical walls upstream to the northeast. Further upstream from that, it proceeds steeply into the side of Agua Tibia Mountain. The *Vascular Flora of the Agua Tibia Mountains* by Darin Banks mentioned the Bigleaf maples in Castro Canyon and his collections indicated that they occurred above the rocky area but below the Cleveland National Forest boundary. Carefully examining maps with Township-Range Sections and land ownership, I thought that I had a good idea of where the trees might be in Castro Canyon. Furthermore, I thought that I found an old vehicle trail that would lead up to a hill from which I could walk to the rim and then down a steep slope into the canyon. I planned to avoid walking on Tribal land and figured an old jeep trail might be an innocuous way to get to the non-tribal portion of the canyon. One weekend I drove out for a reconnaissance examination of the situation. I found the old vehicle trail alright and it looked like it would serve its purpose, but it had a locked gate with a sign that clearly stated in bold red letters "No Trespassing! Violators Will Be Subject to \$10,000 Fine and Prison." I looked up trespassing laws for the State of California, and those claims were beyond the legal limits. However, I had no intention of trying to cross land behind a locked gate.

Something occurred as a coincidence that could only happen in real life, or may be so happenstance that it might never really happen in life. Around the time that I visited the area, I received an announcement of a recently added CNPS Rare Plant Treasure Hunt for the Pala Reservation to occur a week or so later, organized by Kim Clark, Southern California Rare Plant Treasure Hunt coordinator for CNPS. The Pala Reservation in its own right is a spectacular piece of land worth looking at any time. I was interested in participating in any case, but the thought crossed my mind that at some point there might be very small chance for an opportunity to visit part of the Pala land that included Castro Canyon.

It was a warm day for a rare plant treasure hunt as we

walked down the San Luis Rey River looking for Slender horned spine flower (*Dodecahema leptoceras*), a diminutive plant found on the north side of Agua Tibia in coarse sandy soil just like that in the San Luis Rey River, but we were a little late in the season to find it even if it was there. To make a long story short, we were able to find one of the rare plants on the Reservation, *Tetracoccus dioicus* (San Diego tetracoccus), growing on gabbro soils. However, I also was able to speak to Shasta Gaughen and Kurt Broz and others who staff the Pala Environmental Department for the Pala Tribal Council. They were extremely gracious, interested in documenting the resources of the Pala Tribal lands, and open to the idea of visiting Castro Canyon in the future.

A few weeks went by and after some discussions about access that included a variety of routes, it was concluded that a walk up the stream course would be the most suitable on a day chosen in mid-July. That day, Lance Woolley, an ultra-marathon runner from the office where I work came along with Kurt, Shasta and two of her staff. The path seemed clear at first. We were simply walking up a stream bottom, boulder hopping, pulling away Wild grape (*Vitis girdiana*) vines and attempting to avoid Poison oak (*Toxicodendron diversilobum*) for those who have skin reaction from it. My field outfit was long pants with gators to help keep out stickers, and snake guards, as well as a long sleeved shirt and old leather working gloves. It was a warm, humid day, so I carried $\frac{3}{4}$ of a gallon of water in small plastic water bottles that fit in the pockets of my back pack, and two cameras, including one as a backup. I did not expect that this opportunity for which I waited more than 40 years would come again. The snake guards were a precaution learned from my place of work. On our walk, Shasta did find a young Pacific rattlesnake curled up at the base of an oak tree. It didn't appear excited even though it was a warm day in the low 80°F. That was enough to raise another level of awareness.

In describing the narrow, rock cliff area of Castro Canyon, Darin Banks did use a term that worried me just a little. It was the term "the falls area." It was not apparent that there were actual falls there after viewing the areal images of this canyon uncountable times, searching for any sign of a rock face water drop and even pulling the USGS topographic maps to examine every contour line on it. As we walked we were discussing this issue and that it would be nice to have a consistent definition of "falls." Does it mean a cliff with a large drop or a sloping cascade area? In the heart of the narrow area, the cliffs were approaching 100 feet in height on each side. As we walked along we heard the trilling Wrentit call but then as we entered the narrow portion, Canyon wrens with their cascading whistle call were

heard. We had climbed over a few short drops, being able to grab handholds and footholds with no problem, and had made it about a third to half of the way through the narrow cliff portion when we encountered a rock face with a drop of roughly 15-18 feet. A rock climber with sticky soled shoes and chalked fingers would make short work of climbing this drop, but we with water-loaded backpacks, old hiking boots and some with tennis shoes had no chance. The right side of the face was vertical and not passable in any means easier than climbing the face. On the left side, however, the steep slope had just enough soil and just enough base rock to provide a passage for someone who was obsessed and willing to risk a bit of sketchy effort. It caused my heart to sink at first, but I went for it, hoping that my water and camera laden backpack would not pull me too far out of balance, grabbing roots and branches where possible, and shuffling my feet quickly up the slope to keep from sliding backward. To my own surprise, I made it up the initial pull and then walked across a steep slope and back down to the creek bed above the falls. After making it safely I figured I would worry about the difficulty of coming back down later.

Read the rest of the article next month, or read it now at <http://www.cnpsd.org/>.

Tom Oberbauer, Chapter President

Yosemite's Lost Pacific Yews

If you are interested in finding unusual populations of plants like Tom does, consider joining the Sierra Foothills CNPS Chapter and the National Park Service **Saturday, September 21, 2013** for a trip to look for Yosemite National Park's lost Pacific yews (*Taxus brevifolia*). Leader: **Alison Colwell**. Hiking Level: moderate (fairly level terrain, but off-trail). Famous botanist Katherine Brandegee wrote in her 1891 article "The Flora of Yosemite" about the Pacific yew trees found in the Merced River Canyon (Zoe 2:155-167). Although not a rare plant at the statewide level, this population of Pacific yews would merit conservation concern due its "locally rare" status. In recent decades there have been several fruitless attempts by various botanists to find these trees in or near Yosemite Valley, leading some to conclude that the trees are likely extirpated. We're not convinced. Ms. Brandegee's brief description gives us a clue, which we'll follow in our attempt to relocate the southern-most outpost of this species in the Sierra Nevada. **Meet at 10:00 a.m. at Arch Rock Entrance Station parking lot on Highway 140.** Contact info: aelcolwell@msn.com or [240-997-5153](tel:240-997-5153).

A Monarch Butterfly's Life



Larva and chrysalis



Freshly hatched native Monarch butterfly with chrysalis remnants on exotic bloodflower milkweed (*Asclepias curassavica*). Photos by Jürgen Schrenk

The CNPS-SD Newsletter is published 12 times a year. The newsletter is not peer reviewed and any opinions expressed are those of the author identified at the end of each notice or article. The newsletter editor may edit the submittal to improve accuracy, improve readability, shorten articles to fit the space, and reduce the potential for legal challenges against CNPS. If an article, as edited, is not satisfactory to the author, the author can appeal to the board. The author has the final say on whether the article, as edited, is printed in the newsletter. Submissions are due by the 10th of the month preceding the newsletter; that is, March 10 for the April newsletter, etc. Please send submittals to newsletter@cnpsd.org.

CNPS-SD Calendar for September 2013

- 9/1: Tecolote Canyon Walk, p.7
- 9/7: Point Loma Native Garden Work Party, p.4
- 9/4: **Board Meeting**, p. 2
- 9/11: Gardening Committee Meeting, p. 2
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- 9/15: Point Loma Native Garden Work Party, p.4
- 9/15: Last day for Plant Sale Pre-orders, p.1
- 9/22: Packaging and labeling seeds, p. 3
- 9/24: **Chapter Meeting**, p. 1
- 9/28: **Native Plant Gardening Symposium**, p. 1
- 9/30: CNPS Education Grant proposals due, p. 2
- 10/12: Fall Plant Sale, p. 3

MEMBERSHIP APPLICATION

___ Student or Limited Income \$25; ___ Individual \$45; ___ Family or Library \$75
___ Plant Lover \$100; ___ Patron \$300; ___ Benefactor \$600; ___ Mariposa Lily \$1,500
Name(s): _____
Address: _____

Phone: _____ e-mail: _____ Mail check payable to
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Dedicated to the preservation of the California native flora

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