

Lompoc Valley Botanic and Horticultural Society Newsletter

May 2026 | Volume 41 | Issue 3

May Meeting

Our May meeting will be at the **Burton Mesa Chaparral Garden**

Located at 1 Hancock Dr, Lompoc. After turning onto the campus, turn right and keep to the right - parking is free.

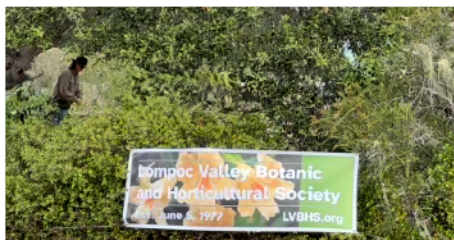
May 17, 2026 2-4pm,
After the business portion, Victor Balderas and Denise Knapp will lead a guided tour.

Chilies and Lilies

May 9, 2026, 12-2pm
Member exclusive event.
Email to get on the list and more details.
lvbothortsoc@gmail.com

Garden Tour

June 13, 2026. Member exclusive event. If you haven't already signed up: lvbothortsoc@gmail.com



The Care & Cultivation of Coast Live Oaks ~ Greg Donovan

The natural range of the coast live oak (*Quercus agrifolia*) in California runs from roughly the Mexican border by San Diego to the southern portion of Mendocino County. Several different native tribes made this range their home. The Spanish colonial settlers closely followed this tree species' geographic



Coast Live Oak
Quercus agrifolia

range. The locations of the famed California missions from south to north form almost a territorial overlay of the coast live oak's range. The northward progression of mission development phased out as the oaks started receding in their dominant role as the main hardwood species in this floristic province. Interestingly, this is the same area where coniferous forests become increasingly dominant and continuous. This region of upper Sonoma County is where the southernmost Russian colonial settlement in North America (Fort Ross) was pioneered early in the 18th century. The continuous forest of conifers probably harkened to the feel and memories of the taiga to these Russian settlers where the leaves of oaks and their broad crowns made Spaniards feel at home gave way to the needles of fir and spruce. The spirit of a place speaks strongly in human instinct as we seek the coordinates for a homeland.

The Coast Live Oak is the dominant hardwood species on the western half of the Santa Ynez River watershed. The arboreal crown that it forms is prevalent from shady canyons to the south such as Miguelito Canyon and the mosaic of vegetation in the Burton Mesa Chaparral to the north. Yet, as we have had-

Coast Live Oaks Cont.

-an ever growing privilege of creating landscapes for the sake of beauty and the special consolation a garden can offer, it has been a long and arduous struggle to introduce this oak species into our regional landscape design even though it is our most common native tree on this watershed.

There are different reasons the acceptance of using coast live oaks in our cultivated landscape has been impeded. One is the awareness of human mortality. People become discouraged at the prospect of planting one of these trees before they get started because in their imagination they picture 250 year-old specimens they have seen and then think they will not be around to ever see this culminating arboreal magnificence. This then leads to the next issue: oaks are slow growing. Given the right circumstances this is a complete falsehood. It is true they will not be around to witness the stature of these grand old specimens but will surely witness the emergence of a substantial landscape tree within a human lifespan. This challenge to introducing oaks in the landscape is one more weighted in the psychology of expectations.

Another setback to the acceptance of these oak trees in public perception is found in the misguided and inappropriate practices in the nursery and landscape industry. These problems go into some arboricultural technicalities specific to the oak genus, but there is still a dimension of dealing with people's mental pictures of what is tree-like. This typically means a branchless primary stem (trunk) topped by a clearly defined crown consisting of an orb of branches. Coast live oaks are severely penalized by this customary practice. This is detrimental to the oaks in myriad ways. This style of shaping and pruning a young tree violates many of the healthy natural ratios that a prosperous oak needs in its emerging development, especially in regards to the caliper of the tree's trunk relative to its height. The tree will have a trunk diameter too narrow for its height that results in a spindly stem. The crown growth will be overly 'shrubby' with the clear formation of good scaffolding limbs delayed.



41 yr-old coast live oak at Nielsen's in Solvang that is 63 ft tall, with a 69 ft crown and 41 inch diameter@breast height. -Greg Donovan

This is not to say that some selective and strategic pruning cannot take place. If a branch that appears to be taking a dominant role in the tree's pattern of growth has an angle of attachment of less than 30 degrees, it should be removed because over time it will result in the formation of included bark that leads to structural weakness in the tree.

If the tree is in a location where ultimately human activities will be occurring in close proximity, lower branches can be incrementally removed year by year to reach the desired level of clearance for the passage of everything from pedestrians to vehicles. This arboricultural practice connotes a closely intertwined relationship between place, people, and the tree in locales where homes, commercial buildings, or public spaces such as parks exist. If we were to focus on the best practices for encouraging healthy oak growth in an open or wild range setting, we would be having an entirely different discussion.

La Purisima Nature Hike

--- a hiker's perspective ~ Tom Hofmann

Denise Knapp, Ph.D., led a nature hike through La Purisima Mission State Historical Park on April 11, 2026. Two park representatives, two Lompoc locals, and several LVBHS members joined the journey (Denise stands in the middle of the group (photo 1)). Everyone enjoyed her message about biologic competition, cooperation, and adaptation. She compared and contrasted the three major plant communities of Burton Mesa:

● Oak woodlands ● Maritime chaparral ● Coastal sage scrub.

Occasional drizzles that morning kept sandy trails from getting too dusty. The area we hiked through has developed these signature plant communities despite four major disruptions in the just two centuries:

- 1) growth of the Mission and intensive Chumash hunting-gathering
- 2) a cattle ranch emphasizing grazing over trees and bushes
- 3) Mission reconstruction and planting of non-native trees and plants
- 4) a recent fire (2018) caused destruction

After a short stroll, Denise delivered a mini-lecture on the the three dominant shrubs of the Maritime chaparral: manzanita, ceanothus, and chamise. She enhanced her talks with mini-posters describing each plant, its insect companions, pests or pollinators, and its range. Burton Mesa is important because our local species of manzanita and ceanothus only grow in western Santa Barbara County.

The next stop was oak woodland. Coast live oak, *Quercus agrifolia*, dominates the plant community. Its acorns provide food for wildlife and the Chumash. The park ranger described the challenge of teaching young park visitors how to grind acorns. The shade provides a moister habitat for the understory, especially poison oak, *Toxicodendron diversilobum*.



Coastal sage scrub was the final plant community for our visit. Its shrubs are smaller and softer than those in the chaparral. Its flagship is the black sage, *Salvia mellifera*. The cast includes California sagebrush, coffeeberry, and Lompoc monkeyflower, which are also represented in other communities. My favorite was this yellow flower, which may be common fiddleneck, *Amsinckia intermedia* (photo 4).

In the end, it wasn't a lecture; it was a discussion while walking. Denise provided scientific expertise: plant and insect interactions, adaptations to environment and disruptions. The ranger added relevant park history. Each hiker shared their knowledge and experience about our area. Later, I don't really remember specific facts we discussed, but I think I will remember my fellow hikers for a long while.



Santa Barbara ceanothus,
Ceanothus impressus.



My favorite flower in this habitat is
Fremont's death camas,
Toxicoscordion fremontii.

Householder Practice in the Garden ~ Mac Duncan

Back in the days of the COVID-19 quarantine, I was living with my child in a tiny rental in Santa Ynez. To cope with the isolation, we began sleeping in a tent in the garden, which brought us into close contact with our neighbors, the plants and animals. As we fell asleep we often heard the gophers munching nearby - sometimes right beneath us! Often the breeze in the eucalyptus leaves or the song of the barred owl perched on a pole in the field would be our lullaby.

During that difficult time, I was possessed with the desire to pray, although I had never learned how. In a moment of introspection, I decided that I would practice prayer through water conservation. I began running water into a bucket while the shower was heating, and taking my dishwater outside to water the garden. This practice became my daily prayer for the world.

Prayer opens the door to a relationship with Spirit. Spirit answers prayer in unpredictable ways.

The first thing that began to happen was that I found myself outside even more. Sometimes at night I would see star patterns I had not noticed before, or hear coyotes singing, or surprise an opossum family climbing in the grapes. I began to look forward to my short but sweet bucket-full excursions into the natural world. Another thing that happened was that I began to plant my garden beds like watersheds, with the thirstiest plants near the path where I walked with my buckets, and rivulets running away towards more drought tolerant plants. I started to dig some pretty funny furrows, playing in the mud as I had as a child. I got to be a personal raincloud, noticing who was in need of water and engineering playful means to meet their needs.



Pretty soon I began to see watersheds everywhere. I saw creek beds in the faintest depressions in the fields where I walked. After all, where does a creek begin? Anywhere that the rain falls. I noticed the way that plants naturally organize themselves along watersheds, enjoying the underground water but also drawing it up through their roots and contributing to the weather patterns that perpetuate life. Most surprisingly, when the rain did fall, I experienced it as an answer to my prayers. I was on the same team as the sky, the trees, and the Earth.

A few years later I was invited to a workshop in the Resilience Garden Program offered by the Santa Ynez Chumash Environmental Office and the White Buffalo Land Trust. I learned about bioswales, strategically graded channels designed to direct runoff to groundwater. Bioswales can be used to facilitate the reforestation of degraded landscapes. They run in curves perpendicular to the direction of runoff, like topographical lines. Townspeople in India are competing to see who can dig the most "Earth smiles" to bring trees and groundwater back to their homes.



Householder Cont.

It was only later that I read about the concept of “householder practice” in some religious traditions. Householders embrace a non-monastic approach to worship. They weave the concrete facets of keeping house, such as planting a garden or feeding animals, into a spiritual life. Householder practice reminds us that ownership and belonging are derived from caretaking. Our world suffers because ownership has become divorced from caretaking. Householder practice returns humans to our proper place as caretakers of our home, the Earth.

I guess you could say that the time I learned to pray was a watershed moment.



Wildflower Hotline ~ Mark Zuhlsdorf

Every Friday from March through May, the Theodore Payne Foundation posts a recorded weekly update on where to experience Southern and Central California's spring blooms. It's not too late to tune in—narrated by Tom Henschel, it's free to call the hotline number:

818-768-1802 ext 7

More information at:
<https://theodorepayne.org/learn/wildflower-hotline/>



Backyard Treasures ~ Linda Jay

There are just too many things going on in the garden right now. Color is popping everywhere. I want to start by saying how much I enjoyed Christine's demo at our last meeting. I went right home and built my vertical planter. It is taking off spectacularly. I put mine under a tree for filtered light, so I won't have to water daily unless it is scorching hot.

This week my Watsonia are the show piece in my yard. Watsonia is an old-fashioned bulb, they take very little water and are tough as nails. Watsonia come in an array of colors. They are a native of South Africa and easy to grow in full sun. No pesticides or fertilizer needed. Just kick back and enjoy!



Central Coast Iris Society Garden Tour

Our friends at the Iris Society hosted a garden tour that included six wonderful gardens. Pictured is a happy group in Jennifer's front garden.

The Budding Ecologists. What's the Buzz?

What's the Thingamajig? ~ Julie Leafy

Ms. Denise Knapp, with a Ph.D. in ecology and a passion for plant-insect interactions, led about 10 of us on a fact-soaked hike. We barely escaped being water-soaked during several drizzly-rainy episodes during our 2.5 mile trek along the upper loop of La Purisima Mission State Park (LPMSP, or "the park"). She encouraged us to ask questions and share 'good stuff' that we know – and we did! Lots of us on the walk were seasoned plant observers, yet this brought us a new appreciation of our native plants, their favorite terrains, and their pollinators.

Denise began by noting that some of the plants that are pretty common at the park might be rare in general. The unique landform we were standing on is called the Burton Mesa, which was an ancient sand dune, and its sandy substrate influences what plants can thrive at the Mission. On the hike she highlighted three different communities: chaparral, oak woodlands, and coastal sage scrub. In the chaparral was manzanita and ceanothus. Here we learned about "buzz pollination". Have you heard of that? It's the coolest thing ever. There are some plants where the pollen is locked inside elongated anthers that are only open at the tip. To release the pollen, the anther must be shaken. Bumblebees are some of the only organisms that can do that. How? They grab onto the anther and begin shaking in their thorax at slightly above the frequency of middle C on the piano, (270 cycles per second), and that releases the pollen which comes out in a little poof. This is particularly true for manzanitas.

Throughout the park we found the adaptable sticky monkeyflower. (The LVBHS logo flower!). Stopping in front of them, Denise told us that it has a forked, two lobed stigma which folds closed after pollen lands on it. The word "thingamajig" in the title of this article is just my jest to help remember the scientific term "thigmotropism", a response that occurs when an object lands on the stigma and touches it. Denise said the plant does that because it might be transferring pollen. The plant is like 'Mine, I'm gonna hold on to that pollen.' Then the pollen grows a pollen tube down to the ovary to fertilize it. {Author's side note: this phenomenon is also called TSS: Touch Sensitive Stigma. This is a type of tropism (which is Latin for turn). There is geotropism and phototropism, as roots respond to gravity and plants grow towards light. Now thigmotropism refers to the movement of leaves, tendrils, and stigma in response to pressure. I went to my backyard and did the same performance of touching the stigma and watching it rapidly close in a fraction of a second. How neat! Who ever knew that sticky monkeyflower had a TSS?!}



Denise Knapp, Ph.D at LPMSP - J. Leafy

It takes all different kinds of pollinators to interact with certain plants to produce seeds – just one of the wonders of life. Different plants support different pollinators, and many butterflies and moths are specialists. The Manzanita moth is specialized to manzanita while the coyote brush borer plume moth, which might not even look like a moth to you, is named after the coyote brush.

Buzz Cont.

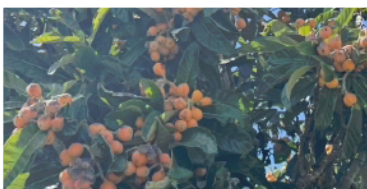
Another cool thing that Denise informed us of is that plants tend to avoid self-pollinating, as it's more adaptive to cross-pollinate. Diversifying genetics will make a plant more resilient to change. The coyote brush has the male and female flowers on two separate plants, and thus, it's not possible for it to self-pollinate.

Denise told us how to tell a coast live oak from other oaks. If you look underneath the leaf, it has hairy armpits. Where the veins meet, you can see little tufts of hairs, which is unique to coast live oak. We then stopped in a coastal scrub area that receives more moisture. The leaves are thinner and softer and they don't have to be as tough as the chaparral.

In summary, Denise said there are common communities that ecologists think about, and they can be mapped to understand the resources in a place. But LPMSP is kind of weird. It's not a neat, mappable place because everything seems to occur in mixes. Walking along the path, you've got chaparral, but then the sides of the trails are all full of coastal scrub. Due to the complex disturbance history at the park, not only different fires but also people clearing for fuel breaks or grazing. There are trails and lots of different things happening. If you have a moment, picture yourself as if you were trying to map the place. How would you view it with a new lens? Denise kept us stimulated and amazed for the duration of the hike.

A Very Happy Loquat

This fruitful specimen was planted around 1950 as a young tree. It has one main trunk and two volunteers. This loquat stands about 13 feet tall and has a width of 30 feet. The fruits range from slightly tangy to the sweetest nectar ever tasted. Celebrate this glorious tree and share a piece of your garden in future newsletters.



Photos by C Zuhlsdorf

LVBHS

c/o Christine Zuhlsdorf - President
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EXECUTIVE COMMITTEE

President: Christine Zuhlsdorf
Vice President: Vito Vitelli
Secretary: Denise Knapp
Treasurer: Warren Arnold

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Helga George
Horticulture: Patcine Beaman
Membership: Helga George
Education: Kristeen Caldwell
Communications: Christine Zuhlsdorf,
Mark Zuhlsdorf, Vito Vitelli, Charlie Blair
At-Large Representatives: Kristeen
Caldwell, Julie Levy, Mark Zuhlsdorf



LVBHS April Activities

On April 18th we set up a table and gave away plants at the City's Mulch/Compost Earth Day event. We met a lot of wonderful people and two new members joined - Welcome Niro and Kris!



Membership Information

Dues for 2026: \$20.00
Membership meetings 3rd Sunday
in Jan, Mar, May, Sep & Nov
Regular meeting location: Stone
Pine Hall, 210 South H St
E-mail: lvbothortsoc@gmail.com



On April 25th we had a Garden Care Day at BMCG, the invasives are invading - we will have more Garden Care Days in May to work at protecting our chaparral. Reach out if you would like to help coordinate one!