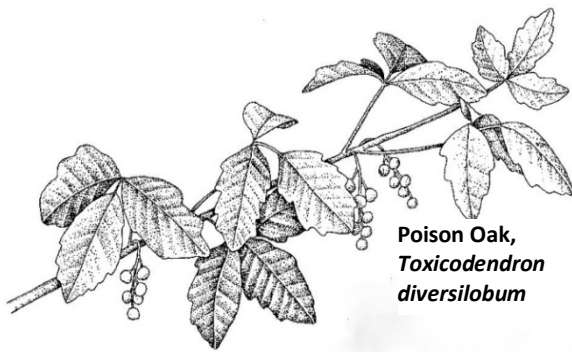


# TREES AND SHRUBS ON THE SONOMA OVERLOOK TRAIL

Among the ferns, short-lived grasses and wildflowers along the Sonoma Overlook Trail, you will find **“woody” plants – trees and shrubs**. These plants will be seen every time you hike here. Some plants are *evergreen*- always with leaves, while others are *deciduous*- meaning their leaves may change color and will all fall off over time or seemingly all at once leaving the tree bare- usually in late summer due to dryness, or in autumn or winter due to shorter day length. Bare stems without leaves make identification of the plants more difficult. This guide is listed in sequence to follow a series of small, **low-lying PLANT TAGS** next to some trees and shrubs along the trail which will help you in their identification. **If there is an \* Next to the name, this means there is NO TAG ON THE TRAIL**

## POISON OAK



Poison Oak,  
*Toxicodendron  
diversilobum*

It is important to learn, respect, admire and *avoid contact* with this small shrub, commonly found along the trail! Any touch can lead to a possibly painful, itchy, swelling skin irritation. This relative of the cashew, pistachio and mango can also be a vine, a ground cover or a tall willowy shrub. In late winter growth starts with shiny red to green compound “leaves of three”, then small greenish flowers appear. Deer will browse on the stems and the older oak-shaped leaflets that may ooze black resin when chewed or crushed. By autumn its deciduous leaves often turn bright red before falling, leaving behind small dry capsules on the bare stems. It is also crucial to learn to identify the thick bare stems of winter in order to avoid the dermatitis.

## TREE OF HEAVEN \*

An invasive “non-native” from China, this deciduous tree, with large feather-like “pinnate” compound leaves, is often found in wild lands near to where someone had built a structure or disturbed the soil such as here near the cemetery. Its crushed foliage has an unpleasant odor. The flowers are white to yellow and female trees bear wing-like fruits called samaras- not found on the separate male trees. This popular street tree has an underground stem that causes the tree to spread aggressively with sprouting shoots. It is found in many urban locations and waysides, surviving in extreme conditions. It was used as the main metaphor for toughness and resilience in the popular novel and film, *A Tree Grows in Brooklyn*.



Tree of Heaven,  
*Ailanthus altissima*

**INVASIVE NON-NATIVE PLANTS**, such as Tree of Heaven, can replace native species and may change natural conditions such as available forage, suitable habitat or increased fire danger. Land managers face a task to control or eradicate plants that have invaded wild lands and may be spreading. **You can volunteer with the Sonoma Overlook Trail Stewards to help control invasive plants**, such as French Broom or Yellow Star-Thistle, in the area of the Sonoma Overlook Trail.

## EUROPEAN OLIVE

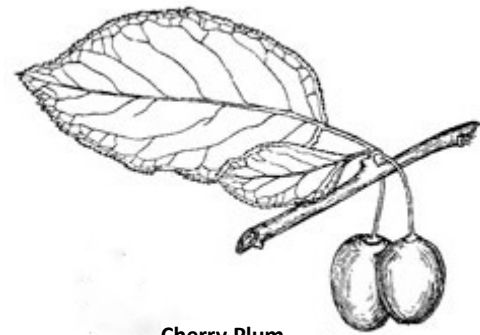


European Olive,  
*Olea europaea*

A less invasive non-native from the Eastern-Mediterranean, this evergreen shrubby tree with dark gray-green leaves and smooth gray stems, probably grew here when the seed was dropped by a bird that enjoyed the popular olive fruit. It is commonly grown by local orchardists and gardeners. The olive has been listed as one of the 10 most important trees on earth due to its significance for food, oil and decorative foliage and wood. It is related to Jasmine and Privets. Here you will find olive trees sparsely located along the trail and hillsides. If you find the bitter olive fruits on any olive tree, you will not enjoy them until they are properly cured.

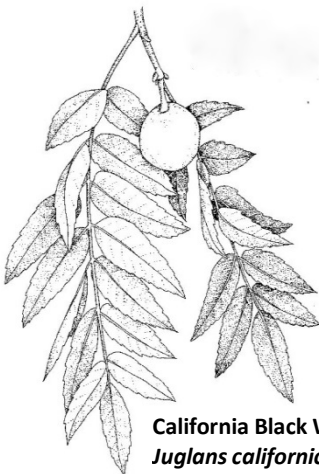
## CHERRY PLUM\*

This small deciduous tree blooms heavily with pinkish-white blossoms in early spring. It is yet another non-native located between Norrbom Road and the Mountain Cemetery. Look for small plums later in spring. Its large single seed was also probably carried here, maybe by a bird or animal (human?) attracted by the juicy fruit. The trunk is smooth and leaves are simple. This is one of many varieties of the cherry plum. The origin of this seed may be from the fruit of a hardy rootstock plant on which was earlier grafted a scion for a more desirable member of the genus *Prunus* which includes cherries, plums, peaches and other stone fruits.



Cherry Plum,  
*Prunus sp.*

## CALIFORNIA BLACK WALNUT\*

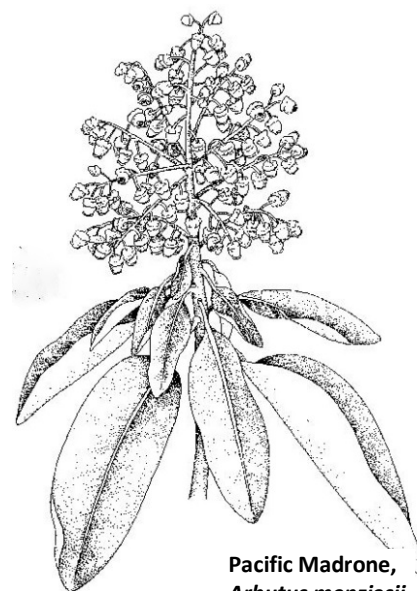


California Black Walnut,  
*Juglans californica*

A deciduous tree with pinnate compound leaves; this may be the native Northern California species, or a Southern California native. There is also a black walnut native to the Eastern U.S. valued for its beautiful wood. Unlike the popular English walnut, the rich, flavorful nutmeat is difficult to extract from the black sticky fruit and tough shell. Black Walnut roots are adapted for local soil conditions and diseases so this tree probably originated from the rootstock for the commercial English walnut orchards found in our region.

## PACIFIC MADRONE

A favorite native tree, also known as Madroño, is treasured for its overall beauty. Its evergreen leaves are large simple and leathery with dark green tops and silvery green bottoms. Before falling, dry older leaves can turn to colors of pink and yellow and often show curious internal trails of leaf miner insects. Small white to pink urn-shaped flowers come in large sweetly fragrant clusters. Each tiny urn falls from high in the tree to decorate the ground in the spring after pollination. By late summer clusters of yellow-orange to bright red fleshy berries form, filled with tiny hard black seeds. Flowers and berries are a favored food to local fauna. The shade-tolerant tree can vary from small and meandering to large and majestic, living for hundreds of years. Notable is the hard smooth orange-reddish to brown inner bark that is exposed as the thin flaky outer bark exfoliates in strips. This strikingly attractive bark shows its close relationship to the shrub Manzanita which we will see later. Children are often introduced to the Madrone as the “Refrigerator Tree” because the smooth bark feels cool to the touch even on the hottest summer afternoons. The beautiful, heavy, finely-grained hard wood is difficult to work into bowls and cabinetry. It is a source for tannins for leather and is prized for firewood. Madrone may sprout after wildfires but it is susceptible to disease and does not transplant nor propagate easily.



Pacific Madrone,  
*Arbutus menziesii*

## BUSH MONKEY FLOWER



Bush  
Monkeyflower,  
*Mimulus*  
*aurantiacus*

A very common, but easily overlooked hardy shrub, this member of the snapdragon family is often found on rocky slopes, chaparral and in woodlands. It is “drought deciduous” but will always have some small elongated opposite leaves present with rolled margins. It becomes more visible when its creamy yellow flowers are present in single or small groups in the uppermost branches. There are many regional forms with variations of flower color from white, yellow, orange and even red. The flowers lead to dry elliptical capsules which split open to spread many tiny seeds. It is also related to other local more ephemeral annual brightly colored monkey flowers that all get their common name from the broad “grin” of the flower that recalls the smiling face of a mime or monkey.

When hiking with a naturalist, if the flowers are fresh, you may be shown a fancy rapid motion trick that the “stigma” of the flower performs to possibly prevent self-pollination and lead to a more diverse offspring.

**A WORD ON OAKS-** As we begin to look at the acorn-producing oaks (Genus *Quercus*) along the trail, it is known that these wonderful and important trees can individually exhibit a **wide range of physical characteristics** such as leaf size and shape or tree height or form **within each species**. These appearances may be due to surrounding environmental factors such as soil conditions, available sunlight, moisture, wind, etc. Also, the wind-pollinated oaks **hybridize** easily as their pollen lands indiscriminately on female flowers of other closely-related species – This can produce acorns which later sprout into viable trees with **intermediate characteristics between the involved species**. Hybridization is common in our location. The so-called “**Hybrid Swarm**” can make definitive identification of every tree very difficult!

## COAST LIVE OAK

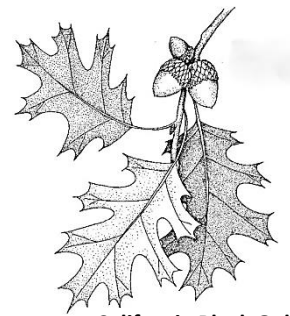


Coast Live Oak,  
*Quercus agrifolia*

Known as Encina or holly oak by early Californios, this tree helps to provide the characteristic look of the California coastal evergreen forests from Mendocino County to Baja. Its leaves often confuse out-of-state visitors who will stare in disbelief when told it is a true oak, until they are shown the significant conical acorns on its branches. Many seedlings and saplings are seen along the trail. The long-lived tree can remain shrubby and twisted or become large and majestic with a short trunk and a wide spreading, shapely crown. The dark steel gray bark is thick and provides some fire resistance. The spiny convexly curved leaves are leathery and shiny green on top and pale green beneath. The importance of this tree for habitat and its acorns for food for a vast variety of insects, birds, mammals and for native peoples cannot be overstated. Wood is usually too twisted for lumber but it is excellent dense firewood. This is the most common tree of the SF Bay area and is how the city of Oakland was named. Since the 1990's the coast live oak has been the main victim of a fungus-like pathogen causing Sudden Oak Death which has killed individuals and stands of these trees and has spread into Sonoma Valley.

## CALIFORNIA BLACK OAK

A common Oak found in many locations in California, this deciduous tree has the hallmark characteristics of an oak most will recognize. Young pink unfolding leaves burst forth from the buds leading to shiny, deeply lobed large leaves with pointed tips. Before falling, the leaves show colors of yellow and hints of red giving the hillsides a touch of fall color. The fat acorns have deep cups and are important for food. The tree forms great habitat and cavities for wildlife. Black oaks are tolerant of shade and can vary in form from shrub to medium sized tree to spreading majesty in the full sun. Look for very dark gray to black bark that was used to make dye. The California Black Oak is also susceptible to Sudden Oak Death. The scientific name *kelloggii* has nothing to do with Frosted Flakes cereal. Albert Kellogg was a 19<sup>th</sup> Century American botanist who helped found the California Academy of Sciences in 1853.



California Black Oak,  
*Quercus kelloggii*

## CALIFORNIA BAY LAUREL



California Bay Laurel,  
*Umbellularia californica*

Found in low to mid elevations of California and Oregon, you can easily identify this common evergreen tree by the distinctive strong spicy smell of the leathery, shiny, dark green leaves. The Bay Laurel is also known as Oregon Myrtle, Pepperwood, Spice-tree or simply Bay Tree. It is a close relative of the European Bay Tree from where the spice comes and locals use it interchangeably. It is also a relative of Cinnamon, Camphor, Sassafras and Avocado. The small yellow-green flowers appear in bunches of 4-10 during mid-winter. The resulting olive-like fruits that form are similar to avocados in color and also bear a large single seed which Native Americans would roast and eat. The

tree form varies from a shrub to a massive multi-trunked giant with thick brown-gray scaly bark.

Chemicals in the leaves inhibit the growth of other trees in its vicinity and also repel insects and treat body pains. Its hard finely grained wood and burls are used in furniture, cabinets and novelty items. The Bay Laurel branches formed into a crown have long been used as a symbol of power, achievement, fame and recognition.

## CALIFORNIA BUCKEYE

This deciduous tree is probably the easiest tree to visually identify, especially in the spring and fall. The distinctive palmate hand-like leaves burst early in the year from large buds after days begin to warm in late winter. Once the leaves are fully extended, upright candle-like flower buds appear and open up to large fragrant splendid creamy white to pink flower clusters that are hard to miss, lasting through spring. The leaves are summer deciduous, dropping off as the weather dries. Only one or sometimes two of the flowers of the group will form the pear-shaped green to pale brown leathery fruit that will hang like a large noticeable pendant from the drooping bare branches until the rainy season of fall. The capsule will then split open along obvious lines and expose the shiny red-brown “buckeye ball” that soon falls and litters the ground below with its siblings. The large seeds are quickly collected by ground squirrels or roll to a choice location and, if conditions are right, will germinate with a large root, penetrating the earth and forming seedlings by midwinter. During summer and winter when leaves and fruits are not obvious the tree is also distinctive from other trees as usually a multi-stemmed shrubby tree with gray-white knobby bark. All parts of California Buckeye are poisonous to humans and most wildlife and livestock. The nectar is toxic to honeybees. Native Americans would grind the large seeds and place into streams to stupefy and gather fish. The poison could be roasted and leached from ground up seeds if needed for a food source.



California Buckeye,  
*Aesculus californica*

## COMMON MANZANITA

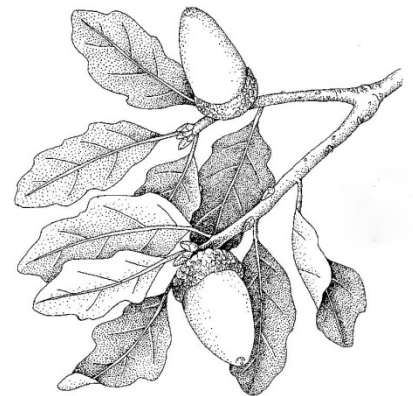


Common Manzanita,  
*Arctostaphylos manzanita*

From 40 to hundreds of species, varieties and cultivars of Manzanita are described in California making identification difficult. The unmistakable smooth reddish-brown stems are similar to the Madrone tree, a close relative, but the typical stature is definitely shrubby. The leaves are simple and evergreen and often gray-green. Showy white-pink urn-shaped flowers bloom in clusters during late winter. Hard-skinned red berries with a mealy pulp and hard black seeds resemble “little apples” from where the Spanish name “Manzanita” is derived. The fruit is eaten by many animals and is traditionally ground by Native Americans to make a coarse meal. The berries were used along with young leaves to make extracts that cured headaches, relieved poison oak and provided a refreshing tea or cider. The wood and bare dry shrubs are decorative, and the fire-resistant burls are made into novelty items and even smoking pipes. The beautiful and variable sizes and shapes are popular in landscaping. In order to sprout, seeds must undergo abrasion or be exposed to fire.

## BLUE OAK

This is the most common deciduous oak found in this area. The Blue Oak is a California endemic – found typically in lower elevation dry sunny slopes so it is in its prime habitat here. It is also called Mountain Oak or Iron Oak but the most common name comes from the blue-green and often pale color of the entire to shallowly lobed leaves. Also noticeable is the light gray bark with dark cracks and the medium size and single trunk of the typical tree. The acorn is plump and egg-shaped with a saucer-shaped warty-scaled cap. This oak often hybridizes with Valley Oak and Oregon White Oak in our area. The wood is heavy, hard and strong so it is prized for firewood and fence posts. Over eighty species of plants and animals have *douglasii* in their scientific names honoring Scottish botanist David Douglas who explored the Pacific Northwest in the 1820's.



Blue Oak,  
*Quercus douglasii*

## TOYON, CHRISTMAS HOLLY



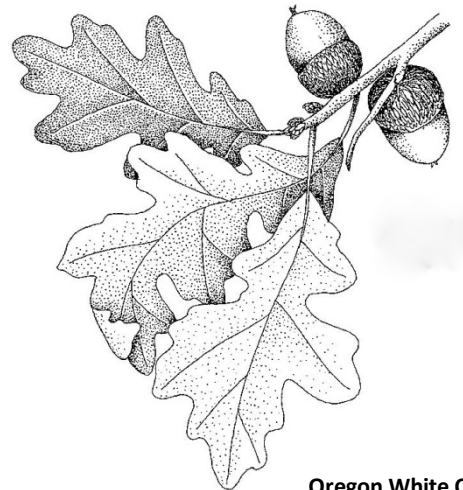
Toyon,  
*Heteromeles arbutifolia*

This common shrub is notable around two holidays. On July 4<sup>th</sup> you can find a bright white “firework display” of a large heavy group of small flowers on this evergreen shrub. By Christmastime the persistent bright red berries hang as yuletide decorations in the otherwise green to gray natural landscape. Birds and other wildlife seek and guard the nourishing morsels. The beauty of the boughs as a popular decoration may have led to outlawing the collection of the festive branches in the early 1900’s. The Toyon or California Holly is in the Rose Family not related to the true hollies. The confusion continues as the presence of Toyon in the hills of Southern California may have resulted in the misleading name of Hollywood.

Of more certainty, the name Toyon is of California Native American origin. The leaves on the sturdy shrub are very leathery with saw tooth margins and even though an evergreen, the leaves can turn into very colorful red, orange and yellow mosaics before they individually fall. Some Toyon bushes can reach heights over 20 feet tall.

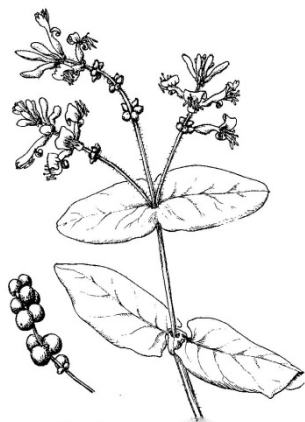
## OREGON WHITE OAK \*

Big shiny leaves that may be broad above the middle with 5 to 9 deep lobes characterize this deciduous mid-sized oak found along our trail where it favors well-drained soils. Since it hybridizes easily, its characteristics are not always clear here. The acorn is stubby and round with a deep cup of waxy scales. The bark is thin and smooth with square-like plates often covered in moss. The acorns and leaves are an important food source. Of all the western oaks, the Oregon White Oak has the most useful wood for furniture, flooring and veneer, as well as for fence posts, railroad ties and firewood. There have been some attempts to use its wood for wine barrels. This is the only native oak found in British Columbia and Washington State where it is also known as Garry Oak, Brewer Oak or Shin Oak. Garry oak was named by botanist and explorer David Douglas for Nicholas Garry of the Hudson's Bay Company, who helped him during his travels.



Oregon White Oak,  
*Quercus garryana*

## CALIFORNIA HONEYSUCKLE\*

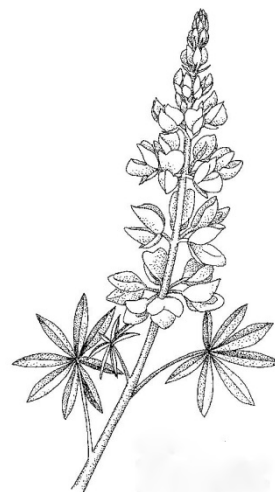


California Honeysuckle,  
*Lonicera hispidula*

Since this vine can sometimes be found entwined in trees as a thick woody stem, it fits into this guide. Typically it is a thinner, wiry, entangled vine in trees, shrubs or found as a trailing groundcover. Because of this variability, it is easy to confuse with Poison Oak in its vine or groundcover forms. Honeysuckle has opposite simple deciduous leaves and shredding bark as it thickens. In upright branch ends are paired tubular white to pinkish flowers that attract hummingbirds. Most notable are the bright red bitter berries that form later in the summer.

## SILVER BUSH LUPINE\*

Many native lupines are soft herbaceous annual wildflowers but this blue and white flowered member of the pea family is a small stubby perennial shrub with soft tips. The flowers appear in early spring along with fresh velvety leaves that are palmate or hand-shaped compound. Later in the spring pods or legumes will form with seeds inside. Beware that many lupines are toxic. There are over 200 species of lupines worldwide with lots of color variation. The name lupine comes from the Latin “wolf”. It was thought that lupines stole nutrients from the soil since they are found often on poor soils, but they actually can add nitrogen to the soil.



Bush Lupine,  
*Lupinus albilfrons*



## COYOTE BRUSH



Coyote Brush,  
*Baccharis pilularis*  
female and male

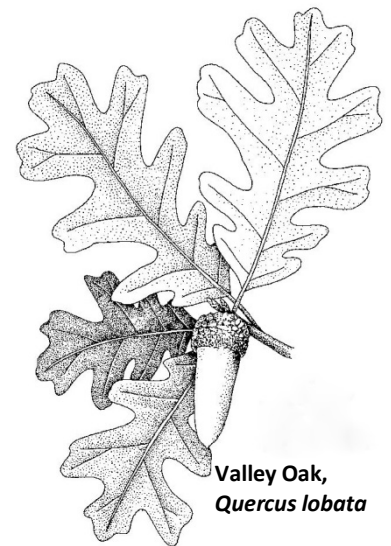
One of the most common shrubs in our area that often gets overlooked since it has inconspicuous clustered flowers and small evergreen leaves with three tiny principle veins. It often is a pioneer woody plant in open areas. This member of the Sunflower Family has male plants separate from female plants making it “dioecious”, or of “two houses”. Male flowers appear yellow in early winter while the female flowers are white. The female plants are easiest to recognize in late winter when it puts out tufts of white hairs attached to the mature seeds allowing for wind dispersal.

Therefore, another common name is “Fuzzy Wuzzy”. Because of its leggy branching it is sometimes called “Chaparral Broom”. There are 9 species in California. Some form dense mats and are used in landscaping. This winter bloomer is valuable to hundreds of species of insects for food and habitat.

## VALLEY OAK\*

The large stately oak tree found in the deep soils of California Valleys is also known as Roble, Mush Oak, Bottom Oak, Swamp Oak or Water Oak. The trees can be up to 150 feet tall with roots up to 80 feet deep. Limbs are often picturesquely twisted with long, drooping outer branches. The specimens along the Sonoma Overlook Trail are not in their primary habitat and don’t reach the breathtaking size as those seen in the valley below. Its deciduous leaves have 7 to 11 very deep lobes, are shiny green on top and pale beneath with yellow veins. It has deeply furrowed, alligator-like bark and long acorns with a warty deep cup. Valley Oaks hybridize with Blue and Oregon Oaks so it is often difficult to separate them out from the other deciduous oaks here. The wood is hard and brittle so its main use is for fuel. The large trees are prized critical habitat for many woodland creatures and the leaves and acorns are valuable food. Bulbous green to tan “Oak Apple” insect galls are often found attached to its stems.

Abnormal cell growth caused by the egg-laying and secretions of a unique wasp produces the gall. These galls serve as a unique habitat of their own as a nursery and food source for the wasp and other predatory insects that occupy the gall. Agriculture has been the main cause for the loss of habitat for regenerating Valley Oaks.



Valley Oak,  
*Quercus lobata*