

Hike Statistics**Starting point:****Distance:** 1.7 miles**Time:** Allow about 2 hours**Grade:** Moderate**Suggested age:** All Cubs Scouts, Tigers through Webelos.**Suggested Season:** Spring through Summer.

Directions: From Highway 24 in Oakland, take the Fish Ranch Road exit immediately east of the Caldecott Tunnel. Continue 0.8 miles to Grizzly Peak Blvd. Turn left and go 2.4 miles on Grizzly Peak to Skyline Boulevard. Turn left and drive approximately one-half mile to the park entrance on the left, past Sibley Volcanic Regional Preserve.

Note to Trail Trekker Coordinator:

The object of this hike is to educate our Scouts about the different plants and trees that are found within the preserve, this is why the estimated time is 2 hour for a 1.7 mile hike. The proceeding pages will help in you with your discussions with the Scouts of the various plants and trees found in the Huckleberry Botanic Regional Preserve. Unabbreviated version is found in the East Bay Trail Map for are provided here in for the scouts to use for identification.

Hike: Huckleberry is a self-guided nature path, a 1.7-mile loop, the path descends into a mature bay forest, follows the contour for about half a mile. The path splits downward is the Pinehurst trail and the Huckleberry path that ascends to the botanically rich upper trail. Staying on the Huckleberry trail, stop at each trail marker and find the plant or tree indicated on the map without disturbing the vegetation see if the scouts can point out the plant or tree in question. Have a discussion about its characteristics. Below are some of those characteristics to which you can discuss.

Pacific Madrone (*Arbutus menziesii*)

Pacific madrone is an evergreen tree with urn-shaped cluster flowers. In the fall and winter the flowers give way to a pea-sized berry cluster of dark to orang red berries consisting of mealy pulp and numerous seeds. The glossy, leathery leaves are arranged alternately on the stem. The bark is freely exfoliating, peeling off in large, thin scales. Once the outer bark is shed, the remaining bark has a reddish smooth and polished appearance. The Trunk can be of a Single or multiple curved trunks that supports a broad, spreading crown composed of heavy, irregularly-shaped limbs that can reach heights ranging from 16 to 130 feet, with diameters up to 2 to 3 feet. Once established, Pacific madrone is wind restraint, drought resistant, and somewhat tolerant of wet, freezing conditions too.



California hazelnut (*Corylus californica*)

California hazelnut is a 13- to 49-foot tall shrub or small tree. It typically has several trunks, felt-like leaves, and showy male catkins. Hard nutlets inside vase-shaped, papery fruits are sweet and edible. Twigs are slender and may grow in a zigzag pattern. The fruit which is a nut is enclosed in a husk, with a tubular extension about 0.79–1.57 in long that resembles a beak. Tiny filaments protrude from the husk and may stick into, and irritate, skin that contacts them. The spherical nuts, which are surrounded by a hard shell, are edible. The California hazelnut varies in habit from scattered individual plants to densely clumped thickets. Isolated shrubs are typical. Western or California Hazelnut as it is known is native to many shady moist spots from Santa Cruz and Yosemite north to B.C. One of the early Spanish expeditions along the coast in 1543 said the Indians in Santa Barbara had abundant quantities of hazelnuts and it was part of their diet.



http://www.fs.fed.us/database/feis/plants/shrub/corcor/all.html#GENERAL_BOTANICAL_CHARACTERISTICS

Western sword fern (*Polystichum munitum*)

Western sword fern plant is a lush evergreen ground cover identified by large and showy, glossy-green fronds. Note the “rusty” undersides. In addition to spreading through rhizomes, sword ferns will also reproduce via spores that are found along the backside of the fronds. These spores appear as brown spots or light yellow which are clustered together in groups. The dark green fronds of this fern grow 1.6 to 5.9 ft. tall, in a tight clump spreading out radially from a round base. They are single-pinnate, or resembling a feather, in its construction. The pinnae alternates on the stalk. Each pinna is 0.39 to 5.91 in long, with a small upward-pointing lobe at the base, and the edges are serrated with bristly tips. Individual fronds live for 1.5 to 2.5 years and remain attached to the rhizome (subterranean plant stem) after withering. This fern thrives in cool, shady, moist sites, and (to an extent) frequents the borders of huckleberry thickets or the shade of bay woodlands.



<http://plants.usda.gov/core/profile?symbol=pomu>

Wood fern (*Dryopteris arguta*)

Dryopteris arguta, with the common name coastal wood fern, native to the west coast and western interior mountain ranges of North America, from British Columbia, throughout California, and into Arizona. is a species of wood fern. The soft, feathery appearance of this fern readily distinguishes it from the dark, leathery fronds of the sword fern. The Wood Fern can be found in mixed evergreen forests, oak woodlands, and shady lower elevation slopes in chaparral and woodlands habitats, and can tolerate more dryness than the sword fern.



https://images.search.yahoo.com/search/images; ylt=A0SO81JnL6RUihMAOmlXNyoA; ylu=X3oDMTBsOXB2YTRjBHNIYwNzYwRjb2xvA2dxMQR2dGlkAw--? adv_prop=image&fr=yfp-t-901&va=wood+fernshttp://en.wikipedia.org/wiki/Dryopteris_arguta

California-laurel -The bay trees

California-laurel is the only tree of the family Lauraceae found in the western United States. It is a broadleaved evergreen tree with distinctly aromatic “bay” leaves. Often referred to as myrtle wood, California-laurel is one of the best known and most valuable western hardwoods. California-laurel Initial growth of sprouts is rapid; Top height of at least 80 ft. on mature trees, up to 150 ft. On the best California-laurel sites seedlings develop more slowly in typical understory environments. Long-term height growth of California-laurel is slow less than a 1 ft. per year on many sites, but rates of 1 to 2 ft. per year are possible on good sites. Diameters of 15 to 16 in. may be achieved in 50 years. The spicy aromatic leaves can be used to season soups and stews, although they are four to five times as potent as commercial sources.



<http://en.wikipedia.org/wiki/Umbellularia>

Manzanita barren–*Arctostaphylos*.

The word *manzanita* is the Spanish diminutive of *manzana* (apple) A literal translation would be *little apple*, and is a common name for many species of the genus *Arctostaphylos*. They are evergreen shrubs or small trees and are found as far north as southern British Columbia and as far south as Mexico. They are characterized by smooth, orange or red bark and stiff, twisting branches. There are 106 species of manzanita, 95 of which are found in the Mediterranean climate and colder mountainous regions of California, ranging from ground-hugging coastal and mountain species to small trees up to 20 feet (6m) tall. Manzanitas bloom in the winter to early spring and carry berries in spring and summer.^[1] The berries and flowers of most species are edible.



<http://en.wikipedia.org/wiki/Manzanita>

Douglas iris (*Iris douglasiana*)

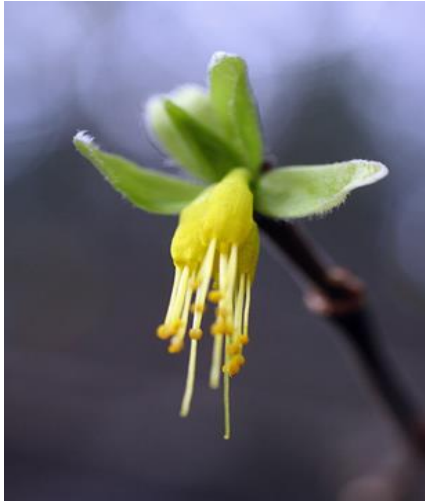
The thickened, grass-like leaves and the elegant light blue through violet into a kind of blue-ish-pink, and arise on a 1 to 2 ft. high stem and spread slowly into a 2 to 4 ft. wide clump. A home native from Santa Barbara to Oregon. Douglas Iris likes full sun near coast, afternoon shade inland, some summer water. Fast growing near the coast, but grow slower inland. This iris prefers richer soils, but can tolerate sand, clay, serpentine and seasonal flooding.

- a. Indians used the outermost strands of fiber from the leaf margins for weaving.



<http://www.laspilitas.com/nature-of-california/plants/iris-douglasiana>

Western leatherwood (*Dirca occidentalis*)—is a Shrub [herb, tree, or vine], often ill-smelling, poisonous. It's stem erect, flexible, branched, generally with raised, woody leaf scars; bark fibrous, tear-resistant, often green and/or ± white, at least in patches, especially when young. Extremely rare. Please treat this unique species with care. The leaf is simple veined petals small, alternate sepals, often green and/or white, at least in patches, especially when young, flowers December to March. Deciduous, Just before leatherwood breaks dormancy, the intricate naked branchlets produce striking lemon-yellow blooms at the tips. Due to the peculiar S-shaped arrangement of its wood fibers, leatherwood has very flexible, pliable branches, hence its common name.



Jimbrush (*Ceanothus sorediatus*)

- Jim brush is a 3' to 9' tall shrub sometimes with a tree-like trunk and with flexible, hairy branchlets and twigs. The alternate leaves are ovate, elliptic or elliptic-oblong to 1-1/2" long, pubescent below and glabrous above. The thorny, rigid, twiggy growth produces soft blue blossoms in spring. The Jim brush blooms from February to April and may be found on dry, shrubby slopes about 4500' from Los Angeles and Riverside Counties north. Native Americans made a shampoo from the flowers of this species.



Canyon live oak (*Quercus chrysolepis*)

Quercus chrysolepis is also known as Maul Oak, Iron Oak, Hickory Oak, Goldenleaf Oak and Goldencup Oak. Canyon Live Oak is native to canyons and is widely distributed throughout California. Uncommon in the East Bay, mainly found in mountainous canyon regions. An evergreen tree that grows to about 40ft to 60 ft. This oak can be identified by the sometimes grayish, but usually golden, fuzz on the leaf undersides. Stout acorns rest in thickened, fuzzy, golden cups. Also found in has a basal burl. The leaves of this oak can be toothed or smooth, (sometimes on the same tree). They are dark green on top and fuzzy gold-white underneath. It likes sun, moderate water. It is more beautiful than live oak. This tree grows well in most of California and the West.



Coast huckleberry (*Vaccinium ovatum*)

An evergreen 2-3 ft. shrub but can grow to 6 ft. and has 1/4" to 1/2" blue berries, it flowers April to May. Bright or dark glossy-green leaves, V or hedge-like growths. The rarer variety (V.o. var. saporosum), having pear-shaped fruits with a sweeter flavor, also grows in this Preserve. Huckleberry, *Vaccinium ovatum*, is a. tolerates sand and clay. And its foliage color is reddish-green and its flower color is white and the fruit is edible.



Intermediate successional stage.

Notice the tall, dense canopy of leaves. You may also notice, by stooping, the dead and rotting, moss-covered burls of brittle leaf manzanita beneath, or the dying pallid manzanitas, sometimes toppling over. Even though chinquapin creates a dark, more or less competition-free understory in earlier life, the faster-growing huckleberry will eventually overgrow and kill the chinquapin.

An ecosystem undergoes many intermediate stages of succession. These changes form a continuum between the two endpoints, with the actual stages being merely a fixed glance at the never-ending progression of plants and animals. The emergence of the climax state of succession may occur more quickly in some ecosystems, and likely never occur in other biomes that experience routine disturbances. Examples of quickly forming climax communities are the short-grass and long-grass prairies of the Great Plains of the United States.

Five Stages of Plant Succession

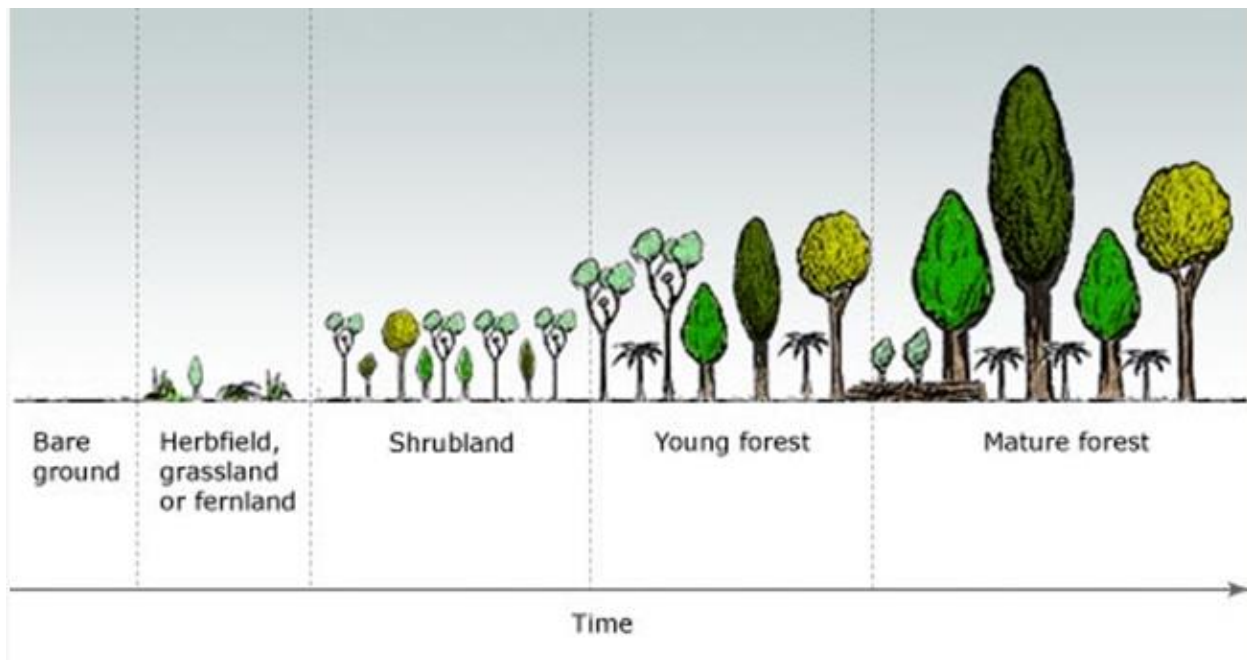
Herb Stage - Herbaceous plants form the first stage of plant succession following a disturbance. Flowering plants and grasses are usually the first plants to emerge following forest clearing or plowing a field. Ferns and vines often emerge first following a fire.

Shrub Stage - The shrub stage follows the herb stage in plant succession. Cane plants such as berries, woody-stemmed shrubs and small, sun-loving trees such as cedars spring up from the ground that has been stabilized by the herbaceous plant layer. Young white pines, aspens, and birches begin to appear as the shrub stage transitions to a young forest.

Young Forest Stage - The young forest stage is characterized by thick growth of thin-trunk young trees. Aspens and birch are followed by specimens of maple, pine, and other species depending on the forest location and climate. Young forest trees climb quickly skyward, attempting to out-compete one another for sunlight. Slower trees are shaded out by their faster-growing neighbors and die off as the system moves toward the mature forest stage.

Mature Forest Stage - A mature forest includes diverse species of diverse ages, from ground cover and undergrowth plants to trees with low, mid- and upper-story canopies. Sun-loving successional varieties such as birch and aspen will die off, and varieties of hardwoods and straight-trunk conifers that need protected shade to germinate and grow will begin to dominate the forest system.

Climax Forest Stage - A climax or "old growth" forest is not an even-age forest of enormous old trees. Rather, a climax forest is the most diverse forest system. Trees left undisturbed to reach their full life span will then die and fall, serving as 'nurse trees' to new growth. This creates sunlit openings in the canopy that foster herbaceous growth, starting the stages of plant succession over again in a patchwork throughout the forest. Forests rarely reach the climax stage because disturbances such as fire, clearing, or timber management usually interrupt succession at the mature forest stage.



During a succession, different groups of plants grow at a site over time. The diagram shows a succession from bare ground to a mature forest.

Plants that colonize bare ground are typically hardy and low-growing. In time, shrubs and small trees grow among the first plants, and a shrubland develops. Seedlings of tall forest trees germinate and grow in the shelter of the shrubs, and soon overtop them, forming a young forest. This gets taller and more complex over time. In the mature forest, individual trees die and young saplings grow up to replace them, but the forest's composition and structure basically remain the same for centuries.

Chinquapin (*Castanopsis chrysophylla* var. *minor*)—Flowers June to September. The spear-shaped, dark green leaves with golden fuzz on undersides, and the spiny, yellow, burr-like fruit encasing several hard nutlets, make the chinquapin hard to be mistaken. Flickers and jays extract the nutlets from the thorny burrs in fall and winter.



Brittle leaf manzanita (*Arctostaphylos crustacea*)

Brittle leaf manzanita flowers February to March. Brittle leaf Manzanita is an evergreen shrub 3-4' in height. Leaves distinguish this manzanita. It forms dense colonies of Green leaves on reddish stems, bright little pink flowers and is slow growing. Found in coastal areas growing in sand overlaying hard pan. This manzanita does well in afternoon shade and some water, and has proved to be hardy to about 0 degrees F here (with no snow cover). Brittle leaf Manzanita needs good drainage, will not tolerate the high interior heat. Hummingbirds like these bushes for their flowers and structures for nests. These can be very long lived, 100 years plus.



Pallid manzanita (*Arctostaphylos pallida*)

Flowering as early as mid-November. The dense, white flowers are urn-shaped and 0.2 to 0.3-inch (7.6 mm) long. The flowering period is from November to March. The reddish, smooth, crooked branches, with tightly clustered grey-green leaves, and the tall, arboreal growth readily distinguish this as Very rare. In summer, the sticky, viscid berries may adhere to your clothing. The *Arctostaphylos pallida* grows to around 6–13 ft. (1.8–4.0 m) in height. The branches on the shrub are reddish or grayish (more reddish) and they have twigs that tend to be bristly. The oval to triangular leaves are bristly, strongly overlapping and clasping. They are 1.0 to 1.8-inch (46 mm) long and 0.8 to 1.2-inch



Coast Silktassel (*Garrya elliptica*)

One of the most dramatic winter flowering shrubs in California is coast silk tassel (*Garrya elliptica*). Flowering December to February. Coast Silktassel has compacted, rounded growth and dark green leathery leaves with a whitish fuzz on undersides help to distinguish this plant. Silktassel comes in separate male and female varieties of plant. The males have long, silky catkins that hang like tinsel. The females have short, beaded fruits in catkins, with the purplish fruits giving off a purplish stain. Slow growing at first but will grow fast once established, and can grow up to 24 feet high with an equal spread in the wild but are usually smaller. Native to the coastal counties of California from Ventura County to southwestern Oregon. They have a bitter taste and were used by early settlers as a substitute for quinine (hence, its other common name, the quinine bush).



Pink-flowering currant (*Ribes glutinosum*)

Description: Pink-flowering currant blooms from January to March. Clusters of pink bell shape flower that dangle from their branch. These flowers are highly aromatic, the leaves are sticky, and blue and black berries later form. The *Ribes glutinosum* or flowering currant for simplicity likes shade to partial shade and moderate water but is also very drought tolerant in Coastal gardens and can be found in pine, evergreen The pink flowering current can be found in Chaparral, Closed-cone Pine Forest, Mixed-evergreen Forest, Riparian (rivers & creeks) and Central Oak Woodland.



Resources

1. East Bay Regional Park District, Huckleberry Botanic Regional Preserve trail map.
2. Various websites...
 - a. [http://www.fs.fed.us/database/feis/plants/tree/arbmen/all.html#GENERAL BOTANICAL CHARACTERISTICS](http://www.fs.fed.us/database/feis/plants/tree/arbmen/all.html#GENERAL_BOTANICAL_CHARACTERISTICS)
 - b. [http://www.fs.fed.us/database/feis/plants/shrub/corcor/all.html#GENERAL BOTANICAL CHARACTERISTICS](http://www.fs.fed.us/database/feis/plants/shrub/corcor/all.html#GENERAL_BOTANICAL_CHARACTERISTICS)
 - c. <http://plants.usda.gov/core/profile?symbol=pomu>
 - d. https://images.search.yahoo.com/search/images;_ylt=A0SO81JnL6RUihMAOmIXNyOA;_ylu=X3oDMTBsOXB2YTRjBHNIYwNzYwRjb2xvA2dxMQR2dGlkAw--?_adv_prop=image&fr=yfp-t-901&va=wood+ferns
 - e. http://en.wikipedia.org/wiki/Dryopteris_arguta
 - f. <http://en.wikipedia.org/wiki/Umbellularia>
 - g. <http://en.wikipedia.org/wiki/Manzanita>
 - h. <http://www.laspilitas.com/nature-of-california/plants/iris-douglasiana>
 - i. http://en.wikipedia.org/wiki/Dirca_occidentalis,
http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=23143
 - j. http://www.laspilitas.com/groups/ceanothus/california_ceanothus.htm
 - k. <http://www.laspilitas.com/nature-of-california/plants/quercus-chrysolepis>
 - l. <http://www.laspilitas.com/nature-of-california/plants/vaccinium-ovatum>
 - m. <http://www.teara.govt.nz/en/diagram/11898/stages-of-forest-succession>
 - n. http://www.ehow.com/how-does_5152408_five-stages-plant-succession.html
 - o. https://www.google.com/images?rlz=1T4NDKB_enUS592US593&q=Castanopsis+chrysophylla&hl=en&sa=X&oi=image_result_group&ei=ShSkVLfVLMXegwSzmYSQCg&ved=0CBoQsAQ
 - p. <http://www.laspilitas.com/nature-of-california/plants/arctostaphylos-crustacea>
 - q. <http://www.laspilitas.com/nature-of-california/plants/ribes-sanguineum-glutinosum>