## Field Guide

to

# Plants of UC Santa Cruz 

 Selected Trees, Shrubs, Herbs \& FernsNathalie Martin
UCSC Environmental Studies, B.A. 2017


Illustrated by Brett Bell
Edited by Alex Jones

## Field Guide to Plants of UC Santa Cruz

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by Nathalie Martin
Illustrated by Brett Bell
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Edited by Alex Jones
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## How To Use This Guide

Organization: This guide is organized in the same manner as the second edition of The Jepson Manual, Vascular Plants of California. This guide is divided into five main sections: Ferns, Gymnosperms, Magnoliids, Eudicots, and Monocots. These sections are then subdivided alphabetically by family, genus, and species. This can help users get familiar with Jepson's general format if they wish to learn how to use its dichotomous keys for plant identification.

Abundance: Each plant is marked with an abundance ranking, ranging from abundant to rare. Please note that "rare" does not necessarily mean that the species itself is rare statewide or federally, but that the plant is a rarity within the campus boundaries. If a plant is considered rare by the California Native Plant Society, it is noted in the description. No federally endangered or threatened plant species are known to occur on campus.

Plant height: Average height is represented using the following relative scales: below ankle, ankle, mid-calf, knee, waist, chest, and head heights. These scales are used to give users a general (not exact!) idea of height, as height can vary throughout a plant's life. Over-head heights are given in meters and plants that grow in vine form are given as "variable" since they can grow along the ground, up trees/other plants, and everywhere in between.

Bloom period: This indicates the time period in which a plant typically flowers. These periods can vary slightly from year to year depending on a number of environmental factors. Phenology is not fixed!

Flower/inflorescence size: The diameter of each flower or inflorescence in the guide corresponds to one of the following:
$\square$ very small $=0.5 \mathrm{~cm}$ or less
$\square$ small $=0.5$ to 2 cm

- medium $=2 \mathrm{~cm}$ to 4 cm
$\square$ large $=4 \mathrm{~cm}$ to 6 cm
$\square$ very large $=6 \mathrm{~cm}$ or greater
"Inflo. size" applies to plants with composite flowering heads, i.e. plants in Asteraceae that have ray and/or disk flowers. Remember, like plant height, flower/inflorescence size is variable. A plant's flowers may be assigned "very small" in this guide, but that does not mean it cannot also have "small" sized flowers.

Habitat: The habitats in which a particular plant may be found are indicated by the colored rectangles found on each plant's species account. The colors and vegetation community abbreviations correlate to those on the UCSC Vegetation Communities map on the next page.

Please note: There are over 500 plant species that exist on the UCSC campus; thus, this guide, with its 185 species, is just a start (see p. 126 for a more complete, though still partial, working list). If you see a plant on campus but cannot find it in the book, use what you have learned from the guide or what you may already know about plant taxonomy to point you in the right direction. Its organization is meant to help you notice certain characteristics of the various groups, families, and genera spread across the campus. What family does the plant look like it might be in? Even further, what genus? Does it remind you of something else that you know? Such clues can help you deduce what you are looking at and enhance your botanizing experience.
Additionally, photos are not necessarily the best way to identify plants to species (or subspecies) level. Keying a plant with the Jepson Manual or a local flora is the most accurate way to figure out what plant you are observing.
Lastly, you may notice that the guide does not include graminoids-the grasses and grass-like plants (rushes and sedges). Are you, dear reader, the one who will create the second edition of this guide?

## UCSC Vegetation Communities

C-FT Chaparral - Forest Transition

CP Coastal Prairie
CBS Coyote Brush Scrub
DA Developed Area
Dr-m-c Dwarf Redwood - Mixed - Chaparral
DRF Dwarf Redwood Forest
G Grassland
LA Landscaped Area
mE Mixed Evergreen

## NMC Northern Maritime Chaparral

RF Redwood Forest
RWS Riparian Woodland and Scrub


[^0]
## Campus Vegetation Communities

## Redwood Forest DRF DR-M-C

All those who visit UC Santa Cruz are familiar with this plant community, as coast redwoods (Sequoia sempervirens) are a dominant feature of the central and upper regions of campus. These towering, long-lived conifers can grow up to 120 m tall and 2200 years old in some parts of California, but only reach about 60 m and 100 years old on campus. They are restricted to the central and northern coast of California and a small part of the southern coast of Oregon. This is because redwoods exist where coastal fog exists, as it provides moisture for the trees in the otherwise too-dry summer months. The plant species that dwell in the forest understory need this moisture, too. However, the dark canopy and deep duff that the redwoods create limits what plants are able to grow in their company. Associated species you can observe growing on the forest floor are sword fern (Polystichum munitum), milkmaids (Cardamine californica), fetid adder's tongue (Scoliopus bigelovii), wake-robin (Trillium ovatum), redwood violet (Viola sempervirens), and redwood sorrel (Oxalis oregana). Some tree species, like Douglas-fir (Pseudotsuga menziesii) and tanoak (Notholithocarpus densiflorus) also dwell in the midst of the redwoods.

Additionally, there are some stands redwoods that are categorized as "dwarf redwoods" on the Vegetation Communities Map. These are not true dwarf forms, but are reduced in stature in terms of circumference and height. Stands of these smaller trees, which grow more densely than the other redwoods on campus, are found on the East Slope of the Campus Natural Reserve, as well as around the Trailer Park and North Remote parking lot. These trees are perhaps smaller because they grow on poor, sandy soils and/or in areas that were historically burned.

## Mixed Evergreen Forest

This diverse vegetation community is found on the main campus in small patches, but is most common in Upper Campus and a section of campus west of Empire Grade. Much more diverse and variable than redwood forest, mixed evergreen forest is host to an
abundance of ferns, trees, shrubs, and herbaceous plant species. Here, broadleaf evergreen trees, like members of the oak family (Quercus spp. Notholithocarpus densiflorus, Chrysolepis chrysophylla var. minor), madrone (Arbutus menziesii) can grow in the company of conifers (redwood, Doug-fir, pine). Shrubs like California hazelnut (Corylus cornuta subsp. californica), California blackberry (Rubus ursinus), and poisonoak (Toxicodendron diversilobum) are common in this varied landscape. Flowers of striking colors and unique features also bloom here, such as hound's tongue (Cynoglossum grande), white globe lily (Calochortus albus), Douglas iris (Iris douglasiana), and California hedgenettle (Stachys bullata).

## Chaparral NMC C-FT DR-M-C

This is a hot, dry plant community that is characterized mostly by shrubs. Here in Santa Cruz, the influence of summer fog and presence of sandy soil makes this kind of chaparral distinct from the more inland type. This is referred to as northern maritime chaparral, which is a relatively rare plant community found in small patches along the coast. Although the fog provides some respite for the plants in the summer, maritime chaparral is still a harsh environment that plants must adapt to in specialized ways. Small, thick, stiff leaves help plants hold and efficiently use the small amounts of water they receive. Plants here are also fire-adapted, as fire is integral to the ecology of this community. Some species are able to resprout from their bases after fire while others have seeds that germinate in response to the heat or smoke of fire. Examples of chaparral plants include manzanitas (Arctostaphylos spp.), ceanothus (Ceanothus spp.), coffeeberry (Frangula californica), huckleberry (Vaccinium ovatum), chaparral pea (Pickeringia montana), and sticky monkeyflower (Mimulus aurantiacus). Occasionally, you will find a knobcone pine (Pinus attenuata) or a small oak, too. Two good places to visit campus chaparral are on Chinquapin Rd. northwest of Red Hill Rd. and on Fuel Break Rd. between Red Hill and West roads.

## Grassland \& Coastal Prairie G CP

Grassland dominates most of the lower half of campus and pockets of Upper Campus. Large meadows, like the East Meadow, the

Great Meadow, and Mima Meadow, are composed mostly of annual plants, especially grasses. Most of the grasses and herbaceous plants in these meadows are non-native and/or invasive, like ripgut brome (Bromus diandrus), slender wild oat (Avena barbata), rattlesnake grass (Briza maxima), wild radish (Raphanus spp.), stork's bill (Erodium botrys), and rough cat's ear (Hypochaeris radicata), which can have detrimental impacts on the native ecosystem. However, some native species have managed to persist. Sky lupine (Lupinus nanus) and California poppies (Eschscholzia californica) still bloom in abundance in the spring, painting the meadows with patches of blue and orange. Other common native grassland species are sun cups (Taraxia ovata), Fremont's star lily (Toxicoscordion fremontii), California buttercup (Ranunculus californicus), blue-eyed grass (Sisyrinchium bellum), coyote brush (Baccharis pilularis var. consanguinea), purple needlegrass (Stipa pulchra), and California oatgrass (Danthonia californica).
While the large lower campus meadows have spectacular views and a host of plant life, the meadows of Upper Campus are truly the jackpot for botanizing. These meadows, like the Marshall Fields complex, are a specific type of grassland called coastal prairie that sit on ancient marine terraces. This plant community is especially diverse. In addition to the native and non-native plants found on lower campus, this community also includes colorful species like harlequin lotus (Hosackia gracilis), yellow owl’s clover (Triphysaria versicolor), golden brodiaea (Triteleia ixioides), mariposa lilies (Calochortus spp.), and brodieas (Brodiaea spp.). Many of these species are rare or restricted in range, such as Point Reyes horkelia (Horkelia marinensis), largeflowered mariposa (Calochortus uniflorus), and San Francisco popcorn flower (Plagiobothrys diffusus).

## Riparian Woodland \& Scrub

Riparian zones on campus include those with standing water, streams, seeps, and springs. Some of this water is present year round and some is seasonal, greatly influencing what grows when and where. Riparian plant species require ample moisture, growing in or near the three main riparian corridors on campus: Cave Gulch, Moore Creek, and Jordan Gulch. The most common trees
in this plant community are bigleaf maple (Acer macrophyllum), willows (Salix spp.), and buckeye (Aesculus californica). Riparian zones on campus also support a number of fern species, like giant chain fern (Woodwardia fimbriata) and lady fern (Athyrium felixfemina var. cyclosorum), as well as the grass-like sedges (Carex spp.) and rushes (Juncus spp.). Fewer herbaceous plants and shrubs dwell in these chronically wet environments, although elk clover (Aralia californica), western azalea (Rhododendron occidentale), and sneezeweed (Helenium puberulum) do thrive in these conditions.

## Coyote Brush Scrub

Coyote brush (Baccharis pilularis var. consanguinea) is dominant or co-dominant in coyote brush scrub, sometimes growing in the company of other scrub-affiliated shrubs like blue blossom (Ceanothus thyrsiflorus), sticky monkeyflower (Mimulus aurantiacus), blackberry (Rubus ursinus), and coffeeberry (Frangula californica). Often, coyote brush scrub is a transitional community between grassland and woodland--when left unmanaged (e.g. fire suppression, no grazing), coyote brush can establish in grassland and shelter tree seedlings as they mature. On campus, the extent of coyote brush scrub may actually be larger than mapped, but CBS is not a persistent community and current management practices are keeping coyote brush populations down.

## Developed / Landscaped Area DA LA

Areas developed and cultivated by humans exist primarily on the main campus where there are buildings, plantings around buildings, parking lots, and gardens. In these areas, the natural landscape is "disturbed" by human activity and thus altered in some way. The Arboretum, the CASFS Farm, Chadwick Garden, and the various college gardens are all examples of landscaped areas. Developed areas essentially include any piece of land that has been built on or paved over. These places often host invasive plants, as many of these species prefer and thrive in environments where the soil is disturbed. While invasive plants thrive in degraded habitats, native plants do not do so well and are at a disadvantage. This allows weedy species to outcompete native plants and dominate disturbed areas.

## Transitional Communities

 DR-M-C C-FTWhile categorizing different vegetation communities is useful, it is not truly so cut and dry in nature: variation, transition, and overlap within and between different communities is a given. In other words, you cannot really put nature into definitive boxes or cleanly draw borderlines (although we try!). There are two distinct transitional communities that occur on campus: Chaparral - Forest Transition and Dwarf Redwood - Mixed - Chaparral. These communities exist where chaparral species and forest (redwood and/or mixed evergreen) species meet and mix. These transitional spaces occur, in part, due to past land use and current fire suppression on the campus. Wildfire is crucial to the ecology of chaparral communities, so when it is prevented, forest plants like Douglas-fir are able to encroach and take over. Historically, Cowell Ranch limework's industrial practices like forest clearing and slash burning allowed chaparral to expand on campus lands. Now, the area of chaparral is shrinking due to fire suppression and forest regeneration after the abandonment of the lime industry. Because of this, there is a large buildup of fuel from dead chaparral plants in the forest understory, which presents a management issue for campus land managers.

## Key to UCSC Plants

With your smartphone, use the QR code below to access the UCSC-FERP Key to UCSC Plants. Differing from dichotomous keys such as those in the Jepson Manual, this is a user-friendly synoptic key that allows you to select easily identifiable traits to narrow down your speices ID possibilities. You can use the key to help confirm an ID you have already made with the guide, or as a starting point in identifying a plant. If you are unfamiliar with the plant morphology terminology used in the key, the glossary in the back of the guide may be useful.


The UCSC Forest Ecology Research Plot (FERP) is a 16-hectare mapped forest plot located on the Campus Natural Reserve. It includes approximately 28,000 woody individuals larger than 1 cm in diameter, $3 / 4$ of which are made up of oaks, tanoaks, Douglasfir, and redwoods. The FERP, directed by Dr. Gregory Gilbert, provides an outdoor laboratory for students to learn about ecology and evolutionary biology in a field-based setting. The FERP is one of 63 CTFS-ForestGEO network plots (forestgeo.si.edu).

## UCSC Botanical Hotspots

The map on the right highlights some of the locations mentioned in the species accounts throughout the guide. These spots are botanically interesting in that they are host to an diverstiy of plant species and/or unique plant species. The Water Tanks are merely for geographic reference (though perhaps someone should paint a flower on one). Some spots are illustrative of a certain vegetation community, providing a good example of what coastal prairie or chaparral may look like. Use the map to guide you down into the gulches and up into the meadows!


Sources: Map by Alex Jones, December 2017. Base map by OpenStreetMap © OpenStreetMap contributors. OpenStreetMap ${ }^{\circledR}$ is open data, licensed under the Open Data Commons Open Database License by the OpenStreetMap Foundation. Cartography in map tiles licensed under the Creative Commons Attribution-ShareAlike 2.0 license (CC BY-SA). See openstreetmap.org and opendatacommons.org. UCSC boundary supplied by UCSC Physical Planning and Construction.




This section is included to provide an abbreviated guide to some of the campus trees. Cone-bearing trees and flower-bearing trees are separated in the main guide, so this section allows users to see all of the trees in one place. Page numbers of the full species accounts are noted beside each species name. Please note that these are not the only tree species on campus-other species not included in this book do occur.

Coast redwood p. 30
Sequoia sempervirens
Cupressaceae

$\square$ Abundant
$\square<60 \mathrm{~m}$ tall

- Cone size: 1.3-1.5 cm

This tree is a familiar one on campus. It has fibrous redbrown bark and small, spheric, woody seed cones. Mature leaves are generally flat and have narrow, alternate leaflets with pointed tips, while younger leaves may have "stubbier" leaflets that are not in one plane.

## Pacific ponderosa pine p. 31

Pinus ponderosa var. pacifica
Pinaceae


- Uncommon
- < 50 m tall
- Cone size: 7-18 cm

Ponderosa pines have flat-plated, yellowish-brown bark and prickly, ovoid seed cones that are spreading or recurved. The leaves are long, dark green needles that grow in 3 per bundle. The foliage is bushy looking overall. This species does not usually grow so close to the coast.

Knobcone pine p. 30
Pinus attenuata
Pinaceae

$\square$ Fairly common

- < 36 m tall
- Cone size: 6-18 cm


These pines are named for their curved, knob-like cones that directly attach to the trunks and branches. The long, needlelike leaves are yellowish-green and grow in bundles of 3 . The bark is gray-brown. Lack of wildfire is reducing populations of this fire-adapted species on campus.

Douglas-fir p. 31
Pseudotsuga menziesii var. menziesii

## Pinaceae



- Abundant
- < 67 m tall
- Cone size: 4-20 cm


This shade-tolerant species has large upper branches and small, light brown seed cones with protruding bracts. Mature bark is graybrown and deeply furrowed, while younger bark is smooth. The short, rounded, blunttipped needles spiral around the twigs.

California bay p. 34
Umbellularia californica
Lauraceae

$\square$ Common

- < 45 m tall
- Blooms: March-May
- Flower size: small

This tree has simple, deep yellow-green leaves with a
strong, tangy scent. The narrow trunks have smooth, gray-green to red-brown bark. In midwinter, clusters of 5-10 small cream-colored flowers bloom. The fruit resembles a small avocado (same family!).

Pacific madrone p. 63
Arbutus menziesii
Ericaceae

$\square$ Abundant

- < 40 m tall
- Blooms: April-May
$\square$ Flower size: small
This broadleaf evergreen

has large, simple, bright green leaves that are ovate to oblong. The reddishorange bark is thin and peeling. The small, urn-shaped flowers are yellowwhite or pink-tinged. The round fruit is bumpy. Madrones twist and turn, growing towards light gaps in the canopy.


## Blackwood acacia p. 67

Acacia melanoxylon
Fabaceae


- Uncommon
- < 30 m tall
- Blooms: Feb.-March
$\square$ Flower size: very small
This invasive tree has fernlike juvenile leaves and simple, lanceolate adult leaves with 3-5 distinct lengthwise veins. The small, pale yellow flowers grow in spherical tufts. The fruit is a curving, leathery seed pod. Few mature trees occur on campus.


Giant chinquapin p. 74
Chrysolepis chrysophylla var. minor

## Fagaceae



- Uncommon
- < 10 m tall
- Blooms: April-May
$\square$ Flower size: very small


Chinquapins have leathery leaves with dark green upper surfaces and goldenyellow undersides. The leaf blades are similar in shape to those of bay trees, but appear somewhat folded and have upturned margins. The gray bark is thick, rough, and furrowed. The fruit is spiny and bur-like.

Coast live oak p. 75
Quercus agrifolia var. agrifolia

## Fagaceae

This common oak species has convex, roundish leaves with spiny margins. Often, leaves have small tufts of hairs in the axils ("armpits") on the undersides. The dark gray bark is furrowed and checkered with age. The acorns are slender and pointed and have obconic cups.

$\square$ Abundant

- 10-25 m tall
- Blooms: Feb.-April
$\square$ Flower size: very small


Tanoak p. 75
Notholithocarpus densiflorus var. densiflorus
Fagaceae


- Common
$\square<30 \mathrm{~m}$ tall
- Blooms: June-Oct.
$\square$ Flower size: very small
These shade-tolerant trees have gray-brown bark and leaves with "parking lot"-like venation. Mature leaves are hairless, while younger leaves are slightly hairy on top and finewoolly underneath. The acorns have cups with stiff scales. This is not a "true" oak.

Shreve oak p. 76
Quercus parvula var. shrevei

## Fagaceae


$\square$ Common
$\square<17 \mathrm{~m}$ tall

- Blooms: April-June
- Flower size: very small


This oak has hairless, variably-shaped leaves with entire to spine-toothed margins. Leaves are olive-green to dark green above and dull, light olive-green below. Hairy "armpits" are not present on the leaves. The bark is grayish. The acorns have blunt tips and sit in bowl-shaped cups.

Bigleaf maple p. 103
Acer macrophyllum
Sapindaceae


- Uncommon
- < 30 m tall
- Blooms: April-May

$\square$ Flower size: small
This monoecious tree has large, palmate leaves with 5 lobes and more or less toothed edges. Its leaves are deciduous, meaning they turn colors and drop in the fall. The fringed flowers hang in a pendulous inflorescence. The winged fruit is called a samara. The bark is gray.

Buckeye p. 104
Aesculus californica
Sapindaceae


- Uncommon to rare
- 4-12 m tall
- Blooms: May-July

$\square$ Flower size: medium
Buckeyes have deciduous, palmately compound leaves with 5-7 leaflets. The panicle-like inflorescences have white to pale rose flowers with exserted stamens. The fruit is a large, pear-like pod that holds a glossy brown seed. The bark is silvery-gray.




## FERNS



$\square$ Common
$\square$ Waist to head height

This evergreen fern is characterized by its large, coarse, 2-pinnate leaves, chain-like sori, and affinity for wet envionments. Each frond has many pinnae (leaflets) that are divided into pointed, curving pinnules (subleaflets). On the underside of the frond, the oblong sori are arranged end-to-end along each pinnule's main vein. The stipe (leaf stalk) is orange-brown to straw-colored at the base. Giant chain fern can grow 1-3 m tall.

Western bracken fern Pteridium aquilinum var. pubescens Native

$\square$ Abundant
$\square$ Mid-calf to knee height

Bracken fern has a stiff, upright main stem that bears bright green leaves that are widely triangular and leathery. The fronds are 1-3-pinnate. The leaf blades are often 3-pinnate at the base. The pinnules, which have clear hairs, are divided into lobes with rounded tips. Dense lines of tiny sori appear along the edges of the pinnules. This common fern is found in many habitats in partial to full sun, sometimes forming dense "forests".


- AbundantMid-calf to knee height

Wood fern has 2-3-pinnate fronds and a feathery appearance overall. The elongate leaf blade is widest at the base, narrowing to an acute tip. The pinnae are shallowly to deeply lobed and have veined pinnules with serrate edges. The teeth sometimes have bristle-like tips. The round sori have scale-like outgrowths that are round to kidneyshaped. The lower stipe has shaggy scales that are tan to brown. It is found on open, wooded slopes.

Sword fern
Native


Sword fern is characterized by the sword-hiltlike projection at the base of each pinna. The evergreen, 1-pinnate leaf blades are lanceolate to narrow-elliptic, tapering to an acute tip. The pinnae have pointed tips and slightly serrate margins. The sori are round with straight, conspicuous hairs along the edges. This plant is commonly found on wooded hillsides and shaded slopes, especially in redwood forest.

$\square$ Common

- Ankle to mid-calf height

California polypody is a fern with droughtdeciduous leaves that often grows on rocks, tree trunks, and cliffsides. The firm leaf blades are ovate to equilaterally triangular and variably membranous to fleshy in texture. The pinnules are widely serrate, have pointed or rounded tips, and often appear fused together along the axis. The flat, yellow sori are round to oval-shaped, more or less sunken, and sometimes have short, glandular hairs.

Goldenback fern Pentagramma triangularis subsp. triangularis Native

$\square$ Common

- Ankle height






## GYMNOSPERMS



$\square$ Abundant

- < 60 m tall
$\square$ Cone size: 1.3-1.5 cm

Coast redwood is the world's tallest-growing tree, exceeding heights of 110 m (not on campus). It has fibrous red-brown bark and bears small, spheric, woody seed cones. Mature leaves are flat and have narrow, alternate leaflets with pointed tips, while leaves in the canopy are usually very short annd scale-like. Redwoods, a common feature of the campus, can resprout from stumps after trauma, sometimes forming "cathedral/fairy rings."

Knobcone pine
Pinus attenuata
Native


Knobcone pine is a many-branched evergreen tree. The knobby, curved, serotinous cones are directly attached to the tree's gray-brown bark. The leaves are yellowish-green and sheathed, with needles in bundles of 3 . This species usually does not grow so close to the coast or near well-developed redwood groves, so their presence on campus is unusual. Good places to see it are along Fuel Break Rd and Red Hill Rd.


This is an evergreen conifer with yellowishbrown bark, dark green needles, and spreading or recurved seed cones. The straight trunk has ruddy, flat-plated bark with well-spaced, shallow furrows and yellowish inner surfaces. The bushy leaves have 3 long, thin needles per bundle. The cones are generally ovoid and slightly prickly. This species is unusual here because it is most common in the arid, mountainous habitats of the inland West.


- Abundant
$\square<67 \mathrm{~m}$ tall
$\square$ Cone size: 4-20 cm



Douglas-fir, the world's second-tallest conifer, is an evergreen tree that has gray-brown bark, large branches, and light brown seed cones with protruding bracts. Young bark is smooth and has resin blisters, while mature bark is thick, firm, and deeply furrowed. The needles have rounded, blunt tips and spiral around the twigs. Doug-firs can be confused with redwoods, which have redder, stringier, parallel-grooved bark and flat leaves.


## MAGNOLIIDS




Rare
$\square$ Ankle height
$\square$ Blooms: March-May
$\square$ Flower size: medium

This rhizomatous perennial herb has flowers with 3 long-tapered, reflexed, maroon sepals and heartor kidney-shaped leaves. The cup-shaped flowers are white inside and have a red spot or stripe in the middle. The flowers generally grow at the base of the plant and are often concealed by the leaves, which grow from upright petioles. Wildginger forms loose mats in moist forest habitats.

California bay
Native

$\square$ Abundant
$\square<45 \mathrm{~m}$ tall
$\square$ Blooms: March-May
$\square$ Flower size: small

| DR-M-C | DRF |
| :---: | :---: |
| RF | ME |

California bay is an evergreen tree or shrub with stongly-scented foliage. Its narrow, smooth trunk has gray-green to red-brown bark. The shiny, deep yellow-green leaves are simple, narrow, and pointed. In midwinter, the tree bears clusters of 5-10 small, cream-colored flowers. The roundovoid, green fruit resembles a small avocado. This tree commonly grows in canyons and valleys, such as on the edge of Porter Meadow.

## EUDICOTS





- Abundant
$\square$ Ankle to over head ht.
$\square$ Blooms: April-June
$\square$ Flower size: small


This vine or shrub is notorious for its ability to cause severe contact dermatitis. Poison-oak is seen growing abundantly on the forest floor or climbing high into the trees. The deciduous leaves have 3 leaflets, which are round to oblong with wavy or lobed margins, and turn bright red in the fall. The small, yellow-green flowers hang down from the brown, twig-like stems. Remember: leaves of three, let it be. And beware of bare twigs!

Bur-chervil
Non-native


Anthriscus caucalis
$\square$ Common
$\square$ Mid-calf to waist height
$\square$ Blooms: April-June
$\square$ Flower size: very small

This annual herb has tiny white flowers that grow in a compound umbel inflorescence. The flowers grow in distinct clusters atop stem-like peduncles, which radiate from the erect main stem. The light green leaves are finely dissected, giving them a feathery appearance. The small, spiny fruit is ovoid. Bur-chervil, which is native to Eurasia, is generally found in shady places.

## Invasive non-native



This biennial herb has fern-like leaves and a typically purple-streaked or -spotted stem. It has small, white flowers that grow in compound umbels. It appears similar to Anthriscus caucalis, but hemlock is distinguishable by its height, stem, and glossier leaves. It is most commonly found in moist and disturbed places. This plant is highly toxic when consumed and was most famously used to put Greek philosopher Socrates to death.

## Prickly coyote-thistle


$\square$ Uncommon
$\square$ Ankle to mid-calf height
$\square$ Blooms: May-August
$\square$ Flower size: very small

Prickly coyote-thistle is a perennial herb with a flat basal rosette of thick, yellow-green leaves and spiky inflorescences. The tiny, somewhat spherical flowers have white or purplish petals and are nestled in the pointed bracts. The long, narrow leaves have sparsely sharp-serrate to irregularly cut margins. This plant, which is indeed very prickly at some stages, grows in coastal prairie and grassland communities, often in clay soils.


Fairly common
$\square$ Mid-calf to waist height
$\square$ Blooms: April-Sept.
$\square$ Flower size: very small

Sweet cicely is a licorice-scented perennial herb with small, white flowers and compound leaves. The flowers have 5 petals and grow in a compound umbel inflorescence. The leaves are divided into 3 ovate to lanceolate leaflets that have serrate, irregularly cut or lobed margins. The long, narrow fruit has bristly ribs. This plant, which is nearly hairless to finely hairy, can be found in conifer forest, woodland, and disturbed areas on campus.


$\square$ Uncommon
$\square$ Knee to chest height
$\square$ Blooms: June-Aug.
$\square$ Flower size: very small

This perennial herb has cream colored flowers that grow in compound umbels atop a tall, slender stem. The tiny flowers have 5 roundish petals, each with 1 distinct vein. The basal leaves often wither by flowering time and have linear to lanceshaped leaflets which resemble blades of grass. The fruit is elliptic-oblong and has thread-like ribs. Kellogg's yampah prefers open grassland, such as the upper meadows of Upper Campus.

$\square$ Fairly common
$\square$ Ankle to mid-calf height

- Blooms: March-May
$\square$ Flower size: very small

This perennial herb has spherical flowering heads composed of very small, densely clustered flowers with reddish-purple (sometimes yellow) petals. The tiny, curved petals are exceeded by the protruding stamens. The glaucous, sharplytoothed leaves are once or twice pinnately divided and green or purplish in color. The fruit is ovate to round with stout, curved prickles. Purple sanicle is found in open, grassy areas like the Great Meadow.

Gambleweed
Sanicula crassicaulis
Native


The inflorescence of this perennial herb has tight clusters of many tiny flowers with 5 yellow, curved petals. The smooth leaves are generally palmate and deeply 3-5 lobed with finely sharp-serrate margins. The erect stem is stout and taprooted. The fruit is more or less round and has stout prickles. Gambleweed prefers open slopes, ravines, and woodland areas.

$\square$ Uncommon
$\square$ Knee to over head ht.
$\square$ Blooms: Feb.-March
$\square$ Flower size: small


This evergreen shrub or small tree has many branches with stiff, shiny, ovate leaves. The leaves usually have widely-spaced, spinelike teeth, but sometimes have entire to lobed margins. The small four-petaled flowers are a dull white color. The bright red fruit is round, shiny, and smooth. This escaped cultivar, historically planted as an ornamental, has invaded forested areas via bird-dispersed seeds.

Elk clover
Native


Elk clover is a perennial herb with spherical clusters of white to greenish-white flowers, very large compound leaves, and a stout stem. The flowers have 5 pointed petals and protruding stamens. The leaves have opposite, ovate to oblong leaflets with serrate margins and slightly cordate bases. The fruit is a black berry. This plant grows in moist shade, canyons, and along streams in areas like the Seep Zone in Upper Campus.

$\square$ Fairly common
$\square$ Ankle to over head ht.
$\square$ Blooms: May-June
$\square$ Flower size: very small


This woody vine or shrub has simple, dark green evergreen leaves with lighter green venation. The leaf blades are ovate to diamond-shaped. The green, five-petaled flowers grow in umbels and have clearly protruding stamens. It only produces flowers in vine form. The fruit is a black or yellow berry. English ivy often outcompetes native plant species and thus has a negative impact on native ecosystems in forest habitats where it grows.


White ray flowers and yellow-white disk flowers form the radiate flowering heads of this perennial herb. The flowers grow in dense, flattopped clusters to form the inflorescence. The alternate cauline leaves are finely pinnately divided, giving them a feathery appearance. The slender stem is long and straight. This plant has a strong, sweet scent and on campus most commonly grows in grassland habitats.

$\square$ Fairly common
$\square$ Ankle to knee height
$\square$ Blooms: July-Aug.
$\square$ Inflo. size: very small

This perennial herb has small disciform flowering heads with deciduous white pistillate flowers and white disk flowers. The flowers grow atop the branches of the slender, erect stem. The triangular basal leaves have shallowly toothed margins, hairless upper surfaces, and white-tomentose undersides. The fruits are club-shaped and encircle the inflorescence. Trail plant grows in shaded areas of forests.


$\square$ UncommonMid-calf to waist height
$\square$ Blooms: April-Aug.
$\square$ Inflo. size: small

This perennial herb has a woody base and flowers that grow in clustered discoid heads. The flowers have creamy-white or pink-tinged petals and the protruding stamens make them appear sparsely hairy on top. The opposite cauline leaves are broadly triangular with serrate edges. They are sticky and slightly hairy. The stem is more or less brown-purple. Sticky snakeroot prefers wet, disturbed places.

$\square$ Common
$\square$ Mid-calf to knee height
$\square$ Blooms: April-July
$\square$ Inflo. size: medium

| DR-M-C | DRF |
| :---: | :---: |
| RF | ME |

This perennial herb has radiate heads with yellow 3-lobed petal-like ray flowers. Each flowering head is subtended by a spherical involucre with glandular phyllaries. The linear to oblanceolate leaves are bristly-hairy to soft-hairy with entire margins. Generally, the lower leaves are opposite and the smaller upper leaves are alternate. The stems have golden to dark brown glands. Woodland madia prefers moist forested areas.

## Prostrate cape weed

Arctotheca prostrata
Invasive non-native

$\square$ Rare

- Ankle height
$\square$ Blooms: year-round
$\square$ Inflo. size: large

This annual or perennial herb has radiate flowering heads with long, yellow ray flowers and yellow disk flowers. The deeply lobed leaves grow in basal rosettes. The leaf surfaces are slightly wooly and the undersides are white-woolly. Prostrate cape weed grows in large patches in disturbed areas. It is not too common on campus, but can be seen growing in a patch between Family Student Housing and Porter Meadow.

$\square$ Fairly common
$\square$ Ankle height
$\square$ Blooms: April-June
$\square$ Inflo. size: small


This perennial herb has yellow, soft-hairy discoid flowering heads that generally number 3-10 per plant. The involucre subtending the disk flowers is long and tube-like. The soft-hairy basal leaves grow in a rosette and cauline leaves are often reduced in size. The slightly sticky leaves are ovate to more or less heart-shaped with slightly lobed to toothed edges. Rayless arnica grows in coniferous forests and mixed forests.

## California mugwort

Artemisia douglasiana
Native


Mugwort is an aromatic perennial herb bearing gray-green leaves and clusters of disciform, bell-shaped flowering heads with yellowish petals. The evenly-spaced leaves are coarsely lobed and have sparsely tomentose surfaces and densely white-tomentose undersides. At flowering, the upper leaves have entire margins. This plant, which has medicinal properties, grows in open to shady areas, often in drainages.



- Abundant
$\square<4.5 \mathrm{~m}$ tall
$\square$ Blooms: Sept.-Jan.
$\square$ Inflo. size: very small

| DR-M-C | C-FT |
| :---: | :---: |
| NMC | G |
| CP |  |

Coyote brush is an upright or rounded evergreen shrub that commonly occurs in chaparral and grassland. It has many spreading branches with small leaves that are narrowly lance-shaped or oval. Leaves taper at the base and have entire or toothed margins. Staminate (male) and pistillate (female) flower heads grow along the stem in leafy clusters and on separate plants. Mature pistillate flowers are light brown and look like cottony tufts.

## English daisy

Bellis perennis
Non-native

$\square$ Common
$\square$ Ankle height
$\square$ Blooms: April-Aug.
$\square$ Inflo. size: small

The radiate heads of this perennial herb are composed of many narrow, white ray flowers around bright yellow disk flowers. The basal leaves are oblanceolate to obovate and taper to the base, sometimes creating a spoon shape. The leaf margins are serrate, crenate, or entire. English daisy prefers damp, grassy areas usually around human developments, such as the McHenry Library lawn.


Fairly common

- Ankle to mid-calf height
$\square$ Blooms: March-April
$\square$ Inflo. size: medium
DA
orange ray flowers and small, similarlycolored disk flowers. At maturity, the flower heads begin to nod. The leaves are lanceolate and have slightly wavy margins. Both the leaves and narrow stem are finely hairy and glandular. This plant is an escaped cultivar that now grows in areas disturbed by humans.

$\square$ Common
$\square$ Mid-calf to waist height
$\square$ Blooms: Feb.-July
$\square$ Inflo. size: medium

| DA | ME |
| :---: | :---: |
| G |  |

This annual herb grows from a rosette of long basal leaves that have sharply pointed lobes. The cauline leaves also have sharply pointed lobes and are often covered in cobweb-like hairs. The flower heads have pink to purple corollas and generally grow in clusters of $2-5$. The spiny stem is stiff and can be glabrous to slightly woolly. This plant grows in open, disturbed areas, such as roadsides and annual grasslands.


Uncommon
$\square$ Mid-calf to knee height
$\square$ Blooms: June-Sept.
$\square$ Inflo. size: small



This small shrub has yellow flowers that grow in dense clusters from many erect stems. The clusters have 3-30 radiate flowering heads that have 4-8 oval-shaped, petal-like ray flowers each. The small, alternate leaves are deeply 3- to 5-lobed with narrow, filament-like divisions that appear to curl under. The stems and leaves are whitewoolly to green. Golden-yarrow is named for the flowers' likeness to those of Achillea millefolium.

## Gazania

Invasive non-native

$\square$ Rare

- Ankle height
$\square$ Blooms: year-round
$\square$ Inflo. size: very large

This perennial herb has colorful, distinctive flowers. The wide ray flowers are yellow, orange, or red-orange and surround yellow or orange disk flowers. Each petal has a dark spot at the base. The dark green, pinnately lobed leaves are adaxially hairless and abaxially whitewooly, growing in loose rosettes. The stems are short and decumbent. Gazania is found growing in disturbed places like roadsides.

$\square$ Fairly common
$\square$ Mid-calf to knee height
$\square$ Blooms: April-Oct.
$\square$ Inflo. size: medium


This perennial herb has a bell- to dome-shaped involucre with spiny, hook-like phyllaries. Before flowering, the involucre exudes a white, gummy material. During flowering, yellow ray and disk flowers emerge. The hairless, resinous leaves are lanceolate to ovate and have entire or serrate margins. The fruit is a white to golden-brown achene. Gumplant is found growing in places like North Marshall Field.

Sneezeweed
Helenium puberulum
Native

$\square$ Common
$\square$ Knee to waist height
$\square$ Blooms: June-Aug.
$\square$ Inflo. size: medium


This perennial herb has spherical, yellow radiate flowering heads. The short ray flowers project downward from the base of each head. The margins of the winged stem and the proximal leaves often become wavy when the plant flowers. The cauline leaves are long, narrow, and curl under slightly. Sneezeweed prefers wet areas, such as streambanks and seepage areas.


This annual or perennial herb has yellow liguliflorous heads. The leaves are oblong with a prickly surface and sharp white spines on the underside. Spiny leaf-like bracts subtend the flower from below. The stem and its branches are coarse and stout. The fruit is composed of white, plumose tufts. For much of the year, bristly ox-tongue can be found in disturbed areas.

Telegraph weed
Heterotheca grandiflora
Native

$\square$ Fairly commonMid-calf to head height
$\square$ Blooms: year-round
$\square$ Inflo. size: medium

This bristly annual or short-lived perennial herb has yellow composite flowers and grows tall in disturbed areas like roadsides. The inflorescence has few to many radiate flower heads that grow in flat-topped or panicle-like clusters. The hairy, clasping basal leaves have entire to toothedmargins and a leaf stalk, whereas the mid-cauline leaves are less hairy, not clasping, and lack leaf stalks. The fruits form spherical, silvery-brown tufts.

$\square$ Fairly common
$\square$ Ankle to knee height
$\square$ Blooms: May-Sept.
$\square$ Inflo. size: small


This perennial herb has white, petal-like ligules and curling yellow stamens. The rectangular ligules are slightly toothed at the tips. The upright main stem is densely hairy on the lower half. The hairy, oblanceolate leaves are mostly basal, forming a rosette around the base of the stem. Smaller cauline leaves are sometimes present on the lower half of the stem. This species can be found growing in redwood forest along Red Hill Rd.

Rough cat's ear
Hypochaeris radicata
Invasive non-native


| DR-M-C | DA |
| :---: | :---: |
| C-FT | NMC |
| G | CP |

This rough-hairy perennial herb has 1 to several usually branched stems with yellow, liguliflorous flower heads. The many 5-toothed ligules are often reddish on the back. Under each flower are thin, dry, overlapping bracts. The thick leaves of the basal rosette are toothed or lobed. The fruit is a bristly achene. Rough cat's ear invades disturbed areas and grassland, growing in abundance in places like Mima Meadow.


This annual herb has radiate heads with yellow corollas and grows in open areas in large numbers-hence the name "goldfields". The ray flowers number 6-13 and may be 3-lobed at the tip. The stem is short, slender, and simple. The leaves are linear to oblanceolate, have entire margins, and are sometimes fleshy in texture. Although this species grows abundantly in many habitats, it can only be found in coastal prairie habitats on campus.

## Hairy hawkbit

Leontodon saxatilis
Non-native


Hairy hawkbit is an introduced annual herb with many curved-ascending stems bearing liguliflorous flower heads. The yellow ligules are toothed at the tips and purplish on the backsides. The oblanceolate basal leaves are more or less stiff-bristly-hairy and have entire, toothed, or deeply lobed margins. The fruit is an achene with short, fringed scales and plumose bristles. This plant is found on roadsides, disturbed areas, and grassland.
$\square$ Uncommon

- Ankle height
$\square$ Blooms: April-June
$\square$ Inflo. size: very small


DR-M-C C-FT

Threadstem madia is a small annual herb that is coated with glandular hairs and has tiny yellow flowers. The involucres that subtend the flowers are shaped like flattened spheres and have grooved phyllaries with golden yellow, roundish glands. The small leaves are linear in shape. The ray fruit is strongly arched and the disk fruit is obovoid.This plant, which prefers sandy or clay soils, can be found in chaparral communities in Upper Campus.

Fragrant pearly everlasting Pseudognaphalium beneolens Native


$\square$ Common
$\square$ Ankle to knee height
$\square$ Blooms: June-Oct.
$\square$ Flower size: very small


This annual or short-lived perennial herb is entirely white- or gray-woolly, sometimes appearing greenish-yellow in color. The alternate leaves are long, narrow, and tomentose on both the upper and lower surfaces. The small yellow disciform flower heads grow in clusters and are encased in papery, overlapping phyllaries. Fragrant pearly everlasting is found in dry, open areas in chaparral and grassland.


This perennial herb has a basal rosette of spiny, white-blotched leaves and a spiky inflorescence with a discoid head of pink to purple flowers. The shiny, hairless leaves are sharp-toothed and coarsely lobed. The cauline leaves are alternate, clasping, and coiled along the hairless to slightly woolly stem. The fruit is an achene with many long bristles and a tan to brown seed. Milk thistle invades roadsides, pastures, and disturbed areas.

Dune goldenrod
Native


This perennial herb is wand-like to club-like in form and has yellow radiate flower heads. Flower heads are few to many, with small, sparse ray flowers and many protruding disk flowers. The spoon-shaped leaves are hairless, resinoussticky, and slightly toothed along the margins. The stem is decumbent to erect and has a woody base. The fruits form clustered tufts. Dune goldenrod grows in coastal prairie on campus.


Fairly common
$\square$ Ankle to mid-calf height
$\square$ Blooms: year-round
$\square$ Inflo. size: medium

This perennial herb has a liguliflorous head with bright yellow ligules and long, reflexed phyllaries underneath. The unbranched stem contains white, milky sap. The basal leaves are oblanceolate to obovate with pointed lobes that gradually curve downward. The slender, minutelybarbed bristles of fruit form a silvery-white sphere that is a defining feature of dandelions. Dandelions are found in disturbed areas.

California hazelnut Corylus cornuta subsp. californica Native


Common
$\square<4 \mathrm{~m}$ tall
$\square$ Blooms: Jan.-March
$\square$ Inflo. size: small

Hazelnut is a shrub characterized by its velvetyhairy deciduous leaves and arching stems that have smooth or scaly dark brown bark. The bright green leaf blade has a cordate base, pointed tip, and deep veins. The staminate inflorescence is a catkin and the pistillate inflorescence has several tiny magenta tendrils enclosed in papery, fused bracts. The fruit is vase-shaped. It is found in many habitats, especially moist and shady places.

Native


| DR-M-C | DRF |
| :---: | :---: |
| RF | ME |

This perennial herb has radial flowers with 5 blue-purple, fused petals and white appendages in the center, as well as large, dog tonguelike basal leaves. The flat-faced flowers grow above the leaves atop a single erect stem. The leaves have hairless upper surfaces and hairy undersides. The fruit consists of 4 nutlets with rounded outer surfaces, which appear spiny. Hound's tongue grows in shady forest habitats.

Yerba santa
Native

$\square$ Fairly common
$\square$ Knee to waist height
$\square$ Blooms: May-June

- Flower size: medium


This perennial shrub has white to pale purple, funnel-shaped flowers and waxy, aromatic leaves. Leaves are lanceolate to oblong, have entire to toothed margins that roll under, and have sticky upper surfaces. The upright stem has hairless, sticky twigs. The foliage is sometimes covered in grayish-black, soot-like fungi (as pictured in far right photo). Yerba santa grows in chaparral and fields and on slopes and roadsides.


- Abundant
- Ankle to mid-calf height
$\square$ Blooms: Feb.-July
$\square$ Flower size: small

This perennial herb has flowers with 5 pale blue, fused petals and yellow appendages in the center. The erect stem has a woody base. The bright green basal leaves are ovate and the cauline leaves are oblong. The fruit consists of wide-ovate, dark brown nutlets. Forget-me-not is an introduced species found in moist, disturbed, shady places. They are common garden plants, as well. Compare with the native Hound's tongue.

San Francisco popcornflower Plagiobothrys diffusus Native


San Franscisco popcornflower is an annual herb with small, white, 5 -lobed flowers that appear popcorn-like. The spreading stems are prostrate to somewhat ascending and bear small cauline leaves. The fruit is a nutlet that is ovate, somewhat flat, dull tan to gray, and ridged. This California endemic, which is considered threatened by the CNPS, is found in moist places and seeps in coastal prairie communities such as North Marshall Field.

Native

$\square$ Abundant
$\square$ Mid-calf height
$\square$ Blooms: Feb.-April
$\square$ Flower size: small

| DR-M-C | DRF |
| :---: | :---: |
| RF | ME |

This early-blooming, rhizomatous perennial herb has white to pale pink, 4-petaled flowers which grow in a raceme inflorescence atop a single erect stem. The basal leaves are ovate, round, or widely heart-shaped with smooth to wavy edges, and are connected to the main stem underground. The cauline leaves have 3-5 widely ovate to lanceolate leaflets. Thelong, slenderfruitis vertically oriented. Milkmaids prefer shady, woodland habitats.

$\square$ Uncommon
$\square$ Ankle height
$\square$ Blooms: Feb.-July
$\square$ Flower size: very small

Hairy bittercress is an annual herb with small, white flowers and a basal rosette of leaves with many leaflets. The flowers have 4 petals and 4 stamens. The basal leaves have many pairs of reniform to roundish leaflets. The leaflets are smallest basally and largest terminally. The cauline leaves are similar to but smaller than the basal leaves. The fruit is a long, slender, vertical seed pod. This plant is found in disturbed areas.


Abundant
$\square$ Knee height
$\square$ Blooms: Feb.-July
$\square$ Flower size: medium

Both $R$. sativus and $R$. raphanistrum grow on the UCSC campus. These species often hybridize to create plants with highly variable flower color and fruit shapes. Petals can be yellow, white, pink, or purple with dark veins. The leaves are pinnately lobed and have dentate margins--the lower leaves with a petiole and the upper leaves sometimes without. Both species and their hybrids grow in large stands in disturbed areas and fields.

## California harebell

- Uncommon
$\square$ Ankle to mid-calf height
$\square$ Blooms: June-July
$\square$ Flower size: small

This perennial herb has small, funnel-shaped flowers with pale purple to blue petals. Each of the 5 petals are narrow and reflexed. The pistil has a long style that is much exserted from the corolla. The small, ovate leaves have serrate margins. The fruit is hemispheric, ribbed, and has a cordate base. California harebell can be observed blooming amongst the redwoods in the mid-summer months.

$\square$ Abundant
$\square$ Ankle to over head ht.
$\square$ Blooms: April-July
$\square$ Flower size: small

Hairy honeysuckle is a sprawling or twining perennial shrub or vine with pink flowers and minutely hairy herbage. The flowers are strongly 2-lipped with a shallowly 4-lobed upper lip and have exserted stigmas and stamens. The evergreen leaves are oblong to ovate with rounded tips. Upper leaf pairs are fused around the stem, while others have scale-like stipules. The red fruit is spherical. It is found in canyons, streamsides, and woodland.

Upright snowberry Symphoricarpos albus var. laevigatus Native

$\square$ Abundant
$\square$ Knee height

- Blooms: May-July
$\square$ Flower size: small

Upright snowberry is a hairless to minutely hairy perennial herb named for its white, berry-like fruit. Its main branches are stiff and spreading, while new shoots are erect and unbranched. The simple, deciduous leaves are round to elliptic with varying sizes and margins. The pink, bell-shaped flowers grow in clusters. They are swollen on one side and densely hairy inside. This plant grows in shady woodland habitats.

$\square$ Fairly common
$\square$ Ankle to mid-calf height
$\square$ Blooms: Jan.-June
$\square$ Flower size: very small


This annual herb, also known as windmill pink, has small white to pale pink flowers with 5 petal-like lobes. Each flower grows from an oval-shaped, green- or purple-veined calyx tube that has long, clear, glandular hairs on its surface. The leaves are lance-shaped and are gradually reduced in size upward. The stem is erect or upward-curving and covered in short, rough hairs or bristles. This plant prefers fields and disturbed areas.

$\square$ Common
$\square$ Ankle height
$\square$ Blooms: Nov.-May
$\square$ Flower size: small


DA CP
G

Corn spurry is an annual herb with small white flowers and long, narrow leaves. 5 ovate petals and 5 pointed or rounded sepals surround the stamens and pistil in the center. The whorled leaves encircle the stem and have blunt to abruptly pointed tips. The stem is more or less branched. Overall, this plant is hairless or generally glandular-hairy. It is found growing somewhat inconspicuously in fields and disturbed areas.



Fairly common
$\square$ Ankle height
$\square$ Blooms: March-June
$\square$ Flower size: small

DR-M-C C-FT

Peak rush-rose is a small shrub with bright yellow flowers that appear similar to those of plants in the rose family. Each flower has 5 wide petals and many exserted stamens. Sepals are reddish-brown; this is most evident when flowers have not yet opened and flower buds are present. The small, simple leaves grow on long stems that are slender and smooth. This species grows in dry, chapparral habitats.

California man-root
Marah fabacea
Native

$\square$ Fairly common
$\square$ Ankle to over head ht.
$\square$ Blooms: March-April
$\square$ Flower size: small


This perennial herb or vine has yellow-green to cream flowers and 5-7-lobed leaves. The flowers have 5 fused lobes and fused stamens. The leaves vary in size and lobe length but commonly have cordate bases. The stiff stems, which lose hairiness with age, have tendrils for climbing. The green, somewhat spherical fruit has stiff prickles that range from sparse to dense. Man-root grows on streamsides and in washes and open areas.

$\square$ Abundant

- < 40 m tall
$\square$ Blooms: April-May
$\square$ Flower size: small


Madrone is a broadleaf evergreen tree with reddish-orange peeling bark, red-orange fruit, and small urn-shaped flowers. The bright green leaves are ovate to oblong with rounded or pointed tips and entire or slightly serrate edges. The flowers are yellow-white or somewhat pink. The fruit is spheric and has a bumpy surface. This tree is found in forest and transitional habitats, often growing diagonally towards light gaps in the canopy.

Santa Cruz manzanita
Arctostaphylos andersonii
Native
Fairly common

- 2-5 m tall
$\square$ Blooms: Nov.-MayFlower size: very small


This tree-like shrub is endemic to SC County and considered moderately threatened by the CNPS. It has urn-shaped, 5-lobed flowers that are white to pink and grow in hanging clusters. The oblong, overlapping, light green leaves have pointed tips and lobed, clasping bases with serrate margins. The twigs are densely tomentose or have hairs that are gland-tipped and not. The peeling bark is reddish. The sticky, berry-like fruit is yellow to red-orange.

## Crinite manzanita Arctostaphylos crustacea subsp. crinita Native <br>  <br> $\square$ Common <br> $\square$ Waist height to 3 m <br> $\square$ Blooms: Jan.-March <br> $\square$ Flower size: very small <br>  <br> Crinite manzanita is a burl-forming shrub with urnshaped, white to pink, 5 -lobed flowers and brittle, lime green leaves. The oblong-ovate to lanceoblong leaves are densely hairy underneath. Unlike A. andersonii leaves, these have entire margins and are not lobed at the base. The twigs have short and long stiff hairs. The reddish stems have peeling bark. The fruit is berry-like and orange-red. This endemic is restricted to the Monterey Bay area.


$\square$ Uncommon
$\square$ Waist height to 2 m
$\square$ Blooms: Jan.-April
$\square$ Flower size: very small


Sensitive manzanita is a shrub with small, white, urn-shaped flowers that grow in hanging clusters. The flowers are 4-lobed, unlike those of $A$. andersonii and A. crustacea subsp. crinita which are 5 -lobed. The small leaves are roundish, shiny, and have dark green surfaces. They have entire margins and are hairless except for the midveins. The twigs are hairy. The hairless fruit is somewhat cylindrical.


Fairly common
$\square<8 \mathrm{~m}$ tall
$\square$ Blooms: May-June
$\square$ Flower size: large


This tree or shrub has large, widely funnelshaped flowers with 5 long, exserted stamens. The 5 petals vary in color from white to pink to salmon and are often yellow- or orange-blotched. The inflorescence has a cluster of 3-15 fragrant flowers. The oval-shaped leaves are deciduous, turning yellow-gold or orange in autumn before falling from the branches to expose bare, whorled twigs. It is found on moist wooded slopes.


- Abundant
$\square$ Waist height to 3 m
$\square$ Blooms: Feb.-June
$\square$ Flower size: very small


Huckleberry is a rhizomatous shrub with shiny evergreen leaves and purple/black, sometimes glaucous berries that grow in clusters. The small white to pink flowers are bell-shaped, 5-lobed, and grow in hanging clusters. The leathery leaves are elliptic to lanceolate with saw-toothed margins and indistinct veins. The stems are gray to reddish and erect. This plant often forms dense thickets on edges or in clearings of coniferous forests.

$\square$ Uncommon
$\square$ Mid-calf to knee height
$\square$ Blooms: March-Aug.
$\square$ Flower size: very small


This perennial herb has green to yellow-green hairless leaves that are oblong to elliptic or lanceolate and have finely-toothed margins. The leaves closer to the base are alternate, while those nearer the top are whorled. The inflorescence is an in umbel-like cluster of 3 branches and features cyathia, or "false flowers." The spherical fruit is lobed and has a wart-like projection. Broken stems and leaves exude a toxic, milky sap.

Petty spurge
Euphorbia peplus

## Non-native


$\square$ Common
$\square$ Ankle to mid-calf height
$\square$ Blooms: Feb.-Aug.
$\square$ Flower size: very small

Petty spurge is an annual herb with bow-like pairs of obovate to oblanceolate leaves borne on green or reddish stems. The lower leaves are alternate, while the upper leaves are generally whorled. The inflorescence branches grow in an umbel-like cluster of 3. Typical of the Euphorbia genus, it has cyathia, or "false flowers," between the leaves. The fruit is spherical and has creased lobes. This species is common in disturbed areas on campus.

Invasive non-native


- Uncommon
$\square<30 \mathrm{~m}$ tall
$\square$ Blooms: Feb.-March
$\square$ Flower size: very small


Blackwood acacia is an invasive tree found in disturbed areas. The juvenile leaves are fern-like, whereas adult leaves are simple and lanceolate with entire margins. Adult leaves have 3-5 prominent lengthwise veins. The brown fruit is curving, leathery, and flat and holds the seeds, which are encircled by yellow to red arils. The stem is hairless. Flowers are in small pale yellow tufts. Few mature acacias occur on campus.

$\square$ Fairly common

- Ankle height
$\square$ Blooms: April-July
$\square$ Flower size: small

This small, hairy annual herb has a prostrate to erect stem bearing a single pink, white, and yellow bilateral flower. The white banner has pink veins and the wings are white and yellow. The compound leaves generally have 3 hairy leaflets and red-tinged margins. The fruit is oblong, flat, and more or less straight. Spanish lotus is found growing in coastal prairie communities, such as the meadows in upper Upper Campus.

Native


Common
$\square$ Mid-calf to waist height
$\square$ Blooms: March-Aug.
$\square$ Flower size: small


Deerweed is a subshrub with yellow flowers that turn a reddish-orange color once pollinated. The inflorescence has 2-7 bilateral flowers that grow on clustered stems. The stems are generally ascending to erect, but are sometimes prostrate and mat-forming. The alternate leaves have 3-6 elliptic leaflets and are often deciduous. The fruit is a curved 2-seeded pod. This pioneer species is characteristic of dry slopes in chaparral habitats.

## French broom

Invasive non-native

$\square$ Common
$\square<3 \mathrm{~m}$ tall

- Blooms: March-May
$\square$ Flower size: small



This invasive shrub has erect branches with yellow, silky-hairy flowers. Flowers grow in raceme inflorescences along slightly hairy twigs. The deciduous leaves are generally composed of 3 ovate leaflets that taper at the base. The leaflets have well-defined midveins. The fruit is densely silky-hairy. French broom is common in disturbed areas, such as roadsides, and can grow up to 3 m tall.


Fairly common
$\square$ Ankle height
$\square$ Blooms: March-July
$\square$ Flower size: small

The flowers of this glabrous perennial herb have bright yellow banners and pink-purple wings that fade to white. The umbel inflorescence is generally 3-9-flowered. Leaves are composed of 3-7 dark green leaflets. The elliptic or obovate leaflets have entire margins and are typically opposite. The sprawling to ascending stem often has a spongy base. Harlequin lotus, considered rare by the CNPS, is found in moist coastal prairie.

$\square$ Uncommon
$\square$ Ankle to over head ht.
$\square$ Blooms: Jan.-May
$\square$ Flower size: small


The flowers of this perennial herb have a pale pinkish-purple banner and a white keel and wings. The inflorescence includes 8-15 flowers that grow close together. Leaflets are alternately arranged and ovate in shape, generally numbering 8-12 per leaf. The narrow, angled stems often bear coiling tendrils at the end. Pacific pea prefers mixed evergreen forests but will also grow in redwood forest.


Fairly common
$\square$ Ankle height
$\square$ Blooms: March-May
$\square$ Flower size: small


This annual herb grows abundantly in grassy open areas in the spring, forming beautiful patches of blue in campus meadows. The flowers have blue to purple-blue petals and feature a white spot on the banner. They grow along an erect stem in whorled racemes. The fuzzy leaves are palmately compound and have 5-9 oblanceolate leaflets with entire margins. The hairy seed pods are long and narrow.

## Common bur-clover

Medicago polymorpha
Invasive non-native


## $\square$ Common

$\square$ Ankle height
$\square$ Blooms: Feb.-June
$\square$ Flower size: very small
DA CP

G

This annual herb is prostrate, mat-forming, or ascending. The flowers are very small and yellow. The inflorescence is 2-6-flowered. The opposite leaflets generally grow in threes. The fruit is a loose, prickly-edged spiral that is coiled 2-6 turns. This glabrous plant is commonly found in in disturbed areas and grasslands.


Uncommon
$\square$ Waist height to 3 m
$\square$ Blooms: May-Aug.
$\square$ Flower size: medium


California goldenbanner Thermopsis california var. californica Native

This intricately branched shrub has distinctive magenta flowers. The branches feature modified twigs that appear as long, stout thorns. Flowers grow in a raceme inflorescence. The evergreen leaves have three elliptic or ovate leaflets with entire margins. The reddishyellow fruit is oblong with wavy margins. This species can be found growing in the maritime chaparral on Chinquapin Rd. in Upper Campus.
$\square$ Uncommon
$\square$ Mid-calf to knee height
$\square$ Blooms: April-Oct.
$\square$ Flower size: small


CP


California goldenbanner is a perennial herb with bright yellow flowers and a slender stem that is ascending to erect. The branches along the stem are irregularly arranged. The widely ovate to oblanceolate leaves are palmately compound and feature three hairy leaflets with distinct lateral veins. Some of the leaves are clasping. The fruit is straight, generally ascending, and densely hairy.

$\square$ Abundant
$\square$ Ankle height
$\square$ Blooms: April-May
$\square$ Flower size: very small



This annual herb has a cylindrical spike inflorescence with an erect stem. The flowers have needle-like, plumose sepals and orange to pale pink corollas. The hairy lobes of the sepals harden into bristles as the plant dries and begins to fruit. The leaves are palmately compound with three linear, narrow leaflets that are fused at the base. This clover tends to carpet disturbed areas in grassy habitats.

## Rose clover

## Trifolium hirtum

Invasive non-native

$\square$ Common
$\square$ Ankle height
$\square$ Blooms: Feb.-March
$\square$ Flower size: very small

## DA

G

Rose clover is a naturalized annual herb that has flower heads with pink corollas. The calyx lobes of the flowers are bristle-like and densely plumose. Sepals tend to harden with age. The compound palmate cauline leaves have three obovate leaflets that are hairy. The stem is ascending to erect. This plant is commonly found in disturbed areas such as roadsides.


Uncommon
$\square$ Below ankle height
$\square$ Blooms: Feb.-Jan.
$\square$ Flower size: very small

| DA | G |
| :--- | :--- |
| CP |  |

This annual herb has tiny white flowers and grows close to the ground with a prostrate or creeping stem. The cauline leaves are hairy with obovate or obcordate leaflets. The flowers bear fruit in the form of burs. Subterranean clover can be found in disturbed areas, roadsides, and meadows.

## Purple vetch

 Vicia benghalensis
$\square$ Common
$\square$ Ankle to over head ht.
$\square$ Blooms: March-June
$\square$ Flower size: small

Purple vetch, also known as reddish tufted vetch, is an annual herb or vine with a sprawling or climbing stem. 3-12 reddish-purple flowers that are long and curved generally grow on one side of the stem. The hairy stem and calyx make the plant appear silvery. The leaves have 10-16 opposite, elliptic to oblong leaflets. The fruit is a densely strigose pod. This plant prefers grassland, roadsides, and disturbed areas.

$\square$ Common
$\square$ Ankle to over head ht.
$\square$ Blooms: Feb.-March
$\square$ Flower size: medium

Common vetch is an annual herb or vine with a decumbent to ascending stem. The flowers, which subtend the leaves, have purple-pink banners and dark reddish-purple wings. The leaflets are wedge-shaped to oblong and minutely hairy, forming the compound leaf. The leguminous fruit is brown to black in color and produces generally lens-shaped seeds. This plant can be found in disturbed areas, roadsides, and grasslands.

Wiant chinquapin Native

$\square$ Uncommon
$\square<10 \mathrm{~m}$ tall
$\square$ Blooms: April-May
$\square$ Flower size: very small

Giant chinquapin, a less common tree on campus, has leathery leaves with dark green upper surfaces and golden-yellow undersides and distinctive spiny, bur-like fruit. The lanceolate to oblong leaf blades have tapered bases and tips, as well as a central fold and upturned margins. The gray bark is thick, rough, and furrowed. The the top (crown) of the tree is somewhat conical. It is often found in transitional plant communities on campus.

$\square$ Common

- < 30 m tall
$\square$ Blooms: June-Oct.
$\square$ Flower size: very small

| DR-M-C | DRF |
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| RF | ME |

Coast live oak Native

$\square$ Abundant

- $10-25 \mathrm{~m}$ tall
$\square$ Blooms: Feb.-April
$\square$ Flower size: very small

Tanoakis ashade-tolerant, acorn-bearingevergreen tree that has grayish-brown bark and leaves with "parking lot"-like venation. The oblong to ovate leaf blade has a rounded base, obtuse tip, and entire or serrate margins. Leaves are generally hairless on top and have fine-woolly undersides. Each acorn has a cap with stiff, reflexed or spreading scales. The staminate inflorescence is stiff, spreading to erect, and densely many-flowered.


This evergreen tree has a wide, rounded crown and grayish, furrowed, somewhat checkered mature bark. The convex leaves are widely elliptic to round with spine-toothed margins. Unlike Shreve oak, coast live oak has small tufts of hairs on the underside of its leaves in the axils or "armpits." The acorns have obconic cups. The male flowers are pendulous catkins and the tiny female flowers are in inconspicuous clusters.

$\square$ Abundant

- < 17 m tall
$\square$ Blooms: April-June
$\square$ Flower size: very small


Shreve oak is an evergreen tree with hairless leaves that are olive-green to dark green above and dull, light olive-green below. Its leaves are oblong, lanceolate, or ovate with obtuse, acute, or acuminate tips. The leaf edges are entire to spinetoothed. Unlike coast live oak, small tufts of hairs are not present on the leaf undersides. The bark is grayish. The acorns have bowl-shaped cups. This tree is found in a variety of habitats.

Longbeak stork's bill Erodium botrys Non-native

$\square$ Abundant

- Ankle height
$\square$ Blooms: Feb.-May
$\square$ Flower size: small


This annual herb has pink flowers, a flat basal rosette of leaves, and long, narrow fruit that resembles a stork's beak. Each flower has 5 purple-veined petals and grows atop a short-hairy stem that is prostrate to ascending. The hairless to minutely hairy leaves have ovate to oblong outlines that are lobed to dissected; their veins and long petioles are generally reddish in color. Stork's bill prefers dry, open, or disturbed sites.

$\square$ Common
$\square$ Ankle height
$\square$ Blooms: Feb.-June
$\square$ Flower size: small
DA $\quad$ CP

G

Redstem filaree is an annual herb with decumbent to ascending, glandular-hairy stems that bear small, pink to purple flowers and compound leaves. The 5 petals are narrowly oval and have dark veins at their bases. The sparsely hairy leaves have 9-13 deeply dissected leaflets. Leaf edges and stems are sometimes reddish. The fruit is much like that of stork's bill, but is smaller and less sharply pointed. It is found in open, disturbed sites and grassland.


$\square$ Common
$\square$ Ankle to mid-calf height

- Blooms: Feb.-JulyFlower size: small

Woodland geranium is an annual herb that has pink to red-purple flowers with 5 notched petals. The many palmate leaves are slightly to deeply divided into 5-9 segments and have toothed margins. The stem and its many branches have sparse, soft hairs. The fruit is hairless and wrinkled. This introduced species prefers disturbed ground in open to shady sites.

Non-native


$\square$ Fairly common
$\square$ Ankle to mid-calf height
$\square$ Blooms: March-May

- Flower size: small

Herb robert is a annual herb that has pink to red-purple flowers, fern-like leaves, and stems with long, soft hairs. The flat-faced flowers have 5 rounded petals that surround stamens with yellowish anthers; their sepals are covered with soft, clear hairs. The leaves are generally divided into 5 distinct segments and have margins with rounded teeth. This introduced plant grows in open to shaded disturbed sites.

$\square$ Uncommon
$\square$ Waist height to 4 m
$\square$ Blooms: Jan.-MarchFlower size: small

Pink-flowering currant is a shrub with a pendent inflorescence of many pink to white flowers. The lobed leaves have sparsely hairy undersides and coarsely to finely toothed margins. The leaf hairs on the veins are sometimes gland-tipped. The fruit is a glaucous, glandular, blue-black berry. This plant is found in redwood forest and mixedevergreen forest communities on campus. Beyond UCSC, it can be found in a variety of habitats.

$\square$ Fairly common
$\square$ Ankle to mid-calf height

- Blooms: March-May
$\square$ Flower size: small

| DR-M-C | DRF |
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| RF | ME |

Modesty is a decumbent perennial herb or subshrub with small, white flowers that grow in dense clusters. Each flower has 5 petals and 8-12 stamens. The opposite, persistent leaves are ovate to elliptic and have stiff, straight, appressed hairs on their surfaces. The main stem, which lies flat on the ground, has gray-brown, peeling bark. The fruit is spheric and grows segmented with age. This plant is found in coniferous forests and on slopes.

$\square$ Abundant
$\square$ Below ankle height
$\square$ Blooms: May-July
$\square$ Flower size: very small

Yerba buena is a decumbent, mat-forming and viney perennial herb with small, tubular flowers that are white to lavender in color. The flowers are bilateral and 5-lobed. The small, opposite and fragrant leaves are ovate to ovate-triangular and feature round-toothed and sharp-toothed margins. The leaves and stems have sparse, minute hairs. The very small fruit is shiny brown and smooth. This plant prefers shady, woodland habitats. 79



Fairly common
$\square$ Ankle to mid-calf height
$\square$ Blooms: July-Aug.
$\square$ Flower size: small

Selfheal is a perennial herb with purple, 2-lipped flowers that grow in a club-like spike inflorescence on a square stem. The top lip is hood-like and the bottom lip is 3-lobed with a larger, fringed center lobe. The elliptic or lanceolate leaves have slightly toothed margins, wedgeshaped bases, and red tips. The leaves grow in opposite pairs. The bracts and sepals often have reddish edges. This plant grows in moist areas.

$\square$ Rare

- Ankle height
$\square$ Blooms: March-July
$\square$ Flower size: small


This perennial herb has tubular, usually paired blue-violet flowers and opposite, ovate leaves. Each flower is 2-lipped with a large, whitepatched or -spotted lower lip and a folded upper lip with a hairy, beaklike protrusion. The leaves have entire to scalloped margins and rounded tips. The fruit is obconic and black. Skullcap grows from an underground root system of short, fleshy stems called tubers.


| DR-M-C | DRF |
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Hedgenettle is a hairy, glandular perennial herb with bilateral, two-lipped flowers and opposite, aromatic leaves. The tubular flowers, which grow in clusters of 6 along the stem, are pink to somewhat purple and white. Each has a long lower lip and shorter upper lip. The stiffhairy leaves are generally ovate with cordate bases and blunt tips. This plant, a California endemic, grows on dry slopes in forests.

$\square$ Common
$\square$ Ankle to mid-calf height
$\square$ Blooms: March-Aug.
$\square$ Flower size: small


G

Pale flax is a biennial to weak perennial herb that has small flowers with light blue veins and a long, narrow, many-leaved stem. The 5 petals are nearly round in shape. The slender leaves are linear to lance-linear and grow all along the upright stem. This introduced plant grows in grassland habitats, woodland habitats, and disturbed areas near the coast.

## 凹 Dwarf checkerbloom Sidalcea malviflora subsp. laciniata Native


$\square$ Fairly common
$\square$ Ankle to mid-calf height
$\square$ Blooms: May-Aug.
$\square$ Flower size: medium
$\mathrm{CP} \quad \mathrm{G}$

Checkerbloom is a rhizomatous perennial herb with a decumbent stem that bears flowers with pink, white-veined petals. The petals vary in color from light to dark pink, and occasionally appear white. The leaves are sparsely hairy, with basal leaves shallowly 7-lobed and cauline leaves with many deep, straight-edged segments. It is found growing in grassland and coastal prairie habitats such as Mima Meadow in the summer months.

Red maids
Native

$\square$ Uncommon
$\square$ Below ankle height

- Blooms: Feb.-May
$\square$ Flower size: small


G

This low-growing annual herb has bright pinkpurple petals that are typically streaked with white at their bases. The petals are widest above the middle and slightly curved at the ends. The leaf blades are variable in shape, from linear to oblanceolate to spoon-shaped. Leaves can be hairless to slightly hairy along the edges. Redmaids prefer grassy areas and chaparral communities.


Common

- Ankle to mid-calf height
- Blooms: Feb.-May
$\square$ Flower size: small

Miner's lettuce is a highly variable annual herb with small, white-petaled flowers. The fleshy basal leaves are reniform to cordate in shape, while the leaves subtending flowers are more or less round and completely encircle the stem. The flowers appear in the center of this "perfoliate" leaf, growing in a raceme inflorescence. This plant, which has edible leaves, commonly sprouts up in large aggregations in cool, damp areas.

$\square$ Abundant

- Ankle height
$\square$ Blooms: March-Sept.
$\square$ Flower size: small


This annual herb has small flowers with primarily salmon colored petals that feature a hint of purple at each petal base. Although the salmon color is most common, flowers sometimes appear red, blue, or blue-white. The small leaves are ovate to elliptic in shape and grow opposite or whorled along the stem. Scarlet pimpernel blooms for many months of the year in grassy disturbed areas of campus.

$\square$ Common
$\square$ Ankle height
$\square$ Blooms: April-July
$\square$ Flower size: small

As the name suggests, this perennial herb has star-like flowers. The petals are pale whitishpink in color and are tapered at the tips. Flowers emerge from a whorl of leaves on a thin, delicate pedicel. The bright green, ovate leaves have entire margins and, like the petals, taper at the tips. The petals, sepals, and stamens are all 5-, 7-, or 9-parted. Pacific starflower occurs in the understory of redwood forest habitats.

## Fringed willowherb Epilobium ciliatum subsp. ciliatum

 Native
$\square$ Fairly common
$\square$ Ankle to mid-calf height
$\square$ Blooms: June-Sept.
$\square$ Flower size: small

Fringed willowherb is a perennial herb that has small flowers with 4 notched, white to pink petals. The opposite leaves are narrowly lanceolate, have conspicous veins, and are reduced in size near the top of the plant. A basal rosette is present, bearing a more or less erect stem. The fruit is a hairy capsule that produces seeds with deciduous hair-tufts. This wildflower is found in disturbed places and moist meadows and on streambanks and roadsides.

$\square$ Common
－Ankle height
$\square$ Blooms：Feb．－April
$\square$ Flower size：small

This low－growing perennial herb has bright yellow， radial flowers growing from a basal rosette．The 4 wide petals are round or oval and open to the sun at dawn．Below the petals are 4 narrow，reflexed sepals．The leaves are narrowly elliptic to ovate and have nearly entire to wavy margins．Stems and veins are sometimes red．This plant prefers clay soils in grassy areas，so it can be seen growing on walking trails in places like the Great Meadow．

$\square$ Rare
－Ankle height
$\square$ Blooms：May－Aug．
$\square$ Flower size：very small

Johnny－nip is a puberulent annual herb with a dense，spike－like inflorescence that is greenish－ yellow and white．The small，pouch－like flowers that grow in between the leaf－like bracts have yellow lobes and have teeth at the tips．The foliage is yellow－green，brown，or reddish－brown． The leaves are 0－5－lobed．This hemiparasite， highly variable in form，is found on campus in coastal prairie communities like Mima Meadow．

Denseflower owl's clover Castilleja densiflora subsp. densiffora Native



Fairly common
$\square$ Ankle height
$\square$ Blooms: March-May
$\square$ Flower size: very small

Denseflower owl's clover, a hemiparasite, is an annual herb with a spike-like inflorescence that is rose-purple or cream in color. This coloration is attributed to the the leaf-like, 3 - to 5-lobed bracts, which grow togetherinapaintbrush-likeformation. The small, pouched flowers grow between these bracts in yellow, white, pink, or purple hues. The leaves have 0-3 lobes. This plant grows in grassland communities such as Marshall Fields.

Yellow owl's clover Triphysaria versicolor subsp. versicolor Native

$\square$ Uncommon
$\square$ Ankle to mid-calf height
$\square$ Blooms: Feb.-May
$\square$ Flower size: small

Yellow owl's clover is a green-brown to yellowbrown annual herb with distinctive, 3-parted flowers that grow in a spike inflorescence. Each flower has white petals, which fade to a rose-pink color with age, and a yellow beak. The hairless, finely-divided leaves are 5-9-lobed. Like other species in the family, this plant is a hemiparasite. It grows in colorful stands in grassland communities such as North Marshall Field.

$\square$ Uncommon
$\square$ Ankle height
$\square$ Blooms: year-round
$\square$ Flower size: small

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This perennial herb, which is native to mediterranean Europe, has small, mustard-yellow flowers and a creeping stem. The inflorescence has 2-7 flowers. The 5 petals are oblong to spoon shaped and often feature small red spots below the middle. The clover-like, purplishgreen leaves have 3 heart-shaped leaflets and hairs along the margins. Creeping wood sorrel can be seen flowering in disturbed areas all year.

## Crimson wood-sorrel

Oxalis incarnata
Non-native

$\square$ Rare

- Ankle height
- Blooms: March-June
$\square$ Flower size: medium

Crimson wood sorrel is a perennial herb that has a solitary, funnel-shaped flower growing atop a slender stalk. The flowers have 5 petals that are white to pale pink in color. The leaves are clover-like with 3 heart-shaped leaflets and grow in whorl-like clusters. This rhizomatous plant grows in shady woodland habitats.



- Abundant
- Ankle height
$\square$ Blooms: Feb.-June
$\square$ Flower size: medium


This rhizomatous perennial herb, which is commonly seen carpeting the floor of redwood forests, has clover-like leaves and 5-petaled flowers with white to deep pink petals. The leaves, which taste like sour apples, have 3 heart-shaped leaflets that are bright green above and often purple below. Each leaflet has a pale midrib. The leaf and flower stalks are hairy and grow low to the ground. Redwood sorrel grows in moist conifer forests.

## Bermuda buttercup



- Abundant
$\square$ Ankle to mid-calf height
$\square$ Blooms: Dec.-June
$\square$ Flower size: medium


Bermuda buttercup, also known as sourgrass for its fleshy, sour-tasting stems, is a rhizomatous perennial herb with bright yellow, 5-petaled flowers. The bright green, clover-like leaves grow in a loose basal rosette and have heartshaped leaflets that are often purple-spotted. This highly invasive, many-flowered plant grows abundantly along roadsides and in disturbed areas.

$\square$ Fairly common
$\square$ Ankle height
$\square$ Blooms: Feb.-Sept.
$\square$ Flower size: medium
G $\quad$ DA

Hairy wood sorrel is an annual herb with yellow flowers and clover-like, appressed-hairy leaves. As with other plants in the oxalis family, the flowers have 5 petals and the leaves have 3 heartshaped leaflets. The inflorescence is 1-3-flowered. The main stem is erect to decumbent and densely hairy. This plant grows in grassland vegetation communities and disturbed areas.

California poppy
Native


This brightly colored annual or perennial herb is the California state flower. It has 4 wide, yelloworange petals that open on sunny days. The feathery, blue-green leaves are sometimes pink-tipped. The presence of the pink, wavy-edged receptacle, which supports the petals from underneath, distinguishes this poppy from other poppy species. This wildflower is a common sight in grassy, open areas of campus for many months of the year.

$\square$ Common
$\square$ Mid-calf to chest height
$\square$ Blooms: March-Aug.
$\square$ Flower size: medium


Sticky monkeyflower is a shrub or subshrub with tubular, 5-lobed flowers that are yellow-orange or creamy orange in color. The leaves have sticky lower surfaces, hairless upper surfaces, and distinct veins. The leaf blades are narrowly elliptic to linear in shape and have entire to serrate margins that are generally rolled under. This plant grows on rocky hillsides and canyon slopes and in open forest, chaparral, and transitional areas.

$\square$ Abundant
$\square$ Ankle to knee height
$\square$ Blooms: March-Aug.
$\square$ Flower size: very small


This perennial herb has a spike inflorescence of many flowers that have inconspicuous brownish petals and long, white stamens with large anthers. The flowers open from the bottom to the top, meaning that as the lowermost flowers turn brown and die, those above them bloom (as pictured far left). The long basal leaves are tapered to their bases and have parallel veins. English plantain is common in grassy areas that have been disturbed.

$\square$ Fairly common
$\square$ Ankle height
$\square$ Blooms: April-June
$\square$ Flower size: small

Variable-leaf collomia is a small annual herb with an erect, branched stem bearing salverform to funnel-shaped flowers. The flowers have light pink to white petal-like lobes. The flower tube is yellow to light pink and the throat is yellow to white. The lower leaves are 1-2-pinnatelylobed while the upper leaves are lobed to entire and typically glandular-hairy. This plant grows in sandy to gravelly open areas.

$\square$ Rare
$\square$ Ankle to mid-calf height
$\square$ Blooms: March-June
$\square$ Flower size: small

This hairy annual herb has many variably-colored, salverform flowers. The 5 corolla lobes can be pink, white, yellow, or purple and often have red marks at their bases. The thread-like flower tubes are maroon, pink, or yellow, appearing as a long, slender stalks that emerge from the whiskery tuft of calyces below. The leaf lobes are typically linear and encircle the main stem. Small-flowered leptosiphon is found in open or wooded areas.

## Native


$\square$ Common
$\square$ Ankle to mid-calf height
$\square$ Blooms: April-June
$\square$ Flower size: small


Milkwort is a perennial herb with a decumbent stem bearing unusual pink flowers. The uppermost flowers may be open, while the lower flowers may be cleistogamous, meaning non-opening and selfpollinating. The dark green leaves are lanceolate, elliptic, ovate, or obovate and have entire margins. The fruit is a flattened, oval seedpod. This plant grows on slopes of chaparral, mixed evergreen, and redwood forest communites on campus.


This dioecious perennial herb has an ascending or erect stem bearing whorls of small yellowishgreen or rusty red flowers terminally. The leaves, which can be described as hastate, appear arrowshaped due to the wing-like lobes present at their bases. The fruit is brown. Sheep sorrel grows from a creeping rhizome and/or taproot in more or less disturbed, acidic areas in grassland communities.

$\square$ Uncommon
$\square$ Ankle height
$\square$ Blooms：March－April
$\square$ Flower size：small

Padre＇s shooting star is a 1－6－flowered perennial herb with unique，firework－like flowers．The reflexed petals are magenta to white in color． Each petal base is generally yellow，darkening to maroon and then to dark purple or black．The basal leaves are narrowly elongate，widest at the tip and tapering to the base．This wildflower grows in moist areas of coastal prairie communities，such as the uppermost meadows of Upper Campus．

Western baneberry
Actaea rubra
Native

$\square$ Rare
$\square$ Ankle to mid－calf height
$\square$ Blooms：May－July
$\square$ Flower size：small

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This perennial herb，also known as bearberry，has a cylindrical cluster of white flowers atop a long， erect stalk and compound leaves．The flowers have small，spoon－shaped to oval petals and numerous long，radiating stamens．The leaves have leaflets with toothed to irregularly cut margins and are sometimes lobed．The fruit is a shiny，toxic，red or white berry．Baneberry prefers deep soils in moist areas of mixed－evergreen or conifer forests．

$\square$ Fairly common
$\square$ Ankle to mid-calf height
$\square$ Blooms: Feb.-June
$\square$ Flower size: small

| DR-M-C | DRF |
| :---: | :---: |
| RF | ME |

This rhizomatous perennial herb has white or blue petal-like sepals that surround many long, ascending stamens and a cluster of green pistils. The sepals are elliptic to obovate and have pale venation. Below each solitary flower is a whorl of 3 compound, leaf-like bracts. Each bract has 3 leaftlet-like units with scalloped or serrate margins. Blue windflower grows on moist shaded slopes in redwood and mixed-evergreen forests.

Crimson columbine
Aquilegia formosa
Native


Crimson columbine has nodding flowers with yellow and red spurred petals, spreading to reflexed red sepals, and much exserted stamens. Its basal and lower cauline leaves have 3 bright green, lobed leaflets, while the upper cauline leaves are simple to deeply 3-lobed. This beautiful species grows in many different types of plant communities, but on campus is a rarity that is typically only found in moist regions of redwood forest.

## California buttercup Ranunculus californicus var. californicus

 Native
$\square$ Common

- Ankle to mid-calf height
$\square$ Blooms: Feb.-May
$\square$ Flower size: small
$\mathrm{CP} \quad \mathrm{G}$


This perennial herb has an erect to decumbent stem bearing flowers with bright yellow, shiny petals. Yellow stamens with large anthers surround the cluster of pistils in the center. The leaves are deeply lobed to compound, with the upper leaves much reduced in size. The smooth fruit is disklike and curved. California buttercup, a common sight in campus meadows in the springtime, grows in grassland and open woodland communities.

$\square$ Common

- Waist height to 3.5 m
$\square$ Blooms: April-May
$\square$ Flower size: very small


Wartleaf ceanothus is a densely-growing shrub named for the glandular bumps on its small, thick leaves. These evergreen leaves are oblong to rectangular in shape with dark green surfaces, hairy undersides, and margins that are rolled under. The tiny, 5-petaled flowers are deep blue-purple and grow in fluffy looking clusters. The fruit is sticky and ridged. This California endemic grows in open sites of chaparral and woodland communities.

$\square$ Common
$\square$ Chest height to 6 m
$\square$ Blooms: March-May
$\square$ Flower size: very small


Blue blossom is a mat-like to erect, occasionally tree-like shrub named for the tiny, light blue flowers that grow in fluffy, caterpillar-like clusters. Sometimes, the flowers appear deep blue or white in color. The oblong-ovate to elliptic evergreen leaves feature prominent veins and have margins that are sometimes partly rolled under. The fruit is sticky. This plant is found on wooded slopes and in chaparral.

California coffeeberry Frangula californica subsp. californica Native

$\square$ Fairly common
$\square$ Waist height to 5 m
$\square$ Blooms: June-Aug.
$\square$ Flower size: small


This shrub features black, spherical fruit that contain seeds reminiscent of coffee beans. The smooth evergreen leaves are narrowly to widely elliptic with dark green surfaces, bright green or yellowish undersides, and prominent veins. Leaf margins are entire to serrate and sometimes rolled under. The greenish flowers have pointed sepals and grow in clusters. This plant grows in mixed-evergreen and chaparral communities.


Common
$\square$ Waist height to 4 m
$\square$ Blooms: June-Aug.
$\square$ Flower size: small


## Sticky cinquefoil Drymocallis glandulosa var. wrangelliana

 Native

Sticky cinquefoil is a generally hairy perennial herb with flowers and leaves reminiscent of Fragaria vesca. The leafy, spreading inflorescence has flowers with 5 wide, cream or pale yellow petals encircling yellow stamens and pistils. The leaves generally have 3 pairs of lateral leaflets and a longer terminal leaflet. The leaf margins are twice toothed. The fruit is red to brown. This plant is found in chapparal communities on campus.

$\square$ Common
$\square$ Ankle height

- Blooms: Feb.-May
- Flower size: small


This perennial herb has flowers with roundish white petals and an aggregation of yellow-green pistils and stamens in the center. In the spring, these central reproductive structures become enlarged and produce small, red, edible fruit. The leaves are mostly basal and have 3 slightly hairy leaflets with toothed edges. The stem is soft-hairy. It reproduces via runner stems or "stolons" that lie flat on the ground and take root to form a new, clonal plant.

Toyon
Heteromeles arbutifolia
Native

$\square$ Common
$\square$ Waist height to 10 m
$\square$ Blooms: June-Aug.
$\square$ Flower size: small


Toyon, a shrub also known as Christmas berry for its bright red fruit, has flowers with 5 white petals and simple, leathery evergreen leaves. The leaf blades are more or less elliptic, have finely toothed margins, and are attached to the branches by stalks that have bark at their bases. The trunk bark is more or less gray. This plant prefers chaparral, oak woodland, and mixed-evergreen forest communities.


Fairly common
$\square$ Ankle to mid-calf height
$\square$ Blooms: Feb.-July
$\square$ Flower size: small


## Point Reyes horkelia


$\square$ Uncommon
$\square$ Ankle height
$\square$ Blooms: May-Sept.
$\square$ Flower size: small

This strongly-scented perennial herb has white, 5-petaled flowers that grow atop hairy, ascending to decumbent stems. The long, narrow petals and pointed sepals encircle a ring of stamens. The fuzzy leaves have crowded, toothed, generally wedgeshaped leaflets with palmate venation that number 5-10 per side. This horkelia, which can be found in coastal prairie meadows like North Marshall Field, is considered threatened by the CNPS.


This loose shrub grows in shady, damp forests and has fragrant flowers that come in many shades of pink. The flowers are flat, openfaced, and have 5 more or less heart-shaped petals. Many stamens surround 5-10 pistils in the center. The main branches have long, sharp prickles. The leaves have finely-toothed, ovate leaflets that are oppositely arranged. The fruit is a spherical, red- to orange-colored rose hip.

## Himalayan blackberry

Rubus armeniacus
Non-native invasive

$\square$ Fairly common
$\square$ Ankle to over head ht.
$\square$ Blooms: April-Aug.
$\square$ Flower size: medium


This stout shrub has flowers with white to pink, roundish petals and black or dark purple fruit, which is larger and more swollen looking than that of CA blackberry. The leaves are palmately compound and have 3-5 oval leaflets with pointed tips, coarsely toothed edges, and white-woolly undersides. The stem has large prickles and can be green- or reddish-tinged. It is common in disturbed areas, especially roadsides.


This erect, somewhat viney shrub has large, white flowers and large, fuzzy leaves. The flowers have delicate, oval-shaped to round petals and many stamens. The soft leaves are simple and palmately 5-lobed, with coarsely toothed edges and pale undersides. The dark brown stems often have peeling bark. The raspberry-type fruit is pink to red and thimble-like at maturity. Thimbleberry grows densely in moist, semi-shaded areas.

$\square$ Abundant
$\square$ Ankle to over head ht.
$\square$ Blooms: March-JulyFlower size: medium

This low growing, spreading shrub or vine has white flowers with narrow petals and small, blackberry-type aggregate fruit. Generally, the flowers are unisexual, meaning some have stamens and some have pistils, but not both. The leaves are simple with 3 lobes or compound with 3 leaflets. They have irregularly coarse-toothed edges, pointed tips, and hairy undersides. The stiff stems have many slender and straight prickles or bristles.


Fairly common
$\square$ Ankle to knee height
$\square$ Blooms: April-May
$\square$ Flower size: very small


This species is an annual herb with whorls of small, narrowly oblanceolate leaves and hooked prickles throughout. The bright green leaves grow in whorls of 6-8 around a brittle, 4-angled stem. The tiny flowers, which emerge from the leaf axils, have white corollas with 4 pointed lobes. The nutlet fruits have many short, hooked hairs on the surface, helping with seed dispersal. This plant is found in grassy areas and generally shady places.

California bedstraw Galium californicum subsp. californicum Native

$\square$ Fairly common
$\square$ Ankle to knee height
$\square$ Blooms: Mar.-Sept.
$\square$ Flower size: very small

California bedstraw is a coarsely hairy perennial herb that forms mats or tufts in shady to open sites in forest and chaparral communities. The ovate to elliptic leaves grow in whorls of 4 and have blunt to sharp tips. The flowers have more or less yellow corollas with 4 pointed lobes. The fruit is a berry with soft hairs. This plant is endemic to California.


Fairly common
$\square$ Ankle to knee height
$\square$ Blooms: June-Aug.
$\square$ Flower size: very small


Fragrant bedstraw, a hairless to rough hairy perennial herb, has a decumbent stem bearing whorls of generally 6 broad, oval leaves. Each leaf has an acute, tapered, or small-pointed tip. The tiny flowers, which have cream to pink corollas with 4 lobes, grow in clusters in the leaf axils. The nutlet fruits are covered in soft, hooked, white to brown hairs. This sweet-scented plant is found in damp, shady forested areas.

$\square$ Fairly common

- < 30 m tall
$\square$ Blooms: April-May
$\square$ Flower size: small


Bigleaf maple is a monoecious tree with large, palmate leaves and grayish bark. The leaves are 5-lobed with more or less toothed edges. In the fall, their bright green color turns to shades of gold and yellow. The small, fringed flowers hang in a pendulous inflorescence, as do the greenish-brown, winged fruit (as pictured on far right). This species prefers riparian communities such as streambanks and canyons.

$\square$ Fairly common

- 4-12 m tall
$\square$ Blooms: May-July
$\square$ Flower size: medium

This deciduous tree has panicle-like inflorescences of white to pale rose flowers and palmately compound leaves. The flowers have long, exserted stamens with orange anthers. 5-7 leaflets have finely serrate margins and tapered tips. The fruit is a large, pear-like pod that splits open to expose a glossy brown seed. The bark is silvery-gray. It grows on dry slopes and stream borders along Lower Moore Creek and at the base of the bike path.

$\square$ Rare
$\square$ Mid-calf height
$\square$ Blooms: April-July
$\square$ Flower size: small

This rhizomatous perennial herb has small, cup-like flowers with fringed petals that are green-white, rose, or red in color. The manyflowered inflorescence generally grows on one side of the stem. The ovate leaves have cordate bases, shallow lobes, and sharp teeth along the margins. The cauline leaves are clasping and reduced up the stem. Fringe cups grows on moist slopes in forests, like Jordan Gulch.

$\square$ Rare
$\square$ Knee height
$\square$ Blooms: March-Nov.
$\square$ Flower size: small
$\square$
American black nightshade is a hairy annual herb to subshrub with star-shaped flowers and short, protruding yellow anthers. The fused petals, which are sometimes recurved, are white in color. The inflorescence is umbel- or raceme-like. The ovate leaves have entire to coarsely wavytoothed margins. The fruit is a spherical black or somewhat green berry. This wildflower grows in disturbed areas and seep areas in redwood forest.

$\square$ Fairly common
$\square$ Mid-calf to knee height
$\square$ Blooms: April-Aug.
$\square$ Flower size: small


Red valerian is an annual or perennial herb with an inflorescence of many small, spurred flowers that are generally purple-red but occasionally lavender or white. The hollow stem is decumbent to erect and bears opposite leaves, which have entire margins, pointed to rounded tips, and occasionally lobed bases. The lower leaves are stalked while the upper leaves are not. This plant grows in disturbed places, rock or wall crevices, and roadsides. 105

$\square$ Uncommon
$\square$ Mid-calf height
$\square$ Blooms: April-Sept.
$\square$ Flower size: very small
$\square$ G

Western verbena, or western vervain, is a branching perennial herb with an ascending to erect stem. The inflorescence is a spike of small, 5-lobed, blue to purple flowers. The leaves have coarsely toothed margins and are deeply 1-2-lobed near the base. They are generally soft hairy and have a gray-green upper surface. The fruit is composed of 4 nutlets. It is found in open, disturbed areas that are dry to wet.

뻥 $\begin{aligned} & \text { Stream violet } \\ & \text { Native }\end{aligned}$
Viola glabella

$\square$ Uncommon
$\square$ Ankle to mid-calf height
$\square$ Blooms: April-July
$\square$ Flower size: small

Stream violet, also known as pioneer violet, is a perennial herb with heart-shaped leaves and lemon-yellow flowers that grow right above each leaf. The lower 3 petals (and sometimes the upper 2) have deep purple veins. The thin basal leaves have cordate bases and serrate to scalloped margins, while the similar cauline leaves grow only near the stem tips. This violet grows in moist, shady forest and on streambanks.

$\square$ Common
$\square$ Ankle height
$\square$ Blooms: April-May
$\square$ Flower size: small


Two-eyed violet is a perennial herb that has white petals with yellow bases. The 2 lateral petals each feature a dark purple spot, giving the plant its name. The lowermost petal has a large yellow patch with purple veins and the upper 2 petals are deep red-violet on the back. The simple leaves are generally heart-shaped with scalloped to somewhat serrate margins. This violet grows in moist areas and forests and on rocky or grassy banks.

$\square$ Fairly common
$\square$ Ankle height
$\square$ Blooms: Feb.-April
$\square$ Flower size: small

This rhizomatous perennial herb, also known as California golden violet, has many decumbent to erect stems bearing gold-yellow flowers. The lower 3 petals have dark brown veins and the upper 2 are red-brown on the back. The small, simple leaves are deltate to ovate with scalloped to serrate margins and are hairy or not. This violet is found growing in full sun in open grassy areas such as Mima Meadow.

$\square$ Common
$\square$ Ankle height
$\square$ Blooms: January-May
$\square$ Flower size: small

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Redwood violet, a common redwood forest understory plant, has lemon-yellow flowers with brown-purple veins on the lower 3 petals. The sepals are often purple-streaked or -spotted. The ovate to round evergreen leaves have cordate bases, scalloped margins, and blunt to obtuse tips; they are often purplespotted on 1 or both surfaces. This violet prefers the shade of coastal forest communities.


## MONOCOTS






Common
$\square$ Ankle to waist height
$\square$ Blooms: May-Aug.
$\square$ Flower size: medium

This perennial herb has long basal leaves with wavy edges and flowers with 6 white, downwardcurving petals. Long stamens exceed the narrow petals, which have green or purple midveins. The flowers branch off of the upper portion of the main stem, opening in the evening and closing the next morning. The leaves die back and are not visible at flowering time. Soap plant grows from a bulb, which Native Americans crushed and used as soap.

Three-cornered leek
Non-native


Allium triquetrum
$\square$ Uncommon
$\square$ Ankle to mid-calf height
$\square$ Blooms: March-April
$\square$ Flower size: small

This perennial herb, which grows from a bulb, has several white, bell-shaped flowers that hang from the top of a sharply 3-angled stem. The flowers have long, pointed petals with green midveins. The long, narrow basal leaves are similar to the stem but flatter. Three-cornered leek, an introduced plant often cultivated as an ornamental, is found in shady, disturbed places like the forested edge of Mima Meadow.

$\square$ Fairly common
$\square$ Mid-calf height
$\square$ Blooms: Feb.-June
$\square$ Flower size: very large


Douglas iris is a rhizomatous perennial herb with large, showy flowers. Usually, the flowers are blueish-lavender, but sometimes they appear deep red-purple or pale cream in color. A purpleveined, yellow and white patch is commonly featured at the base of each of the 3 petal-like, reflexed sepals. The leaves are long and narrow, with straight edges and lengthwise, parallel veins. This iris is found in forests and grassy places.

Fernald's iris
Iris fernaldii
Native

$\square$ Fairly common
$\square$ Mid-calf height
$\square$ Blooms: April
$\square$ Flower size: very large


Fernald's iris is a rhizomatous perennial herb with funnel-shaped, cream-colored to pale yellow flowers. The 3 petal-like sepals typically feature dark veins and patches of yellow at their bases. The straight-edged leaves are long, very narrow, and have parallel veins. The perianth tube (pictured above-center) is long and slender. This plant, which only grows northwestern California, can be found in the shade of campus forests. 112

$\square$ Common
$\square$ Ankle height
$\square$ Blooms: March-May
$\square$ Flower size: medium


G

This perennial herb, with its distinct contrasting colors and upright form, is a common sight in moist, grassy, open areas of campus in the springtime. Its blue-purple petals, which can be quite variable in hue, feature yellow spots at their bases and small, tapered points at their tips. Occasionally, the petals are white. The grass-like leaves are long and narrow, like most in the iris family.

Bulbil bugle lily
Watsonia meriana
Invasive non-native

$\square$ Rare
$\square$ Knee to chest height
$\square$ Blooms: May-July
$\square$ Flower size: large
from South Africa. Its inflorescence has 10-15 trumpet-shaped, curved flowers that are orange or reddish in color. The bright green leaves are long, narrow, and thick. Small bulblike structures called bulbils form clusters on the stem. This invasive plant, which can reach 1.5 m tall in height, grows in disturbed areas and fields, sometimes forming dense colonies. 113


Fairly common
$\square$ Ankle to knee height
$\square$ Blooms: April-May
$\square$ Flower size: medium


Also known as fairy-lantern, this perennial herb has 2 to many nodding flowers and long, narrow leaves. The flowers have 3 white to pink petals that close at the tip and are sparsely hairy on the inside. The sepals are appressed. The inflorescence has leaf-like bracts that are generally paired. The bulb-bearing stem is slender. The fruit is a capsule with 3 prominent edges. It grows in shady to open woodland, such as the edge of Mima Meadow.

$\square$ Uncommon
$\square$ Ankle to mid-calf height
$\square$ Blooms: May-June
$\square$ Flower size: large

This perennial herb has deep yellow bell-shaped flowers with long, tapered sepals. Each of the 3 petals is distinctively lined red-brown and generally has a larger central spot. They are wide and sparsely hairy near the base. 6 white to light yellow stamens are prominent in the center of the corolla. The leaves are long and narrow. The fruit is erect and narrowly lanceolate. This species can be observed growing at sites like Porter Meadow.

$\square$ Rare
$\square$ Ankle height
$\square$ Blooms: April-July
$\square$ Flower size: small


This perennial herb has small, bell-shaped flowers with 3 hairy white petals that have pink to purple markings. 1 to several flowers form the inflorescence. The flowers have 3 sepals that taper to a point. The linear-lanceolate basal leaf can grow up to 40 cm long. The nodding fruit is a winged capsule that contains dark brown, net-like seeds. Hairy star tulip prefers dry grassy slopes and woodland.

Large-flowered mariposa Native


$\square$ Uncommon
$\square$ Ankle height
$\square$ Blooms: April-June
$\square$ Flower size: large

This perennial herb has lilac to light pink bellshaped flowers with 3 wide petals that narrow at the base. 2 purple spots and hairs are typically present at the base near the nectary. The stamens have light blue, lilac, cream, or pink anthers. The stem is simple and the leaves are long and linear. The elliptic, winged fruit bears light brown, netlike seeds. Large-flowered mariposa, considered rare by the CNPS, is found in moist coastal prairie.


Rare
$\square$ Knee to waist height

- Blooms: Feb.-May
$\square$ Flower size: small

$\square$

Red clintonia is a rhizomatous perennial herb with bell-shaped, pink to red-purple flowers. The inflorescence is composed of 1 terminal umbel plus 0-3 lateral umbels below, which grow on a tall, upright stem. The 5 or 6 large basal leaves are elliptic in shape and have distinct midveins. The fruits are eye-catching, bright blue berries. This plant grows in shaded, damp redwood forests, but is a rare sight on campus.

Checker lily
Fritillaria affinis
Native

$\square$ Rare
$\square$ Ankle to knee height
$\square$ Blooms: March-May
$\square$ Flower size: medium

This perennial herb has nodding flowers with striking patterns. The 6 petal-like perianth parts have pointed tips and slightly wavy margins. Perianth parts can be brown-purple with yellow checkered mottling or pale yellow-green with purple checkered mottling. The leaves are lance-linear, generally in whorls of 2-8 on the bottom half of the plant and alternately arranged on the upper half. The fruit is widely winged.

$\square$ Fairly common
$\square$ Ankle to mid-calf height

- Blooms: March-June
$\square$ Flower size: small

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Hooker's fairy bells, or drops of gold, is an erect (but nodding) perennial herb with cream-colored to greenish flowers that are generally hidden below pairs of oval-shaped leaves. The flowers are narrowly bell-shaped, often spreading at the middle to expose large anthers. The slightly clasping leaves have parallel veins which are sometimes rough-hairy and wavy edges that are hairy. The berry-like fruit is orange to bright red.

$\square$ Uncommon

- Ankle height
$\square$ Blooms: Jan.-March
$\square$ Flower size: small

This perennial herb, named for its ill scent, is one of few species to bloom in winter. Its 3 petal-like sepals are etched with maroon lines and point downward. The slender petals are threadlike and upcurved around the 3-pronged pistil. The 2 wide leaves are darkly mottled. The capsule-like "slink pod" fruit causes the flower stalk to bend and touch the ground. It is found in moist, shady redwood forest sites like Cave Gulch.


Common

- Mid-calf to waist height
$\square$ Blooms: March-May
$\square$ Flower size: small

The star-like flowers of this perennial herb, also known as Fremont's death camas, grow in a panicle or raceme inflorescence along a tall, erect stem. The 6 perianth parts (the 3 petals and 3 petal-like sepals collectively) are each white with a yellow spot at the base. The long, narrow leaves are curved and have short, stiff hairs along the edges. The fruit is a cylindric, segmented capsule. Fremont's star lily grows on grassy or wooded slopes.

## Fremont's star lily (dwarf form) Toxicoscordion fremontii

 Native
$\square$ Common
$\square$ Ankle height
$\square$ Blooms: Jan.-March
$\square$ Flower size: small

This smaller version of Toxicoscordion fremontii is a common sight in campus grassland and coastal prairie habitats. Previously, it was recognized as Zigadenus fremontii var. minor, but, currently, it goes unrecognized as a distinct variety. However, it differs from $T$. fremontii in that it has a short stature, smaller leaves, and a raceme inflorescence (instead of panicle). Additionally, this form flowers earlier and does not grow in woodland habitats.

Fairly common
$\square$ Ankle height
$\square$ Blooms：Feb．－June
$\square$ Flower size：medium


Wake－robin is a perennial herb with parts growing in threes，hence the＂tri－＂in Trillium．It has 3 petals， 3 sepals，and 3 leaves．The flower generally grows erect and has white petals that often darken to a purplish－pink color with age． The wide，ovate leaves have sharp，tapered tips and form whorl around a straight stem．This plant is found on moist，wooded slopes in forests， often growing in association with redwoods．

Summer coralroot Corallorhiza maculata var．occidentalis Native

$\square$ Rare
$\square$ Ankle to mid－calf height
$\square$ Blooms：May－July
$\square$ Flower size：small

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This parasitic orchid is a tough one to spot in the duff of campus forests，as it is small and inconspicuous． The red，brown，yellow，and white colors of the plant make it easy to miss among the leaf litter． Each of the many flowers has a white lower lip， 2 lateral petals，and 3 pointed sepals．The lip and petals can be spotted or unspotted and the sepals are often the same color as the stem．No leaves are present，as coralroot does not photosynthesize． 119

$\square$ Rare
$\square$ Ankle to mid-calf height
$\square$ Blooms: May-July
$\square$ Flower size: small


Like summer coralroot, striped coralroot is a parasitic orchid that is quite elusive on campus. It has many small, striped flowers that grow along a red-brown, purplish, or yellowish erect stem. The sepals, petals, and lip of each flower vary in color from yellow to pink to pale brown and have lengthwise stripes that are red to purple. This plant grows in the leaf litter of open to shaded redwood or mixed-evergreen forest communities on campus.


$\square$ Common
$\square$ Mid-calf to knee height
$\square$ Blooms: April-Dec.

- Flower size: small

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This perennial herb has multicolored flowers and broad leaves. It bears few to 20 flowers, each of which has 3 greenish sepals, 2 purple-tinged lateral petals, and a pouch-like lip that is white to pink on the outside and brown to purple on the inside. The column, which looks like a small upper lip, has a yellow anther cap. The leaves are lanceolate to ovate, alternate, and ribbed. Helleborine grows on dry slopes and in redwood forests.

$\square$ Rare

- Ankle to mid-calf height
$\square$ Blooms: July-Sept.
$\square$ Flower size: small


Rattlesnake-plantain, an orchid, is a perennial herb that gets its name from the snakeskin-like pattern on its leaves. The leaf blades are dark green with white-streaked midribs and white veins, their basal rosettes collectively forming patches in conifer forest leaf litter. The flowers, which have white petals and green-brown sepals, grow in a dense inflorescence along an erect, hairy stem. The plants on campus seem to flower infrequently.

Mountain piperia
Piperia transversa Native

$\square$ Uncommon
$\square$ Ankle to mid-calf height
$\square$ Blooms: June-July
$\square$ Flower size: very small

Also known as flat spurred piperia, this orchid has flowers that grow densely atop a tall, slender stem. The flowers have petals with green midveins, a forward- or downward-pointing lip, and a long spur that grows more or less perpendicular to the stem. The sepals are white to yellowish. The wide basal leaves are not present at the time of flowering. This piperia grows in dry, forested sites. Some plants occur West Rd. in Upper Campus.

$\square$ Rare
$\square$ Ankle height
$\square$ Blooms: July-Aug.
$\square$ Flower size: small

Like all orchids in the Spiranthes genus, $S$. romanzoffiana has flowers that grow in a tight spiral to form a dense spike inflorescence. Each of the white flowers, hood-like with their fused upper sepals and lateral petals, has a recurved lower lip. The basal leaves do not always persist through flowering. This plant, a rare one on campus, can be found growing in wet meadows such as Lower Marshall Field.

$\square$ Uncommon
$\square$ Ankle to mid-calf height
$\square$ Blooms: May-July
$\square$ Flower size: very small

This rhizomatous perennial herb has small, creamy white, starry flowers that grow in dense clusters at the end of an erect (but nodding) stem. The flowers have stamens that are tipped with roundish, yellow-green anthers. The long, wavy-edged leaves have parallel veins and grow alternately along the stem on one plane. The fruit is a red, purple-dotted berry. This plant grows in moist, open woodland and on streambanks.

$\square$ Uncommon
$\square$ Ankle height
$\square$ Blooms: March-Aug.
$\square$ Flower size: medium


This perennial herb has funnel-like, ascending flowers that are bright purple. The 6 petals have downward curving tips and distinct midveins, especially the outsides. Each of several individual flowers in the scape inflorescence grows from its own stem-like pedicel, looking to be part of a loose umbel. White, flat, stamenlike staminodes form around a central cluster of stamens that are topped with large anthers.

## Dwarf brodiaea

Brodiaea terrestris subsp. terrestris
Native

$\square$ Fairly common
$\square$ Below ankle height
$\square$ Blooms: April-July

- Flower size: medium


This perennial herb has pale purple, funnel-like flowers much like those of harvest brodiaea, but its stem-like peduncle is significantly shorter. This short peduncle keeps the plant close to the ground and is dwarf brodiaea's defining feature. 6 petals with outward or downward curving tips and distinct midveins are present, as well as white, stamen-like, incurving staminodes surrounding the central cluster of stamens.

$\square$ Uncommon
$\square$ Mid-calf height
$\square$ Blooms: Feb.-April
$\square$ Flower size: small

This perennial herb has blue, blue-purple, or pink-purple cup-shaped flowers that grow in a dense, umbel- or head-like cluster atop a long, leafless stalk. The 6-15 flowers per cluster are subtended by dark purple bracts. The small petals point upward. A set of white, membraneous, stamen-like appendages form around the anthers in the center. Blue dicks prefers open disturbed areas, such as grassland and scrub.

$\square$ Fairly common
$\square$ Mid-calf height
$\square$ Blooms: April-June
$\square$ Flower size: small

The scape inflorescence of this perennial herb is an umbel-like cluster of many white flowers. The shallowly bowl-shaped flowers have ascending to spreadingpetals andagreenmidvein. Occasionally, the outer surfaces of the petals are flushed purple. The 6 stamens have white or yellow anthers and generally triangular filaments. The basal leaves are long and narrow. It grows in grassland and vernally wet meadows, like Mima Meadow.

Golden brodiaea Native
$\square$ Fairly common
$\square$ Mid-calf height
$\square$ Blooms: May-June
$\square$ Flower size: medium

This perennial herb has gold-yellow flowers with spreading petals and distinct midveins. The 6 -petaled flowers and striped, unopened buds grow in an umbel-like scape inflorescence. The stamens closely surround the pistil and have flat, forked filaments with straight to recurved tip appendages and cream, yellow, or blue anthers. The 1 to 2 basal leaves are long and narrow. Golden brodiaea can be


## UCSC Plant List

|  |  | $\text { ng } V$ | $\text { ar Plant } \mathrm{Cl}$ | list of UC Santa Cruz | Symbols \& their significance |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | il | d and r | d by Krikor An | an according to TJM2 | * = exotic |
|  | b | er 2017 |  |  | ** = exotic+invasive |
|  | on | al edits | Dylan Neubaue | Alex Jones | endemic or rare |
|  | is | workin | ncludes some lik | pated and many unconfirmed species |  |
|  |  | eatu | Field Gui | ants of UC Santa Cruz a | lighted in light gray |
| $\checkmark$ | \# | taxon | Family | Latin name | common name |
|  | 1 | ferns | Azollaceae | Azolla filiculoides | duckweed/water fern |
|  | 2 | ferns | Blechnaceae | Blechnum spicant | deer fern |
|  | 3 | ferns | Blechnaceae | Woodwardia fimbriata | western (giant) chain fern |
|  | 4 | ferns | Dennstaedtiaceae | Pteridium aquilinum var. pubescens | bracken fern |
|  | 5 | ferns | Dryopteridaceae | Dryopteris arguta | California/coastal wood fern |
|  | 6 | ferns | Dryopteridaceae | Polystichum californicum | California sword fern |
|  | 7 | ferns | Dryopteridaceae | Polystichum dudleyi | Dudley's sword fern |
|  | 8 | ferns | Dryopteridaceae | Polystichum munitum | western (common) sword fern |
|  | 9 | ferns | Equisitaceae | Equisetum arvense | common horsetail |
|  | 10 | ferns | Equisitaceae | Equisetum telmateia ssp. braunii | giant horsetail |
|  | 11 | ferns | Isoetaceae | Isoetes nuttallii | Nuttall's quillwort |
|  | 12 | ferns | Ophioglossaceae | Sceptridium multifidum | leather grape fern |
|  | 13 | ferns | Polypodiaceae | Polypodium californicum | California polypody |
|  | 14 | ferns | Polypodiaceae | Polypodium glycyrrhiza | licorice fern |




|  | 57 | eudicots | Asteraceae | Anaphalis margaritacea | pearly everlasting |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 58 | eudicots | Asteraceae | Anisocarpus madioides | woodland madia |
|  | 59 | eudicots | Asteraceae | Anthemis cotula* | stinking chamomile, dog fennel |
|  | 60 | eudicots | Asteraceae | Arctotheca prostrata** | prostrate capeweed |
|  | 61 | eudicots | Asteraceae | Arnica discoidea | rayless arnica |
|  | 62 | eudicots | Asteraceae | Artemisia douglasiana | Douglas' mugwort |
|  | 63 | eudicots | Asteraceae | Baccharis glutinosa | marsh baccharis, seep willow |
|  | 64 | eudicots | Asteraceae | Baccharis pilularis ssp. consanguinea | coyote brush |
|  | 65 | eudicots | Asteraceae | Bellis perennis* | English (lawn) daisy |
|  | 66 | eudicots | Asteraceae | Calendula arvensis* | field marigold |
|  | 67 | eudicots | Asteraceae | Calendula officinalis* | pot marigold |
|  | 68 | eudicots | Asteraceae | Carduus pycnocephalus ssp. p.** | Italian thistle |
|  | 69 | eudicots | Asteraceae | Centaurea calcitrapa** | purple star thistle |
|  | 70 | eudicots | Asteraceae | Centaurea melitensis** | tocalote, Maltese starthistle |
|  | 71 | eudicots | Asteraceae | Centaurea solstitialis** | yellow starhistle |
|  | 72 | eudicots | Asteraceae | Cirsium arvense** | Canada thistle |
|  | 73 | eudicots | Asteraceae | Cirsium brevistylum | Indian thistle |
|  | 74 | eudicots | Asteraceae | Cirsium vulgare* | bull thistle |
|  | 75 | eudicots | Asteraceae | Corethrogyne filaginifolia | common sand aster |
|  | 76 | eudicots | Asteraceae | Crepis vesicaria* | weedy/beaked hawksbeard |
|  | 77 | eudicots | Asteraceae | Deinandra corymbosa | coastal tarweed |












|  | 288 | eudicots | Limnanthaceae | Limnanthes douglasii ssp. nivea | meadow foam |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 289 | eudicots | Linaceae | Linum bienne* | narrow leaved flax |
|  | 290 | eudicots | Lythraceae | Lythrum hyssopifolia* | Hyssop loosestrife |
|  | 291 | eudicots | Malvaceae | Malva nicaeensis* | bull mallow |
|  | 292 | eudicots | Malvaceae | Malva parviflora* | cheeseweed |
|  | 293 | eudicots | Malvaceae | Sidalcea malviflora ssp. laciniata | checker mallow |
|  | 294 | eudicots | Montiaceae | Calandrinia menziesii | redmaids |
|  | 295 | eudicots | Montiaceae | Claytonia perfoliata ssp. perfoliata | miner's lettuce |
|  | 296 | eudicots | Myricaceae | Morella californica | California wax myrtle |
|  | 297 | eudicots | Myrsinaceae | Lysimachia arvensis* | scarlet pimpernel |
|  | 298 | eudicots | Myrsinaceae | Lysimachia latifolia | woodland star flower |
|  | 299 | eudicots | Onagraceae | Clarkia unguiculata | elegant clarkia |
|  | 300 | eudicots | Onagraceae | Epilobium brachycarpum | tall annual willowherb |
|  | 301 | eudicots | Onagraceae | Epilobium canum ssp. canum | California fuschia |
|  | 302 | eudicots | Onagraceae | Epilobium ciliatum ssp. ciliatum | fringed willowherb |
|  | 303 | eudicots | Onagraceae | Epilobium ciliatum ssp. watsonii | Watson's willowherb |
|  | 304 | eudicots | Onagraceae | Oenothera elata ssp. hookeri | Hooker's evening-primrose |
|  | 305 | eudicots | Onagraceae | Taraxia ovata | sun cups |
|  | 306 | eudicots | Orobanchaceae | Bellardia trixago* | Mediterranean lineseed |
|  | 307 | eudicots | Orobanchaceae | Castilleja ambigua ssp. $a$. | Johnny-nip |
|  | 308 | eudicots | Orobanchaceae | Castilleja densiflora ssp. d. | owl's-clover |




|  | 351 | eudicots | Polygonaceae | Rumex acetosella** | sheep sorrel |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 352 | eudicots | Polygonaceae | Rumex crassus | willow-leaved dock |
|  | 353 | eudicots | Polygonaceae | Rumex crispus* | curly dock |
|  | 354 | eudicots | Polygonaceae | Rumex pulcher* | fiddle dock |
|  | 355 | eudicots | Polygonaceae | Rumex salicifolius | willow-leaved dock |
|  | 356 | eudicots | Primulaceae | Primula clevelandii var. patula | shooting star |
|  | 357 | eudicots | Ranunculaceae | Actaea rubra | Western baneberry, bearberry |
|  | 358 | eudicots | Ranunculaceae | Anemone grayi | blue windflower |
|  | 359 | eudicots | Ranunculaceae | Aquilegia formosa | crimson columbine |
|  | 360 | eudicots | Ranunculaceae | Ranunculus aquatilis var. capillaceus | water buttercup |
|  | 361 | eudicots | Ranunculaceae | Ranunculus californicus var. c. | California buttercup |
|  | 362 | eudicots | Ranunculaceae | Ranunculus muricatus* | pricklefruit buttercup |
|  | 363 | eudicots | Ranunculaceae | Thalictrum fendleri var. polycarpum | meadow rue |
|  | 364 | eudicots | Rhamnaceae | Ceanothus papillosus var. roweanus | warty-leaved ceanothus |
|  | 365 | eudicots | Rhamnaceae | Ceanothus thyrsiflorus var. $t$. | blue brush, California Lilac |
|  | 366 | eudicots | Rhamnaceae | Frangula californica ssp. c. | coffeeberry |
|  | 367 | eudicots | Rosaceae | Acaena pinnatifida var. californica | California sheepburr |
|  | 368 | eudicots | Rosaceae | Adenostoma fasciculatum var. f. | chamise, greasewood |
|  | 369 | eudicots | Rosaceae | Cotoneaster franchetii** | Franchet's cottoneaster |
|  | 370 | eudicots | Rosaceae | Cotoneaster pannosus** | woolly/silverleaf cotoneaster |
|  | 371 | eudicots | Rosaceae | Drymocallis glandulosa var. wrangelliana | sticky cinquefoil |







|  | 477 | monocots | Orchidaceae | Corallorhiza maculata var. $m$. | spotted coral-root |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 478 | monocots | Orchidaceae | Corallorhiza maculata var. occidentalis | summer coral-root |
|  | 479 | monocots | Orchidaceae | Corallorrhiza striata | striped/hooded coral root |
|  | 480 | monocots | Orchidaceae | Epipactis gigantea | stream orchid |
|  | 481 | monocots | Orchidaceae | Epipactis helleborine* | broad-leaved helleborine |
|  | 482 | monocots | Orchidaceae | Goodyera oblongifolia | Rattlesnake-plantain |
|  | 483 | monocots | Orchidaceae | Piperia transversa | royal rein orchid |
|  | 484 | monocots | Orchidaceae | Piperia unalascensis | (Alaska) rein orchid |
|  | 485 | monocots | Orchidaceae | Spiranthes romanzoffiana | hooded lady's-tresses |
|  | 486 | monocots | Poaceae | Aegilops triuncialis | barbed goat gras |
|  | 487 | monocots | Poaceae | Agrostis exarata | spike bentgrass |
|  | 488 | monocots | Poaceae | Agrostis gigantea* | creeping bentgrass, redtop |
|  | 489 | monocots | Poaceae | Agrostis hallii | Hall's bent grass |
|  | 490 | monocots | Poaceae | Agrostis pallens | seashore/leafy bentgrass |
|  | 491 | monocots | Poaceae | Aira caryophyllea* | silver hairgrass |
|  | 492 | monocots | Poaceae | Anthoxanthum odoratum* | sweet vernal grass |
|  | 493 | monocots | Poaceae | Arrhenatherum elatius* | tall oatgrass |
|  | 494 | monocots | Poaceae | Avena barbata** | slender wild oat |
|  | 495 | monocots | Poaceae | Avena fatua** | European wild oat |
|  | 496 | monocots | Poaceae | Brachypodium distachyon** | purple falsebrome |
|  | 497 | monocots | Poaceae | Briza maxima** | large rattlesnake (quaking) grass |


|  | 498 | monocots | Poaceae | Briza minor* | small rattlesnake (quaking) grass |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 499 | monocots | Poaceae | Bromus carinatus var. c. | California brome |
|  | 500 | monocots | Poaceae | Bromus carinatus var. marginatus | large mountain bromegrass |
|  | 501 | monocots | Poaceae | Bromus catharticus var. c. | rescue grass |
|  | 502 | monocots | Poaceae | Bromus commutatus* | hairy chess |
|  | 503 | monocots | Poaceae | Bromus diandrus** | ripgut brome |
|  | 504 | monocots | Poaceae | Bromus hordeaceus** | soft brome |
|  | 505 | monocots | Poaceae | Bromus madritensis ssp. m.* | Spanish brome |
|  | 506 | monocots | Poaceae | Bromus madritensis ssp. rubens* | red (foxtail) brome |
|  | 507 | monocots | Poaceae | Bromus tectorum** | cheatgrass |
|  | 508 | monocots | Poaceae | Bromus vulgaris | Columbia brome |
|  | 509 | monocots | Poaceae | Calamagrostis koelerioides | tefted pine grass |
|  | 510 | monocots | Poaceae | Calamagrostis rubescens | pine reed grass |
|  | 511 | monocots | Poaceae | Cortaderia jubata** | jubata grass |
|  | 512 | monocots | Poaceae | Cortaderia selloana** | Pampas grass |
|  | 513 | monocots | Poaceae | Cynodon dactylon* | Bermuda grass |
|  | 514 | monocots | Poaceae | Cynosurus echinatus* | hedgehog dogtail |
|  | 515 | monocots | Poaceae | Dactylis glomerata* | orchard grass |
|  | 516 | monocots | Poaceae | Danthonia californica | California oat grass |
|  | 517 | monocots | Poaceae | Deschampsia cespitosa ssp. holciformis | California (coastal tufted) hairgrass |
|  | 518 | monocots | Poaceae | Deschampsia danthonioides | annual hairgrass |




|  | 561 | monocots | Poaceae | Trisetum canescens | tall trisetum, nodding oat grass |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 562 | monocots | Poaceae | Triticum aestivum* | common wheat |
|  | 563 | monocots | Ruscaceae | Maianthemum racemosum | false Solomon's seal |
|  | 564 | monocots | Ruscaceae | Maianthemum stellatum | starry false Solomon's seal |
|  | 565 | monocots | Themidaceae | Brodiaea elegans ssp. elegans | garland brodiaea |
|  | 566 | monocots | Themidaceae | Brodiaea terrestris ssp. terrestris | harvest brodiaea |
|  | 567 | monocots | Themidaceae | Dichelostemma capitatum ssp. $c$. | dwarf brodiaea |
|  | 568 | monocots | Themidaceae | Triteleia hyacinthina | blue dicks |
|  | 569 | monocots | Themidaceae | Triteleia ixioides ssp. ixioides | white brodiaea |
|  | 570 | monocots | Themidaceae | Triteleia laxa | golden brodiaea, pretty face |
|  | 571 | monocots | Themidaceae | Ithuriel's spear, common triteleia |  |

## Glossary

Abaxial: the backside or underside of a surface or structure
Achene: a dry, 1-seeded fruit that does not open inherently to release its seed(s); characteristic of Asteraceae, usually featuring pappus
Acuminate: when a structure such as a leaf tapers to a long, sharp tip with concave sides
Acute: when a structure such as a leaf tapers to a short, sharp tip with convex or straight sides that come together at less than a right angle
Adaxial: the front side or upper side of a surface or structure
Alternate: arranged singly along an axis, with points of attachment alternating along the sides of the stem rather than growing across from each other (opposite)
Annual: a plant that germinates and dies in one year or one growing season; usually herbaceous
Anther: the top part of a stamen that bears pollen
Appressed: flattened against a surface (or nearly so)
Ascending: growing upward and away from the base
Axil: angle between a structure or appendage and its main axis (e.g. leaf and stem, lateral leaf vein and leaf midrib)
Axis: main line of direction, growth, or extension of a structure (e.g. stem) that other structures emerge or grow from
Banner: large, uppermost petal characteristic of bilateral Fabaceae flowers
Basal: located at or near the base of a plant or plant part
Beak: narrowed end of a flower part (mostly pertaining to plants in
Orobanchaceae in this guide)
Bell-shaped: describes a flower that widens gradually from an already wide base
Berry: generally fleshy, soft, many-seeded fruit that does not open inherently to release its seed(s)
Biennial: a plant that germinates and dies in two years or growing seasons; usually herbaceous
Bilateral: when a structure such as a flower can be divided into a mirror image in just one way
Bisexual: when functional male and female reproductive parts are both present in a flower
Blade: the expanded part of a leaf or petal
Bract: a reduced leaf-like structure present at the base of an inflorescence, flower, or branch or emerging from a cone
Bristle: a stiff, straight, relatively large hair or hair-like structure
Bulb: a short underground stem with fleshy layers
Bulblet: a small bulb or bulb-like structure that forms at the base of a bulb or in a leaf or bract axil
Calyx: term for a flower's sepals together as a single unit, making up the first and outermost perianth whorl
Capsule: a dry fruit with multiple chambers, which opens irregularly or via slits, pores, or lines

Catkin: a pendent spike or raceme inflorescence of inconspicuous unisexual flowers
Cauline: leaves growing along an above-ground stem (as opposed to basal)
Ciliate: fringe of hairs along margins or edges
Compound: a structure made up of two or more parts or of repeating structures
Compound leaf: a leaf composed of two or more distinct sets of leaflets;
essentially, leaves made up of smaller leaves
Compressed: flattened
Conic: cone-shaped
Cordate: heart-shaped; a term usually in reference to the base of a leaf
Corolla: term for a flower's petals together as a single unit, making up the second perianth whorl
Crenate: having shallow, rounded teeth along a margin; scalloped
Deciduous: leaves or other structures that are not persistent, meaning they fall off the plant seasonally or readily; describes non-evergreen plants
Decumbent: primarily lying flat on the ground but with tips growing upward
Deltate: more or less with the shape of an equilateral triangle
Dentate: having coarse, outward-pointing teeth along a margin
Dioecious: a unisexual plant that produces separate male and female flowers on different individuals
Disciform head: in Asteraceae, a flowering head made up of disk flowers and inconspicuous or missing ray flowers (similar in appearance to a discoid head)
Discoid head: in Asteraceae, a flowering head made up of only disk flowers
Disk flower: in Asteraceae, small, bisexual, radial, 5-lobed flowers that collectively make up the center portion of a composite flowering head
Dissected: deeply, sharply cut into segments as to appear compound
Distal: toward the tip or end (as opposed to proximal)
Elliptic: widest at the middle and tapering equally at both ends, like a flattened circle or narrow oval
Endemic: a native plant limited to a particular area
Entire: having continuous margins that lack teeth, lobes, or any other sorts of divisions
Erect: upright
Evergreen: plants that are not deciduous, meaning that they do not drop their leaves seasonally
Exceeding: when one structure surpasses another due to length or orientation
Exserted: protruding beyond surrounding parts
Exudate: a substance excreted from a plant
Filament: thread-like stalk of a stamen supporting the anther
Flower: the reproductive portion of a flowering plant, with petals and/or sepals and male and/or female reproductive structures present
Fusiform: broadest at the middle and tapering to both ends
Glabrous: hairless
Glandular: bearing substance-excreting gland(s) in the outermost cell layer or at the tip of a hair

Glaucous: covered with a waxy or powdery coating that is whitish or bluish in color
Head: a dense cluster of flowers or inflorescences, usually pertaining to plants in Asteraceae
Herb: a plant that is non-woody above ground
Inflorescence: all the flowers or flower clusters together on a plant as one unit, not including larger foliage
Involucre: whorl of bracts subtending a flower, fruit, or inflorescence
Keel: pair of lowermost, fused petals characteristic of bilateral Fabaceae flowers
Lanceolate: widest near the base and narrowing to an acute tip; significantly longer than wide
Lateral: on or at the side of a structure
Leaf: a photosynthetic organ made up of a flat blade and a stalk
Leaflet: a leaf-like unit of a compound leaf
Ligule: in Asteraceae, a strap-shaped, petal-like, 5-lobed ray flower
Liguliflorous head: in Asteraceae, a flowering head made up of only ligules
Limb: the expanded, petal-like lobes of a fused corolla or calyx located above the tube and throat
Linear: long and very narrow with approximately parallel sides
Lip: one of the upper or lower two parts of a bilateral, irregular corolla or calyx
Lobe: like marginal teeth, but larger and rounder; non-fused portions of otherwise fused structures, like sepals
Margin: edge
Membranous: thin, flexible, and more or less translucent
Monoecious: a unisexual plant that produces separate male and female flowers on the same individual
Native: growing naturally in an area
Naturalized: a non-native plant that has established and persists in the new environment without human aid
Nectary: a structure that produces nectar
Needle: slender, linear, needle-shaped leaf typical of conifers
Nodding: drooping or hanging down on a curved stalk
Node: point of origin of a leaf, bud, branch, or flower on a stem
Nutlet: small nut or nut-like fruit
Ob-: prefix used to invert a term regarding shape
Oblong: at least two times longer than wide with almost parallel sides
Obtuse: when a structure such as a leaf tapers to a short, blunt or rounded tip with convex or straight sides that come together at more than a right angle
Opposite: arranged in pairs along an axis, growing across from each other rather than singly, alternating along the axis (alternate)
Ovary: wider, basal part of the pistil that holds ovules, which become seeds
Ovate: describes two-dimensional structures (leaf) that are egg-shaped
Ovoid: describes three-dimensional structures (cone) that are egg-shaped
Palmate: lobed, veined, or divided from a single point of origin, like fingers on $a$ hand

Panicle: a branched inflorescence in which flowers bloom from the bottom upwards; a raceme of racemes
Pappus: collective term for the scales, awns, or bristles protruding from the top of the achene and replace the calyx in Asteraceae plants
Pedicel: in an inflorescence, the stalk of an individual flower
Peduncle: the stalk of a single flower (not in an inflorescence) or of a whole inflorescence
Pendent: drooping or hanging straight downward
Perennial: a plant that germinates and dies in more than two years or growing seasons; non-woody to woody
Perianth: collective term for the calyx (sepals) and corolla (petals) together, usually used when the calyx and corolla are indistinguishable, as with many Liliaceae plants
Perianth part: individual part of a perianth; useful term when the calyx and corolla are indistinguishable
Petal: individual part of the corolla
Petiole: leaf stalk, which can be conspicuous or not
Phyllary: in Asteraceae, an individual bract that makes up part of the involucre
Pinna (Pinnae): a primary division in a fern leaf blade, like a leaflet in a compound leaf
Pinnate: term for the feathery appearance of leaves, veins, or lobes that are borne, branching from, or arranged along a shared axis, whether in pairs or not; if a compound leaf has a leaflet at the end, it is odd-pinnate, and if it does not have a leaflet at the end, it is even-pinnate

1-pinnate: leaf blade once-divided into leaflets
2-pinnate: leaf blade twice-divided into leaflets
3-pinnate: leaf blade divided into leaflets three times
Pinnule: a secondary division in a twice-compound fern leaf blade, which is the primary division of a pinna
Pistil: a flower's female reproductive organ, which is made up of an ovary, a style, and a stigma; a flower can have one pistil, multiple pistils, or a compound pistil
Pistillate: possessing functional pistils but lacking functional stamens (or lacking stamens altogether)
Prickle: a sharp projection, stiff to somewhat flexible, emerging from a plant's outer tissue layer
Prostrate: growing flat on the ground or low and parallel to the ground
Proximal: closer to the base or source than to the end or tip
Puberulent: slightly hairy with fine, short hairs
Raceme: an unbranched inflorescence in which flowers that are borne on pedicels bloom from the bottom upwards
Radial: when a structure such as a flower can be divided into a mirror image in three or more ways
Radiate head: in Asteraceae, a flowering head made up of central disk flowers and surrounding ray flowers
Ray flower: in Asteraceae, petal-like, generally sterile or pistillate, 3-lobed
flowers that collectively make up the outer portion of a composite flowering head
Receptacle: the structure where flower parts or flowers are attached in a flower or flowering head
Recurved: curved downward or backward gradually
Reduced: smaller in size
Reflexed: curved or bent downward or backward abruptly
Reniform: kidney-shaped
Rhizome: horizontal underground stem
Rib: raised vein or ridge
Rosette: radiating cluster of leaves at or near the base of a plant
Rotate: fused, disk-shaped corolla with widely spreading lobes and little or no tube
Sagittate: arrowhead-shaped, with downward-pointing lobes at the base Salverform: fused corolla with a slender tube and an abruptly spreading, flat limb (of petal-like lobes)
Scabrous: rough texture
Scale: dry, thin, translucent or variously colored structure
Scape: a leafless flowering stem (peduncle) rising from a bulb, rhizome or other underground structure
Sepal: individual part of the calyx
Serrate: having sharp, saw-like, tipward-pointing teeth along a margin
Sessile: directly attached without a stalk
Sheath: when one structure or part of a structure partially or fully surrounds another structure or part of a structure
Shrub: a woody, much-branched plant that is tree-like usually shorter than a tree Simple: undivided or unbranched; not compound
Sorus (Sori): cluster of sporangia on the backside of a fern
Spheric: sphere-shaped
Spike: an unbranched inflorescence in which sessile flowers usually bloom from the bottom upwards
Spine: modified leaf or leaf part that is sharp, stiff, and usually subtending an axillary bud or branch
Sporangium (Sporangia): a case or sac that bears spores
Spore: microscopic reproductive cells present in a sporangium
Spreading: nearly horizontal to the origin or point of attachment
Spur: hollow, slender, sac-like appendage of a perianth part, which usually bears nectar
Stamen: a flower's male reproductive organ, made up of a filament and a pollenbearing anther
Staminate: possessing functional stamens but lacking a functional pistil or
pistils (or lacking a pistil or pistils altogether)
Staminode: a modified, sterile stamen that can appear petal-like
Stigma: top part of the pistil that receives pollen
Stipule: leaf-like appendage, usually part of a pair, present at the base of a petiole
Stolon: thin, above-ground, horizontal stem that roots and produces new clonal

Strigose: having hairs that are stiff, straight, sharp and appressed Subshrub: a small shrub with a woody base and non-woody upper stems and twigs
Tendril: thin, twining, stem-like structure helps plants such as vines coil around and climb up other plants or structures
Ternate: in three parts
Throat: expanded, open portion of a fused corolla or calyx located between the tube and limb
Tomentose: having woolly, densely interwoven hairs that are matted or tangled; cobwebby
Tooth (Teeth): projection that is small and pointed
Truncate: having a tip or base that is squared off as if cut
Tube: hollow, cylindrical portion of a fused corolla or calyx located below the limb and throat
Umbel: an inflorescence with three or more pedicels that radiate from a common point, giving it a flat-topped or convex overall shape
Urn-shaped: wide at the base and narrowing to a hollow mouth
Unisexual: when functional male or female reproductive parts are present in a flower, but not both
Whorled (Whorl): ring-like arrangement where three or more structures, like leaves, arise from the same point on an axis in a group
Wing: one of two lateral petals characteristic of bilateral Fabaceae flowers or a thin, flat extension or appendage emerging from a structure


## A Simple Guide to Plant Morphology

## Leaf Venation


pinnate

pinnately lobed

parallel

palmate

palmately lobed

trifoliate

## Leaf Shapes


elliptic lanceolate

linear

oblanceolate
oblong


ovate

obvate

cordate

deltoid
falcate


orbicular

oval

spatulate

runcinate

## Leaf Tip Shapes


acute

acuminate

rounded

notched

emarginate

spine tipped

Leaf Arrangement (Phyllotaxy)

opposite

alternate

whorled

Common Leaf Margins

entire

serrate

lobed


Types of Inflorescences



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I am so grateful I had the opportunity to create a campus resource such as this, as it better connected me to my natural surroundings and the endless wonders they contain. I hope the Field Guide to Plants of UC Santa Cruz inspires readers to get out in the field and make some new flowering (and non-flowering!) friends, just as the process of making it encouraged me to do. Whether you're walking between classes or hiking in the coastal prairie meadows of Upper Campus, there is always an opportunity to form a new friendship.


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## UCSC Campus Natural Reserve

The UC Santa Cruz Campus Natural Reserve (UCSC CNR) is a 409-acre living laboratory and outdoor classroom that supports a wide variety of field-based research and learning. Established as part of the 1988 UCSC Long Range Development Plan, the CNR represents the most diverse campus reserve within all of California.

The acknowledged need for such a learning and research resource on the UCSC campus originated with Chancellor Dean McHenry, even before the campus officially opened its doors. In early visionary and program-planning endeavors UC leaders realized the unique natural resources that the UCSC campus offered and began integrating the natural landscape into the campus vision in a manner that explicitly supports education and research in natural and environmental sciences.

The CNR provides a vital link between ideas discussed within traditional classrooms and their counterparts in the natural world. Thousands of students engage in CNR activities each year, participating in transformative experiences such as internships, student and faculty research projects, class field trips and volunteer opportunities. CNR staff members provide resources to meet the learning objectives of small, intensive upper-division field courses, as well as lower-division classes with enrollments topping 400 students. Enriched both professionally and personally, students often cite their hands-on experiences within the CNR as highlights of their time at UCSC.

ucsccampusreserve.ucsc.edu



[^0]:    Map created by Alex Jones, Dec 2017. Sources: UCSC and Campus Natural Reserve boundary data courtesy of UCSC Physical Planning and Construction; vegetation data created by URS Consulting from data from the following two studies prepared for the Office of Physical Planning and Construction, Campus and Community Planning Office, UCSC. EcoSystems West. 2004a. Botanical and Wildlife Assessment of the UCSC north campus Study Area. October. Prepared for UCSC. Office of Physical Planning \& Construction. Jones \& Stokes. 2004. Biological Baseline Study of the Lower, Central, and Upper Campus, UCSC. August. (J\&S 02-778) Sacramento, CA.

