

Friends of Corte Madera Creek Watershed

# FLORA AND FAUNA OF THE CORTE MADERA CREEK WATERSHED

A Guide to Identifying Common Species in Forests, Woodlands, and Chaparral



## **Table of Contents**

Introduction	1
Plants	2
Invasive Plants	12
Fungi	14
Birds	15
Mammals	20
Reptiles	22
Amphibians	23
Additional Resources	25

## Introduction

The Corte Madera Creek watershed is located in the eastern urbanized corridor of Marin County, California, and reaches from San Francisco Bay to the peak of Mount Tamalpais, in the Coast Range. It is part of the ancestral lands of the Coast Miwok, who live here to this day.

The natural communities of the watershed reflect the variety of local soil types, drainage patterns, elevations, slope, and orientations to sun and wind. Natural communities found in the watershed include Northern Coastal Scrub, Chaparral, Grasslands, Coastal Salt Marsh, Freshwater Marsh, Vernal Marsh (Seasonal Wetland), Coastal Riparian Forest, Valley Oak Woodland and Oak Savannah, Coast Live Oak Woodland, and Mixed Evergreen Forest. There is substantial urban and suburban development within the watershed, so habitats in the watershed also include suburban gardens, urban parks, and roadsides.

Due to the variety of natural communities and habitats, the watershed is incredibly biodiverse. Mount Tamalpais is known to support over 750 plant species. Numerous birds, mammals, reptiles, amphibians, fish, and invertebrates also reside within the watershed.

The purpose of this guide is to introduce readers to common and charismatic species of the Corte Madera Creek watershed, with emphasis on those likely to be encountered in woodlands, forests, and chaparral. While not a replete manual, this guide acts as a starting point to engage, excite, and inspire readers to continue learning about all the fascinating species native to the watershed. Several exotic plants are also identified here to introduce readers to the impacts of introduced species.

Species profiles were created by Alycia Matz, Phil Greer, and Lewis Randall, with photography by Alycia Matz, Morgan Cantrell, and iNaturalist users (licensed CC BY-NC). Guide editing and assembly by Alycia Matz.

Top photo: yerbasanta via iNaturalist Bottom photo: Alycia Matz

### Coast Live Oak - Quercus agrifolia

• Habitat: Valleys, slopes, mixed evergreen forest, woodland, chaparral, coastal scrub

#### • Description:

- Evergreen tree typically 30'-75' tall
- Crown is wide, rounded; bark is dark gray and furrowed
- Leaves are elliptic to round, leathery, and paler green below, with tiny spine tips and edges
- Fruits are slender, ovoid acorns about 1"-1.5"; cups are shallow and thin-scaled; mature in fall and winter

#### • Wildlife and Human Uses:

- Nesting habitat for a wide variety of birds
- Acorns support deer, rodents, turkey, pigs, acorn woodpeckers, and California scrub-jays
- · Acorns are a food staple for many Native Americans

## California Black Oak – Quercus kelloggii

• Habitat: Oak forests, woodlands

#### · Description:

- Grows 30'-118' in height, up to 5' in diameter, and 35' in spread
- Male flowers are on catkins and the fruit is a large acorn
- The bark is smooth on young trees, becoming plated and deeply fissured with age
- The leaves are distinguished by their pointed lobes on each side, unique among California oak trees

#### • Wildlife and Human Uses:

- Vast numbers of insect, bird, and mammal species use the California black oak for food and shelter
- Their acorns are also eaten by many Native American peoples, after leaching the tannins, and are considered the best food acorn



Top photo: Morgan Cantrell Bottom photo: lorrigong via iNaturalist

### Valley Oak – Quercus lobata

- Habitat: Valleys, mixed oak woodlands, riparian forests, grasslands
- Description:
  - Deciduous tree; grows up to 110' tall
  - Crown is wide and rounded with drooping branches
  - Bark is light gray and furrowed; checkered in older trees
  - Leaves have 6-8 lobes and are darker green above than below
  - Fruits are slender, conic acorns about 1.25-2"; cups have warty scales: mature in fall

#### Wildlife and Human Uses:

- Nesting habitat for a wide variety of birds
- Acorns support deer, squirrels, turkey, pigs, Acorn Woodpeckers, Western scrub-jays, and more
- Acorns are a food staple for many Native Americans



Top photo: p6mulertg6 via iNaturalist Bottom photo: john1kelly via iNaturalist

### California Bay, Bay Laurel – Umbellularia californica

• Habitat: Valley bottoms, slopes, mixed evergreen forests, riparian areas, coastal scrub

### · Description:

- Evergreen single or multi-trunk tree up to 150' tall
- Leaves are 1-4" narrow, shiny, smooth, and yellow-green
- Leaves are aromatic; toxic litter limits understory growth
- Flowers are clustered and yellow-green; bloom in winter
- Fruits are 1" round, fleshy, green, and single-seeded
- Acts as a key host of the Sudden Oak Death fungus

#### Wildlife and Human Uses:

- Seeds are an important food source for rodents and birds
- Deer browse young shoots during the summer
- · Heart rot in large trees often provides cavity nesting habitat
- Nuts are roasted and eaten; leaves used in soups and more



Bottom photo: vanesawalrus via iNaturalist

### Coast Redwood – Sequoia sempervirens

- Habitat: Valleys, slopes, redwood forest, riparian forest
- Description:
  - Evergreen tree; grows up to 360' tall
  - Crown is narrowly conic with downswept branches
  - Bark is red-brown, fibrous, to 12" thick, fire resistant
  - Flowers are separate pollen cones 1/16-3/16" in size
  - Leaves are needles, 2-ranked in flat sprays
  - Fruits are spheric cones 0.5"-1.3", persisting for < 2 years
  - Decay-resistant litter builds up to create a protective surface layer, reducing erosion and increasing water infiltration

#### Wildlife and Human Uses:

- · Nesting habitat for wide variety of birds
- Fire cavities provide bat roosting and bird nesting habitat
- Wood is used for building materials, such as canoes and homes



Top photo: rkowell via iNaturalist Bottom photo: jeannefh via iNaturalist

### Douglas Fir – Pseudotsuga menziesii

- Habitat: Valleys, slopes, mixed evergreen forests
- Description:
  - Evergreen tree, up to 220' tall
  - Crown is rounded at maturity, upper branches large
  - Leaves are needles, 2-ranked in flat sprays
  - Bark is smooth with resin blisters when young and becomes deeply furrowed and dark brown as it matures
  - Fruits are cones, 1.5"-7.5", with 3-toothed bracts at each scale
  - Establishment in oak forests may lead to stand conversion to conifer forests

### Wildlife and Human Uses:

- Nesting habitat for a wide variety of birds
- Native Americans use wood for fuel, utensils, tools, and timber; pitch is used for sealing; young shoots can be eaten



Top photo: ammlmt via iNaturalist Bottom photo: groufa47via iNaturalist

### California Buckeye - Aesculus californica

- Habitat: Woodlands, riparian areas, canyons, dry slopes
- Description:
  - Grows 12'-36' tall; usually grows as broad as it is high
  - Large, deciduous, upland shrub or tree
  - Flowers are white to pale pink with 4 petals; they grow in elongated clusters that bloom in the summer
  - Leaves are finely toothed, with usually five leaflets per leaf
  - Fruit is a glossy, brown seed surrounded by a woody capsule



- · Provides food and habitat for butterflies
- Native Americans ground the nuts or hulls to form a powder that they would use to stun fish





Top photo: onyxrat via iNaturalist Bottom photo: alisong26 via iNaturalist

### Pacific Madrone – Arbutus menziesii

- Habitat: Valleys, slopes, evergreen forests, mixed-oak forests
- Description:
  - Evergreen tree growing up to 130' tall
  - Bark is red, smooth, later thin shredding or fissured brown
  - Leaves are 4.75" unlobed, oval, smooth, shiny, and yellow green
  - Flowers are ¼" in size, bunched at stem tips, and white to light pink; blooms in spring
  - Fruits are round, textured, orange-red berries 0.5" in size



- · Nesting habitat for wide variety of birds
- Flowers provide nectar for a variety of insects
- Berries eaten by birds including robins, waxwings
- Native Americans use fruits in cooking and as fish bait, and use leaves and bark for medicinal properties

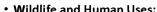


Top photo: Andy Bridges via iNa

Top photo: Andy Bridges via iNaturalist Bottom photo: Brian Starzomski via iNaturalist

### Toyon - Heteromeles arbutifolia

- Habitat: Coastal scrub areas, chaparral, mixed oak woodlands
- Description:
  - Perennial shrub; grows 8'-15' tall
  - Small, white flowers form in dense bunches, blooming in early summer
  - Leaves are evergreen, alternate, and sharply toothed
  - Fruits are small, bright red, and berry-like; mature in fall and winter



- Food and habitat for butterflies and other insects
- · Eaten by birds, including mocking birds and cedar waxwings
- Eaten by mammals, such as coyotes and bears
- Native Americans eat berries and mix in water to make a beverage





Top photo: Michael Chasse via iNaturalist Bottom photo: vfgillis via iNaturalist

### Beaked Hazelnut - Corylus cornuta

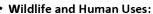
- Habitat: Woodlands, forest edges
- Description:
  - A shrub to small tree, it grows 5'-26' wide and 10' across
  - Male flowers grow on catkins and the fruit is a nut (the hazelnut) enclosed in a husk with a beak-like protrusion
- Wildlife and Human Uses:
  - The hazelnut is eaten by bears, chipmunks, squirrels, and jays, while the leaves are eaten by deer
  - Hazelnuts are also eaten by humans and thin branches were used for baskets and other stiff woven items by Native Americans



Photo: Morgan Cantrell

### Coyote Brush – Baccharis pilularis

- Habitat: Chaparral, coastal bluffs, oak woodlands, grasslands
- Description:
  - Grows between 4'-10' tall
  - Woody, perennial, upland shrub
  - Small flowers are white to light yellow; blooms July-October
  - Leaves are small with toothed edges; their waxy texture makes them drought-resistant
  - It is dioecious, meaning male and female flowers are borne on separate plants



- Food and habitat for wasps, butterflies, flies, and other insects
- Shelters birds, such as wrentits and white-crowned sparrows
- · Coast Miwok use the leaves to reduce swelling



### Pacific Poison Oak – Toxicodendron diversilobum

- Habitat: Forests, woodlands, chaparral, grasslands
- Description:
  - Has compound leaves with three leaflets that are lobed or toothed to varying degrees, but generally resembling white oak
  - Can grow as a vine up to 100' long and 7" thick, a large bush 13' high, and many forms in between
  - Leaves and stem are coated in urushiol, which causes an itchy, painful contact dermatitis in most humans
  - Develops colorful foliage in the Fall before the leaves drop

### Wildlife and Human Uses:

- Mammals including deer and squirrels feed on the foliage
- Many species of birds eat the greenish-white to tan fruits
- It is also host to multiple species of moth and butterfly







Top photo: Alycia Matz Bottom photos: Morgan Cantrell

### California Poppy - Eschscholzia californica

- Habitat: Grasslands, chaparral, coastal prairies, open slopes
- Description:
  - Grows 2"-2' tall and 1'-2' wide
  - Flowers are yellow to orange with four petals, blooms Feb.-Sept.
  - Petals close at night or in cold, cloudy weather
  - Leaves are waxy, pale, and blueish-green, with round, lobed segments
  - Fruit is a slender capsule about 1.5"-3.5" long, which splits in two to release numerous small black or dark brown seeds



- Food and habitat for birds, small herbivores, butterflies, bees, and other pollinators
- Native Americans use it for food and medicine; some tribes cook it as a vegetable; others use it to treat illnesses and as a sedative



Photo: Alycia Matz

### Orange Bush Monkeyflower - Diplacus aurantiacus

- Habitat: Woodlands, chaparral
- Description:
  - Grows as a shrub up to 5' tall
  - Flowers are typically a bright orange, but range from white to red, with five petals coming from a tubular base

#### Wildlife and Human Uses:

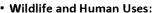
- Host to ~10 species of moth and butterfly and is a key host for Variable Checkerspot and Common Buckeye butterflies
- · Hummingbirds use the plant for nectar
- Miwok and Pomo used the plant medicinally to treat sores, burns, and other minor ailments



Photo: Alycia Matz

### Woolly Indian Paintbrush – Castilleja foliolosa

- Habitat: Chaparral, rocky desert and mountain slopes
- Description:
  - Grows up to 2' tall and 2' wide
  - The "flowers" are colorful leaves, typically a bright red, with nondescript green flowers nestled within them
  - Blooms Jan.-July
  - It is hemiparasitic, meaning it parasitizes other plants while also providing some of its own energy through photosynthesis to several bushes, including coastal sage and chamise



Host to ~15 species of moth and butterfly



Photo: Alycia Matz

Top photo: truthsegr via iNaturalist Bottom photo: dmansb via iNaturalist

### California Buttercup – Ranunculus californicus

- Habitat: wet meadows, grasslands, oak woodland
- · Description:
  - Herbaceous perennial sprawling 7 to 25 " long
  - Leaves: deeply lobed or compound
  - Flowers: 9-17 petals waxy yellow, ¼ ½" long; sepals 5, reflexed, stamens exerted prominently
  - Requires moist soils of cooler slopes and flat

#### Wildlife and Human Uses:

- Flowers support a wide variety of bees, butterflies and other insects attracted to nectar and pollen
- Seeds can be ground into a powder and used as a soup flavoring or incorporated into breads

### Milkmaids – Cardamine californica

- Habitat: Woodlands, grasslands, chaparral
- Description:
  - Grows to 12" tall
    - A group of flowers grows on a spike and are ½" in diameter and white (occasionally pale pink)
    - Blooms December-May
    - Leaves are compound with three leaflets arranged perpendicularly

#### Wildlife and Human Uses:

- All parts of the plant are edible, with a peppery taste similar to horseradish
- Host to at least three moth species: the Sara Orangetip, White-Lined Sphinx, and Margined White



Photo: Alvcia Matz

### Smooth Mule-ears – Wyethia alabra

- Habitat: Grasslands, chaparral, oak woodlands
- Description:
  - Herbaceous perennial growing up to 16"
  - Leaves are 10-18" long, oblong, shiny, smooth to fine hairs
  - Flowers are daisy-like, outer green leafy bracts on inflorescence base is 1.5-2.75"; has generally longer than 1-2" yellow ray flower pedals
  - Generally shady sites on woodland and chaparral edge

#### Wildlife and Human Uses:

- Flowers support a wide variety of bees, butterflies, moths and other insects attracted to nectar and pollen
- Larval food source (host) for the painted lady butterfly (Vanessa cardui)
- Native Americans use seeds in pinole or eat them fresh



Top photo: steven via iNaturalist Bottom photo: richandtonig via iNaturalist

Photo: Alycia Matz

### Douglas Iris - Iris douglasiana

- Habitat: Coastal prairies, grasslands, live oak woodlands
- Description:
  - Grows between 6"-32" tall with two or three flowers per stem
  - Leaves are around 0.8" wide and bitter-tasting
  - Purple flowers are typical, but yellow and white varieties are also common; blooms February-June
  - Flowers are characterized by their radial symmetry, with three large sepals growing downward and three petals rising upward
  - Grows mainly at lower elevations, but found up to 3000'

#### • Wildlife and Human Uses:

- Host to at least three species of moth: White-Lined Sphinx,
   American Ear moth, and Verbena Bud moth
- · Unpalatable to deer, cattle, and humans

### Western Blue-eyed Grass - Sisyrinchium bellum

- Habitat: Grasslands, woodlands
- Description:
  - Grows in clumps, usually 1'-2' tall
    - Perennial herb; summer semi-deciduous
    - Flowers are about 1" across and purplish-blue (occasionally white) with yellow centers; blooms January-July; flowers close when cloudy
  - Leaves are grass-like and narrow

#### • Wildlife and Human Uses:

- Birds may eat the seeds
- Attractive to pollinators, such as bees and butterflies
- Pomo and Kashaya use root infusions for upset stomach, heartburn, and ulcers; Costanoan peoples use an extract to treat chills



Photo: Alycia Matz

### Silver Bush Lupine – Lupinus albifrons

- Habitat: Woodlands, chaparral, grasslands, meadows
- Description:
  - A large, perennial, evergreen shrub growing 2'-3' wide and 3'-5' tall
  - Prefers rocky or sandy soils with good drainage
  - Violet flowers grow on stalks up to 12" long
  - Blooms January-June
  - The compound leaves have a silvery hue and a feathery texture

#### • Wildlife and Human Uses:

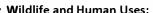
- Pollinated by bees and is host to ~60 species of moth and butterfly, including the endangered Mission Blue butterfly
- The seeds are eaten by multiple bird species



Photo: Alycia Matz

### Blue Dicks – Dipterostemon capitatus

- Habitat: Grasslands, hardwood and coniferous forests, chaparral
- Description:
  - Grows on a thin stalk up to 24"
  - Inflorescence consists of 2-15 flowers: blooms January-June
  - Flower color ranges between pale blue, purple, pink, and white
  - Grows from small corms that may lay dormant for years before a fire or other disturbance creates an opening



- The corms are edible and were a significant source of carbohydrates for many Native American peoples, who helped maintain their abundance through burning and various propagation methods
- Many animals including bears, deer and rabbits also eat the corms



Photo: Alycia Matz

### Ithuriel's Spear – Triteleia laxa

- Habitat: Openings in forest or woodlands with sandy soil Description:
  - Grows 15"-20" from a single stalk
  - A spray of stems grows from the stalk at a single point, each with a six-petaled, purple-to-blue flower
  - Blooms March-July
  - Grows from a corm, an underground storage stem akin to a tuber



- The corm is edible and similar in taste to a potato
- The corms were cooked and eaten by Yukiah and Pomo Native Americans



Photo: Alycia Matz

### Pacific Hound's Tongue – Adelinia grande

- Habitat: Woodlands, chaparral in shady areas
- Description:
  - A flower stalk grows 12"-36" from a cluster of leaves (up to 6") around the base of the plant
  - The flowers are ½" in diameter, deep blue with a white center with a cluster on each stalk
  - Blooms December-June
  - The fruits appear as groups of four bristly nutlets

#### Wildlife and Human Uses:

- It is host to at least three species of moth, including the Wild Forget-Me-Not and White-Lined Sphinx
- Some Native American groups used the root medicinally



Photo: Alvcia Matz

### Canyon Liveforever – Dudleya cymosa

- Habitat: Cliffs and rock outcrops
- Description:
  - Fleshy, pointed leaves grow in a spiraling rosette
  - Grows 3.6"-6" tall and 4"-6" wide
  - Leaf color varies by sun exposure from pale gray-green to deep red-orange
  - A cluster of yellow-to-red flowers grows on an erect stalk up to 17" tall
  - Requires very little water, especially during the summer

#### • Wildlife and Human Uses:

- Flowers provide nectar to humming birds
- Host to multiple species of moth and butterfly
- · Threatened by human poaching



Photo: Alvcia Matz

### Checker Lily - Fritillaria affinis

- Habitat: Oak and coniferous woodlands
- Description:
  - Grows 4"- 47" tall
  - The common subspecies has highly variable, strongly mottled yellow-green and purplish-brown, nodding flowers
  - A subspecies found only in Marin county has flowers with more subtle mottling and an overall darker color
  - Blooms Jan.-July

#### • Wildlife and Human Uses:

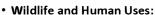
- Both the roots and bulb are edible raw or cooked and were eaten steamed by multiple Native American groups, including many Salish peoples
- Host to the White-Lined Sphinx moth



Photo: Morgan Cantrell

## Soap Plant - Chlorogalum pomeridianum

- Habitat: Rock bluffs, grasslands, chaparral, open woodlands
- Description:
  - Grows around 3' tall and 1.5' wide
  - Flowers grow on a long, thin stem and are small and white; only open in the late afternoon or evening
  - Leaves grow from the base of the plant; edges are usually wavy
  - Grows from a bulb which is brown, about 3-6" in diameter, and covered in thick, coarse fibers



- Provides food and habitat for native bees, hover flies, and butterflies
- Native Americans use the bulb to make soap, and the fibers surrounding the bulb can be used for scrubbing; Miwok and Chumash roast and eat the bulb as a winter food



Top photo: cris via iNaturalist Bottom photo: Jason Cantley via iNaturalist

### Miner's Lettuce, Rooreh – Claytonia perfoliata

• Habitat: Moist forests, streambanks

- Description:
  - Grows several ¼"-12" stems from a single rosette
  - Young, basal leaves are heart-shaped, while flowers grow above a pair of fused leaves that resemble a single, circular leaf
  - Flowers are small and white with five petals

#### • Wildlife and Human Uses:

- Miner's Lettuce (Rooreh) is edible except for the roots with a taste and texture resembling lettuce or spinach
- The common name Miner's Lettuce came from its consumption by miners to prevent scurvy
- Can be eaten raw or cooked



Photo: Alvcia Matz

### Maidenhair Fern – Adiantum jordanii

- Habitat: Shaded woods, moist rock outcrops
- Description:
  - Up to 2'-3' wide, individual fronds can grow to 18"
  - Fronds are composed of many rounded, lobed segments connected by a dark stem
  - The underside of each lobe has 1-4 sori, the spore-releasing organs of ferns
  - Will stay evergreen or go dormant depending on water availability
  - Desiccated fronds can recover after rain

#### Wildlife and Human Uses:

· Host to the White-Lined Sphinx moth



Photo: Alycia Matz

### Western Sword Fern – *Polystichum munitum*

- Habitat: Moist coniferous forests
- Description:
  - Fronds grow 1.6'-5.9' tall in a tight, radially spreading clump
  - Pinnae alternate sides of the frond stalk and are 0.39"-5.91"
  - Edges of pinnae are serrated and have an upward-pointing lobe at the base
  - After fronds die, they remain attached to the rhizome

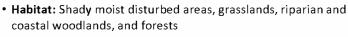
#### • Wildlife and Human Uses:

- Coast Salish people in the Pacific Northwest use the fronds as a topical analgesic
- The rhizomes were roasted, peeled, and eaten by many Native American groups
- Fronds were also used to fill mattresses and line fire pits



Photo: Alycia Matz

### Broadleaf Forget-Me-Not - Myosotis latifolia



#### • Description:

- Invasive non-native herbaceous annual or perennial to 2' tall
- Native to northwestern Africa; introduced as a garden ornamental
- Stems are woody at base, green, erect above
- Leaves are 1"-7" long, narrow to broadly elliptic
- Flowers are blue to pink and funnel-shaped, with 5 petals
- · Seeds are persistent in the soil seed bank
- Forms dense patches by spreading lateral roots (rhizomes)
- Invader of the forest understory along roads and trails; once established, it spreads into less disturbed adjacent native plant communities and displaces them



Photo: elizevz via iNaturalist

### French Broom – Genista monspessulana

• Habitat: Grasslands, coastal scrub, chaparral, riparian areas, woodlands, and forests

#### • Description:

- Invasive non-native evergreen shrub; grows 3.5'-10' tall
- Native to southern Europe; introduced as a garden ornamental
- Leaves are 3-parted, green, silvery to reddish-gold, and hairy
- Flowers are pea-like, yellow; blooms late spring-early summer
- Fruits are pea pods, hairy, brown when dry; open in summer
- Seed are small, black, dispersed in summer; persist for years in the soil seed bank
- Displaces native plants and alters ecosystem composition
- · Limits wildlife movement and foraging
- · Increases fire fuels and fire risk
- Sprouts multiple stems following fire or cutting



Photo: frostykiwi via iNaturalist

### Scotch Broom - Cytisus scoparius

- · Habitat: Grasslands, woodlands, chaparral, forest edges
- Description:
  - Invasive, non-native evergreen shrub; grows 3.5'-10' tall
  - Introduced to California as an ornamental in the 1850s and used as an erosion control in the early 1900s before being recognized as a problem species
  - Flowers are bright yellow and pea-like, often with red on the lower petals; blooms March-May
  - Fruits are hairy pea pods that dry in summer and twist open to explode, dispersing their seeds
  - Leaves are 3-parted and similar in appearance to, but much smaller than, French broom leaves
  - Forms dense stands and crowds out native species, changes soil composition by fixing nitrogen



Photo: Chuck Wilson via iNaturalist

### Pride-of-Madeira - Echium candicans

- Habitat: Coastal bluffs, hillsides, other sunny, open areas
- Description:
  - Large herbaceous perennial shrub; grows 5'-8' tall
  - Native to Madeira and the Canary Islands; introduced as a garden ornamental and still commonly planted today
  - · Stems are woody, with light gray bark
  - Leaves are gray-green, long, narrowed, and tapered to the tip
  - Flowers are blue or purple; occur in cylindrical clusters up to 20"
  - Produces copious amounts of seed, which may lend to its escaping cultivation and become established in native plant communities, displacing them
  - While noted for its drought-tolerance and use by pollinators, continued use in gardens should be considered carefully



Photo: giffomancer via iNaturalist

### Italian Thistle - Carduus pycnocephalus

- Habitat: Disturbed areas, grasslands, woodlands
- Description:
  - Invasive non-native herbaceous annual 8"-6.5' tall
  - Native to southern Europe, northern Africa, western Asia
  - · Stems are fleshy, winged with spines, wooly hairs
  - Leaves are 4"-6" long; green with wooly hairs
  - Flowers occur in clusters of 2-5; spiny, wooly hairs, pink to purple petals; blooms February to July
  - Seeds are typically dispersed short distances by wind
  - Invader along roads, trails; once established, spreads into less disturbed adjacent native plant communities
  - Growth in oak woodland understory can increase wildfire risk
  - Dense rosette of leaves at base crowd native plants
  - Nectar and pollen supports bees, butterflies and other insects



Photo: ark234 via iNaturalist

### Yellow Star Thistle – Centaurea solstitialis

- Habitat: Disturbed areas, grasslands, chaparral, prairies, riparian areas
- Description:
  - Invasive non-native herbaceous annual up to 3.5' tall
  - Native to southern Europe, likely accidentally introduced
  - Stems are stiff and wiry, with winged extension of leaves
  - Leaves are gray to bluish-green with fine white, cottony hairs
  - Flowers are a tuft of narrow yellow petals above an oval, green, spine-covered bud, spines up to 1"; blooms April to September
  - About 10-50 seeds per flower; form a cottony white tuft
  - Invader along roads, trails; once established, spreads into less disturbed adjacent native plant communities and displaces them
  - Deep taproot competes with native grasses for soil moisture
  - Flower spines can limit wildlife/livestock movement and foraging
  - Nectar and pollen supports bees, butterflies and other insects



Photo: norikonbu via iNaturalist

### California Golden Chanterelle – Cantharellus californicus

- · Habitat: Mixed oak forests and woodlands
- Description:
  - Grows from the soil in a symbiotic, mycorrhizal association with oaks, especially coast live oaks; most common November-Aprril
  - Cap averages 2"-12" wide and grows in a fluted shape
  - Has false gills (decurrent ridges, i.e. they extend downward) and cross-veins
  - Yellow-orange color, may brown with age; white inner flesh
  - A choice edible mushroom, but can be easily confused with the poisonous Western Jack-O-Lantern mushroom; three differences are the Jack-O-Lantern grows on dead wood, has true gills, and orange inner flesh



### Turkey Tail - Trametes versicolor

- Habitat: Mixed oak forests and woodlands
- Description:
  - · White-rot fungus growing on dead wood of deciduous trees, particularly oaks
  - Fruiting body is shelflike, thin, and leathery when fresh, ridged and slightly flexible when dry
  - Cap is fan-shaped, 1"-4", 0.2"-0.4" thick, flat or wavy; surface is dry with fine hairs; lower surface is whitish to light brown with minute pores
  - Stalk is absent
  - Colors are in concentric zones of light and dark white, gray, brown, yellow or black, margin lightest, may have green algae
  - Breaks down lignin in wood, initiating decay processes leading to soil formation



Photo: Lewis Randall

### Sudden Oak Death – Phytophthora ramorum

- Habitat: Mixed oak forests and woodlands
- Description:
  - Sudden Oak Death (SOD) is a disease affecting many species of native hardwood trees, particularly oaks
  - Symptoms include bleeding cankers on the tree's trunk and dieback of foliage, in many cases leading to the death of the tree
  - SOD is caused by an infection of the single-celled organism Phytophthora ramorum
  - Phytophthora is an exotic species to which many California native plants are not adapted
  - Some ornamental and native tree and plant species may be infected by Phytophthora but are not killed or otherwise significantly affected. These hosts pass it to susceptible species
  - Millions of trees in California have died from SOD since first detected in the mid-1990's, altering forest composition and increasing fuel and fire risk



Top photo: kerrywininger via iNaturalist Bottom photo: edwardrooks via iNaturalist

14

Photo: Alycia Matz

Photo: Terence Zahner via iNaturalist



Photo: Alycia Matz

### American Crow - Corvus brachyrhynchos

- Habitat: Woodlands, farmland, shores, urban areas
- Description:
  - Average length is 15.8-21"; wingspan is 33.5-39.4"
  - Large and thick-necked, with a straight bill
  - · All black with iridescent feathers
  - Tail is rounded or squared off at the end

#### Behavior:

- Very intelligent; capable of using tools to obtain food
- Sociable; often seen in groups
- Call is a loud, short, and rapid caaw-caaw-caaw
- Diet is omnivorous; includes seeds, fruits, grains, eggs, fish, invertebrates, carrion, and scraps of human food

### California Scrub-Jay – Aphelocoma californica

- Habitat: Coniferous and deciduous woodlands, grasslands, chaparral, pastures, urban areas
- Description:
  - Average length is 11.0-11.8"; wingspan is 15.3"
  - Blue head, wings, and tail with a gray-brown back; whitish underside with a blue necklace
  - Straight, black beak; black eyes with a white eyebrow

#### • Behavior:

- · Seen foraging in pairs or in small groups
- Stores food in scatter caches within its territory
- Call is a loud jayyy or jree; in flight, it's a long series of check-check notes
- Diet includes lizards, frogs, insects, bird eggs, grains, nuts, and berries

### Turkey Vulture – Cathartes aura

- Habitat: Grasslands, shrublands, farmlands, suburban areas
- Description:
  - Average length is 25.2-31.9"; wingspan is 66.9-70.1"
  - Black and dark brown feathers with a featherless red head and pale bill
  - Undersides of its flight feathers are paler
  - When in flight, its wings look like a 'V'

- Roosts in large community groups
- Will stand spread-winged to dry and warm up
- Lacks a vocal organ (syrinx) that other birds have; limited to grunting or low hissing noises
- A scavenger; diet is primarily carrion

Photo: mayoung01 via iNaturalist

### Great Horned Owl - Bubo virginianus

 Habitat: Deciduous and evergreen woodlands, prairies, coasts, deserts, urban areas

#### • Description:

- Average length is 18.1-24.8"; wingspan is 39.8-57.1"
- Large, barrel-shaped body, with two feathered head tufts
- Mottled gray-brown feathers, with a reddish-brown face and a white throat patch
- Wings are broad and rounded

#### Behavior:

- · Most active at night
- Can fly silently due to its wing structure
- Call is a loud, low-pitched ho-ho-hoo hoo
- Diet includes mammals, primarily rabbits and rodents; also eats birds, reptiles, amphibians, and invertebrates

### Red-shouldered Hawk - Buteo lineatus

• Habitat: Deciduous woodlands, riparian areas, suburban areas

#### · Description:

- Average length is 16.9-24"; wingspan is 37-43.7"
  - Wings are broad and rounded; tail fans out when soaring
  - Brown and white checkered wings; red barring on the breast
- Tail is black with narrow white bands

#### • Behavior:

- Often soaring over forests or on a perch
- · Has both good vision and good sense of hearing
- Call is a rising, whistled kee-rah
- Diet includes small mammals, amphibians, reptiles, fish, other birds, and insects



Photo: benjchristensen via iNaturalist

## Red-tailed Hawk – Buteo jamaicensis

 Habitat: Grasslands, coniferous and deciduous woodlands, farmlands, suburban areas

#### • Description:

- Average length is 17.7-25.6"; wingspan is 44.9-52.4"
- Brown feathers above and pale below, with a streaked belly;
   dark brown bar on underside between shoulder and wrist
- · Tail is rufous brick-red on top and paler orange below

- · Soaring is its most efficient flight method
- Often perching in a tree or telephone pole
- Call is a scream described as kree-eee-ar or sheeeeee
- Diet includes small mammals; occasionally birds, reptiles, amphibians, fish, and invertebrates



Photo: nordsman via iNaturalist



Photo: Sam Rawlins via iNaturalist



Photo: paulgbarnett via iNaturalist



Photo: Thomas Koffel via iNaturalist

### California Quail - Callipepla californica

- Habitat: Chaparral, woodlands, sagebrush, urban areas
- Description:
  - California's state bird
  - Average length is 9.4-10.6"; wingspan is 12.6-14.6"
  - Plump, short-necked, with a small head and bill
  - · Has a crest on its head
  - Males have a gray-blue chest and a scaled black and white belly; females are more gray-brown

#### • Behavior:

- A very social bird; gathers in small flocks called covevs
- Forages on the ground by scratching around for food
- Call is three syllables; sounds like Chi-ca-go
- Diet includes seeds, leaves, berries, and insects

### California Towhee - Melozone crissalis

- Habitat: Chaparral, woodlands, suburban areas
- Description:
  - Average length is 8.3-9.8"; wingspan is 11.4"
  - Dull brown, with a rust-colored patch under the tail
  - Short, rounded wings, long tail, and thick beak

#### • Behavior:

- Usually stays on the ground, close to the protection of low shrubs and trees
- Often seen both alone and in pairs
- Call is a single-note heard as tseek, tsip, or cheet
- Diet includes seeds, grasses, herbs, and insects

### Western Bluebird – Silia occidentalis

 Habitat: Coniferous and deciduous woodlands, farmlands, urban areas

#### • Description:

- Average length is 6.3-7.5"; wingspan is 11.4-13.4"
- Stocky thrush with a thin, straight bill
- Males have vibrant blue feathers while females' feathers are gray-buff; both have rust-orange breasts and whitish bellies

- A social bird; often seen feeding in flocks
- Uses trees for nesting cavities and as a hunting perch; will also nest in bird boxes
- Calls sounds like cheer, chur-chur, or chup
- Diet includes insects, worms, berries

Photo: John Dumbacher via iNaturalist

Photo: Alycia Matz



Photo: mayoung01 via iNaturalist

### Chestnut-backed Chickadee – Poecile rufescens

 Habitat: Coniferous and mixed coniferous forests, suburban areas

#### · Description:

- Average length is 3.9-4.7"; wingspan is 7.5"
- Large-head and small-billed, with a long, narrow tail and short, rounded wings
- Black and white head feathers with a rich brown back and gray wing and tail feathers

#### • Behavior:

- Very active; will bounce around small limbs and twigs, or even hang upside down
- Will flock with other passerines in winter, such as kinglets and nuthatches
- · Diet includes insects, seeds, and fruit

### Dark-eyed Junco - Junco hyemalis

- Habitat: Woodlands, fields, parks, suburban areas
- Description:
  - Average length is 5.5-6.3"; wingspan is 7.1-9.8"
  - Rounded head with a short, stout bill and long tail
  - Color varies regionally; here, the "Oregon" junco is common, with a dark hood, warm brown back, and rufous flanks
  - Males have darker, more conspicuous markings

#### • Behavior:

- Tends to stay on the ground, hopping around bases of trees and shrubs, or on grassy areas
- Call is a high pitched, rapid tick or tiitii; a tsick call is used to keep track of its flock or to warn of danger
- · Diet includes seeds and insects

### Oak Titmouse - Baeolophus inornatus

 Habitat: Oak woodlands, pine or juniper woodlands, suburban areas

#### • Description:

- Average length is 4.5-5.5"; wingspan is 7.5"
- Darker gray-brown above and lighter gray white below
- Short, stubby bill, short head crest, and a mediumlong tail

#### Behavior:

- Active bird that's constantly in motion
- Seen in pairs or small groups, but doesn't form flocks
- Call is a rapid, scratchy tsicka-dee-dee
- Diet includes insects, spiders, berries, acorns, and seeds

## Anna's Hummingbird – Calypte anna

• Habitat: Woodlands, savannahs, coastal scrub, suburban areas

### Description:

- Average length is 3.9"; wingspan is 4.7"
- Green and grav feathers; males have iridescent reddish-pink feathers on the head and throat
- · Long, straight, thin bill



- Solitary and territorial
- During courtship, males will fly up to 130' and dive toward the ground; its tail feathers will make a popping noise
- Call is scratchy and metallic chip or chee-chee-chee
- Diet includes nectar from flowering plants and insects



Photo: Alycia Matz

### Acorn Woodpecker – *Melanerpes formicivorus*

- Habitat: Oak woodlands, evergreen-oak forests
- Description:
  - Average length is 7.5-9.1"; wingspan is 13.8-16.9"
  - Mostly black feathers with a mottled white and black belly
  - Has a red cap, white face patches, white eyes, and a black patch around the bill



- Very social; live and breed in large groups
- Family groups gather large numbers of acorns, storing them in tree trunks, telephone poles, and buildings which are referred to as "granaries"
- Calls is a raucous waka-waka that sounds like it's laughing
- Diet includes acorns, insects, sap, seeds, and fruits

Photo: nutsaboutkitties via iNaturalist

### Downy Woodpecker – Dryobates pubescens

• Habitat: Woodlands, orchards, suburban areas

#### Description:

- Average length is 5.5-6.7"; wingspan is 9.8-11.8"
- White and black striped head; males have a red spot
- Straight, pointed, black bill
- Back feathers are black with a white stripe down the center: underside is white



- Often seen on tree limbs and trunks, drumming with its bill in search of food
- Has a distinctive rising-and-falling flight style
- Call is a rattling, repetitive pik-pik-pik
- · Diet includes insects, seeds, and berries



Photo: Kim Cabrera via iNaturalist



Photo: Marshal Hedin via iNaturalist

Photo: Ad Konings via iNaturalist



Photo: Mary K. Hanson via iNaturalist

### Bobcat - Lynx rufus

 Habitat: Brushlands, woodlands, semideserts, wetlands, mountains, urban edges

#### • Description:

- Can reach a body length of up to 50"
- Fur is brown or beige, with spots or lines in black or dark brown
- It has a black-tipped, stubby (or "bobbed") tail

#### Behavior:

- It is crepuscular, with most hunting occurring before sunrise and after sunset
- Primarily solitary animals and can get highly territorial against others of its kind
- Can reach speeds up to 34 mph and can swim
- Diet includes rabbits, rodents, deer, insects, and birds

### Coyote- Canis latrans

 Habitat: Grasslands, mountains, woodlands, wetlands, urban areas

#### • Description:

- Average length is 3' 3"- 4' 5"; tail length is about 16"
- Fur colors are a mix of gray, tan, and reddish brown
- Generally smaller than a gray wolf, but ears are longer

#### • Behavior:

- More active around evening than during the day Vocalizations include barks, yips, howls, and whines
- Hunt individually, in pairs, or with a family group
- Diet includes mammals such as small rodents, other animals such as snakes and birds, large insects, grasses, berries, and carrion

### North American River Otter - Lontra canadensis

• Habitat: Rivers, streams, creeks, coasts, lakes, swamps

#### • Description:

- Average length is 26-42", with its tail comprising about one-third of that length
- Has thick, waterproof fur, usually brown in color but also in tones of white, gray, and black

#### Behavior:

- Most active from dusk until dawn, but may be more commonly seen in the day during the winter
- Can either live solitarily or in family groups
- Play strengthens social bonds and is used for practicing hunting techniques
- Diet includes amphibians, turtles, fish, crayfish, crabs, and other invertebrates; occasionally aquatic plants



Photo: Alycia Matz





Top photo: Lorri Gong via iNaturalist Bottom photo: cookiebongster via iNaturalist



Photo: Cricket Raspet via iNaturalist

### Columbian Black-tailed Deer Odocoileus hemionus ssp. columbianus

• Habitat: Forest edges, grasslands, suburban areas

#### • Description:

- Average height is 31-42", average length is 3.9-6.9'
- Tannish-brown, with a tail that looks dipped in black
- Fawns have a spotted coat
- Males' antlers start growing in April and are shed beginning in January, after the end of the mating season

#### · Behavior:

- Most active at dawn and dusk
- Females and offspring typically stay in groups, while
- bucks will either group together or remain solitary
   Diet includes Douglas fir, poison oak, grasses, ferns, berries, lichens, and forbs

### Dusky-footed Woodrat - Neotoma fuscipes

Habitat: Oak woodlands, riparian areas, chaparral, mixed coniferous forests

#### • Description:

- Average length is 14-18", including its tail
- Fur is brown and gray
- Has long whiskers, rounded ears, a furry tail, and darkcolored feet, hence its common name

#### Behavior:

- Active during the night
- Builds conical nests made of sticks, bark, and other plant material that range from 2-8' tall
- Nests offer space for shelter, nursing, and storing food
- Diet includes leaves, seeds, fruits, fungi, nuts, and occasionally insects

### Sonoma Chipmunk – Neotamias sonomae

 Habitat: Coniferous forests, oak woodlands, chaparral; mostly limited to Marin and Sonoma counties

#### • Description:

- Average length is 8.5-10.5"; about half is its tail
- Fur is brown, with five alternating blackish-brown and white stripes running the length of its body
- Has darker, duller fur in winter than in summer

- Active during the day; usually solitary
- Usually lives and makes burrows on the ground, but can also climb and nest in trees
- Stores food in its cheek pouches and in burrows
- Makes a high-pitched call in response to threats
- · Diet includes seeds, herbs, fruits, insects, and eggs

Photo: reptipods via iNaturalist

## Pacific Gopher Snake – *Pituophis catenifer* catenifer

 Habitat: Deserts, prairies, grasslands, shrublands, woodlands, savannahs, farmlands, marshes

#### · Description:

- Length ranges from 3-7'; most are 4-5'
- Color ranges from yellow to dark brown, with dark brown spots and gray on its sides
- · Head is narrow; lacks venom glands

#### Behavior:

- · Most active during the day
- Lives in a burrow, where it spends 90% of its time
- Will curl into a strike pose and shake its tail as defense mechanisms
- Diet includes small mammals, such as pocket gophers; birds, eggs, lizards, insects, and bats

## Western Fence Lizard – Sceloporus occidentalis

 Habitat: Grasslands, chaparral, woodlands, forests, farmlands

#### • Description:

- Ranges in length from 2-8", including the tail
- Usually brown, with black stripes on its back
- Bright blue belly and blue patches on the throat, though this is faint or absent in females

#### • Behavior:

- Active during the day
- Uses its fast reflexes, including biting and breaking off its tail, to avoid predators
- Often seen "doing pushups" or bobbing its head to claim territory or court mates
- Diet includes spiders and insects

### Western Skink - Plestiodon skiltonianus

• Habitat: Grasslands, chaparral, woodlands

#### • Description:

- Average length is 4-8.25"
- Broad brown stripe down its back, with smaller black and beige stripes extending from nose to tail
- A juvenile skink's tail is bright blue and turns gray as it ages

- Active during the day but will hibernate in winter
- Cautious and agile; prefers to forage in dense vegetation
- Will shed its tail (called autotomy) to escape from predators and will regrow a new one
- Diet includes insects and spiders



Photo: Alycia Matz



Photo: Morgan Cantrell

### California Newt – Taricha torosa

 Habitat: Oak woodlands, chaparral, grasslands; ponds and streams for breeding

### Description:

- Average length is 5-8"
- Color is brown to gray, with a bright orange underside
- Skin is rougher than that of salamander



- Partly aguatic lifestyle; relies on water habitat for breeding
- Skin glands produce a strong toxin (only dangerous to humans if eaten, or if it comes in contact with a cut)
- Diet includes worms, slugs, other insects, and amphibian eggs and larvae, including of its own kind



Photo: yardsale via iNaturalist

### Foothill Yellow-legged Frog - Rana boylii

• Habitat: Forests, chaparral, woodlands; flowing streams and rivers with rocky substrates and open, sunny banks

### Description:

- Average length is 1.46-3.23"
- Gray, brown, and reddish on top; can be mottled or plain
- Yellow coloration under its legs, hence its common name
- Lacks an eye stripe; has horizontal pupils
- Skin is rough and bumpy



- Mostly active during daylight
- Metamorphoses from an egg, to a tadpole, to an adult
- Tadpoles' diet includes algae, diatoms, and detritus: adults' diet includes insects such as flies and snails



## Sierran Treefrog – Pseudacris sierra

• Habitat: Forests, grasslands, farmlands, chaparral, suburban areas; ponds, lakes, marshes, and reservoirs for egg-laying and breeding

### Description:

- Average length is 0.75-2"
- Occur in all shades of greens and browns
- Large eyes with a wide, dark stripe through the middle of them that extends from the nostrils to the shoulders
- Smooth, moist skin



- Active day and night; nocturnal during dry periods
- Metamorphose from eggs, to tadpoles, to adults
- Diet includes spiders and insects; tadpoles eat algae, bacteria, and protozoa





Top photo: Erica Fleniken via iNaturalist Bottom photo: Alex Lee via iNaturalist



Photo: Morgan Cantrell



Photo: Oscar Moss via iNaturalist



Photo: Grigory Heaton via iNaturalist

### Arboreal Salamander – Aneides lugubris

- Habitat: Oak and sycamore woodlands, chaparral
- Description:
  - Average length is 2.6-3.9"
  - Color is purplish-brown, often with gold spots on top
  - · Large head with sharp teeth
  - Large toes and a prehensile tail

#### Behavior:

- · Active at night
- Lungless; breathes through its skin
- Often found under leaf litter or in tree cavities; needs areas with plenty of moisture
- Skilled at climbing
- Diet includes insects and seldom other salamanders

### California Giant Salamander Dicamptodon ensatus

- Habitat: Wet coastal forests, riparian areas; lakes, ponds, rivers, and streams for breeding
- Description:
  - Average length is 6.7-12"
  - Coloration is marbled, with dark brown blotches on a light brown background
  - Broad head and body, with a short, flattened tail

#### · Behavior:

- Partly aquatic lifestyle; larvae start life in water and metamorphose into adults who live on the ground
- Capable of vocalizing when threatened; sounds barklike
- Diet includes snails, slugs, insects, small rodents, other amphibians, and aquatic invertebrates

### California Slender Salamander Batrachoseps attenuatus

 Habitat: Coniferous and deciduous forests, grasslands, riparian areas, suburban areas

#### • Description:

- Average length is 2.7-5"
- Brown or black body with a red-brown stripe on its back
- Narrow head and body

- Most active fall to spring; will aestivate (similar to hibernate) during the summer when it's hot and dry
- · Lungless; breathes through its skin
- Often found under leaf litter, rotting logs, or rocks
- · Diet includes mites, spiders, and snails

## Additional Resources

Additional resources abound for identifying and learning more about the species around us. While not an exhaustive list, the following resources may prove useful in expanding one's knowledge:

**iNaturalist:** a free app that helps users identify species, as well as the ability to connect with a community of scientists and naturalists

**Calflora:** a website for learning about plants growing in the state, including a "What Grows Here?" tool

**California Native Plant Society:** offers resources on plant ID, tour and workshop opportunities, and more, plus field guides for purchase

**Jepson eFlora:** a digital database entailing the taxonomy, distribution, photos, and ID keys for native and naturalized vascular plants of CA

**PlantID:** a website for identifying and learning about CA wild plants

**CAL-IPC:** has guides for identifying invasive plants, invasive plant research and risk assessments, control methods, and more

**MykoWeb:** an internet hub for descriptions and photographs of California's fungi, plus other articles and resources

**All About Birds:** a website managed by the Cornell Lab that has bird ID info, live cams, courses, and more; their Merin ID app helps users learn how to ID birds by sight and sound

**CaliforniaHerps:** a website with photo indexes, identification info, range maps, and more for both native and non-native herpetofauna

**Butterflies and Moths:** a website for sharing and collecting data about butteaflies and moths across North America

**California Natural History Guides:** Print offerings through University of California Press, covering everything from natural history of the San Francisco Bay to field guides on owls, spiders, ferns, and more



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