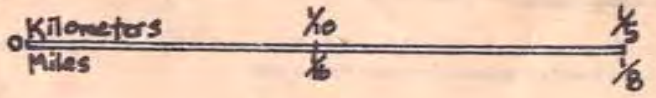
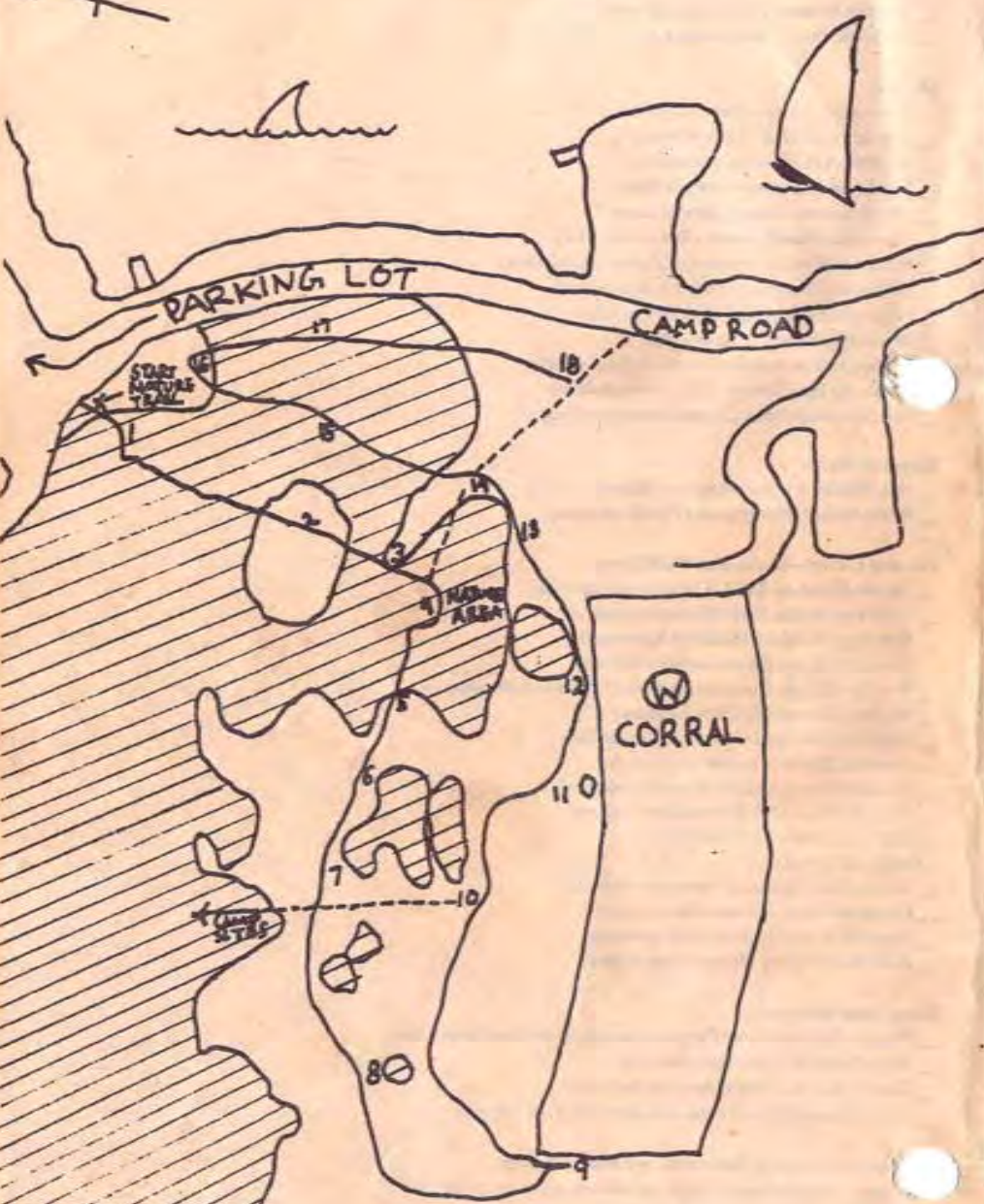


Finney Valley

# Nature-Ecology Trail



The Revised and Expanded



# Wente



# Nature



# Guide





## introducing the Wenté Nature Guide

The Wenté Nature Guide was designed to be an overview of the basic plants and animals that make up Wenté's ecosystem. First produced in 1992, it has been revised and expanded in 1993. This book should be particularly useful to scouts working on nature merit badges, such as bird study, reptile study, mammals, forestry, and particularly environmental science. These self-guided nature trail text now includes explanations of the terms required for environmental science merit badge. All scouts taking this merit badge are expected to do the trail.

This booklet is *not* meant to serve as the only nature reference or source on information on life at Wenté. Instead, this guide is best used as a starting place for building familiarity with organisms seen at camp. We hope that this guide can function as a companion for any commercial field guides you might have. (For commercial guides, we recommend the Roger Tory Peterson series or the Golden Field Identification Guides.) All the organisms in this guide have been identified by sight or other sign within the bounds of camp from spring 1991-spring 1993. A species checklist at the end of the guide functions as an index. If you sight, or find signs of, any organism at Wenté not currently included, please let the Nature Staff know so that we can add the organism to our list of life at Wenté.

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PRODUCED BY THE NATURE STAFF 1991-1993 (S.A.B.C.B.)

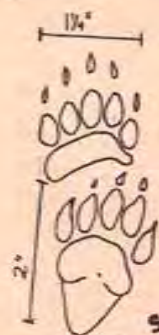
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BLACK BEAR



BUCKEYE BUTTERFLY



Elizabeth Kwan



# Finney Valley Ecology Trail

(Map on back cover)

## Post #1. The Wente Woods

Welcome to the Wente Woods!

As you follow this trail you will discover many features of our forest here. Before you are the Ponderosa Pine, Manzanita, and Madrone. Above you are branches of Douglas Fir. You will become familiar with these trees and others on our trail. These trees are an important part of the Wente Woods *Environment*.

The environment is the home in which any organism (animal, plant, or fungus) lives. The environment includes non-living things, such as sunlight, water, soil, and climate, in addition to the living surroundings, such as the trees and other animals. Life is made possible by the complex relationships between each organisms and the parts of its environment. For example, you might see a Western Gray Squirrel in this forest environment, in which trees provide shelter from the hot sun and hiding places from predator as well as food. *Ecology* is the science which studies the interaction between organisms and their environments.

## Post #2. Plant Succession

While there are many large trees in this forest, it is not a virgin (unlogged) forest. This clearing filled with grasses and Manzanita, once covered with trees, shows that the side has not recovered from logging done here over thirty years ago. The fertile forest soil eroded and dried up when the shelter of the trees was removed. However, clearings like these provide foraging opportunities



for Mule Deer and Wild Turkey.

This clearing is gradually undergoing changes called *Plant Succession*: first grasses grow on soil made bare by fire, erosion, or logging. These grasses provide food for certain animals which after eating fertilize the soil. The roots of the grass prevents erosion and eventually the soil improves until shrubs grow. These shrubs shelter the soil and add further nutrients to the soil from their fallen leaves. Finally trees can again sprout in the shelter of the shrubs and overtime replace them, becoming a tall forest, called a climax forest, like in the nature area.

Looking across this clearing you will see a large tree, the Ponderosa Pine. Notice that the needles of this tree are long and grow in clusters, the signs of a pine. Look closely, and you will see that there is a vine growing up this pine's trunk. Do you recognize it?

You should know that this vine is a plant called Poison Oak. This is something you should probably avoid, as you may already know. It is easy to tell this plant by its leaves, which grow in sets of three.

As you continue on this trail, make note of any Poison Oak that you might see. You will find that this plant takes many forms: ground



### Nature Trail Guide

cover, shrub, and vine. This plant is very hardy, and can live under many severe conditions with little sunlight or water, or much sunlight and much water.

Vines like the one on the tree before you are harmful to the trees on which they grow. They choke the life out of the tree by blocking sunlight from hitting the tree's lower branches. However, this plant, like all others, is still an important part in the environment. It provides food for California Quail and other small animals.

#### Post #3. Douglas Fir

The branches that stretch toward you are from a Douglas Fir, the dominant tree in most of Wente's wood. The trees you see only began growing in the late 1950s or 1960s and are already quite tall. Though an untrained eye might mistake these trees for being much older, they are only 30 to 40 years old! Because of this rapid growth and for the high quality of its wood, the Douglas Fir is one of the most important lumber trees west of the Mississippi. Notice the configuration of the needles on the twigs. The needles radiate in all directions. You will notice that they are attached singly. The best way to determine a Douglas Fir is by its cone which has small three pronged bracts that are said to look like little boy scouts signs.

The Douglas Fir is not actually a true Fir. Though it looks very similar to a Fir, an early explorer of the west, James Douglas, examined the trees and realized that the cones were different from every other Fir. Dou-

glas sent samples to London where a botanist studied them. The scientific name comes from that of the Botanist.

#### Post #4. Forked Treetop

If you look up at the treetops before you, you will notice one tree which is different. This tree splits towards the top. This unusual occurrence is a result of the tree's loss of its terminal bud. The terminal bud, located at the top of every tree, is the place where all the upward growth of the trunk occurs. Probably the bud was knocked off when a branch from the Black Oak above it fell. The tree's two lower buds both grew upwards competing for sunlight. Eventually, as you can see, one became the dominant bud. This is one example of how different members of an environment can affect each other



#### Post #5. Bracken Ferns

Before you, and scattered about under the eaves of the forest, is the Bracken Fern. Most ferns are moisture loving. While this fern is able to adapt more than most to the dry heat, it gains its moisture from spring run off on this hillside and from the extra moisture of the forest which is absent

### Nature Trail Guide

in the fields.

The Bracken Fern is perhaps the most versatile of ferns growing in climates from the subarctic to semi-tropical. Ferns are different from the other plants you see around you, because they do not flower or produce cones. In fact, ferns are an ancient kind of plant which existed even before dinosaurs. Ferns reproduce by spores (not by seeds) which are formed on the underside of their fronds (the fern equivalent of leaves). The spores are spread by wind and if they land in a suitable place they will grow into ferns.

#### Post #6. Oregon White Oak

The large tree beyond this post is the Oregon White Oak. You will notice that its leaves are deeply lobed with ends of the lobes smoothly rounded. If you look at the trunk of this tree you will find that its bark (underneath the moss) is a whitish gray.

The acorns of this tree are eaten by wildlife and livestock. Trees like this one scattered through hot dry fields provide important shelter for birds and other animals.

#### Post #7. California Black Oak

At first inspection, this tree resembles the last very closely, however, this is a different oak: the California Black Oak. Notice that the leaves of this tree are again deeply lobed, but this time the tips of the lobes end in thin, needle-like points. The bark of this tree is a much darker gray and sometimes almost black.

Both the Black and White Oak are hardy trees which you can find grow-

ing alone in the dry, rocky fields. Yet elsewhere you may sometimes find old oaks that are important parts of the forest as well.

The acorns of this oak were considered the best tasting by Native Californians.

#### Post #8. A Tree Parasite

Before you is another Black Oak. If you look at its branches you can find clumps of leaves and stems of a different color and shape, quite different from the leaves and branches of the oak. These green leaves are Mistletoe.

Mistletoe, which you are probably familiar with from holidays, is a parasite of oak trees. A parasite is an organism which damages another in order to survive. The mistletoe attaches to the oak's branches and sucks water and minerals out of the Oak for its own use; the Oak gets nothing in return.

Mistletoe berries and leaves are highly toxic to humans.

#### Post #9. Animal Erosion

You will notice on your left is a horse corral. As you can see the environment is very different within the corral. In the corral there are virtually no plants. The barren soil which you can see is a result of animal erosion. This exposed soil is now an easy victim for wind and water erosion. It can easily be blown away by wind or washed away by rain. As you can see the introduction of enclosed domestic animals can greatly alter the environment. Almost completely destroying what had been before.



### Trail Through the Field.

Now turn around and take the right trail to continue Nature Trail. As you walk along this trail through the tall dry grass, think about how this field environment is different from the forest you were in earlier. Is it hotter? Is there more wind? Compare the soil. Do you find the soil harder and rockier than in the forest? These are some of the ways that the prairie or field is different from the forest. As a result of the different climate and soil there are less trees, except for the occasional hardy oak or Madrone.

A field like this one is host to many different animals. Many species of small mammals, from the Black-Tailed Jack Rabbit to the Harvest Mouse, are found here. Gopher snakes are more common in these fields because the rodents they eat are more common in the prairie. In addition, the birds you will find flying over the prairie are different. You might see crows, or ravens, hawks, or vultures—birds you are not likely to see within the forest. If you are lucky, you might see a group of Wild Turkeys foraging in this field.

Stop and turn towards the view of the valley. You may notice lush green vegetation in the valley, as a result of a stream. Looking to the slopes on the other side of the valley, you may be able to see several tall dead trees. Dead trees like these are called snags. But they are still amazingly sturdy and very useful too. Snags serve as homes for squirrels, nesting places for many birds, and storage places for our

camp's native Acorn Woodpecker.

You can see that the other side of this valley, the northward facing slope is forested and much greener than the side you are on, the south facing slope. The south facing slope is more exposed to sunlight. (We are above the equator, so the sunlight shines from the south.) More intense sunlight and heat on the south-facing slopes makes a dryer climate. The north facing slope is less exposed to sunlight and is therefore damper, allowing more vegetation. In this case moisture is a *Limiting Factor*.

A Limiting Factor is anything which controls the populations of certain kinds of organisms. Because of the extra sunlight there is less moisture which prevents many trees and shrubs from growing; moisture is a limiting factor. Other important limiting factors include food, shelter, and predators.

### Post #10. Pacific Madrone

This large tree is the Pacific Madrone. You may notice the flaky brown bark peeling. Beneath this is a smooth light red bark. Madrones peel continually. The Pomo Indians of this area used the wood of the Madrone for lodge poles and for making tools.

This tree is an oasis in the hot fields of Wente. Take a moment to rest in the shade of this tree, if it is sunny. You will notice how cool it feels. Not only do trees block the hot sunlight, but they also cool the air around them through transpiration. Transpiration is a process in which leaves cool themselves by releasing water vapor, a process much like our own sweating.

### Post #11. Manzanita

This shrub is a Manzanita. You will notice it is similar to the Madrone. It has smooth red bark, though darker than the Madrone, which you may be able to find peeling. The Manzanita leaves are similar in shape to those of Madrone but are smaller and a different shade of green. You may see some small green to red berries on this chaparral shrub. These berries were used by California Indians to make cider, and then by settlers for Manzanita Jelly. Although these berries are edible, they don't taste very good unprepared.

### Post #12. First Growth Tree

Towering above you is a giant Douglas Fir which has been named "Big Jim." Big Jim is a first growth tree, which means that he was not cut down when most of the rest of the original forest was clear-cut for lumber. Almost all the forest would be the size of Big Jim or larger, had they not been logged. Jim was not logged because he was struck by lightning and developed a wood disease called heart rot. (You can see signs of heart rot in the huge branch just off the trail, which fell from Big Jim.) Because of this disease, lumber from such a tree would be useless.

If you step back far enough to see Jim's top you may see a raven or other bird perched in its top. The top of Big Jim represents the top of the Biosphere in this area. The Biosphere is the thin layer on the surface of the Earth in which all life exists. Most of the planet is magma and rock but on the earth's crust extending from the depths of the ocean to the tops of the

tallest trees is the biosphere.

### Post #13. Forest Housing

If you look at the oak before you, you can see a hollow where a branch has fallen off. Such hollows provide vital habitat. When first formed, such hollows are first used by insects and then small birds or squirrels will move in. Through the use by animals and rotting away of the wood by built up water, the hollow will enlarge further. Eventually, the hollow will become large enough for an owl or raccoon. Here you can also see a good contrast between grasslands and forest environments. What do you notice that is different about the ground and vegetation?

### Post #14. Tanoak

Before you is a Tanoak or Tanbark Oak. The leaves on this tree are oval with separated edges. If you look at the bark, it is a tannish gray color. The acorns, which are the seeds of all oaks, from this type of tree were a favorite of some California Indians. Although all acorns are poisonous, the Indians overcame this by powdering, boiling, and re-boiling the acorns to remove the poison and make edible flour. As you walk away, notice how this tree stands out against the primarily Douglas Fir forest behind it.

### Post #15. Forest Recycling

Here, within the forest, you can see the natural recycling and reusing process. You can see a couple of decaying stumps; these provide a home and food for many invertebrates which decay the wood into



### Nature Trail Guide

nutrients for the trees. On the ground is a layer of fallen leaves, called humus, which shelters similar creatures and also mulches the plants of the forest, adding organic nutrients to the soil. Finally, back in the woods of Wente, lies a large log, or fallen tree. Even after they have fallen, trees provide shelter and food to the creatures of the forest and future trees. Stumps and logs like these provide habitat for insects, such as ants which are hunted by Red-Shafted Flickers, often seen here poking their beaks into the rotten wood.



### Post #16. Edible Berries

Before you grow two spiny plants which are berry bushes: A Raspberry bush, the Blackcap Raspberry, has smaller, more triangular leaves in groups of three with larger separations and fewer spines. These Raspberries are dark purple-black when ripe in mid-summer. The Himalayan Blackberry, has rounder leaves in groups of five with smaller separations and larger spines. Blackberries are a deep purple and ripen later than raspberries. These berries are important food for many animals, including the Purple Finch and Dusky-footed Woodrat. These animals help the plant by eating its berries, since the small seeds inside

the berries are not digested but pass through the digestive system and are deposited with animal fertilizer in another place. Animals are very important in dispersing the seeds of many plants.

### Post #17. Old Man's Beard

Look up at the Douglas Fir and you will notice a gray-green beard-like substance hanging from the branches. This is called False Spanish Moss, or Old Man's Beard. Actually this is not a moss but a lichen. A lichen is a union in which both fungus and algae help each other (like Boy Scouts). The algae provides food through photosynthesis, while the fungus provides water and structure. The fact that these lichens are growing here is a sign of our camp's fresh air since lichens are easily damaged by pollution. Although these lichen grow on trees they do not affect the tree. They are example of epiphytes, plants which use trees for a place to grow but take nothing from the tree (as opposed to parasites, like mistletoe).

Beyond the bearded Douglas Fir, you can see a Madrone which grows at an angle. This tree curved in reaction to its environment. Like all living things, trees react to their surroundings. In this case the tree is reacting to available light and is moving, though very slowly, towards the maximum sunlight.

### Post #18. Lake Made By Humans

From this point you can look out across Wente's lake. This lake did not always exist. This lake was created in 1963. If you look through

### Nature Trail Guide

towards the road you came in on, you can see a straight evenly raised bank and the road running over it. Here is the dam that makes this lake. As demonstrated by the site you see before you, humans can be very influential on the environment.

Humans can help an environment by proper management of a watershed, for instance, as in this valley. The dam provides a body of water which scouts can use for recreation, which wildlife use it for water and shelter. By releasing some water into the valley on the other side of the dam, the watershed and stream side ecosystem of the creek valley is preserved, along with the lake!

However, quite often people's powerful influence is not such a positive (like erosion at the corral). Overhunting, overfishing, pollution, and the destruction of habitat are all negative forces caused by humans that have devastating consequences. Wilderness is needed to preserve the vast variety of life on Earth. Every living thing is an essential part of the cycle of life and should therefore be preserved. By destroying wilderness, humans weaken the cycle of life in which everything, including us, needs to be in balance.

### Lakeside Ecology

Take a moment to step closer to the water and look along the edge of the lake. You may hear frogs (Yellow-legged Frog, Bull Frog, or Pacific Tree frog) in the reeds or see birds (the Red-Winged Blackbird, Western Kingbird, or and Osprey) flying over the water. The Red-Winged Blackbird eats cattails, while

the Western Kingbird swoops over the water in search of the insects it eats. The Osprey, once driven near extinction by DDT, catches fish over the open lake. In addition, land animals attain water from the lake.

Around the lake you can see several forms of pond side vegetation. As tall as six feet with grass like leaves, and brown, corn dog-shaped clumps of seed, are Cattails. Furthermore, you may see Bulrushes around the lake, though none grow at this post., with round pointed stalks to as high as six feet with brown seed clusters hanging from the tips of each rush. The lake with its animals and plants around it forms an *Ecosystem*.

An ecosystem is the combination and interrelationships between all the natural processes in a particular environment. Ecosystems include chemical cycles like the that of oxygen which is used by animals forming carbon dioxide and then the carbon dioxide is used by plants to form sugars and the oxygen is produced again. Also important are the water cycles, and the more complicated nitrogen cycle. Living cycles within an ecosystem include the food chain: plants produce food (sugars) using sunlight, water, and carbon dioxide; then these plant foods are eaten by animals which are in turn preyed upon by other animals. When these predators die they are "eaten" by fungi and bacteria which produce nutrients in the soil used by plants to start the cycle over again. The interactions of all the living and non-living things in an environment makes up an *ecosystem*.



### Nature Trail Guide

Now look within the lake. Do you see any fish, or plant life in the lake? Indeed within the lake is another ecosystem. Here there swim three fish: Mosquito Fish, Bluegill Sunfish, and Largemouth Bass. These fish all interact with underwater vegetation and with representatives of the air-breathing world such as insects hovering above the water.

Humans too are part of the ecosystem. The air we breathe and the food we eat follow the same processes as that of any animal. In order for life to continue it is important that we maintain natural habitats which are important parts of the global ecosystem, the web of nature which supports all life. Ecology studies this web.

## Forestry: Native Trees

### Cone-bearing, needle-leaved trees



#### Pacific Ponderosa Pine (*Pinus ponderosa*)

This is the most economically important pine of the western United States and is logged extensively in some areas. It is a very important part of the Wente ecosystem, providing food for Gray Squirrels and California Quail which eat its seeds. Mule

Deer browse its bark. Usually found in dry soils in sunny areas. Other pines are found few at Wente, but some Jeffrey Pines can be found in the outback. These differ from the Ponderosa in having less prickly cones and sweet-smelling bark. Planted near the dining hall are Coulter Pines which have much larger cones.



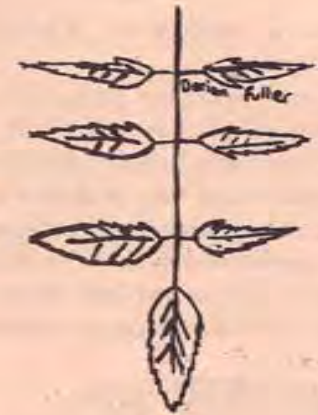
DOUGLAS FIR

#### Douglas Fir (*Pseudotsuga menziesii*)

The most important lumber tree in North America, this species is also popular for christmas trees. They provide food for birds as well as Sonoma Chipmunks. Black bears sometimes strip the bark to eat the inner growth. (See Nature

Trail posts #3 and #4)

### Narrow leaves, rough or toothed edges



#### California Buckeye (*Aesculus californica*)

Found on the lower slopes of some Wente creek beds, such as "Buckeye Creek" below the dam, these trees produce large clusters of pink-white flowers in late June. Buckeyes are toxic sometimes poisoning livestock. The nectar may kill bees. The berries are poisonous.

#### Willows (*Salix* sp.)

Willows are water-loving trees and shrubs, often growing with their roots submerged. Willows are often pioneer species, which means that they start growing in areas where trees are gone. Willows are often the first trees to grow in disturbed moist areas which makes them very important for controlling erosion. Willow bark produces salicin, the chemical from which aspirin is made. The leaves and buds of willows are eaten by livestock and wildlife.

#### Blue Elderberry (*Sambucus cerulea*)

This tree is sometimes planted in gardens. Its berries can be used to make jam or pie. Deer browse its twigs. Many birds eat the berries. A few examples at camp can be found along the main road between the cabins and the shotgun range.



ARROYO WILLOW



PACIFIC WILLOW



## Oval or round leaves, toothed or rough



### Cascara Buckthorn (*Rhamnus purshiana*)

This gray barked tree produces small clusters of green flowers which are hardly noticable. However, these flowers attract many bees. And often on a June (or July) afternoon a Cascara near the waterfront is truly abuzz. Its fruit are eaten by raccons and Gray Foxes. Its bark is harvested for use as a laxative.



### Toyon (*Heteromeles arbutifolia*)

Also called Christmasberry or California Holly, this tree is harvested for Christmas decorations because of its red berries which remain into winter. Its berries are eaten by California Quail and many songbirds.



BIRCHLEAF  
MOUNTAIN-  
MAHOGANY



WESTERN  
SERVICEBERRY

### Birchleaf Mountain-mahogany (*Cercocarpus betuloides* var. *betuloides*)

A small tree or shrub which grows on the dry, rocky, chaparral slopes of Wente, such as near the Adventurer's Gorge Kali-Ama post. The leaves are eaten by mule deer.



CALIFORNIA  
HAZELNUT



WHITE  
ALDER

### Alder (*Alnus* sp.)

Alders grow along waterways, such as Salmon Creek on the way to Pomo Pools Kali-Ama post. These trees do particularly well in poor moist soil because they incorporate bacteria in their roots which "fix" nitrogen, providing nutrients for these trees. The bark is said to ease diarrhea and skin irritations. These trees are important sources of food for deer, beavers, and Aplodontia ("mountain-beavers"), a large secretive rodent which may inhabit Wente. Red Alders (*Alnus rubra*) do particularly well in disturbed creek, like after logging. These should not be confused with California Hazelnut (*Corylus cornuta* var. *californica*) which grows in damp parts of the Wente woods and has fuzzy leaves. The fruits and velvety leaves of this tree are important as food for deer, rodents, quail, and Steller's Jays.

### Western Serviceberry (*Amenlanchier alnifolia* var. *semintegrifolia*)

Sometimes called the Saskatoon Juneberry. The berries of this tree were eaten by Native Americans and many people eat them today fresh, cooked, or dried. These berries also feed chipmunks and birds.

## Oval or round leaves, toothed or rough

### Tanoak (*Lithocarpus densiflorus*)

This tree is fairly common throughout the Wente Woods (See Nature Trail Post #14). Although Tanoaks produce acorns, they are different from the acorns of all true oaks. The Tanoak is a Tanbark, a group of trees mostly found in Asia closely related to oaks.



TANOAK

### Live Oaks (*Quercus* sp.)

These are called live oaks because their leaves stay green all year long, that is they never lose their leaves like most other oaks. At camp the Interior Live Oak (*Q. wislizenii*) grows on the dry hills of Wente. A good example can be found in the Trail's End Campsite. The Canyon Live Oak (*Q. chrysolepis*) grows in rocky canyon habitats, like near Adventurer's Gorge Kali-Ama post.

INTERIOR LIVE  
OAK →



← CANYON  
LIVE OAK

### Lobed Leaves



### California Black Oak (*Quercus kelloggii*)

This tree usually found interspersed in evergreen forests, and never in groves solely of Black Oak. Its wood was used for many household implements by the Miwok indians of the Yosemite area; while other tribes used its bark for dyes.

### Oregon White Oak (*Quercus garryana*)

Very common in the dry fields of Wente, only occasional large specimens (like in the nature area) being found in the forest, these oaks sometimes form woodlands, such as with California Buckeye, in the creek below the dam. These and black oaks hybridize producing many oaks which are intermediate.



POISON  
OAK →



### Poison Oak (*Toxicodendron diversilobum*)

Although this is not a tree, Poison Oak sometimes grows as a large shrub or as vine on the trunks of trees. You should beware its leaves of three. Although its leaves are shaped somewhat like those of an oak, this plant is not a relative.



## Lobed Leaves

**Bigleaf Maple (*Acer macrophyllum*)**  
Found on streambanks (for example Salmon Creek on the way to Point of View on Kali-Ama post). The seeds of this tree are eaten by Gray Squirrels and chipmunks. The leaves are eaten by deer.



## Oval or Narrow, smooth edged leaves



### Manzanita (*Arctostaphylos* sp.)

The most common shrub of Wente chaparral and forest edge. Species are very difficult to tell apart.

### California Laurel (*Umbellularia californica*)

The California Bay or Oregon Myrtle, this tree produces bay leaves of spice cabinet fame. The fruits provide food for Gray Squirrels and Steller's Jays.

### Oregon Ash (*Fraxinus latifolia*)

This is the only Ash of the northwestern U.S. whose lumber is harvested. This tree grows along creeks.

### Pacific Madrone (*Arbutus menziesii*)

A common tree throughout Wente's woods. The berries produced by this tree are eaten by deer, quail, and songbirds, and were by Native Americans (see nature trail post #10)

### Mountain Dogwood (*Cornus nuttallii*)

Also known as the Pacific Dogwood, a group of these trees can be found growing in the forest near Tanoak Cathedral on the Kali-Ama Trail. This tree has showy flowers in early spring, which never last to summer. Its thin green leaves, grow in clusters of four and are browsed by Mule Deer.

## Entomology: The Study of Insects



### Woodland Cicada

On any summer afternoon at Wente one can hear a high-pitched buzzing coming from the trees. This sound is the sound of male cicadas, made by quickly vibrating special membranes on the abdomen. This sound is used in courtship.

As young nymphs Cicadas live underground feeding on roots. Then when they are ready to change into winged adults they climb up on trees and shed their juvenile exoskeletons. These brittle shells can often be found stuck to the bark of trees around camp.



### Ants




Ants are highly social, living in colonies, dominated by a single, or several queens. The workers are all daughters of the queen(s).


Most ants are scavengers, but some are harvesters, or herdsman. Harvester ants can be found in fields at camp. They gather grass seeds which they store in their underground colony and eat. They don't eat all the seeds and thus help with the spread of grasses. These and other ground dwelling ants help aerate the soil so plant roots can grow.

Other ants herd aphids, which are tiny destructive plant-eating insects. The ants eat a honey which is secreted by the aphids.


### Insect Friends & Foes

Many insects are very important to life as we know it. Bees, butterflies, moths, and some flies pollinate most of the flowers we see. Without this pollination no new plants would sprout and the entire environment would collapse. Other insects help by preying upon destructive insects pests. In addition there are many other useful products which come from insects, such as honey from bees and silk, from an Asian caterpillar.

Look for the symbol of  useful insects in this guide:

However, many other insects are destructive. Destructively eating crop plants, or boring into forest trees. In some cases insect epidemics can be fatal for forest tree species. Destructive insects in this guide have this: 

As you know there are some insects which can be harmful to the individual, such as hornets and bees with their poison stingers. However, just because an insect is harmful to you does not mean that it isn't useful, such as bees.

Harmful insects have this: 

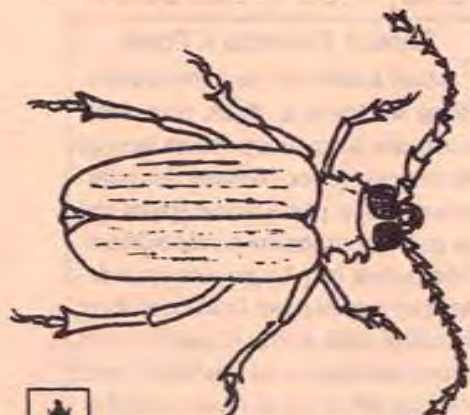


### Jerusalem Cricket

Also known as Potato Bugs, these large, ugly insects, are not really as scary as they look. They are not poisonous, although they can give you quite a pinch if they bite in trying to escape. They burrow eating roots.



## Order Coleoptera (Beetles)



 **California Prionus Beetle**


This beetle is in the family of long-horned beetles. They are wood-boring beetles, but most of them, like the Prionus, bore into dead or dying wood, which means that they help in the decomposition process, the recycling of the forests. Another Wente beetle in this family is the **Spined Woodborer**, which is primarily a stump borer. While both these beetles are big and startling they are not dangerous.


Long-horned beetles are helpful, unlike some other wood-boring beetles, like our camp's Pine Borer, the **Golden Buprestid** (pictured below), which bores into living trees, pine and Douglas-Fir. These beetles can be very destructive in some years, despite their beauty.



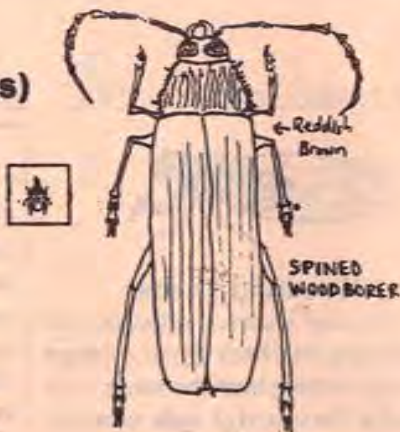
**GOLDEN BUPRESTID**



 **Red Turpentine Beetle**

 **Red Turpentine Beetle**

Even more destructive than the Golden Buprestid is the small Turpentine Beetle which bores galleries in the bases of Pines and Douglas Fir.



**SPINED WOODBORER**



**Ten-line June Beetle**

Also known as a Giant Chafer beetle, this large striped beetle lives in the shrubby areas near or around fields. The larvae of this beetle feed on the roots of shrubs and trees and are sometimes destructive. However, since the species this beetle feeds on are usually not major lumber trees, it is rarely considered a pest.

The males have large reddish antennae which are club-like. These beetles can emit a squeak sound when they are harassed.



**Two-stabbed Ladybeetle**



**Ladybird Beetles**

Commonly called "ladybugs," these are actually beetles. These beetles are usually small, round, and red with black spots. They are a welcome sight by gardeners because they eat aphids, tiny plant-eating insects. The Two-stabbed Ladybeetle (above) is black with two red spots.

## Order Lepidoptera (Butterflies & Moths)

*Selected Butterflies (approximately lifesize)*



**Pale Swallowtail**

This butterfly lives in the dry hillside habitats of California. A very similar species which is black and yellow (instead of white) is the Western Tiger Swallowtail which lives in streambed habitats. Both of these species are important as pollinators while their caterpillars eat leaves.



**Painted Lady**

Also known as the Thistle Butterfly its primary food source this is perhaps the most widespread butterfly on earth. This species is not native to California but is now well established.

A very similar species, the West Coast Lady has blue spots on the lower wing.



**Monarch Butterfly**

Monarchs migrate in the fall, some as far as 2,000 miles to spend the winter at a few small sites in Southern California (Pismo Beach, south of San Luis Obispo) and Mexico. In the spring the Monarch migrate north, although the individuals who migrate north are the offspring of those that migrated south.

The monarch caterpillars in many areas feed on poisonous milkweed plants, and become poisonous themselves. Most birds know to not eat Monarchs.



**Mourning Cloak Butterfly**

This widespread species is known from America, Europe, and Asia. It is long-lived for a butterfly, often surviving several years.

The caterpillars are spiny, purple-black, with a double row of red spots along back, and feed largely on willows.



### Butterfly Antennae:



YELLOW-ORANGE

### Black and Gold Sulphur

An uncommon but very beautiful butterfly at Wente. It feeds on nectar, pollinates. The caterpillars feed on vetches and wild peas, which are very uncommon in camp areas. Thus so is this butterfly.



ORANGE

### Mylitta Crescent

Caterpillars are black and spiny with some yellow hair tufts. These larvae feed on thistles, plants the adults can be found pollinating.



ORANGE  
YELLOW

### Flery Skipper

This bright skipper is common throughout California in disturbed areas. It is found in parks, yards, farm fields, and along roads. At Wente you may see near the road or the corral, but rarely in the more wild parts of camp, such as outpost.



ORANGE

BLUE BAND

### California Sister

A forest butterfly, the California sister is often seen flying through the shady woods, particularly where oaks, or perched on a branch. This butterfly rarely visits flowers.



### Pine White

The larvae of this butterfly feed on Douglas Fir. These caterpillars are dark green with white stripes down the back and sides.



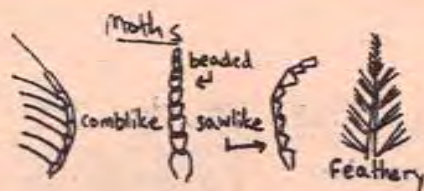
BLUE  
ORANGE

### Acmon Blue

These small blue butterflies pollinate many small wild flowers both native and introduced.



### Moth Antennae:



### Red-shouldered Ctenucha

A day-flying moth which can be found in Wente stream habitats on the leaves of trees or in grass. This moth is distasteful to most predators. From a distance this moth resembles a beetle.

### Silk Moths

This family of moths (Saturniidae) is noted for its large, showy species, such as the Ceanothus Silk Moths and Polyphemus Moths of Wente. The silk moths which produce silk are from a different closely related family.

These moths are active usually only after midnight.

The Ceanothus Silk Moth feeds on native shrubs, such as Buck brush. The Polyphemus moth feed primarily on broad-leaved trees and in some areas is an orchard pest.



### Elegant Sphinx Moth

This large moth is a fairly common late night moth in the Wente woods since the caterpillars of this species feed solely on Manzanita. The large caterpillars are bright green with dull bands on each side and a brown horn. Many other sphinx moth species can be found at camp and in the state. Some of these, the Hawk Moths, are important day flying pollinators sometimes confused with hummingbirds.



CEANOTHUS SILK MOTH

RED



POLYPHEMUS MOTH

ORANGE-BROWN

PINK STRIPES

Clear membrane in eye-spots



# Ornithology: The Study of Birds

## Golden Eagle (*Aquila chrysaetos*)

**Wings:** Dark brown with lighter patches underneath. 6.5 to 7.5 feet across. Holds wings flat when gliding, or swooping.

**Body:** Dark brown. lighter brown at the very base of the tail. Spot of gold on back of neck.

**Habitat:** Mountainous and hilly areas. On occasion eagles are seen hunting over Wente valleys.

**Eating:** Mammals, such as jack rabbits, sometimes other birds, large reptiles, or carrion.

**Nesting:** This bird nests on cliffs. Golden Eagles mate for life and lay 1-4, but usually 2 eggs once a year. The larger hatchling often kills its sibling. The nests of these birds are sticks interwoven with brush and leaves. Golden Eagles are known to use aromatic leaves to help keep away insects.



GOLDEN EAGLE



TURKEY VULTURE

## Turkey Vulture (*Cathartes aura*)

**Head:** Bald and red. Often appears merely lighter colored than body.

**Wings:** Black with lighter shade on lower side. Holds wings above back in shallow v-shape when in flight.

**Flight:** Rarely flaps wings.

**Body:** Black.

**Food:** Carrion. Vultures hover about until locating dead carcasses, even as small as rodents or reptiles, by smell and sight. Often large numbers of vultures will circle over and eat from the same carcass.

**Nesting:** Rarely makes nests but lays eggs on cliffs or sometimes in small caves or hollows in snags. Mates for life (monogamous), 2 (1 to 3) eggs once per yr.

A vulture's bald head is an adaptation which helps these birds avoid infection, since these birds stick their heads into dead carcasses in order to eat flesh, which will rot over time and become infectious. Infectious carrion is less likely to stick to their skin than it would to feathers.

## Large Birds: Crow Size and Larger

### Large Birds: Crow Size and Larger

## Red-Tailed Hawk (*Buteo jamaicensis*)

**Tail:** Red on top appearing slightly red below. White band at rounded tip.

**Wings:** Broad, 4 to 4.5 foot span.

**Description:** Broad-winged, with wingspans of 4 to 4.5 feet.

**Underside:** White-grey; belly striped with brown.

**Immature:** grey or brown tail with narrow dark bands and whitish underparts with dark spots or streaks.

**Habitat:** Open woodlands and fields with scattered trees.

**Food:** Rodents and rabbits, but also birds, snakes, lizards, fish, newts, and large frogs.

**Nesting:** 2 or 3 eggs once per yr. in nest of sticks lined with bark and green leaves. In the top branches of large tree, sometimes cliffs. Mates for life.

## Cooper's Hawk (*Accipiter cooperii*)

**Size:** Crow size

**Underside:** White with fine wavy rusty-red stripes.

**Tail:** Long with black bands.

**Back:** Dark.

**Food:** Ground-dwelling birds and mam-

mals, sometimes lizards. In hunting this hawk springs from concealed perches, like other accipiter hawks.

**Nesting:** Monogamous bird builds a stick platform nest, sometimes lined with bark, pine needles, or feathers. 2 to 5 bluish or greenish eggs once per yr.

Cooper's Hawks are accipiter hawks which mean they feed primarily on smaller birds, which they out maneuver.

## Osprey (*Pandion haliaetus*)

**Wings:** 4.5 to 6 feet across. White, or grey, with black patch mid wing.

**Flight:** Holds wings crooked slight downward.

**Head:** White with black cheeks.

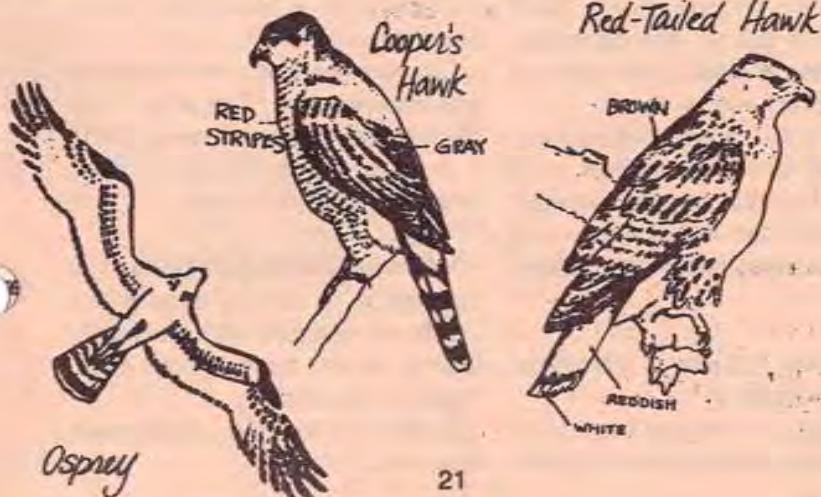
**Back:** Black.

**Habitat:** Near lakes or rivers.

**Food:** Fish.

**Nesting:** Monogamous; uses an abandoned raven or hawk nest in the high branches of snags or other trees. 3 or 4 eggs a year.

At Wente Osprey can be seen searching for fish over the lake.



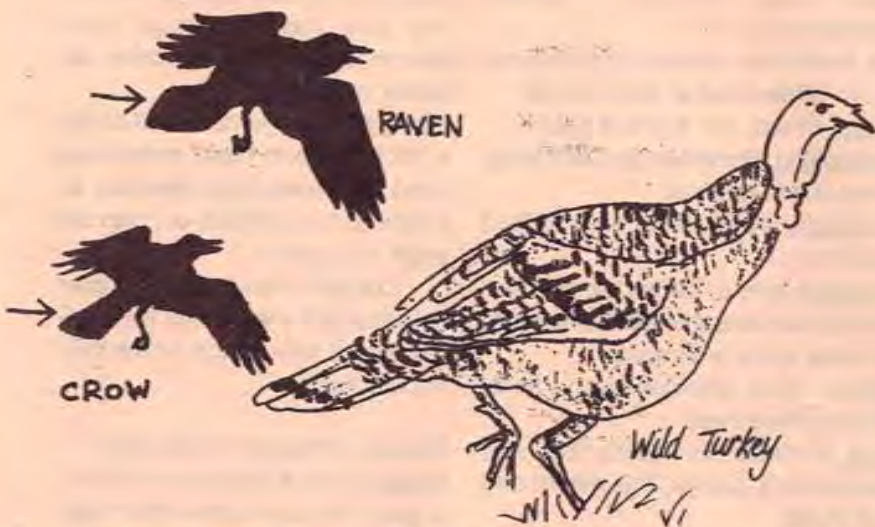
Osprey

Cooper's Hawk

Red-Tailed Hawk



Large Birds: Crow Size and Larger



**Common Raven (*Corvus corax*)**

**Description:** All black bird, about the size of hawk. When perched displays shaggy throat feathers.

**Flight:** Holds wings flat.

**Tail:** Oval, or almost diamond shaped

**Habitat:** Rocky seacoasts, forests, foothills, rocky canyons, mountains, deserts and arctic tundra. Seen in air over camp valleys.

**Food:** Carrion, insects, and fruit.

**Nesting:** Builds bowl shaped nests on cliffs or in the tops of trees. 3 to 7 eggs once per yr. Monogamous. Sometimes a raven pair nests on human structures.

Ravens are known for doing flips, dives and other playful aerial acrobatics. The call of a raven in deeper and slower than that of a crow and sometimes sounds like repeated tapping.

**American Crow (*Corvus brachyrhynchos*)**

**Description:** An entirely black bird, with a slight purplish gloss, the crow

has a barely curved, almost flat tail and is often seen in large groups.

Considerably smaller than the Raven.

**Habitat:** Woodlands, farmlands, and shores.

**Food:** Insects, carrion, small reptiles or mammals, eggs, corn, seeds, and fruit.

**Nesting:** Bowl shaped nest in trees or shrubs of branches, twigs and bark usually lined with moss, grass, feathers, hair and leaves. 3 to 9 eggs once per yr. Breeds in small colonies and may mate for life.

Crows derive their name from their characteristic call. Crows in camp can be seen mobbing Ravens, that is a group of crows chases a Raven away from their territories.

**Wild Turkey (*Meleagris gallopavo*)**

**Description:** A turkey: large round bird, bald head bluish with red wattles. Bronzy brown body. Rarely flies. Travels in groups.

**Tail:** long tail feathers, which male displays in fan.

Large Birds: Crow Size and Larger

**Habitat:** Woods, fields, chaparral, near creeks.

**Food:** Seeds, insects.

**Nesting:** On ground in protective shrubs or tall grass.

**Green-Backed Heron (*Butorides striatus*)**

**Legs:** Long, greenish-yellow.

**Back:** Glossy blue-green.

**Neck:** Red-brown; long, often bent.

**Head:** Grey crest, white stripes on face. Long, spear-like beak.

**Flight:** Neck folded in an S-shape. Flies low over water with slow wingbeats.

**Habitat:** Lakes, streams, marshes. Often perches in Pacific Willows around Wente's lake.

**Food:** Fish, insects, aquatic invertebrates.

**Nesting:** Concealed nest in trees or shrubs near or over water; interwoven sticks and twigs. 2 to 7 bluish-green eggs 1 or 2 times per yr. Mates for life.



**Great Blue Heron (*Ardea herodias*)**

**Legs:** Very long.

**Body:** Grey, slightly bluish; black shoulders.

**Head:** White with a black streak beginning behind the eye and ending in crest feathers.

**Neck:** Usually folded in an S-shape when wading or flying.

**Habitat:** Marshes, lakes, streams

**Food:** Primarily eats fish by spearing them with its long sharp beak. Sometimes eats small mammals, nestlings, or aquatic invertebrates.

**Nesting:** Usually builds a flat nest of woven sticks in the upper branches of a tree not far from water. Sometimes builds in shrubs or on cliffs. Monogamous laying 3-5 eggs per year.

Often Great Blue Herons nest in colonies, although other times solitary, as probably at camp Wente.

The call of this bird is a series of deep, loud croaks.





*Large Birds: Crow Size and Larger*

**Pileated Woodpecker (*Dryocopus pileatus*)**

**Head:** Prominent red crest White face; black stripe from eye to beak.

**Body:** Black.

**Wings:** Broad white linings, seen in wavering flight.

**Food:** This bird gleans bark, poking holes into bark or into dead trees (snags) in search of insects to eat. Sometimes the Pileated Woodpecker eats fruit, nuts, or acorns.

**Nesting:** This woodpecker mates for life laying 3 to 5 eggs once a year in a tree cavity lined with chips. The male and female take turns incubating the eggs.

A pair of these large colorful woodpeckers includes the Nature Area and some of the campsites within its territory and occasionally visits these areas in the morning. When pecking wood this woodpecker is extremely loud.



*pileated woodpecker*

**Head:** Black cap; Long, pointed, orange beak.

**Food:** Primarily fish, also aquatic invertebrates. This gull-like bird catches fish by swooping dives to the water surface. Can be seen hovering before dives.

**Nesting:** After a complex courtship of aerial dancing and chasing, a pair of Caspian Terns will dig a nest on a beach or occasionally in a marsh, laying 2-3 eggs once each year. Nests in colonies. After hatching young are fed for up to 7-months, the longest period for any tern.

Caspian Terns have adapted well to human civilization, since many nest on human made beaches, or gravel areas.

At Wente, Caspian Terns sometimes visit the lake, although they probably nest elsewhere. As many as 10 can sometimes be seen on a single day foraging over the lake. The flight style, and shape of this bird easily distinguish it from Osprey.

**Caspian Tern (*Sterna Caspia*)**

**Flight:** Large white birds, with long, curving, pointed wings. Flies in fast swoops, flapping often, over the lake.



CASPIAN TERN

*Mid-sized Birds:  
Robin Size to nearly  
Crow Size*



*Red-shafted Flicker*

**Northern "Red-shafted" Flicker (*Colaptes auratus*)**

**Flight:** Flashes of salmon-red seen under wings

**Back:** Brown with many black bars.

**Underside:** Wide black crescent across chest. Black spotted.

**Head:** Grey; brown patch around eyes. Males have red "mustache" stripe.

**Habitat:** Low in forests, groves, canyons. Pecks into rotting logs, stumps, snags, or sometimes living trees.

**Food:** Ants Sometimes acorns, nuts, or seeds.

**Nesting:** Nests in cavities, usually in snags, but sometimes in manmade structures. Mates for life; 5 to 8 eggs once per yr.



*Acorn Woodpecker*

**Acorn Woodpecker (*Melanerpes formicivorus*)**

**Head:** white forehead and pale yellow chin with visible red crown. Black at base of beak. Whitish eyes.

**Back:** Black.

**Sides:** White. Also white wing patch visible in flight.

**Habitat:** Pine oak woodlands, like wente, which includes snags.

**Food:** This bird eats insects. In the fall this bird hoards acorns by storing them in holes it makes in dead trees (or telephone poles); it eats these acorns through the winter. It may store up to 30,000 acorns in a single tree. In California these trees are always communal. Also hoards almonds, walnuts, or pecans if available. Will sometimes eat fruit, sap, or corn.

3 to 7 eggs 1 or 2 times per yr. in cavity nests (tree hollows, of snags) in areas where there are acorn storage trees. These wood-



Mid-sized Birds: Robin size to nearly Crow size



BELTED KINGFISHER

stripes.

**Wings:** Pointed wings gray

**Head:** Red cap; black stripe through eye with two stripes extending down across the face.

**Food:** Insects, sometimes small mammals or other animals. Foraging by hovering in the air and diving.

**Nesting:** Nests in tree hollows. Lays 2-4 eggs once each year.

The national bird of Mexico. This bird is often seen in pairs and sometime harasses vultures until the vultures disgorge some food.

**Belted Kingfisher (*Ceryle alcyon*)**

**Head:** Grey, crested; has dagger-like beak.

**Chest:** Has a gray belt across chest. Females have an additional red belt below this.

**Diet:** Eats fish, sometimes amphibians. Hovers over the water and dives on fish spearing them with its beak.

**Nesting:** Nests in burrow or sometimes tree cavity. Lays 6-7 eggs each year.

Parents teach their young how to fish by dropping already dead meals in the water for young to retrieve.

**Common Nighthawk (*Chordeiles minor*)**

**Identification:** This bird is active only very late at night and rarely seen at camp. Easily identified by its loud piercing "pee-eeek" call at night. During the day it sits on the ground or branches well camouflaged by its mottled brown body.

**Food:** Catches insects on the wing. Flies silently.

**Nesting:** Builds no nest, but lays disguised eggs on the ground in fields.

peckers live and mate in communities of up to 16, consisting of at least two mature, breeding birds plus young of previous years and cousins. Often there are more mating adults in the group if there is an abundance of acorns.

Often seen in flocks. These birds will attack squirrels, jays, nuthatches, titmice, other woodpeckers which may try to raid the acorn storage trees.

**American Kestrel (*Falco sparverius*)**

**Body:** Red back with dashed black



Mid-sized Birds: Robin size to nearly Crow size

**Pied-Billed Grebe (*Podilymbus podiceps*)**

Ducklike swimmer and diver

**Beak:** Thick, white with black vertical stripe.

**Throat:** Black patch

**Body:** Grey to Brown; Back: black

**Habitat:** Lakes, marshes. Seen swimming, near or in tules.

**Food:** Aquatic insects, snails, fish, frogs, some vegetation.

**Nesting:** Platform nest of decaying vegetation anchored in water among reeds. Mates for life; 3 to 10 eggs once per yr. Secretive during mating season; hides in tules.

Pied-Billed Grebes carry their young on their back, sometimes during dives.

**California Quail (*Callipepla mexicana*)**

**Head:** Face black with white striping; forward leaning black plume.

**Body:** Short, plump, grey.

**Habitat:** Chaparral, forest edges.

**Food:** Berries (including Poison Oak),

foliage, acorns.

**Nesting:** Nest concealed in brush or shrubs, on ground. Shallow depression, lined with pine needles, leaves, grass some feathers. Monogamous; 12 to 16 eggs once per yr.

Travels in groups (coveys), usually on ground; rarely flies. Roosts (sleeps) in dense trees or shrubs while preparing nests on ground. The state bird of California.

**Rock Dove, Domestic Pigeon (*Columba livia*)**

**Identification:** This bird is easily recognized as the gray pigeon found in cities and parks everywhere.

**Food:** Eats seeds, mostly grain (and therefore baked breads found in city trash), occasionally insects.

**Habitat:** cities and towns. These birds sometimes visit Wente from Willits.

**Nesting:** On building ledges, lays 2 eggs at a time. Breeds all year. Monogamous.



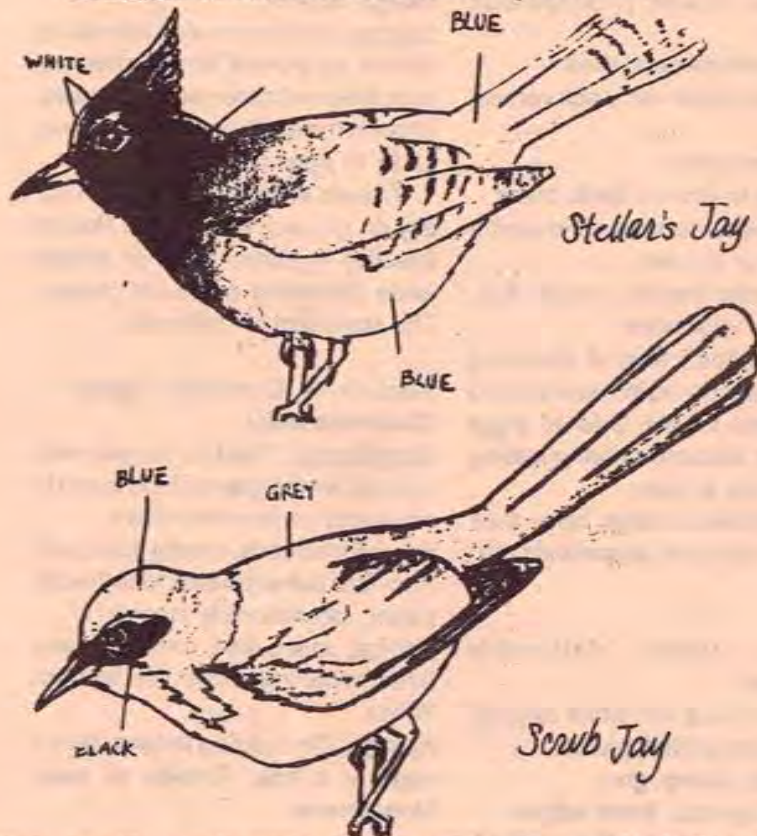
Pied-Billed Grebe



California Quail



Mid-sized birds: Robin size to nearly Crow size



Stellar's Jay

Scrub Jay

**Stellar's Jay (*Cyanocitta stellerii*)**

**Head:** Black with prominent crest.

**Body:** Dark blue, becoming black towards head.

**Habitat:** Conifer or pine-oak forests. Often visits campsites in search of leftovers.

**Food:** Mostly acorns, pine seeds, fruit; also insects, birds' eggs, nestlings, other small animals.

**Nesting:** Nest concealed in tree or shrub; twigs, dry leaves, held together by mud, lined with roots pine needles, grass.

Known to rob Acorn Woodpecker storage trees. Makes a hoarse squawking sound heard on almost every camp afternoon.

**Scrub Jay (*Aphelocoma coerulescens*)**

**Head:** Blue, darker under eye; white throat, blue "necklace" stripe beneath. No crest.

**Body:** Grey patch between wings. Tail and wings blue.

**Underside:** White to slightly tan.

**Habitat:** Oak woodland, chaparral; shrubs near lake.

**Food:** Mostly insects; bird eggs, nestlings, acorns, fruit, seeds.

**Nesting:** In shrub or small conifer, nest of moss or cup of grass, lined with fine roots, hair, supported by twigs. 2 to 7 eggs once per yr. Likely monogamous.

Steals from acorn woodpecker

Mid-sized birds: Robin size to nearly Crow size

storage trees. Stores acorns by burying (aids spread of oaks). Known to sometimes perch on deer and remove ticks.

**American Robin (*Turdus migratorius*)**

**Underside:** Brick red, or orange chest. Immatures spotted.

**Back & Head:** Dark Grey. Black flecks on throat.

**Habitat:** Cities, towns, farms, forests. Eats insects, snails, earthworms, fruit.

**Nesting:** In shrubs, on ground, on buildings; base of twigs and grass, bowl of mud lined with fine grass. 3 to 7 pale blue eggs 2 or 3 time per yr. Mates for life.

These birds sometimes become intoxicated by eating fermented fruits. Robins find earthworms not by sound as traditionally held but by sight (based on recent experiments). Robins were

threatened by DDT insecticide because the poison was incorporated by worms.

**Mourning Dove (*Zenaida macroura*)**

**Body:** Tan or Baige colored body with black spots mid-back, at base of wings.

**Tail:** Tail triangular with stripes of white, black, and grey on edges.

**Flight:** Quick bursts of flight which give off a whistling sound.

**Call:** A series of usually three coo sounds.

**Habitat:** Grasslands, scrub, farms, towns, some woods.

**Food:** Seeds. Young are fed a regurgitated "milk" for their first 3 days.

**Nesting:** Builds a flimsy nest of sticks usually in the fork of a tree branch, sometimes on the ground. Monogamous, lays 2-3 eggs several times a year (2-6). Males incubate by day, females by night.



American Robin



MOURNING DOVE



## Small Birds: up to Blackbird Size

### Red-Winged Blackbird



### Red-Winged Blackbird (*Agelaius phoeniceus*)

**Shoulders:** Red patch with thin yellow stripe beneath

**Head & Body:** Black. Females: Brown and Grey

**Habitat:** Marshes, brushy wetlands. Around Wente lake and below dam.

**Food:** Insects, seeds (cattails)

**Nesting:** Nest near water, of sedges, grass and rushes. Polygynous; 2 to 6 eggs, 2 or 3 times per yr.

A strongly territorial bird, Red-wing males can be seen leaning forward, displaying their shoulder patches while calling, in order to intimidate other males and defend their lakeside territories.

### Winter Wren (*Troglodytes troglodytes*)

**Body:** Small, round, brown bird, with a stub tail held up into air. Dark striping on lower belly and tail.

**Head:** Dark strip through eye; whitish chin; needle-like beak.

**Habitat:** Coniferous forest underbrush, often near water.

**Food:** Insects, spiders. Mostly feeds on ground. Sometimes sticks head in water to catch aquatic insects.

**Nesting:** Usually natural tree cavities, or else under stump. Nest is built of twigs and moss, lined with feathers and hair. Females raise 2 broods of 5 or 6 eggs alone. Males have many mates (polygynous).

While there are many wrens in the U.S., this is the only species found in Europe.

### Chestnut-Backed Chickadee (*Parus rufescens*)

**Head:** Black cap and chin, with a triangular white patch on each cheek.

**Wings & Tail:** Gray.

**Back:** Reddish brown.

**Underside:** White.

**Habitat:** Conifer forests.

**Food:** Insects, gathered from bark, some seeds or fruit.

**Nesting:** Nests in tree cavities, lined with moss, fir, feathers. 6-7 eggs at a time.



## Small Birds: up to Blackbird size



### Hestnut-Backed Chickadee

#### White-Breasted Nuthatch (*Sitta carolinensis*)

**Head:** White cheeks and chin with a dark cap (black in male, gray in female).

**Body:** White underside, gray back.

**Habitat:** Forests, wooded areas

**Food:** Insects and spiders taken from fissures in bark. Occasionally eats nuts.

**Nesting:** Nests in tree cavities, on a bed of shredded bark and feathers. 5-8 eggs once a year; monogamous.

Usually walks head first down trees poking beak in bark for food. Mating pairs remain on a feeding territory throughout the year.

#### Brown Creeper (*Certhia americana*)

**Head:** Curved beak. Brown head with white throat and white stripe above eye.

**Tail:** Stiff two pronged tail provides support for climbing bark.

**Back:** Camouflaged against bark.

### WHITE-BREASTED NUTHATCH



### BROWN CREEPER

**Habitat:** Woodlands, groves.

**Food:** Primarily insects and spiders collected from bark of tree.

**Nesting:** A small cup built under loose bark, built of bark moss and conifer needles. Monogamous; 5-6 eggs per brood. Female does not leave nest; male feeds her when incubating.

Unlike the descending nuthatch, the creeper usually climbs up trees.



*Small Birds: up to Blackbird size*

**Violet-green Swallow**  
(*Tachycineta thalassina*)

Tail: Purple with white patches at base of tail. Slightly notched

Head & Back: Shiny green

Underside: White

Flys: Fast and swooping

Habitat: Woods, canyons, towns.

Food: Flying insects

Nesting: In tree cavity, or other hole; nest of grass, stems, lined with feathers. Mates for life, 4 to 6 eggs 1 time per yr.

Defends nest from other swallow species. Have been known to help Western Bluebirds raise young and then use Bluebird nest.



**Barn Swallow** (*Hirundo rustica*)

Tail: Deeply forked, black with white spots.

Head & Back: Dark blue (black), brown face

Underside: Orangish

Flys: Fast and swooping.

Habitat: open areas: fields, marshes, by lakes.

Nesting: cuplike mud and straw, sheltered (under eaves of roof). 4 to 7 eggs, 2 times per yr.



**Western Bluebird** (*Sialia mexicana*)

Breast & Back: Rusty red.

Head, Wings, Tail, Throat: Blue

Belly: Greyish

Young: Grey, speckled; blue on wings and tail.

Habitat: scattered trees, open areas near clumps of trees.

Food: Insects, berries, earthworms, snails

Nesting: In cavity; grass, weed stems, pine needles, some hair or



*Small Birds: up to Blackbird size*

feathers. Mates for life; 3 to 6 eggs 2 times per yr.

Defends nest hole against swallows, house sparrows.

**Lesser Goldfinch** (*Carduelis psaltria*)

Underside: Bright yellow

Tail, Wings, Top of Head: Black; white on wings.

Back: Green or black.

Habitat: Open woods, brushy country, wooden creekbeds.

Food: Seeds, berries, flower buds, insects.

Nesting: In shrubs, nest of plant fibers, bark, moss. 3 to 6 eggs 2 times per yr.

Male feeds incubating female by regurgitation.

**Western Tanager** (*Piranga ludoviciana*)

Head: Red Female, Immature: greenish yellow.

Underside: Bright Yellow

Wings: Black with white stripe.

Back: Black

Habitat: Conifer or mixed forests. Usually seen in forest clearings.

Nesting: Nest of twigs, roots, moss, lined with hair, roots; in fork of conifer branch away from trunk. Mates for life, 2 to 5 eggs once per yr.

**Common Yellowthroat**  
(*Geothlypis trichas*)

Underside: Bright yellow breast, white belly.

Back: olive-brown.

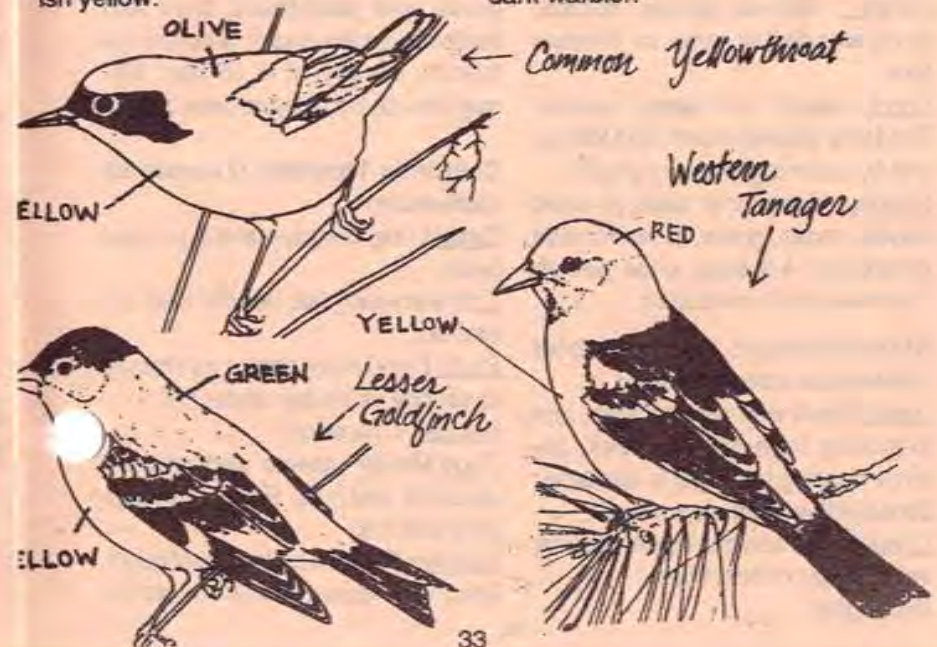
Head: Male with black face, grey stripe over eye.

Habitat: Marshes, thickets near lake.

Food: Insects, spiders, occasional seeds.

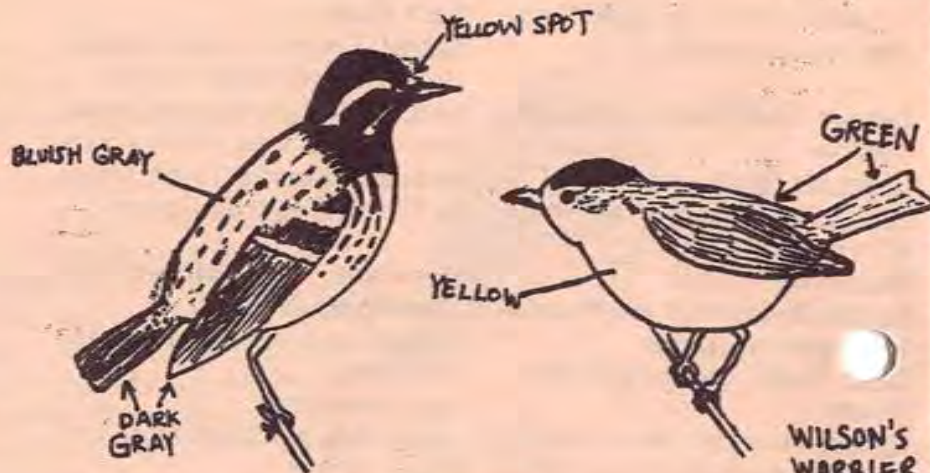
Nesting: Loose nest of stems, grass, bark, ferns. 3 to 6 eggs 2 times per yr.

Thought to be the most abundant warbler.





Small Birds: up to Blackbird size



BLACK-THROATED GRAY WARBLER

**Wilson's Warbler (*Wilsonia pusilla*)**

**Head:** Yellow face, small black cap

**Body:** Green back, yellow underside

**Habitat:** Willows, alders, shrubs, along wooded streams, or Wente's lake.

**Food:** Insects and some berries. Feeds by gleaning bark and foliage and by catching insects in flight.

**Nesting:** Small cup nest of dead leaves, moss, grass, in streamside shrubbery. 4-6 eggs once per yr. Females do all incubation.

**Black-throated Gray Warbler (*Dendroica caerulescens*)**

**Head:** Black with white stripes, one extending from base of beak, another curving from eye to shoulder. Small yellow spot above beak.

**Chest:** White with black dashes along sides. Top of chest black.

**Back:** gray.

**Habitat:** Dry oak slopes and woods.

**Food:** Insects caught in flight or gleaned off branch tips.

**Nesting:** Builds nest of weed stalks, grass, and plant fibers, lined with feathers, on the end of a horizontal branch, usually of a conifer. Monogamous; 3 to 5 eggs once per yr.

**California Thrasher (*Toxostoma redivivum*)**

**Beak:** Long, deeply curved, pointed beak.

**Tail:** Very long tail, usually held out and up.

**Body:** Dark brown back. Light brown to slightly yellowish under tail.

**Habitat:** Chaparral

**Food:** Mostly insects and spiders, also fruit and nuts. Forages by digging with bill.

**Nesting:** Builds a bulky cup of twigs, lined with grass, hidden in shrub-

Small Birds: up to Blackbird size

berry. Monogamous, laying 3-4 eggs twice per year. After the first brood hatches the male cares for young while the female begins the second nest nearby.

These birds are seldom seen far from the ground. Almost always forages in the protective cover of shrubs, rarely in open. Thrashers are fast runners.

**Ash-throated Flycatcher (*Melanerpes cinerascens*)**

**Head:** Brown head, very slight crest or bushy feathers; white-gray throat; beak wide and fairly flat.

**Tail:** Tail brown and rusty. When perched this bird will flick its rusty tail up and down

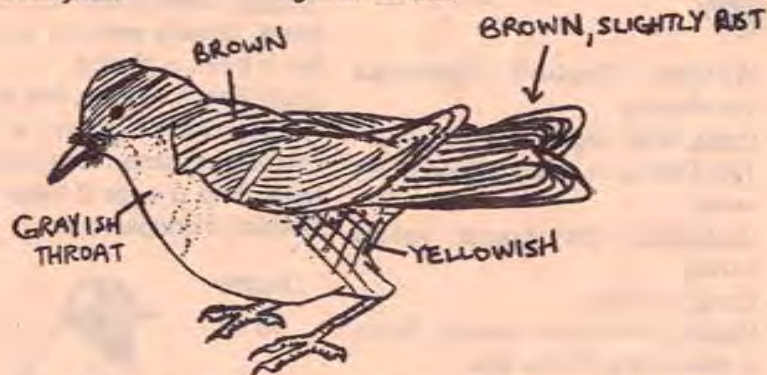
**Body:** Back brown, belly grayish white, slightly yellow.

**Habitat:** Semi-arid scrub and open woods. Found in the camp hills (outpost areas) in the chaparral and woods along the dry fields.

**Food:** Flying insects, occasionally berries.

**Nesting:** Nests in a tree cavity, often an abandoned woodpecker nest. Lays 4-5 eggs. Monogamous.

Sometimes will defend its territory against hawks.



ASH-THROATED FLYCATCHER



CALIFORNIA THRASHER



Western Kingbird



**Western Kingbird (*Tyrannus vociferans*)**

**Head:** Grey, slight crest with red.  
**Tail:** Dark grey, white stripes down sides.  
**Underside:** gray breast, yellow tummy.  
**Back:** dark grey  
**Habitat:** Semi-open country. Nests in oaks along Wente lake.  
**Food:** Insects (primarily flying), berries.  
**Nesting:** On horizontal branch, near trunk; nest thickly lined with hair, cotton, plant down.  
Often perches on branch or wire and then jumps off, swooping through the air in order to catch flying insects.  
**Black Phoebe (*Sayornis nigricans*)**  
**Head and back:** black, slightly crested.  
**Underside:** white belly.  
**Habitat:** Woodlands near water. Has

*Small Birds: up to Blackbird size*  
nested in the waterfront tower.  
**Food:** Insects. Usually eats in air, occasionally ground.  
**Nesting:** Nests, plant fiber and mud, adheres on or under other structures.  
Often swoops around, just above water,

**Oregon (Dark-Eyed) Junco (*Junco hyemalis subspecies oregonus*)**  
**Head:** Completely black.  
**Tail:** Grey with white stripe down each side.  
**Back:** Rusty-brown  
**Underside:** White with rusty sides.  
**Habitat:** Undergrowth and brush of forest. Usually seen on ground, or low in trees or shrubs.  
**Food:** Seeds, insects, few spiders.  
**Nesting:** Nest on ground, in shallow depression; grass, moss, roots, bark, twigs. 3 to 6 eggs 2 times per yr. Possibly monogamous.

Oregon Junco



Black Phoebe

*Small Birds: up to Blackbird size*



Purple Finch

Hutton's Vireo



Song Sparrow

**Song Sparrow (*Melospiza melodia*)**  
**Underside:** White, speckled with brown. In middle of breast is a small brown "bow tie" splotch.  
**Head & Back:** Brown; grey around eye  
**Flight:** Wavering flight; pumps tail up and down.  
**Habitat:** Brush, marshes. Often in shrubs near lake.  
**Food:** Insects, seeds, some berries  
**Nesting:** Nest of grass, leaves, bark strips; beneath shrub, tall grass, brush pile. 2 to 6 eggs 2 to 4 times per yr. Nest sometimes reused for another brood. Monogamous unless females outnumber males.  
**Purple Finch (*Carpodacus purpureus*)**  
**Head & Breast:** Red, Grey-brown stripe through eye.  
**Back:** Grey Brown; brown wings. Red rump.  
**Underside:** Red fades to white with brown stripes.

**Habitat:** Coniferous forests, near swamps, streams, or hillside fields.  
**Food:** Seeds, fruit, insects.  
**Nesting:** Nest of twigs, grass, leaves, roots, hair; sometimes uses old nests of other birds. 2 to 6 eggs 1 to 3 times per yr.

**Hutton's Vireo (*Vireo huttoni*)**  
**Head:** Olive-grey; eye with incomplete white eye ring.  
**Tail & Wings:** Darker grey. 2 white stripes on wing.  
**Underside:** Very light grey, white slightly yellow.  
**Habitat:** Woods and brush, especially with oaks.  
**Food:** Insects, spiders, berries.  
**Nesting:** Nest of False Spanish Moss lichen bound with spider web, lined with fine grass; nest in v-shaped branch at top of evergreen oak (Tanoak, Interior Live Oak) tree. 3 to 5 eggs 2 times per yr.



Small Birds: up to Blackbird size

**White-Crowned Sparrow**  
(*Zonotrichia leucophrys*)

Head: crown striped black and white. Linnature. brown and white stripes, pale.

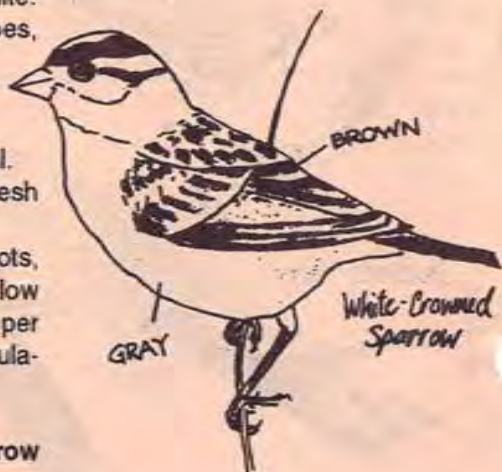
Underside: Grey

Back: Brown

Habitat: Forest edges, chaparral.

Food: Insects, seeds, berries, fresh leaves, flowers.

Nesting: Nest of grass, twigs, roots, leaves, bark; on ground, in low shrubs. 2 to 6 eggs 2 to 4 times per yr. Polygony in migrating populations (not at Wente).



**House Sparrow, English Sparrow**  
(*Passer domesticus*)

Head: Black throat, with white above. Brown streak curves back from eye. Grey cheeks and Grey stripe across top of head. Females and Juveniles: have no distinct black or white.

Back: Brown

Underside: Light grey.

Habitat: Cities, farms, chaparral, or fields.

Food: Seeds, insects, fruit.

Nesting: In tree holes a nest of grass, stems, lined with feathers. 4 to 8 eggs 2 times per yr; possibly monogamous.

The House Sparrow is an introduced species of Eurasian Wevaer Finch. It was introduced in Brooklyn shortly after 1850 both because this bird was thought attractive and in hopes that it would help control insects. This bird quickly spread and by 1900 may have been the most abundant bird in North America. However, after the spread of the automobile the populations of this bird dropped somewhat, since it had



Small Birds: up to Blackbird size

been feeding on undigested grain in horse droppings. Interestingly, a close relative of the house sparrow, the Eurasian Tree Sparrow, was introduced to St. Louis in 1870 but has not been successful beyond a small area in eastern Missouri.

It is believed that the House Sparrow has had a close relationship with humans since the beginning of agriculture.

**Bullock's (Northern) Oriole (*Icterus galbula subspecies bullockii*)**

Underside: Bright orange; females yellow

Head: Black on top and throat, black stripe through eye. females: yellow and greenish.

Wings: Black with thick white bar. Female wing grey-brown.

Habitat: Forests, forest clearings.

Food: Insects, spiders, fruit, nectar, sometimes snails

Nesting: Hanging nest attached to branch; woven plant fiber strips, lined with grass and hair. 3 to 6 eggs once per yr.

Formerly considered a separate species from the Baltimore Oriole, now a subspecies.

**California Towhee, Brown Towhee (*Pipilo crissalis*)**

Body: completely brown, slightly light belly; rusty throat and undertail. Long tail.

Habitat: Brushy, stony areas, open woods. Usually seen foraging on ground; often twitches long tail, or holds up in air.

Food: Seeds, insects, fruit.





Small Birds: up to Blackbird size

**Nesting:** Mates for life. 2 to 6 eggs 2 or 3

The birds known as the Brown Towhee are actually two species, the California Towhee and the Canyon Towhee.

**Rufous-Sided Towhee (*Pipilo erythrophthalmus*)**

**Head & Back:** Black, dashed white lines on wings.

**Sides:** Rufous (rusty red-brown color).

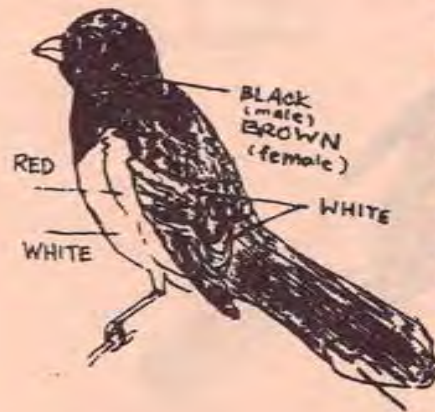
**Underside:** White.

**Habitat:** Undergrowth, brushy edges of forest.

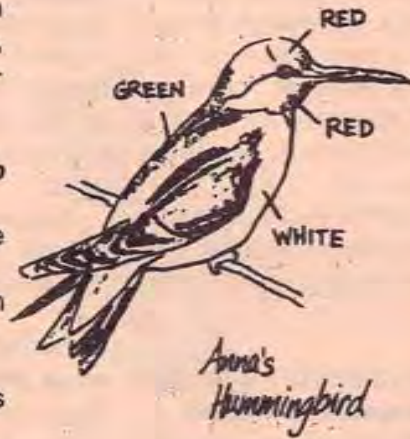
**Food:** Insects, spiders, seeds, fruit.

**Nesting:** Birdmade depression in ground containing nest of twigs, roots, bark, grass. 2 to 6 eggs 2 or 3 times per yr. Mates for life.

Females are known to feign injury in order to distract predators from their nests.



Rufous-Sided Towhee



**Anna's Hummingbird (*Calypta Anna*)**

**Head:** Red throat and crown. Female: green head, little or no red on throat. Long, needle beak.

**Back:** Metallic green.

**Underside:** Silvery white.

**Flight:** This tiny bird hovers at flowers. Wingbeats so rapid wings appear as blur.

**Habitat:** Chaparral, open woods, gardens.

**Food:** Primarily nectar, also tree sap, insects, spiders.

**Nesting:** In shrubs or oaks; tiny bowl made of plant down held together by spider's silk, lined with feathers, plant down. Lichen added to outside. 1 to 3 eggs 2 or 3 times per yr. Promiscuous.

Sometimes bathes on dew covered foliage.

## Herpetology: Reptiles & Amphibians

### Amphibians

**California Newt (*Taricha torosa*)**

**Identifying Features:** Brown and lumpy above (no scales); bright orange beneath.

**Camp Habitat:** In creek or spring pools; sometimes walking through damp forest areas.

**Diet:** Slugs, earthworms, sow bugs, and insects. Newt Larvae eat mosquito larvae.

**Usefulness to Humans:** Eating pests, like slugs, and mosquito larvae.

**Reproductive Notes:** Males seek females by odor and then ride on the females piggy-back in water and rubs her snout with a gland on the lower side of his jaw. He then deposits a small package of jelly at the water surface which the female then stores until this jelly of sperm is needed for fertilization.

When tapped on the back often these newts curl their head up and back and their tail up and forward.



**Ensatina (*Ensatina eschscholtzi*)**

**Identifying Features:** Small salamander, 4 to 6 inches long; smooth brown above, orange below. Orange sprinkles along sides. If harassed will suddenly rise on its toes and tail will exude a sticky milky substance. If pulled the tail can come off as defense.

**Camp Habitat:** In woods near creek, but not in creek.

**Diet:** Earthworms, insects, sow bugs, millipedes, centipedes, spiders.

**Usefulness to Humans:** Consumes various kinds of pests.

**Reproductive Notes:** Mating happens in October: male rubs female's throat with his body. Then she puts her chin on his tail and he leads her over while stroking her with his tail. Eggs laid in underground holes or in rotting wood. Female protects eggs from drying out.





Amphibians: Frogs and Toads

**Pacific Tree Frog (*Hyla regilla*)**

**Identifying features:** Very small frog; green to grey to tan color that changes according to surroundings. Toe pads instead of webbed feet. Dark stripe through the eye.

**Camp habitat:** Near ground among horsetails or grass. In damp areas: near streams, springs, and the lake; rarely in trees.

**Diet:** Tiny insects and arachnids.

**Usefulness to humans:** Reduces flies, ants, other bugs.

**Reproduction:** Lays loose clusters of eggs that float on the lake and its shallows; season from January to May.

This frog's high pitched, two note

call is famous because of Hollywood. The Pacific Treefrogs nighttime call is taped and used in countless wilderness scenes in movies.

**Foothill Yellow Legged Frog (*Rana boylei*)**

**Identifying Features:** Legs 2 or 3 inches long, legs yellow underneath; eardrum indistinct.

**Camp Habitat:** Rarely further than a single hop away from the lake; often buries itself in lake bottom sediment.

**Diet:** Hornets, flies, grasshoppers, beetles, mosquitos, moths, occasionally snails.

**Usefulness to Humans:** Eating of hornets flies, mosquitos, and snails.



Foothill Yellow Legged Frog



Bullfrog

Pacific Tree Frog



Western Toad

Amphibians: Frogs and Toads

**Bullfrog (*Rana catesbiana*)**

**Identifying Features:** On back mostly green bright green head. Large eardrums.

**Camp Habitat:** Near lake, usually in reeds.

**Diet:** Earthworms, snails, spiders, small fish, bees, ants, dragonflies, flies, caterpillars, wasps, frogs; small snakes, birds and mice.

**Usefulness to Humans:** Eats pests. Also the legs are savored by some as s legs cuisine.

The loud, deep "mooring" call of these frogs can be heard at Wente throughout the summer night.

This species was originally native east of the Rockies but was introduced to the west for its legs.

**Western Toad (*Bufo boreas*)**

**Identifying Features:** Dark grey and brown; lumpy (resembling warts); white stripe down center of back.

**Camp Habitat:** Grass lands or woodlands. Most often seen when active at night.

**Usefulness to Humans:** Eats pests  
**Reproductive notes:** Male holds female from behind with arms firmly around female's chest. Lays 16,000 eggs in two long jelly strips.

The "warts" on this toad are actually glands which can secrete a poisonous liquid to protect this toad from predators.



Reptiles

**Western Terrestrial Garter Snake (*Thamnophis elegans*)**

**Identifying features:** White or yellow stripe down back between two wider black or brown stripes. Red blotches on the sides within the dark stripes. The head of this snake is dark colored, from a greenish brown too black. The Garter can grow up to 3 1/2 feet long.

**Camp Habitat:** Grass and reeds by lake or stream. Occasionally in forest or fields. Sometimes swims.

**Diet:** Slugs snails, worms, fish, salamanders, frogs, toads, lizards, snakes, small mammals, and sometimes evens birds or insects!

**Usefulness to humans:** Because of the large range of prey, excellent for pest control.

Garter snakes often urinate a bad smelling musk when captured. Though non-poisonous, angry Garter Snakes will often bite. Garter snakes give birth to live young. These snakes are often found in groups, in particular before breeding or hibernating.



GARTER SNAKE

**Pacific Gopher Snake (*Pituophis melanoleucus* subspecies: *catenifer*)**

**Identifying features:** Yellow or cream-colored snake with black or brown blotches on its back, and



**Reptiles: Snakes**

smaller blotches along its side. White to creamy yellow belly. Usually a darker line runs across the forehead and through the eyes. In this subspecies, the blotches towards the front of the snake are usually completely separated.

**Camp Habitat:** Open fields, at the edges of forest and field. Also found in areas of chaparral; ventures into the forest. Rarely seen by the lake.

**Diets:** A constrictor, which means it kills its prey by wrapping around and thereby suffocating them. Eats rodents, small rabbits. Also eats birds and steals eggs from nests, lizards and large insects.

**Usefulness to Humans:** Grows to lengths of as much as 8 feet. Can eat very large rodents and are often welcomed by farmers and gardeners for controlling pests, including gophers.

Gopher snakes are most active on hot days and can occasionally be seen at night if it is very hot. They usually take refuge in mammal burrows or under large rocks. When threatened this snake flattens its head and hisses while vibrating its tail and sometimes even lunging at the intruder. Because of these actions, and similar color and markings, the gopher snake is often mistaken for a rattlesnake, to its obvious advantage.

**California Kingsnake** (*Lampropeltis getulus* subspecies: *californiae*)

**Identifying features:** Size from three feet to more than six feet, snake with alternating rings of white and black that run around its body. The anal plate on this snake is single.

**Camp Habitat:** Often in damp areas around the lake, but also found in woods and occasionally fields. It sometimes climbs trees.

**Diet:** Lizards, reptile eggs, frogs, birds, and small mammals. Kingsnakes gain their name from the fact that they eat other snakes, including rattlesnakes.

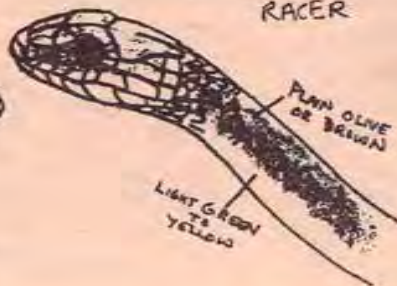
**Usefulness to humans:** Kingsnakes eat pests, such as small mammals, and are particularly known for eating other snakes, including venomous snakes like pit-vipers (rattlesnakes).

The Kingsnake kills by constriction and suffocation. Kingsnakes are mostly immune to pit-viper venom. King snakes are particularly long-lived: they are known to live as long as 27 years!

**Western Yellow Bellied Racer** (*Coluber constrictor* subspecies *mormon*)

**Identifying features:** Olive green or brownish on back, smooth and without markings; belly is pale yellow. Very quick. Grows to lengths of 6 feet.

YELLOW-BELLIED RACER



CALIFORNIA KINGSSNAKE

**Reptiles: Snakes**

**Camp Habitat:** Primarily in fields; sometimes near lake; usually near logs or rocks.

**Diet:** Frogs, lizards, large insects, other snakes, and small rodents. Although this snake's scientific name includes "constrictor" it is not a snake that constricts its prey.

**Usefulness to humans:** Pest control. When threatened these snakes often vibrate their tails to mimic rattlesnakes. When caught Racers bite viciously and repeatedly; although not poisonous, it can be painful. Often these snakes slither quickly, holding their heads high. They do this to spot prey.



**Usefulness to humans:** Sometimes eats infant rattlesnakes; often eats slugs.

When threatened, this snake coils tightly and shows its orange belly. Many predators recognize orange as the color of poisonous food and will therefore not eat Ring-necks. Occasionally this snake will release a bad-smelling, liquid musk when caught. This smooth and secretive snake is sometimes referred to by the Wente Nature Staff as the "Ultimate Snake!"



**Northwestern Ringneck Snake** (*Diadophis punctatus* subspecies: *occidentalis*)

**Identifying features:** Small, slender snake with grayish, dark olive green back, black head. Thin orange ring around neck. Belly is also bright orange, sprinkled with small back dots. Rarely longer than two feet.

**Camp Habitat:** Usually on the forest floor, often concealed beneath the dry leaves or ground covering plants. Sometimes hides under logs or rocks.

**Diet:** Earthworms, slugs, small salamanders, small lizards, and baby snakes. Although harmless to humans, it may have a light venom which affects its small prey. Uses constriction to partly kill its prey.

**Northern Pacific Rattlesnake** (*Crotalus viridis* subspecies: *oreganus*)

**Identifying features:** Dark brown, oval or squarish looking blotches down back. Blotches narrow towards tail. Black rings just above rattle. Head widely triangular. Rattle on tail.

**Camp Habitat:** Throughout camp. Forest or field, usually in drier areas but sometimes near lake as well. Sometimes climbs trees. Rarely swims.

**Diet:** Primarily rodents and other small mammals; also nesting young birds, other reptiles, amphibians.

**Usefulness to humans:** Although this snake is dangerous because of



## Reptiles: Turtles & Lizards



its venom, it eats large quantities of destructive rodents. Rattlesnakes are also essential parts of the Wente ecosystem. Sometimes cooked and eaten as well, although the meat is tough.

Rattlesnakes are known for coiling tightly and shaking their rattle tipped tails to create a warning sound when cornered. Rattlers can strike quickly and usually up to a distance of about 1/2 their length.

If a Rattlesnake is found in or around our campsites, it should **not be killed**. Instead, someone should keep an eye on it, preferably an adult or senior scout, at a distance of at least several yards. The snake should not be agitated and a Nature Staff member should be notified immediately. Qualified staff members will safely catch and relocate the snake.

Contrary to a commonly held belief, rattlesnakes do not add a new rattle each year. Rather, they add another rattle to their tail each

time they shed their skin, which varies to about 3 or 4 times a year. Rattles easily break off.

### Western Pond Turtle

(*Clemmys marmorata*)

**Identifying features:** An olive, brown, or blackish shell with a pattern of dark spots, lines, or dashes that radiate from the center of shell plates. Head has spots or a network of black patterns.

**Camp habitat:** In the lake and occasionally seen in large pools of camp creeks. At night these turtles often leave the protective waters of the lake and walk through nearby fields for food.

**Diets:** Plants, insects, worms, carrion, and small fish.

**Usefulness to humans:** Its eating of potentially pesky insects and also its use of carrion, already rotting, dead animals, are useful both to humans and the ecosystem. Turtles are among those who will eat fish heads and guts which are properly disposed of in the lake.

Often observed basking alone on a log or tule mat in the lake, these turtles will dive if disturbed. On occasion it may bite fishing bait.

**Western Fence Lizard (*Sceloporus occidentalis*) Northern subspecies: *occidentalis***

**Identifying features:** A spiny-scaled lizard of a brown or grey, occasionally almost black; pattern of blotches or wavy stripes on its back. Belly has blue patches on either side. The under arms are yellow when fully ma-

## Reptiles: Lizards

ture. Males have blue or green spots on the back and a blue patch on the throat.

**Camp Habitat:** Throughout camp. Very common.

**Diet:** Insects and spiders.

**Usefulness to humans:** Eating insect pests. Furthermore because it is so common, it is the best species in camp to examine closely when learning about reptiles.

To attract females and to drive away competing suitors, male Western Fence Lizards often bob heads up and down. Often called a "blue-belly" by campers, however, there is another species of lizard in California with blue on its belly, the Sage Brush Lizard (*Sceloporus graciosus*) not found in camp. As a defense, when grabbed by the tail, the tail will break off.

**Western Skink (*Eumeces skiltonianus*)**

**Identifying features:** Smooth fast lizard, runs with a side to side motion resembling slithering. Head and body striped with four light stripes between a darker brown. The tail is bright blue in young but a grayish color in adults.

**Camp Habitat:** Found under leaves of the forest floor, logs, or rocks. Sometimes found in grassy areas.

**Diet:** Insects, spiders, worms.

**Usefulness to humans:** Eating of insect pests.

This quick and stealthy lizard is most often seen in juvenile forms when its bright blue tail stands out. The tails of skinks can be broken often as a defense. A new tail will eventually grow.



WESTERN FENCE LIZARD





Reptiles: Lizards

**Southern Alligator Lizard**  
(*Gerrhonotus multicarinatus*)

Identifying features: Long lizard, short legs, brown or yellowish gray, cross bands on back; dark stripes on center of belly scales, distinct folds of skin along its side.

Camp Habitat: Oak forests, fields, sometimes Douglas Fir groves

Diet: Any animal it can swallow: insects, amphibians, spiders, reptiles, very small mammals.

Usefulness to humans: Removal of pests—insects, infant rodents.

Sometimes this lizard wraps its tail around branches of shrubs to aid in climbing. If grabbed, it will struggle and bite. Alligator lizards have long tails that can be easily left behind for defense. In addition, they may defecate (poop) on hands for defense.

**Northern Alligator Lizard**  
(*Gerrhonotus coeruleus*)

Identifying features: Long lizard, short legs; Olive green to bluish, with dark blotches OR very wavy bands on back; dark stripes on edges of belly scales, distinct folds of skin along its side.

Camp habitat: Under or on rotting logs and rocks in forest areas; prefers cool areas.

Diet: Insects, ticks, millipedes, spiders, occasionally snails

Usefulness to humans: Controls snails and insect pests, especially ticks

The more secretive of the camp's two alligator lizard species. If caught, it may bite. The tail of this lizard can be easily lost for defense.



SOUTHERN ALLIGATOR LIZARD

## Mammology: Furry Animals

### Raccoons

Raccoons are found from forests to city parks happily eating human leftovers, or fishing in the lake shallows for frogs and fish. They also eat lizards, insects, fruit, and small mammals.

Raccoons will often explore campsite garbage at night. For this reason it is not a good idea to leave food in your tent because raccoons are certainly not shy about entering tents and taking whatever smells good.



### California Myotis Bats

This species of bat can be seen everyday at dusk swooping about the lake in search of the mosquitos and other flying insects. The average bat consumes approximately 400 mosquitos in a single hour.

Bats hunt their insect prey using high pitched sounds called sonar too high to be heard by human ears. However, this does not mean that bats' eyes are blind. Wente probably has other species of bats, but we

have not been able to positively identify any others besides the Myotis.

### Black-Tailed (Mule) Deer

The most often seen mammal at Wente, Black-Tailed Deer are the only split-hooved herbivores at camp. The deer at Wente may be less afraid of people than most deer, but they are not domestic pets and campers should avoid feeding them by hand.



The Black-Tailed Deer browse grass, oak leaves, twigs, fruits, and acorns (particularly those of the Oregon White Oak. Does generally have 2 fawns a year which are born in late spring and still have their bambi-like spots during camp.

The Black-Tailed Deer is the Northern California subspecies of the Mule Deer.



Mammals: Squirrels and Chipmunks



**Western Gray Squirrel**

This large bushy-tailed, gray tree squirrel is a commonly seen inhabitant of the Wente Woods and often visits campsites on quiet afternoons. It builds a nest high in trees of bark and sticks. Gray Squirrels feed on pine cones, acorns, some fungi and berries. Sometimes you can hear its loud barking call.

**California Ground Squirrel**

This plump brownish squirrel can often be seen in Wente's field, like around the corral. It is unmistakable due to a black triangle or v-shaped patch on its back between the shoulders. It hardly ever leaves the ground where it feeds on leaves, roots, flowers, seeds, berries, and some insects. It lives in burrows which usually have entrances hidden by a rock or log. These squirrels are known to sometimes cause significant crop damage and its fleas sometimes carry bubonic plague.



**Northern Flying Squirrel**

This squirrel is rarely seen because it is nocturnal. It makes chirping noises which sound much like some birds. However, when the trees in which it lives are disturbed it is sometimes seen during the day. It's nest of shredded bark is made in tree cavities. It "flies" by gliding between trees by means of skin wings between its front and rear legs. It feeds on nuts, seeds, and some insects.

**Golden-Mantled Squirrel or Sonoma Chipmunk?**

Both of these species are found in camp. Chipmunks are much smaller, reaching lengths of only 5 inches while Golden-mantled Ground Squirrels reach lengths of 8. On each side the Golden-Mantled Squirrel has a single white stripe bordered by black while the Sonoma Chipmunk has many poorly defined stripes. Only the chipmunk has a white and black stripe around its eye. Golden-mantled Squirrels live in dense Douglas Fir and Pine forests on some Wente slopes, while Sonoma Chipmunks are usually seen in chaparral or forest clearings.

The chipmunk forages berries and leaves from the ground or branches

Mammals: Squirrels, Chipmunks, Gophers

of shrubs. The Golden-mantled Squirrel eats leaves, seeds, fruit, and insects. Sometimes it carries food in cheek pouches to store it in its den.

pocket gophers they have fur-lined cheek pouches which they cram with food or bedding for nests to be carried back to the burrow. They eat mostly roots and tubers below ground or pull entire plants underground (which is the reason gardeners dislike them). Although they can damage crops in this way, gophers perform an important task of aerating the soil which helps conserve water and prevent erosion.

**Botta's Pocket Gopher**

This mammal spends most of its time underground in its extensive tunnel network. It uses some deeper side branches as toilet areas and others as food storage areas. This gophers are solitary and live alone, except when raising young. As all



GOLDEN MANTLED GROUND SQUIRREL



BOTTA'S POCKET GOPHER



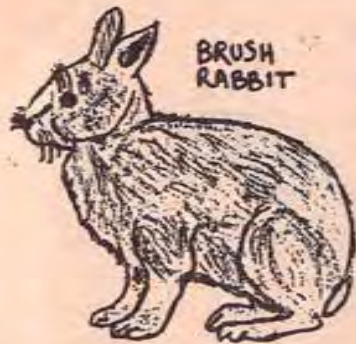
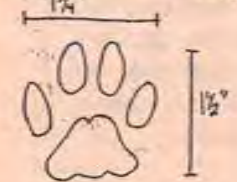
SONOMA CHIPMUNK



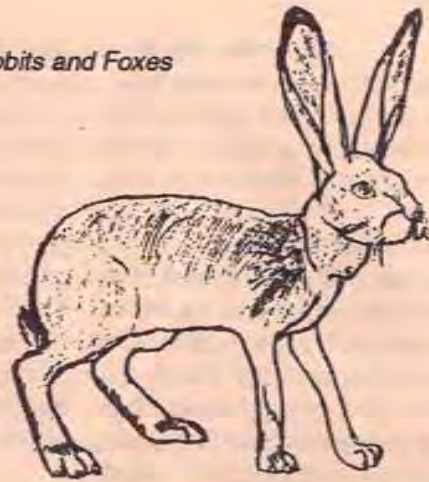
## Mammals: Rabbits and Foxes



BOBCAT TRACKS



BRUSH RABBIT



BLACK-TAILED JACK RABBIT



GRAY FOX TRACKS

### Rabbits

The most often seen rabbit at camp is the Black-tailed Jack Rabbit; scientifically it is considered a hare, not rabbit. Hares are long-legged and fast enough to try to outrun predators, while rabbits prefer to hide. The Black-tailed Jack Rabbit has long back-tipped ears on a grayish-brown body. These jack rabbits live in fields where they dig burrows. This species can reach speeds of 35 mph.

Much more secretive is the camp's cottontail, the Brush Rabbit. This rabbit does not dig burrows but rarely leaves the protection of shrubs, where it eats green plants, grasses, berries.

### Red and Gray Foxes

The Red Fox small, bushy-tailed fox is rusty-reddish above with a white belly and a white tail tip. It builds a den in sparse ground cover or in a stream bank or other slope. Red foxes eat whatever is available, including leaves, berries, acorns, birds and small mammals, and insects. This fox is shy and nocturnal and rarely seen except for brief glances, although it has been seen by the lake not far from the campfire area. Red Foxes originally came from Europe. They were introduced into New England and Virginia around 1850 for fox-hunting and have spread through much of North America.

The Gray Fox is native to most of

## Mammals: Bobcat, Bear, Opossum

the United States. It is gray above and reddish below and on the head. The tail has a black tip. It builds its dens usually natural cavities well hidden in woodlands or rocky slopes. The Gray Fox is also an omnivore but feeds heavily on Brush Rabbits, mice, and birds, as well as insects and plant material. Gray Foxes are sometimes caught and eaten by Bobcats.

### Bobcats

Also called the Bay Lynx, Bobcats get their name from their short "bobbed" tail. These hunters sleep most of the day in a secluded spot and hunt by night, preying mostly on cottontail (Brush Rabbits), but also mice and squirrels. Sometimes it preys upon livestock, or rarely foxes. A common sign of the Bobcat are its tracks, large versions of those of house cats.

### Skunks

Striped skunks, the camp mascot, are known inhabitants of the forests in the Willits area, and are attested at camp by a skull found near the far side of the lake in 1992. However, these omnivores are secretive and shy and rarely seen around campsites. Should you see one, be calm and keep your distance. Their defensive spray is one of the most noxious smells known and very hard to get off!

### Black Bears

Bears inhabit the hill and back woods of Wente. Ranging in color from black to cinnamon, these bears are most active at night but can sometimes be seen foraging during the

day. Other signs of bears include tracks and "bear trees" which are those whose bark is scarred with tooth marks and vertical claw slashes. Good examples can be seen on some Alders on the way to the Pomo Pools Kali-Ama post.

These bears are solitary and range in territories of 8 to 10 square miles feeding mostly on twigs, leaves, berries, and roots, but also on insects and sometimes fish. Most Black Bears fear people and quickly leave if they see humans. Nevertheless, you should not approach a bear should you ever see one. Look from a distance only briefly, then please inform the nature staff where you have seen it.

### Opossums

The size of large house cats, these white marsupials, white hairless tails are solitary, nocturnal scavengers. They eat birds, snakes, mammals, earthworms, fruits and carrion. As a marsupial the young are born very undeveloped about the size of a penny and then are carried by the mother in a pouch (for which kangaroos are famous). In this pouch the young continue to develop while feeding from mammary glands in the pouch. Only one species of Marsupial is found in North America, the Virginia Opossum.



VIRGINIA OPOSSUM



## Wente Species Checklist

### Amphibians

- Pacific Tree Frog (*Hyla arenicolor*)
- Foothill Yellow-Legged Frog (*Rana boylei*)
- Bullfrog (*Rana catesbeiana*)
- Western Toad (*Bufo boreas*)
- California Newt (*Taricha torosus*)
- Ensatina, Escholtz' Salamander (*Ensatina eschscholtzi*)

### Reptiles

- Gopher Snake (*Pituophis catenifer*)
- Western Terrestrial Garter Snake (*Thamnophis elegans*)
- California (Common) Kingsnake (*Lampropeltis getulus californicus*)
- Western Yellow-Bellied Racer (*Coluber constrictor mormon*)
- Northern Pacific (Western) Rattlesnake (*Crotalus viridis*)
- Western Pond Turtle (*Clemmys marmorata*)
- Western Skink (*Eumeces skiltonianus*)
- Western Fence Lizard (*Sceloporus occidentalis*)
- Southern Alligator Lizard (*Gerrhonotus multicarinatus*)
- Northern Alligator Lizard (*Gerrhonotus coeruleus*)

### Mammals

- Golden-Mantled Ground Squirrel (*Citellus lateralis*)
- Western Grey Squirrel (*Sciurus griseus*)
- California Ground Squirrel (*Spermophilus beecheyi*)
- Douglas Squirrel, Chickaree (*Tamiasciurus douglasi*)
- Northern Flying Squirrel (*Glaucomys sabrinus*)
- Sonoma Chipmunk (*Tamias sonomae*)
- Botta's Pocket Gopher (*Thomomys bottae*)
- Western Harvest Mouse (*Reithrodontomys megalotis*)
- Brush Mouse (*Peromyscus boylii*)
- Dusky-Footed Woodrat (*Neotoma fuscipes*)
- Brush Rabbit (*Sylvilagus bachmani*)
- Black-Tailed Jack Rabbit (*Lepus californicus*)
- ? Aplodontia, Mountain Beaver (*Aplodontia rufa*) ?
- Black-Tailed (Mule) Deer (*Odocoileus hemionus*)
- Opossum (*Didelphis virginiana*)
- Raccoon (*Procyon lotor*)
- Striped Skunk (*Mephitis mephitis*)
- Black Bear (*Ursus americanus*)
- Red Fox (*Vulpes fulva*)
- Grey Fox (*Urocyon cinereargenteus*)
- Bobcat, Bay Lynx (*Lynx rufus*)
- California Myotis (*Myotis californica*)
- Little Brown Myotis (*Myotis lucifugus*)

### Birds

- Golden Eagle (*Aquila chrysaetos*)
- Turkey Vulture (*Cathartes aura*)
- Red-Tailed Hawk (*Buteo jamaicensis*)
- Cooper's Hawk (*Accipiter cooperii*)

- American Kestrel, Sparrow Hawk (*Falco sparverius*)
- ? Peregrin Falcon (*Falco peregrinus*)?
- Osprey (*Pandion haliaetus*)
- Common Nighthawk (*Chordeiles minor*)
- ? Northern Pygmy Owl (*Glaucidium gnoma*)
- Caspian Tern (*Hydroprogne caspia*)
- Common Raven (*Corvus corax*)
- American Crow (*Corvus brachyrhynchos*)
- Pileated Woodpecker (*Dryocopus pileatus*)
- Northern (Red-Shafted) Flicker (*Colaptes auratus*)
- Acorn Woodpecker (*Melanerpes formicivorus*)
- Red-Winged Blackbird (*Agelaius phoeniceus*)
- Violet-Green Swallow (*Tachycineta thalassina*)
- Barn Swallow (*Hirundo rustica*)
- Chestnut-backed Chickadee (*Parus rufescens*)
- White-breasted Nuthatch (*Sitta carolinensis*)
- Brown Creeper (*Certhia familiaris*)
- Winter Wren (*Troglodytes troglodytes*)
- Western Blue Bird (*Sialia mexicana*)
- Lesser Goldfinch (*Carduelis psaltria*)
- Western Tanager (*Piranga ludoviciana*)
- Mourning Dove (*Zenaidura macroura*)
- Rock Dove, "Pigeon" (*Columba livia*)
- Pie-Billed Grebe (*Podilymbus podiceps*)
- Common Yellowthroat (*Geothlypis trichas*)
- Wilson's Warbler (*Wilsonia pusilla*)
- Black-throated Grey Warbler (*Dendroica caerulescens*)
- Western Kingbird (*Tyrannus vociferans*)
- Ash-throated Flycatcher (*Myiarchus cinerascens*)
- Black Phoebe (*Sayornis nigricans*)
- Oregon (Dark-Eyed) Junco (*Junco hyemalis* subspecies *oregonus*)
- Song Sparrow (*Melospiza melodia*)
- Lark Sparrow (*Chondestes grammacus*)
- White-Crowned Sparrow (*Zonotrichia albicollis*)
- House Sparrow, "English Sparrow" (*Passer domesticus*)
- House Finch (*Carpodacus mexicanus*)
- Purple Finch (*Carpodacus purpureus*)
- Hutton's Vireo (*Vireo huttoni*)
- California Quail (*Callipepla mexicana*)
- Wild Turkey (*Meleagris gallopavo*)
- Steller's Jay (*Cyanocitta stellerii*)
- Scrub Jay (*Aphelocoma coerulescens*)
- California Thrasher (*Taxostoma redivivum*)
- American Robin (*Turdus migratorius*)
- California Towhee (*Pipilo fuscus*)
- Rufous-Sided Towhee (*Pipilo erythrophthalmus*)
- Green-backed Heron (*Butorides striatius*)
- Great Blue Heron (*Ardea herodias*)
- Northern "Bullock's" Oriole (*Icterus galbula* subspecies *bullockii*)
- Anna's Hummingbird (*Calypsa anna*)
- Rebel Kingfisher (*Ceryle alcyon*)



## Fish

- Largemouth Bass (*Micropterus salmoides*)
- Bluegill Sunfish (*Lepomis macrochirus*)
- Mosquitofish (*Gambusia affinis*)

## Trees

### Gymnosperms

- Douglas Fir (*Pseudotsuga menziesii*)
- Ponderosa Pine (*Pinus ponderosa*)
- Knobcone Pine (*Pinus attenuata*)
- Jeffrey Pine (*Pinus jeffreyi*)
- ?? Pacific Yew (*Taxus brevifolia*) ?
- Introduced Species*
- Coastal Redwood (*Sequoia sempervirens*)
- Giant Sequoia (*Sequoiadendron giganteum*)
- Incense Cedar (*Calocedrus decurans*)
- Coulter Pine (*Pinus coulteri*)

### Angiosperms

- Bigleaf Maple (*Acer macrophyllum*)
- Mountain Dogwood, Pacific Dogwood (*Cornus nuttallii*)
- Pacific Madrone (*Arbutus menziesii*)
- Manzanita (*Arctostaphylos*)
- Oregon White Oak (*Quercus garryana*)
- California Black Oak (*Quercus kelloggii*)
- Interior Live Oak (*Quercus wislizenii*)
- Canyon Live Oak (*Quercus chrysolepis*)
- Tan oak, Tanbark Oak (*Lithocarpus densiflorus*)
- Pacific Willow (*Salix lasiocarpa*)
- Arroyo Willow (*Salix lasiolepis*)
- Casahuate Buckthorn (*Rhamnus purshiana*)
- Toyon, Christmasberry, California Holly (*Heteromeles arbutifolia*)
- California (Bay) Laurel, Oregon Myrtle (*Umbellularia californica*)
- Oregon Ash (*Fraxinus latifolia*)
- California Buckeye (*Aesculus californica*)
- Birchleaf Mountain-Mohogany, Birchleaf Cercocarpus (*Cercocarpus betuloides*)
- Western Serviceberry, Saskatoon Juneberry, Shadbush (*Amelanchier alnifolia*)
- Red Alder (*Alnus rubra*)
- White Alder (*Alnus rhombifolia*)
- Bitter Cherry (*Prunus emarginata*)
- Blue Elderberry (*Sambucus mexicana*)
- California Hazelnut (*Corylus cornuta* var. *californica*)
- Introduced species*
- Weeping Willow (*Salix babylonica*)
- Lombardy Poplar (*Populus nigra* variation *italica*)
- Prairie Crab Apple (*Malus ioensis*)
- English Walnut (*Juglans regia*)
- Hinds Walnut (*Juglans hindsii*)
- Box Elder, Ashleaf Maple (*Acer negundo*)
- Sugar Maple (*Acer saccharum*)
- Sweetgum (*Liquidambar styraciflua*)
- American (Eastern) Sycamore (*Platanus occidentalis*)
- Redgum Eucalyptus (*Eucalyptus camaldulensis*)

- Silktree, Mimosa (*Albizia julibrissin*)
- Domestic Pear (*Pyrus communis*)

## Shrubs

- Manzanita (*Arctostaphylos* species)
- Coyote Brush (*Baccharis pilularis*)
- Buckbrush (*Ceanothus cuneatus*)
- Dyerbrush (*Ceanothus integrifolius*)
- Chamise (*Adenostoma fasciculatum*)
- Himalayan Blackberry (*Rubus discolor*)
- Blackcap Western Raspberry (*Rubus leucodermis*)
- California Gooseberry (*Ribes californicum*)
- Poison Oak (*Toxicodendron diversiloba*)
- Wood Rose (*Rosa gymnocarpa*)
- Chaparral Honeysuckle (*Lonicera interrupta*)
- California Huckleberry (*Vaccinium ovatum*)
- Common Snowberry (*Symphoricarpos albus*) ?

## Parasitic Plants

- Oak Mistletoe (*Phoradendron villosa*)
- White-veined Wintergreen (*Pyrola secunda*)

## Ground Cover—Herbs and Wildflowers

- Superb Mariposa Tulip (*Calochortus superbus*)
- California Indian Pink (*Silene californica*)
- Hartweg's Sidalcea (*Sidalcea hartwegii*)
- Turkey Mullein (*Eremocarpus setigerus*)
- Woolly Mullein, Common Mullein (*Verbascum thapsus*)
- Western Yarrow (*Achillea lanulosa*)
- Hayfield Tarweed (*Hemizonia laevisfolia*)
- Cobweb Thistle (*Cirsium occidentale*)
- Parched Fireweed (*Epilobium obcordatum*)
- Vinegar Weed (*Trichostema lanceolatum*)
- Self Heal (*Prunella vulgaris*)

### Introduced Species

- Yellow Star Thistle (*Centaurea solstitialis*)
- Common Tansy (*Tanacetum vulgare*)
- Klamath Weed (*Hypericum perforatum*)
- Ruby Sand Spurry (*Spergularia rubra*)

## Ferns (and Relatives)

- Western Bracken Fern (*Pteridium aquilinum* variation *lanuginosum*)
- Sword Fern (*Polystichum munifolium*)
- Giant Chain Fern (*Woodwardia fimbriata*)
- Giant Horsetail (*Equisetum telmateia* variation *brunnei*)

plant species of Wente have not been included.  
Some species have been reclassified when possible according to  
The Jepson Manual (UC press, 1993).

Insects have not been included because the list is very extensive and growing. For  
the latest insect compilation see your Nature staff.