

12 MANZANITA

This is a large patch of greenleaf manzanita (*Arctostaphylos patula*). Manzanita has round, leathery, flat leaves and red bark. This species often invades burned areas, because fires help the seeds to germinate. If the plant is burned it will regrow from its roots or the burl at its base, a common characteristic of manzanita species. It is often confused with tobacco brush.

13 BITTERBRUSH

Bitterbrush (*Purshia tridentata*) is one of the chief browse plants for game animals in parts of the west. It also has three-lobed leaves, like the sagebrush, and the scientific name reflects this. In fall and winter, deer come down from higher mountain areas to feed on the young bitterbrush. Its common name, bitterbrush, comes from the bitter taste of the dark green leaves. Native Americans extracted a violet dye by boiling ripe seeds and made bark tea.

14 FROST WEDGING

This large granodiorite boulder is fractured in several straight planes. If you squeezed the pieces together, they would fit very closely. This was probably caused by minute quantities of moisture getting into cracks in the rock and freezing. As the water turned to ice it expanded and exerted pressure on the inside of the rock great enough to cause it to split. This process is known as frost wedging. If you wonder where the trail went, just walk through the rock!

15 LICHEN

The scaly blotches of color on this rock are lichen. Lichen is fungus and algae coexisting in a symbiotic relationship. In a symbiotic relationship, each species aides the other, often to the point of mutual dependence for survival. This is the case with lichen. Algae make food to share with the fungus, which provides the shelter for the algae.

16 MISTLETOE

Notice the scale-like yellowish or brownish leaves and flattened berries of the growth on this Jeffrey pine. This is a parasitic plant, Western dwarf mistletoe (*Arceuthobium camplyopodum*). Parasites live off of other organisms, damaging and weakening them. Mistletoe seeds are sticky, and are fired from the parent mistletoe to strike another pine. If they hit, they burrow into the bark, their stems invade the branches, draw nourishment from the tree and cause it to grow in strange ways. If enough mistletoe grows on the pine, the tree cannot grow how it wants to or take in enough water and food to support both itself and the parasite. When this happens, the tree and parasite both die. A parasitized tree is also weaker and more susceptible to disease and deadly invasions by insects.

17 GALENA CAMPGROUND

You are looking at a remnant of the last Galena campground. It was built in the mid-1940's. In those days people didn't barbeque as we do today. They brought food, wood, pots and pans to the park, built a fire on one

of the old stoves you see around you, and cooked their meals on top of it.

P.S. Did you know that the word barbeque comes from the French "barbe-a-queue", literally meaning from beard to tail? It refers to the traditional pig roasts that people still have at big celebrations.

18 BLACK COTTONWOOD

The moisture loving black cottonwood (*Populus trichocarpa*) has a round leaf stalk and a long, pointed leaf with a fine-toothed margin. The upper leaf surface is dark and glossy, while the underside is silvery with rusty veins. With age, the gray bark becomes deeply divided into long, narrow plates. Individual trees produce either male or female flowers that cluster on long catkins. The seeds from the female flowers disperse in late June or early July, carried by the wind on tufts of cotton. The black cottonwood's soft wood and proximity to water make it a favored nesting tree for many birds.

The staff of Washoe County Parks and Galena Creek Visitor Center hopes you have enjoyed using this brochure in your exploration of the park, and that you will come again. We welcome your questions, comments and suggestions. If you choose not to keep this brochure, please help us in our conservation efforts, by returning it to the visitor center, ranger station or an information box.

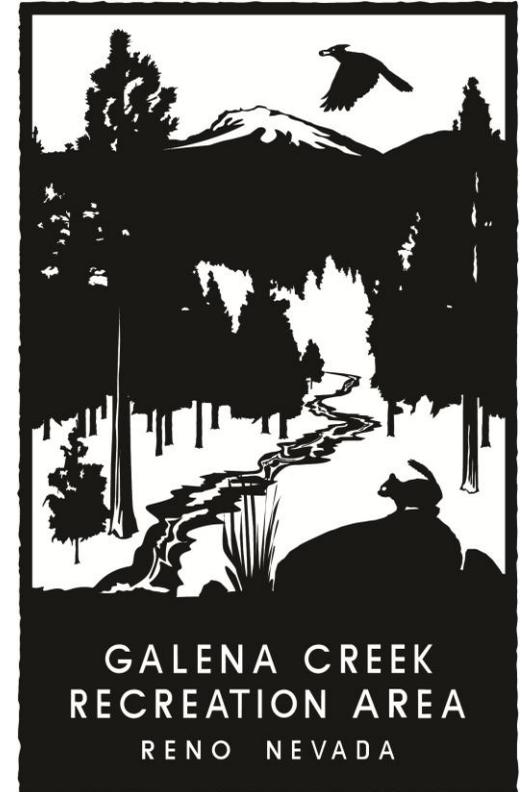
For facility rentals and other parks information, visit the Washoe County Parks at: www.co.washoe.nv.us/parks

For more information about the visitor center and upcoming events visit: www.thegreatbasininstitute.org



TRAIL GUIDE

GALENA CREEK NATURE TRAIL



Galena Creek Visitor Center
18250 Mount Rose Highway
Reno, NV 89511
(775)849-4948

Galena Creek Recreation Area
18350 Mount Rose Highway

Created by Ranger Colleen Wallace-Barnum

1 GALENA CREEK

Galena Creek drains the southeast slopes of the 10,776 foot Mount Rose peak. The creek crosses under Highway 431 and eventually flows into Steamboat creek in Pleasant Valley between Reno and Carson City. It was named for the town of Galena, founded in 1860 near Callahan Road. The town was named for the locally abundant mineral Galena, a form of iron sulfide.

2 FLOODING

Galena Creek floods periodically, at times with devastating results. Wet-mantle floods occur during winter or summer when torrents of rain and melting snow course down the mountain's side. Violent summer thunderstorms, which can drop so much rain in a short period of time that the ground cannot absorb it, can cause spectacular and destructive dry-mantle floods. The water collects in the creek and increases speed as it travels downhill. Flooding results if the water volume exceeds the creek's holding capacity. See the boulders and rocks fanning out from this area? These were deposited by floods. The size of the large rocks illustrates the awesome power of the water as it came roaring down the mountain.

3 TOBACCO BRUSH

The shrub by this marker is tobacco brush (*Ceanothus velutinus*). The leaves have three distinct veins and a light, wooly underside. Some people think the plant smells like cinnamon or fresh tobacco. What do you think?

4 EROSION

Floods cut away much of the creek bed. These floods, combined with subsequent erosion, have exposed the tree roots that you see directly across the creek.

5 JEFFREY PINE

The dominant pine tree in Galena Creek Park is the Jeffrey Pine (*Pinus jeffreyii*). In fact, this habitat type is referred to as Jeffrey Pine forest. This species is distinguished by bundles of three 8-10" needles and 5-10" cones with in-turned prickles. This means that the pinecones won't hurt your hand when you pick them up, hence the nickname, "Gentle Jeffrey". Try picking up a pinecone to see, but put it back for the forest critters! On warm days you can smell vanilla or butterscotch in the crevices of the bark. Hug a tree and breathe deep to see for yourself!

6 WHITE FIR

Notice the differences between this white fir (*Abies concolor*) and the Jeffrey pine? Fir needles grow singularly in flat sprays rather than in bundles, and the bark is light colored. Some cones are produced every year, but most come in two to three year intervals. Unlike pine cones, fir cones remain on the tree until they are mature. The scales are then shed, leaving a central axis. The fir cone seeds are a favorite food for squirrels. This tree and the one on the opposite side of the trail are both forked at about the same point on their trunks. This is odd, as they usually grow tall and straight. Several other nearby trees also have forked trunks. It could

be that debris from past floods took off the tops of these trees. When this happens growth occurs from the remaining branches, which fork into multiple trunks.

7 DECOMPOSITION

On the ground around you are the decaying trunks of trees that once grew here or were deposited by floods. The log on the ground is long dead, but it has not outlived its usefulness. It provides a home for many animals and supports fungi and microorganisms that help decompose the wood by feeding off of it. Small pieces of wood increase the soil's ability to hold moisture and help prevent erosion. As the wood decomposes completely, it returns the nutrients it used to grow back to the soil. This improves the soil for future forests and is one reason why collecting wood or cones is prohibited in the park.

8 SAGEBRUSH

Perhaps the most widespread and best known shrub of the Great Basin is the Big Sagebrush (*Artemisia tridentate*). Tridentata means three teeth, and if you look at the light green leaves, you'll see that they have three lobes. Sagebrush also has slender flowering stalks and a pungent smell. Native Americans ate the seeds and made a medicinal tea from the leaves. The plant is slightly toxic, so the tea acted like a natural version of ipecac. Pioneers primarily used sagebrush for firewood. It is the state flower.

9 WILLOW

The deciduous tree before you with the slender, up-sweeping branches and the long, narrow leaves is a willow (*Salix spp.*). The Sierra has many different willow species. They grow thick around wet or marshy areas and provide ideal nesting areas for birds. Willow bark was an important basketry material for Native Americans and was used medicinally, as it contains the active ingredient in aspirin.

10 FISH HATCHERY

The buildings across the creek were originally a part of the Galena Creek Fish Hatchery. A flood in 1941 destroyed the hatchery's intake pipes in the stream bed and inflicted other minor damages. It also washed away several thousand fingerling trout which had been planted a few days prior along upper Galena Creek. The flood put the hatchery out of business, and it was further damaged by a flood in 1952. Recently, the building has been restored and is available for rentals.

11 MOUNTAIN MAHOGANY

The small tree, or large shrub, in the middle of this patch of Manzanita is curl leaf mountain mahogany (*Cercocarpus ledifolius*). It has small, slender leaves with curled edges and a prominent midrib. It also has a spreading crown, contorted branches, and sometimes a large, rough-barked trunk. Native Americans would make red dye from its roots. It is the oldest known flowering plant, sometimes reaching 1,350 years.