

11) **Old Grayback** ~ The highest peak in Southern California is Mount. San Gorgonio, sitting at 11,499 ft. It is nicknamed “Old Grayback,” because of its gray rocky appearance. You can see the difference between the green San Bernardino mountain range in the foreground and Mt. San Gorgonio’s gray peak in the background. San Gorgonio is one of the few examples in Southern California of an alpine climate so harsh that trees cannot grow.

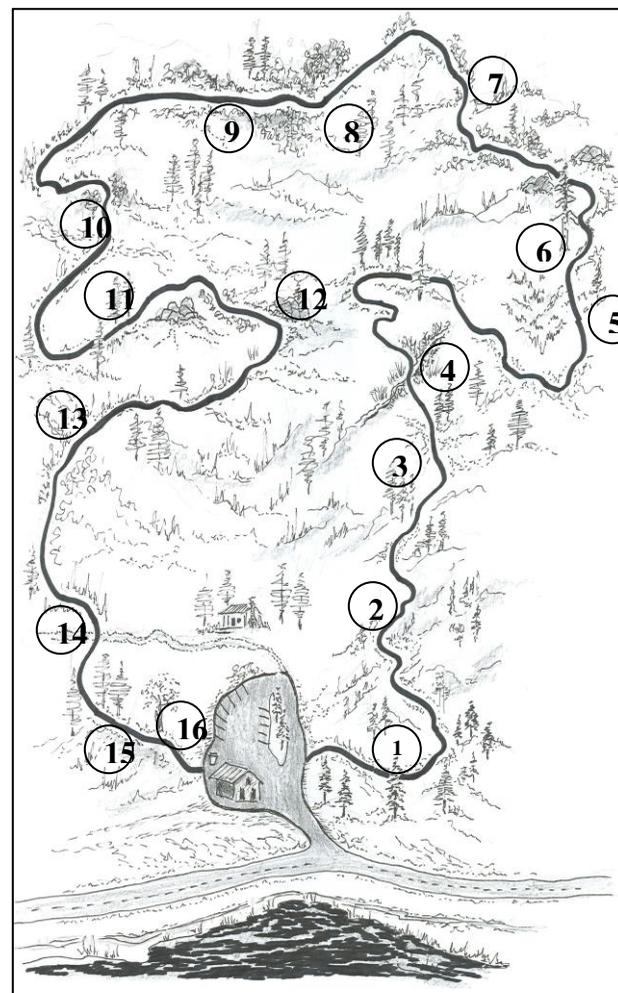
12) **That Rock is Alive!** ~ Granite forms the backbone of the San Bernardino Mountains – it is an igneous rock created by heat and pressure. Please use caution when climbing on these rock piles because they provide habitat for lizards and snakes. The southern pacific rattle snake can be seen along the trail sun bathing on rocks, taking in the morning sun and finding shelter underneath them in the heat of the summer. It’s a good idea to keep your dog on a leash on Forest trails so that the curious critter doesn’t get bitten on the nose or paw as it investigates a rattlesnake hidden under a bush or in the rocks.

13) **All Plants Have a Purpose!** ~ Yerba Santa (right of the post) grows in hot, dry areas to receive maximum exposure to sunlight. Yerba Santa has oblong, shiny leaves designed by nature to prevent them from drying out in the hot summer sun. The leaves are known as “Indian Chewing Gum” and many claim it tastes like spearmint. Rubber Rabbitbrush (to the left of the post) has bright green leaves and blooms in late summer with bright yellow flowers. The white stems are an easy way to identify it! The plant has flexible rubbery stems, and was studied as a rubber substitute in World War II. Like Yerba Santa, the bark and wood of rabbit brush was used by Indians for chewing gum as well as tea, cough syrup, and yellow dye. The name Rabbitbrush is a misnomer because rabbits don’t like the taste of it. Part of its Latin name is “nauseous” – rub a leaf between your fingers and take a whiff to see if you agree.

14) **Mother Nature’s Highways** ~ As you look toward the lake, you can see several types of travel routes – Highway 38, the bike path, and even the lake. Animal populations also have travel routes – or corridors - they use regularly to move between places where they sleep, shelter, reproduce, and find food and water. To your right is an excellent example of an animal corridor – this drainage provides cover at night for animals such as mule deer, coyotes, and bobcats to get down to the lake to drink or look for food. By looking for animal tracks, you can learn which animals are using these natural highways.

15) **Food for Everyone** ~ The Pinyon Pine is easy to recognize because it’s the only single-needle pine in the world. The nuts are eaten by many animals, including birds, rodents, deer, and other wildlife. Pinyon pine seeds, also known as pine nuts, were a significant source of protein for the Serrano. Long sticks were used to knock down the pine cones as the seeds ripened...it was important to get them before the animals did their own harvesting. Pine nuts were eaten raw, cooked in hot water, and sometimes roasted. Roasted pine nuts are very tasty – but you don’t have to take my word for it...you can go to the grocery store and decide for yourself!

16) **Twisted Living & Dead** ~ Many Junipers grow together over time. If you look closely at this tree you will see that it is multiple trunks growing twisted together. The trunk in the middle is dead, while the trunks surrounding it are still alive. Dead standing trees, or snags, provide important habitat for many animals. Keep your eyes open for birds such as woodpeckers, nuthatches, chickadees, bluebirds, and swallows. Watch the holes in the dead trunk to see if birds fly in or out! Snags also provide great hunting perches for hawks.



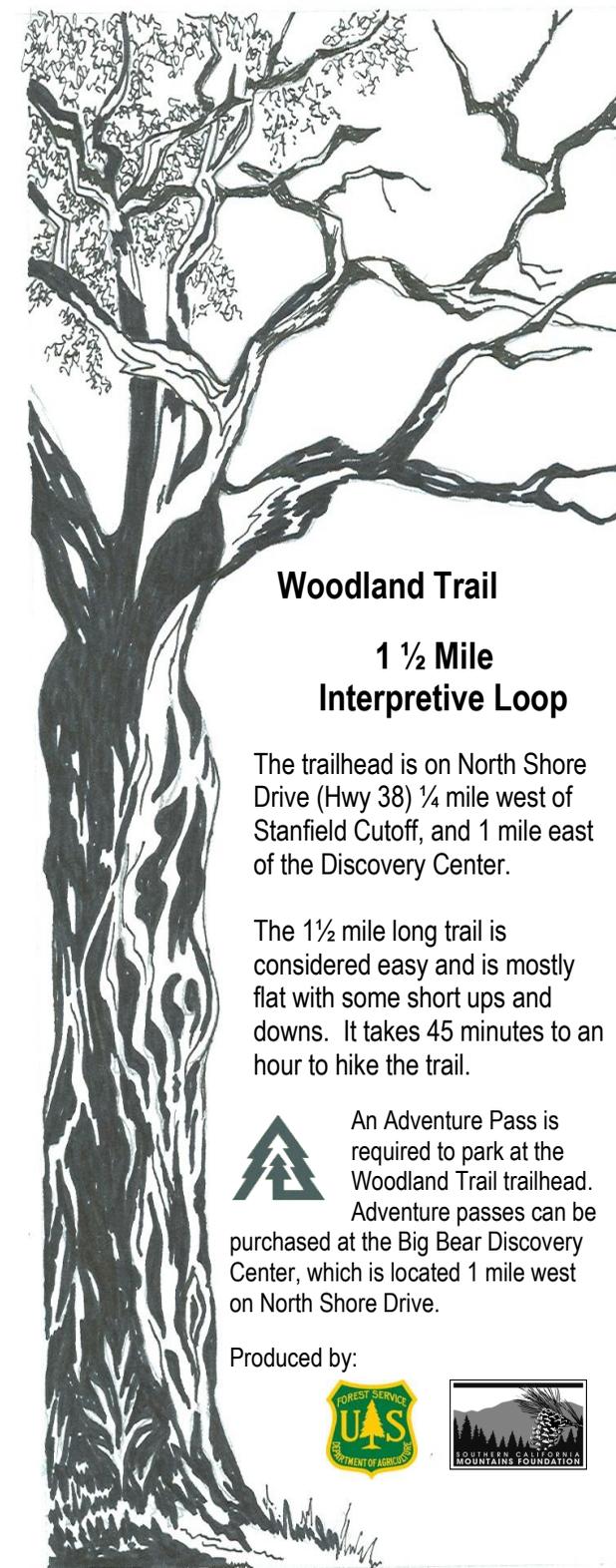
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Answers: 4) Aspirin 8) 351 yrs

*Protect and enjoy your National Forest.*



## Woodland Trail

### 1 ½ Mile Interpretive Loop

The trailhead is on North Shore Drive (Hwy 38) ¼ mile west of Stanfield Cutoff, and 1 mile east of the Discovery Center.

The 1½ mile long trail is considered easy and is mostly flat with some short ups and downs. It takes 45 minutes to an hour to hike the trail.



An Adventure Pass is required to park at the Woodland Trail trailhead.

Adventure passes can be purchased at the Big Bear Discovery Center, which is located 1 mile west on North Shore Drive.

Produced by:



This area is a transition between mixed conifer and Pinyon-Juniper woodland habitats. We invite you to experience the variety and beauty of this site. The numbered posts correspond to the numbers in this brochure.

Please help us protect this unique area by following these rules:

- Stay on designated trails.
- No motorized vehicles are allowed.
- All plants and animals are protected. Take only pictures, no collecting.
- Pets are allowed on leash.
- Fires and camping are not permitted.
- Pack out what you pack in.

Enjoy your stay, but please leave the area as you found it.

1) **If Trees Could Talk!** ~ *This Western Juniper is estimated to be 1,500 years old!* Can you imagine what this area looked like when it was a seedling? There wasn't a lake below us – it was a huge lush meadow full of unique plants with grizzly bears roaming around.

This tree probably provided shade for Yuhaviatam Indians, also known as the Serrano, who summered in Bear Valley. The Serrano utilized the loose stringy bark for making simple skirts, blankets, and shoes. You can identify a Western Juniper by the thick shaggy bark, little blue berries, and twisted trunk and branches.

2) **Tough as Iron** ~ Locals dub the Mountain Mahogany "Ironwood" because it is notorious for dulling chainsaws. The close-grained wood is so heavy it will not float in water! The leathery aromatic leaves remain green year-round making them a favorite food for deer.



In the fall, these bushes look like they've turned silver from a distance... but up close, you will

see that the silver sheen is from the seeds that cover the branches. Pick one of the seeds with the curled feathery tail and toss it up in the air – watch it corkscrew down to the ground...that's how they plant themselves.

3) **Creepy Crawlies** ~ Look closely at the log on the ground. Where the bark has fallen off, you can see a gallery. Not the kind with pictures & paintings, but a maze pattern left by larval grubs feeding on the decaying wood under the bark. Bark Beetles and other insects get blamed for the death of many trees, but in a forest ecosystem, insects help keep a balance of living and dead trees by targeting the weaker ones and allowing stronger trees to thrive. Due to recent droughts, insect populations have increased, affecting already stressed trees. Why cut the trees down? - the Forest Service cuts dead trees close to the trail to make it safer for hikers like you.

4) **Water, Water, Everywhere?** ~ Stands of willow bushes, such as this one, are only found at moist sites. When you look around do you see water? A seasonal stream runs here during winter and spring...but by summer and fall, it is rare to see water on the surface. Not to worry – there's still water under ground and close enough to the surface to support these willows. Stands of willow are often used as nesting habitat for many of our mountain birds.

The Serrano crafted willow branches into baskets and bows and arrows. They also chewed on the bark if they didn't feel well...Do you know what kind of modern medicine comes from willow?  
\*See if you got the answer right – it's on the back\*



5) **Dead But Not Forgotten** ~ Downed Trees play an important role in maintaining a healthy ecosystem. They are an excellent food source for beetles, termites, fungi and bacteria. These organisms help decompose the wood, returning important nutrients to the soil. Those nutrients are important for keeping soils healthy – who has ever heard of healthy dirt!? Without nutrients and healthy

soils, new plants would not grow and old plants would become sick. Decaying logs are also important homes for many different insects, lizards, snakes, amphibians, and small mammals. Look carefully and you might see one – or at least the signs of one. Look for animal scat, tunnels going under, and trails next to a log.

6) **The Kitchen Pantry** ~ This Jeffrey Pine serves as a granary, or storage pantry, for Acorn Woodpeckers. These clown-faced woodpeckers use their pointed beak to drill hundreds of holes in living and dead trees. Then, extended families collect acorns and pack them into each hole - they work hard all summer and fall to store enough food for the whole colony for the long cold winter. If you look closely in the fall, you can see acorns peeking out of the holes in the bark. Acorn woodpeckers aggressively defend their food stash from other animals. They eat the meat in the acorns as well as insects and grubs that are eating their acorns! They are very vocal so listen for their *wheka, weka* call as they fly overhead.



7) **Different Oaks for Different Folks** ~ Here California Black Oak (above the post) and Canyon Live Oak (left of the post) live side by side. The Black Oak is deciduous, losing its lobed leaves in the fall, and is named for its dark (almost black) bark. The Canyon Live Oak is an evergreen that keeps its thick, waxy leaves year-round. Both trees produce acorns - a primary food source for many animals including acorn woodpeckers, chipmunks, and squirrels. Serrano Indians also collected acorns for food, which they cracked open to remove the nut, or meat, of the acorn and ground it into flour on flat stones called *metates*. They used the acorn flour in porridge, called "*wiich*", an important dietary staple.



8) **Know Your Trees** ~ When this tree was alive, it produced a layer of sapwood each year that can now be seen as a tree ring. Tree rings will tell you the history of the tree and the conditions through which it lived. When rings are close together, it means that the conditions were tough (such as a drought). If the rings are far apart it means that the tree had plenty of water and nutrients and grew a lot that year. Take a look and see if you can identify a good and bad growth year and see if you can figure out just how old this pine was when it died before it was cut. Are you older or younger than it? \*answer on back\*

9) **Construction Zone** ~ The mound of sticks at the base of this Canyon Live Oak is the mansion of a resourceful Woodrat or "packrat". Look closely and you will see the variety of items used in the home construction. Woodrat homes (also called "middens") are very large because they are obsessive builders and will continue to make additions for years. Sometimes, they even take over an abandoned home and renovate it! The middens have many separate rooms, including the nest where the females raise their youngsters.



10) **Flames and Fragrances** ~ The large Jeffrey Pine is well-adapted to surviving wildfires. As these pines grow, the lower branches die and fall off – this helps prevent the whole tree from catching fire from flames on the forest floor. Its thick bark – sometimes 6" thick – is like armor that helps insulate the living plant tissue from nearby flames. These adaptations help large pine trees survive occasional fires.

Jeffrey Pine leaves are clusters of three long needles. Their large pinecones are large and woody. The bark and pinecones have a distinct smell – walk over to the trunk and take a whiff between the plates of the bark. What does it smell like to you? Many people claim it smells like vanilla.