California State Parks

Video Transcript

Sierra Redwoods of the South Grove at Calaveras Big Trees State Park

Welcome to the South Grove at Calaveras Big Tree State Park. This trail is about 3-1/2 to 5 miles, and we'll be journeying on it today to show you what this wonderful place looks like.

The South Grove was owned by the timber industry until 1954, when it became a part of the California State Park System. In 1954, as a result of a state bond act, as well as the incredible efforts of people like Adrian Bradley and an incredibly wonderful one-million-dollar donation by John D. Rockefeller, Jr., and with the help of the Save-the-Redwoods-League, and individual donations from a lot of people, the South Grove was purchased. It is now considered one of the last pristine Sierra redwood groves in California. We will be going now down towards Beaver Creek, and we'll be crossing the creek and heading up into the South Grove.

This is a good place to stop and look at a couple of the kinds of trees that we'll find here in the park. On the left here we have a fairly small ponderosa pine that's a member of the yellow pine family, and it has three needles in a bundle. Over here we have an incense cedar. A lot of people misidentify this as a giant sequoia, or the Sierra redwood, and vice versa, but these leaves are really quite green and they look like they've been ironed. So that's an easy way to tell the difference between the two. This is a ponderosa pine and this is an incense cedar.

Can you smell these? They're wonderful. Don't they smell good? Are there some ladybugs there? Oh yeah, good bugs. They go down to the Central Valley to mate and reproduce and then they come back up here again. I was told that if you pinch the lower part of the flower right near the stem, that instead of smelling so incredibly wonderful it smells like skunk. Doesn't smell too good anymore. Oh, look, there are some ladybugs here. Great, we're going to see some more. Maybe we'll see them over at the log. Look at them all. Amazing, absolutely amazing.

Okay, so what kind of tree is this?

VISITOR: An incense cedar?

GUIDE: It's an incense cedar, good. Come on over here by the creek. Can you see these green reeds? These are called horsetail reeds, and they've got silica in it. They're used for scrubbing pots and pans when you're out in the wild. Also when they're dry, they're split open, and they provide a very, very fine sandpaper. The silica also provides a finish, and they use it for things like the final work on the wood of a violin. One of our docents is a violin maker, and

he was the one that showed us that. It's an incredible fine, fine sandpaper. So that's horsetail reed.

Let's go on over, and we'll start up. We've got about one mile before we start into the preserve. This bridge was a result of donations by Calaveras Big Trees Association. Before this, Beaver Creek had to be waded across to get into the South Grove. You can see down there, there's some, I think it's called, milky quartz. See those stripes? We'll see more of that when we get up into the grove. Quartz is supposedly a sign of gold, but there is no gold at this elevation, it's too high. That doesn't even look real, does it? But it is.

This is a really good place to stop. We've just hiked about a mile, and we're stopping on a fire road that goes all the way around the South Grove. We're now entering a preserve, which is the highest form of preservation in the State Park System. The sign here is in memory of Alex Horvath who came out here and did a lot of surveying. Actually we have huge blueprints now that have a mapping of the big trees, they're all numbered. He was very, very involved with the Calaveras Big Trees Association. In the preserve, very interestingly, even though it's the highest form of protection, we are allowed to go off the trail. So we will take advantage of that and go and see some of those really fun, interesting things that we will find in the South Grove. The South Grove has over a thousand of the big trees, so that's what we'll be looking at.

If you remember, we talked earlier about the Pickering Lumber Company and the building of a railroad that was going to take sugar pine out of the area around the grove. This is the railroad grade. The first thing that, fortunately, stopped the harvesting was a fire at the mill in Standard. So this would have been the railroad grade that was going to take the sugar pine over to the town of Standard in Tuolumne County.

Oh great, here's a wild rose. Isn't that really pretty? It's really a nice example of it. In the fall they have what's called a rose hip that's eaten by some of the animals. I don't know if it's the hip they use to make rose hip tea, but it's a really nice example. They're usually in bloom around this time of year.

This place doesn't look very nice, does it up here? Doesn't look as nice as some of the other spots that we've seen so far. What do you think happened here? What's caused this to look the way it does?

VISITOR: Fire.

GUIDE: Fire, right, that's exactly right. This is the result of a prescribed burn. The California State Park System started prescribed burning in 1975. I'm not sure exactly when this burn occurred. For so many years we have put out forest fires, and we've found that a lot of the plants actually needed fire. One of the reasons they need fire is you get all this junk on the forest floor, and a lot of the plants cannot grow unless the seeds can hit the mineral earth. We'll see later on in the hike a lot of baby Sierra redwoods that have been a result of prescribed burning that have cleared the floor of the forest and opened the forest canopy. So while it looks really not too good, it really has done a lot of good for the forest. The prescribed burning is really very scientific and involves the temperature, the humidity, the wind, what kind of fuel there is on the forest floor, what you want to accomplish, and up here it even depends on whether it's a no burn day in the valley. If it's a smoggy day in the valley, we're not allowed

to burn up here in the park. You can see over there on that cedar tree where the duff and the burn just got to the base of the tree. That may be the actual depth that the duff was or it may be just that when they do a prescribed burn, the flames are very, very small, sometimes it almost looks like the end of a cigarette, just smoldering along doing its job. Let's continue on our hike.

This is a really pretty flower. It's called bride's bonnet. There's just this one white flower in the center of the leaves, and then in the fall there's this one bright, bright blue berry that sits exactly where the flowers are right now. It's called bride's bonnet.

This is Big Trees Creek. The creek that runs through the North Grove is called Big Tree Creek, and we have more big trees down here so it's Big Trees Creek. It does have some trout in it that are native, but no fishing is allowed because it is a preserve. The creek starts farther up into the South Grove, and it does run all year. When you're out here in the summertime, you look at these trees and you look at the dirt and you don't think that these trees must like water. But the Sierra redwoods love water, and actually most of them will be close to a drainage where there is water. They can store upwards of 140,000 gallons of water, the big trees can. So water is a very important element for the survival of the big trees.

Great, here's a, it's called a, coral root, and this one is a striped coral root. You may be able to see that there's some striping along the top, and it looks very much like an orchid. It's a sacrophyte, and it lives on the decaying matter on the forest floor. You can see there are no green leaves; it doesn't require chlorophyll. So, that's a striped coral root.

This is a nice example of a sugar pine. There's one here, and there's also one on this side. Sugar pine has bark that's sort of reddish. It's sometimes called the jigsaw tree because you can take the bark and then try and figure out where you got it from. The sugar pine has the largest cones in the world. Pretty cool-sized cone, huh? You can see also where the seeds were. There are two seeds on each scale and then the wings. Remember how big these wings are because when we look at the Sierra redwood seed, you'll see that it's a much smaller wing. The squirrels like to eat the seeds, so you'll find a cone that looks like a corn on the cob or something, like this one, where they'll pull the scales off. They actually shuck the seed and then eat it and then they'll pull the scale off. So this is what it'll look like if it's been eaten. These are the needles. There are five needles in a bundle, S-U-G-A-R. It's also a member of the white pine family, W-H-I-T-E. So this is a sugar pine. If you're trying to identify trees, you really shouldn't always rely on what you find down below the tree because wind or whatever could have brought any kind of cones or needles, anything, under the trees. So you have to try and use the bark, and, as you can see, boy they're pretty high up there, to try and get a good shot of the needle to know what kind of tree it is. This is the sugar pine.

This is called the Bear Slide Tree. It is a Sierra redwood. It's been down heaven only knows how long. We know that people were out here in about 1856, so the tree is older than that. What's really interesting is if you look down here, you'll notice that after the tree fell, it had opened up an area in the forest, and there's a lot of new redwood growth. So it's one place where we can say that there has been some natural regeneration of the Sierra redwoods. They're also all around in this general area. It's really hard to tell unless you know what to look for. If you're looking for the grayer green leaves and it looks very lacy or fern like, those are our Sierra redwoods.

This is more of the Bear Slide Tree, and what's so interesting to me about this is the fact that even though it's dead, it continues to provide life in a number of ways. First of all, it's like a time-release vitamin pill—as it decays, it's providing nutrients into the soil. But you see up here there's a dogwood tree growing? We also have a gooseberry, and then way up here you can see there's a sugar pine seedling, and there's still the seed even attached. Also, this looks like a root from this dogwood tree that ultimately is going to get itself down into the ground. This is one of reasons in the park that we never take things out, or very seldom take things out, because they'll always provide some kind of service, whether it be a home to animals or whether it be a home to new growth.

These trees are considered to be the largest thing that has ever lived on the earth, including blue whales, dinosaurs, anything else—it's the largest size in volume. The oldest documented tree is about 3,200 years old. The ages of these trees is really unknown unless you can count the rings, and as long as they're alive, obviously we can't do that. The trees are really very well protected from the elements, from fire, and from insects. You can notice that the branches are very, very high off the ground, maybe a hundred feet or more up. Do you see in the distance there's a sort of a rounding to the top of the tree? Some people called it a broccoli tree. When the trees get to about 600 to 800 years old, they develop that top. Before that they sort of had a much more round Christmas tree shape to them. Part of that is thought to be because of the tree's ability to sustain and pump all the nutrients up and down the tree. These trees are killed by lightning, by falling over, and unfortunately sometimes by man.

Come on over and feel the bark, and see what it feels like.

Sounds like it's hollow, doesn't it. The bark is very fibrous. You can see that, and it can be upwards of two feet thick on one of these really big old trees. It does a good job of protecting the tree. Often you'll find carpenter ants that have made their home in the bark, but it doesn't seem to affect the survival of the tree. You'll see, sometimes, bears that have come along and clawed at the bark, trying to get after the carpenter ants. The branches up high on the tree have a very different bark on them, and, as a matter of fact, the trunk of the tree does also. This is what the bark looks like that's way up on the branches and up on the trunk of the tree.

Come on down here, and let's look at some of the other things we've got. I don't know whether any of you are strong enough to pick this up. Do you think you could pick it up? It's really, really heavy. Come on, try to pick it up. It's not heavy at all, is it? This is the bark, very fibrous, very light. In the wintertime, after the rain, you can push on it and actually the water comes back at you.

This is a Sierra redwood cone. It's still green, and it's what the Douglas squirrel or the chickaree likes to eat. He eats the scales of the cones and then leaves the seed. If you see the small size of the seed, you can understand why they're not interested in eating them. Each one of these cones will have about 200 seeds in it. There will be about 1,500 new cones a year, and there could be upwards of 40,000 cones on a tree at any time because of the fact that they will be up there green for upwards of 20 years. The cones will dry for a number of reasons. One of them is that the Douglas squirrel will harvest them and eat them, as this one has been eaten by a Douglas squirrel. Also there's a longhorn beetle that lays its larvae in the cone that will kill the cone, and then it will dry out. Also the cones will be dropped by wind and

sometimes by fire. But they can, if left undisturbed, be up there for 20 years. Here's the difference in the seed size. You can see in comparison the very, very small redwood seeds and the large sugar pine seed.

There are three kinds of redwood. There is the Sierra redwood, which is a *Sequoiadendron gigantiem*. There's the coast redwood, which is the *Sequoia sempervirens*. And then there's the dawn redwood that lives in China, and it's called a *Metasequoia*. The coast redwood lives on the coast of California. Our guys, the Sierra redwoods, live only on the western slope of the Sierra Nevada in about a 250-mile long strip, maybe 15 miles wide. The altitude depends on whether you're farther north or farther south. They have been planted in a lot of other places, as well as other parts of the country and even all over the world. But they only grow naturally in the 75 groves in the Sierra Nevada. So if you see these guys around someplace else, they were planted.

VISITOR: How come this has the big fire scar? The bark wasn't there to protect it?

GUIDE: That's a good question. Do you see the fire scar there? And there's also some other fire scars on the bark of the other tree? These trees are very, very old, and they've endured a lot of forest fires. Once a tree has been burned and the bark has been burned in one place, it is much more vulnerable to fire the next time. If we look closely, we can see that the bark has probably started to grow back. It's a very, very slow process—it'll take hundreds of years, if not more. These trees here are probably 600-800 years old or more; we don't really know. Pretty awesome things. Ready?

This is a sugar pine that looks like it's been belted. This is a metal band that's been put around to protect it from squirrels trying to climb up the trunk and harvest the cones. There's a white pine blister rust that's attacking the sugar pine here at Big Trees and actually all around the West Coast, the western United States. But this tree has been found to be resistant to the disease. So what they're going to do is they're going to harvest the cones from this particular tree and some other trees in the South Grove, and they'll try to germinate and grow some sugar pines that will be resistant to the disease. It's white pine blister rust, and this is a good hearty tree.

This is called the Chimney Tree, and when we get over to it, you'll see why it's been given this name. A lot of the trees in this grove do have names. A lot of them were named after famous places or people, like the Kansas group that we saw. This one is an obvious name. Do you want to just come on over and just take a look up? You can see that there's nothing there all the way inside.

Now let's look over here at probably one of my favorite trees in the South Grove. Look at how big it is. See the redwood over there. It's just huge, and it keeps being huge all the way up. It's got all this wonderful, wonderful greenery on top of it. It looks like such a healthy, sturdy tree. We call it the Facade Tree. Come on, follow me. We're going to go off trail now, which we're allowed to do here in the South Grove, and we're going to see why we call it the Facade Tree around the backside. This is the Facade Tree. Isn't it amazing? Look at that, from the base all the way up to the top at least two-thirds of the tree is gone. Look at the size of the side branches, they're huge. It's saying, "I'm going to continue. I don't care what you've done, what nature has done. I'm going to continue, and I'm going to be really, really old."

Well here we are at our destination. This is the Agassi Tree. It's the largest tree in the park. It was named after Louis Agassi, who died in 1873. He was a naturalist back on the East Coast. He was a friend of Longfellow's. He was also a contemporary of Charles Darwin. This tree is about 250 feet tall and about 25 feet in diameter. As I said, it is the largest tree in Calaveras Big Trees State Park, in either of the groves. We're going to go down to it now, and we'll see it's got a huge burn scar. More than just us guys can fit in it. You can tell that this tree has had a lot of fire in and around it, and the bark has not grown back as much as you'd think it would. I don't know whether this size is based on the size it would be if it did not have any fire scars, or if it's based on its present size. But again it's 250 feet tall, about 25 feet in diameter—the Agassi Tree.

I hope you've enjoyed your tour of the South Grove at Calaveras Big Trees State Park today. It's been a wonderful day, and there's been a lot of wonderful stuff to see. I hope you come back again sometime. 'Bye.

Running Time: 28:21