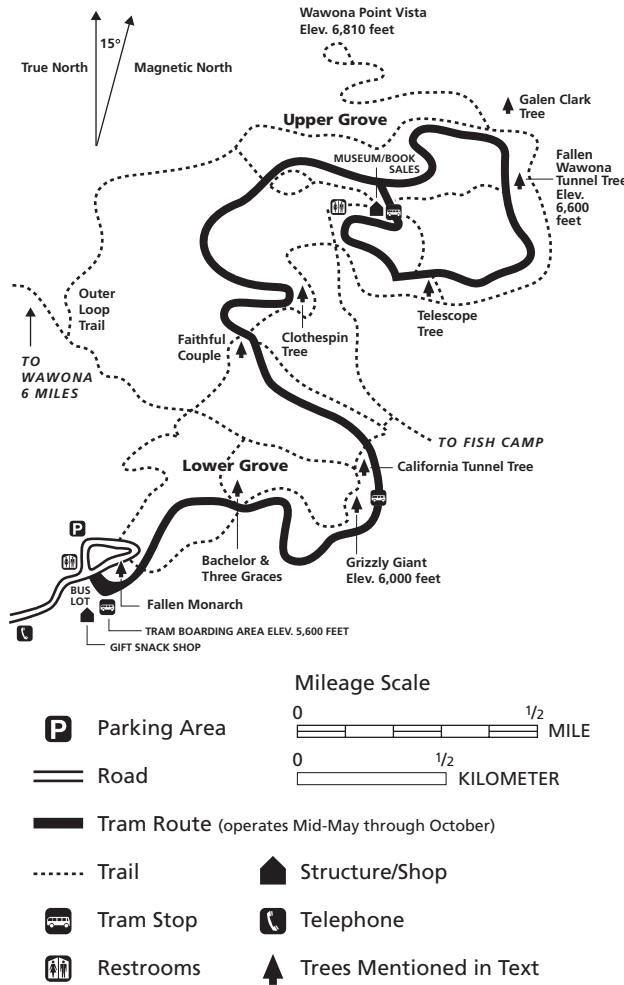




This project made possible through a gift from the Jeangerard Foundation. Printed on recycled paper. © 2006.

This brochure was written by National Park Service Ranger Jon Kinney who died in May, 1986. Jon felt a sense of wonder for these great trees and shared his feelings with thousands of park visitors on his walks through the Mariposa Grove. He continues to speak, in the silence of this grove, to all of us about life on this planet and the sacredness of our wilderness.

All Photos Courtesy of Yosemite Research Library.



Welcome to the Mariposa Grove of Giant Sequoias. If you are impressed with the trees in the parking area, you will be awed by the larger trees ahead.



## WELCOME TO THE MARIPOSA GROVE

These trees, *Sequoiadendron giganteum*, are not the oldest living things. Although the oldest giant sequoias may exceed 3,000 years in age, some living specimens of the ancient bristlecone pine, *Pinus arista*, are more than 4,600 years old!

Giant sequoias are not the tallest living things, either. The related coastal redwoods, *Sequoia sempervirens*, grow higher, up to 368 feet (112 meters). These “Sierra redwoods” top out around 310 feet (94 meters); the tallest in the Mariposa Grove is about 290 feet (88 meters).

Giant sequoias don’t even have the greatest basal diameters. The Montezuma cypress, *Taxodium mucro-nutum*, of Mexico may exceed 50 feet (15 meters). The largest giant sequoia is just over 40 feet (12 meters) in basal diameter.

So how did these trees capture the attention of the world? Simply stated, in total volume the giant sequoias are the largest living things known to humans.

On your right as you start into the grove on the main trail is the **Fallen Monarch** (pictured on cover). Biologists suspect that this tree has been down for centuries. Tannic acid in the wood suppresses the initial growth of fungi and bacteria, essentially arresting decay of a fallen sequoia. Only when rain and melting snow have leached the tannin from the wood can decay begin. For your safety and to help preserve what remains of the Fallen Monarch, please do not climb on it.

Notice the roots of this tree. Sequoias do not have deep tap roots; instead the roots spread out near the surface to capture water. While the roots are usually no deeper than six feet (2 meters), they can fan out more than 150 feet (45 meters), providing a stable base to balance the massive trunk. When visitors stay on the road and trails, it minimizes soil compaction that damages these surface roots.

Lining the road above the Fallen Monarch are numerous young sequoias, distinguished by their foliage of round, overlapping scales, distinctive conical profiles, and soft, spongy bark. Strangely, there are few young sequoias back in the forest. Can you guess why?

To germinate, sequoia seeds have three requirements: 1) some direct sunlight, 2) adequate moisture, and 3) bare mineral soil. Ironically, road construction creates a perfect seedbed by opening up the forest floor to sunlight, increasing moisture along the roadsides, and providing bare mineral soil on the road’s banks.

But why are young sequoias so sparse away from the road? Shortly after these trees were discovered, in a well-intended effort to protect them, people began suppressing natural fires. More shade-tolerant trees quickly spread over the forest floor, reducing sunlight, competing for moisture, and blanketing the mineral soil with their needles and debris. It became impossible for sequoia seedlings to get started.

Only lightning-caused fires reduce the competition from other evergreens, burn away the leaf litter, and leave a thin layer of nutrient-rich ash over the mineral soil. Also, the heat from a fire dries some of the mature trees’ green sequoia cones, causing a shower of fresh seeds to fall onto a perfectly-prepared seedbed. When winter comes, snow blankets the Mariposa Grove. As the snowpack melts the following spring, sunlight, moisture, fresh seeds, ash, and mineral soil combine to create a sequoia nursery.

This dependency on natural fires for sequoia reproduction was not understood until the early 1960s. By then, 100 years of unburned forest litter and young evergreens were present, producing a massive fuel load. Had lightning ignited a fire under these unnatural conditions, an intense crown fire that might have killed the largest trees could have occurred. To reduce this abnormal fuel supply and promote giant sequoia reproduction, the National Park Service began a series of “prescribed burns,” that were deliberately set and closely monitored by rangers, during spring and fall. When the forest returns to a more natural state, these management fires will probably be discontinued. Then nature can resume its cycle of lightning-caused fires every seven to twenty years.

At the **Bachelor and Three Graces**, you can often find egg-shaped sequoia cones. The crown of a mature giant sequoia may bear thousands of green cones at any one time. Each cone contains about 200 tiny flat seeds, roughly 1/4 inch (1 cm) in length and resembling rolled oat flakes. These female cones grow on the upper branches.

To reproduce, giant sequoias depend on the wind. Late winter storms bring strong winds that carry the pollen from the lower branches of one tree to the upper branches of others, allowing the seeds to be pollinated and continuing the genetic mixing necessary for healthy reproduction.

Please remember to leave all cones where you find them for other visitors and squirrels to enjoy.



THE GRIZZLY GIANT

is one of the largest trees in the Mariposa Grove and is estimated to be 1,800 years old. As you near its base, look up. That huge limb on the south side is almost seven feet (2 m) in diameter, which is larger than the diameter of the trunk of any non-sequoia in the grove!

Some 50 yards (45 m) beyond the Grizzly Giant is the **California Tunnel Tree**, cut in 1895 to allow horse-drawn stages to pass through. Most visitors don’t know that two trees in this grove were tunneled, and this is the only one still standing. Walk down and stroll through a tree!

Only an occasional large sequoia occurs along this dry slope between the lower and upper portions of the Mariposa Grove. About ½ mile (.8 km) up from the Grizzly Giant, in a level area with more ground moisture, is the **Faithful Couple**. Here two large trees have fused together at their bases, but remain clearly separated above. On the opposite side of the road stand two smaller trees that may form the next “faithful couple” 500 yards from now.



1¼ MILES (2 km) FURTHER

is the **Clothespin Tree**. Numerous fires have excavated a natural tunnel wider than a car. Size is deceptive here, so walk up and stand in the opening.

The Spanish named the region to the west Mariposa for the many butterflies they observed in the foothills. One of the most perfectly shaped sequoias, the Mariposa Tree, carries the name of the county. Notice the almost completely healed fire scar near the base of this magnificent tree.

Another ¼ mile (.4 km) will take you to the **Mariposa Grove Museum**. This fine cabin occupies the site where Galen Clark built a small cabin in 1861. Inside are exhibits on the ecology and history of giant sequoias, as well as books and postcards for sale.

You can help protect the Mariposa Grove and preserve the giant sequoias by staying on roads and official trails.



ANOTHER ½ MILE (.8 km)

straight ahead from the museum junction is the top of the upper portion of the Mariposa Grove. Directly in front stands the **Galen Clark Tree**, named for the person who did so much to protect these sequoias. In 1857 Clark first entered this grove, probably following the draw ahead of you. He was so impressed that he spent the rest of his life guiding visitors among these wonders and urging their protection.

In 1864 Abraham Lincoln paused during the Civil War to set aside the Mariposa Grove and Yosemite Valley as a protected state reserve “for public use, resort, and recreation.” Mr. Clark lived to see Yosemite National Park established in 1890 and this grove incorporated into the park in 1906. Along with John Muir, Galen Clark was instrumental in Yosemite’s preservation, and it is fitting that this beautiful tree bears his name as a living memorial.

To your left, an easy side road leads ¼ mile (.4 km) to **Wawona Point**, offering an ideal lunch stop with a stunning view to the west and north.

Please help preserve this magnificent forest and leave all cones where you find them.



TURNING RIGHT

from the Galen Clark Tree leads you to perhaps the most famous tree in the world, the fallen **Wawona Tunnel Tree**. Who knows how many millions of visitors drove through this tree between 1881, when the tunnel was cut, and 1969, when it finally collapsed under a record snowload. Weakened by the massive hole in its base, it may have died 1,000 years prematurely. But the stories and pictures of this gentle giant traveled around the world and undoubtedly contributed to the preservation of its brethren.

Returning along the upper grove loop road, you’ll find the **Telescope Tree**. Close your eyes and walk inside. With your eyes still closed, lean your head back and slowly open your eyes. Incredible! This amazing tree is still alive and producing viable seeds. The sequoias’ resistance to fire, disease, insects, and decay that allows them to live through the centuries. The Telescope Tree is a notable example of their endurance.

A wise man once said, “A culture is measured by what it preserves.” Although Yellowstone became our first designated national park in 1872, the idea for preserving our natural treasures budded here in this grove at least eight years earlier. America’s national park idea may be our most noteworthy contribution to the spiritual wealth of mankind.

Tuck this pamphlet away and walk slowly back down, letting this special place touch you.