



United States Department of Agriculture  
Forest Service

PACIFIC SOUTHWEST REGION

*Restoring, Enhancing and Sustaining Forests in California, Hawaii and the Pacific Islands*

Sierra National Forest

# MCKINLEY GROVE GIANT SEQUOIA'S High Sierra Ranger District

**WELCOME TO THE WORLD'S LARGEST TREES**

McKinley Grove is a stand of virgin, mostly mature Giant Sequoia trees, with the largest being over 230 feet tall. Mature sequoias average 15 feet in diameter and 250 feet in height.

At the turn of the century, fallen trunks of giant sequoias served as cabins and tables. Some cut stumps were so large they served as dance floors that would accommodate two or three dozen couples!

**HISTORY OF MCKINLEY GROVE**

McKinley Grove was originally called the Washington Grove and then Dusy Grove in honor of a colorful local settler. It was later named McKinley Grove after the 25th president of the United States.

Because there were no roads or trails nearby, McKinley Grove remained undiscovered until 1869. Even then few people visited the site. The grove remains in the public domain, but has been protected by the Sierra Forest Reserve since 1893.

**RECREATION:**

This botanical area offers a paved nature trail that winds through the towering redwoods and is accessible for persons with disabilities. Picnic tables and restrooms are available.

**ORIGIN:**

The giant sequoia first appeared over 130 million years ago during the time of the dinosaurs. Fossils show that vast sequoia empires stretched across

the continents of North America and Eurasia. As the climate cooled and dried, the once vast sequoia forests were gradually reduced. Only three species of sequoia stock remain today, each in climatically restricted ranges. Two of these are found in California; the Sequoia sempervirens or coastal redwood, and the Sequoiadendron giganteum or giant sequoia. The other species, Metasequoia glyptostroboides, or dawn redwood, is a deciduous tree found only in China.

**AGE:**

These giants are among the oldest of living things. Some trees may be as old as 3,000 years.

Absence of pitch and very thick bark (from two to four feet in mature trees) help the sequoias to be fire resistant.

Tannic acid in the bark inhibits wood-boring insects and destructive fungi and also retards decay. A toppled sequoia may remain intact for decades. No giant sequoia is known to have died of "old age". Rather, because of their shallow root system, they generally fall during severe windstorms in the winter when the ground is wet.

**USES:**

The wood of the big trees is among the lightest of the American trees. However, because of its resistance to decay, people used it for things such as shingles, fence posts, and grape stakes. It is also soft and brittle like balsa.

At one time, lumberjacks would work one or two weeks to topple a single tree. Often, the trunk would shatter when it crashed to the ground, becoming



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useless. Even intact, sound logs were too huge and heavy to handle efficiently and economically.

After the discovery of these giants, about 10,000 acres in the grove were logged. Public outcry against the destruction eventually led to governmental protection.

#### **ROLE OF FIRE:**

Reproduction of sequoias is by seed only and requires perfect conditions. Seeds and seedlings need moisture and mild temperatures, sunlight, and access to bare mineral soil.

Fires provide these conditions by eliminating competing trees, shrubs, and duff (decaying plant material on the forest floor). The lightweight seeds are then able to reach the bare soil, germinate, and grow.

Active suppression of fires during this century has not helped the giant sequoia's reproductive success. For the last decade, resource managers have been setting fires under controlled conditions to bring most sequoia groves back to a more natural state.

#### **REPRODUCTION:**

The cone of the sequoia is small for a tree so large. A mature tree produces 2,000 cones per year, each containing 200 to 300 seeds. The seeds are tiny—5,600 seeds weigh about an ounce, yet it takes only one to produce a giant.

The sequoia will produce about 60 million seeds in its lifetime, but only three or four of those will ever grow to be 100 year old trees. Many of the seeds will never germinate. Of those that do germinate, most will die from lack of water or sunlight during the first few years. Other will be eaten by animals and insects.

If each mature sequoia produces only one successful offspring during the parent's thousand years of life, the number of sequoias will remain constant.

#### **GROWTH:**

Giant sequoias are able to grow so large because of adequate soil moisture. Sequoia groves receive between 45 and 60 inches of precipitation a year. Sheltered sites with deep, well-drained soils absorb enough moisture to last a long, warm, and sunny California summer and provide the best growing conditions.

The sequoia has a shallow root system that allows it to obtain surface moisture. The roots often extend 100 to 150 feet and sometimes more than 200 feet from the tree. The entire root system may affect from two to four acres of ground.

A sequoia's annual growth is one of the fastest in the world; two millimeters diameter in a mature tree is equal to a seedling starting from seed and reaching 50 feet in height and 12 inches in diameter in one year.

#### **DISTRIBUTION:**

Today the giant sequoia is found in only 75 isolated groves at mid-elevations along the west slope of the Sierra Nevada from Placer through Tulare counties, a 260 mile range. Only eight groves, including McKinley, are north of the Kings River.

If grouped together, the groves would cover 35,600 acres, less than half the surface of Lake Tahoe, and contain less than 60,000 mature trees. This does not include the 10,000 acres that were logged for timber before 1950.

McKinley Grove has over 170 specimen sized sequoias spread out over 100 acres. The majority of these trees are between the two walls on the uphill side of McKinley Grove Road.

#### **FOR MORE INFORMATION:**

##### **High Sierra Ranger District**

P.O. Box 559  
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559-855-5355  
(TDD) 559-855-5367

##### **Dinkey Creek Visitor Center**

559-841-3404 (summer only)

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