Ancient Bristlecone Pine Forest

INYO National Forest
The Ancient Bristlecone

High on the wind-swept, rock-strewn slopes of the White Mountains, northeast of Bishop, California, are the oldest known living things in the world—an extensive stand of trees *Pinus longaeva*—the amazing bristlecone pines.

The bristlecone pine is not a tall and stately thing of beauty, nor do its leaves glister and blow in the summer winds. The trees are short and squat, most of them reaching no more than twenty-five feet in height. And they don't have leaves—but instead short needles tufted to stubby branches giving them the appearance of fox tails.

But here, in this otherwise nearly barren area, some of these unique trees have endured the hardships of mountain winters and summers for over 4,000 years. It is hard to visualize this mighty span of time. Some of these very trees were growing when the great pyramids of Egypt were being built. They had been growing many years when Moses received the Ten Commandments, and they were several hundred years old when the Roman Empire ruled over the known world.

Most of the trees have been beautifully sculptured over the centuries by elements of nature: fire, windblown sand and ice particles. For this reason they have been referred to as "living driftwood." Many of the trees are partly dead—and it is thought that herein lies the secret to their survival over the ages: Only a small vein of living tissue is needed to keep the tree alive. Part of the tree can die, so that the living portion remains in balance with the precipitation or other variations of weather and climate in this bleak setting.

The trees have grown slowly, often less than one inch in diameter every 100 years. Yet they cling to life so fiercely that some windblown specimens have grown parallel to the earth rather than give in to the forces of nature. It's also significant that the cones of many of the oldest trees still produce fertile seeds.

The bristlecone pines grow on a dolomitic (limestone) soil which is alkaline and not suitable for most other trees. Here the precipitation is only some ten inches a year, and the soil is shallow and rocky. Erosion has bared a large proportion of the trees' root systems.

In 1958, 28,000 acres were set aside as a Botanical Area administered for "scientific study and public enjoyment." The trees are protected, but other uses that do not threaten the trees or the aesthetics of the area continue, such as hunting, fishing, recreation, and watershed management.

Schulman Grove

Schulman Grove is the area of the oldest trees and is the center of activity. You will find a small picnic ground here with tables, toilets, and an information center with outdoor display case. U.S. Forest Service naturalists provide interpretive talks during summer months at Schulman Grove and Sierra Viewpoint, and evening programs at Grandview Campground.

There are two species of pine trees which prevail here: the bristlecone pine and the limber pine. Limber pine needles are in short tufts at the end of the branches, while the needles of the bristlecone pine run back along the branch for a foot or more. In summer, the cones of limber pine are green without barbed scales, while the bristlecone pine has a deep purple cone with sharp bristles on each scale. Driving toward Schulman Grove, you'll see more and more bristlecone pines until, at Schulman Grove, the stand is almost pure.

From the Schulman Grove (elevation 10,100 feet) a one mile footpath takes you past Pine Alpha, a 4,000-year-old tree. This tree derives its name from the first letter of the Greek alphabet because it was the first tree dated older than 4,000 years with a solid core. Its age was determined by extracting long, thin cores of wood with a Swedish increment borer. In this way, the tree's annual growth rings could be counted without destroying the tree. This ancient tree, while nearly four feet across, has only a 10 inch strip of bark; this means that less than 10 percent of its circumference still has a living tissue. Yet it still produces seeds from which new trees can grow.

The Patriarch

Along the twelve miles to the Patriarch area, you will pass through a land completely different from any other through which you can drive in California. The vast open spaces and long range of colorful mountains are very impressive and could be a scene on the surface of the moon.

During August you'll find flowers such as red Indian paint brush, blue lupine, and white desert sweet in full bloom, along with many others of the 500 or more plant species of the White Mountains.

The Patriarch area is a must for the photographer, and is at its best between noon and 4 p.m. Here at 11,000 feet in elevation, the terrain is even more rugged and barren than at Schulman Grove, and the trees are larger and more grotesque. Be sure to follow the footpath to the Patriarch; this multiple-stemmed tree has a circumference of 36 feet 8 inches, and is recognized as the world's largest bristlecone pine.

BE SURE TO HAVE A FULL TANK OF GAS, DRINKING WATER AND IF YOU WISH, A PICNIC LUNCH: THERE ARE NO COMMERCIAL FACILITIES IN THE BRISTLECONE AREA.
Forest of the Ancient Bristlecone Pine
The Ancient Bristlecone Pine Forest is classified as a Botanical Area and is set aside for scientific research and public enjoyment.

To aid in preserving the area in its natural state, please observe the following rules while visiting the Ancient Bristlecone Pine Forest:

1. Leave all wood, dead or living, downed or standing, as you find it.
2. The area is for day use only. No overnight camping (including campers or trailers).
3. Light no fire (including barbecues, hibachis, etc.).
4. Keep all motorized vehicles on the main roads.
5. Leave Indian artifacts for others to see.
6. A permit is required to collect flower, shrub, or rock specimens.

THIS AREA IS PATROLLED. REGULATIONS ARE ENFORCED.

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