



National Park Service
U.S. Department of the Interior

Sequoia & Kings Canyon
National Parks

47050 Generals Highway
Three Rivers, CA 93271

559 565-3703 phone
559 565-3789 fax

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Advantage in Timing: Cedar Bluffs Prescribed Fire

Fire managers in Sequoia & Kings Canyon National Parks seized an opportunity to complete a prescribed fire in Cedar Grove that provided safer control measures while also achieving key ecological goals.

Timing was everything for this project. This prescribed fire unit, located along the Kings River drainage in Kings Canyon National Park, adjoined to the area burned by the Roaring Fire of 2006. The 2006 lightning fire grew to over 1,700 acres and cleaned the forest floor of accumulated woody debris. When completing the 1006 acre Cedar Bluffs Prescribed Fire, fire managers knew that the south flank of the unit would be controlled when the fire spread upslope into the Roaring Fire area and extinguished in the absence of available forest fuels.

Additionally, there was a lesson provided by the Roaring Fire that the parks' fire ecologist listened to. The vegetation in the Cedar Grove area is composed of the mixed conifer vegetation type as well as areas of live oak and single leaf pinyon pine. Historically, fire naturally occurs approximately every fifteen years in the mixed conifer forest of the Sierra Nevada. However, live oak and pinyon pine forests experience natural fire infrequently. The 2006 Roaring Fire backed into these areas and went out on its own.

The mixed conifer forest species have adapted to fire over thousands of years and thrive in a natural cycle of low severity fires. Fire helps thin this forest, opening the canopy and allowing sunlight through. It recycles nutrients to the soil while reducing the amount of dead, woody debris. This aids the sprouting and re-growth of plants, shrubs, and trees. Fire also helps to create a mosaic of diverse habitats for plants and animals.

Mature pinyon pine and live oak forests are rare to the western slopes of the southern Sierra Nevada and are not fire tolerant. Fires often burn around the pinyon/oak areas because the vegetation is sparsely spaced. Pinyon nuts are an important food source for birds and animals in the parks.

By observing the fire behavior of the Roaring Fire, and under the direction of the fire ecologist, fire managers attempted to simulate the natural pattern of fire in this area. Ignitions were completed in the mixed conifer forest while the live oak and pinyon pine areas were deliberately



The pinyon pine and live oak forest in Cedar Grove is more open than the mixed conifer forest. Fire a rare event in this forest type. (NPS photo by Tony Caprio).

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The Cedar Bluffs Prescribed Fire clears this mixed conifer forest of accumulated forest fuels with low intensity fire. (NPS photo)

avoided. The fire behavior was similar to a natural fire event. The forest floor was cleansed of accumulated forest fuels in the mixed conifer forest and the fire naturally did not carry into the oak/pinyon areas.

“The Cedar Bluffs project provided an excellent opportunity to verify our prescribed fire methods,” said Tony Caprio, the parks fire ecologist. “Prescribed fires are set under predetermined conditions that consider safety, control, and simulating natural fire events for ecological goals. This project demonstrated the successful integration of ecological information with burn implementation.”

Contact: Deb Schweizer, Fire Education Specialist
Phone: 559-565-3703