

March 4, 2005

On behalf of Sequoia & Kings Canyon National Parks, I would like to respond to Dr. Thomas Bonnicksen's opinion piece about the National Park Service fire management program (printed on 2/25/05).

Dr. Bonnicksen spent only two summers, nearly 30 years ago, collecting data in sequoia forests. The state of scientific and empirical knowledge regarding giant sequoia forests has grown exponentially since Dr. Bonnicksen collected his data. As a result, his ideas, though once in vogue, have been superseded by a more comprehensive and sophisticated picture of forest structure and fire ecology.

The information that I'd like to share with you is based on current science, decades of field fire operations, and a long-term monitoring program in our parks. The information has been collected, validated, and published by the National Park Service, the United States Geological Survey, and members of the academic community.

Let me begin by outlining the important relationship between giant sequoia trees and fire. By studying the fire scars on their growth rings, scientists know that over the last few thousand years sequoias experienced naturally-caused fires an average of every 5-20 years. Therefore, a thousand-year-old specimen could have burned approximately 60 times. To survive, and ultimately thrive, in this fire-prone environment, sequoias develop a thick layer of bark to insulate themselves from heat. Most importantly, fire allows these trees to reproduce by clearing the forest floor, creating sunlit forest gaps, adding nutrients to the soil, and opening cones to release seeds.

Given this close natural relationship between fire and sequoias, the National Park Service initiated a prescribed burning program in 1969 to reverse the harmful effects that a century of fire suppression had caused, choking our forests with excess trees. Dr. Bonnicksen claims that this program has resulted in "decades of destruction" and "the loss of thousands of huge trees." Are things really this bad? Park Service monitoring of prescribed fires in sequoia forests has shown that by five years following a fire, the number of large trees (mostly pines and firs) is reduced by approximately 9%, which is still within the natural range. If the parks had never suppressed natural fires over the last century, these few large pine and fir trees, and many excess small trees, would have been cleared away long ago. Their removal makes space for other new, young trees and rejuvenates forest conditions for all kinds of species.

I encourage you to come see the results for yourself. You can go on the internet and print out detailed maps (found at http://www.nps.gov/seki/fire/fire_map.htm) which can guide you to the locations of past prescribed fires (including some wildfires) in Sequoia and Kings Canyon National Parks. Visit recent burns to see immediate fire effects. Then explore burns that occurred a few decades ago which now host young sequoia saplings that owe their existence to fire.

Dr. Bonnicksen points out that chain saws can be a valuable tool for forest management. Indeed, the Park Service sometimes uses chain saws to thin forests around developments to protect public safety. So why not use saws much more extensively – or even as a replacement for

prescribed fire – in national parks? First, much of the forested land in national parks is too steep or remote to be thinned with crews wielding chain saws. For the more accessible areas, the process of cutting, piling, and burning small trees is expensive, costing about \$2,000 per acre in Sequoia National Park. In contrast, prescribed fire is practical in most areas, and costs about \$130 per acre. Secondly, it needs to be noted that no amount of mechanical removal will replace the role of fire in a giant sequoia forest. Chainsaws do not replace nutrients or stimulate the production of seedlings. Thirdly, the construction of extensive road networks for widespread logging in national parks flies in the face of the laws passed by Congress to establish national parks, in addition to other laws such as the Wilderness Act.

Dr. Bonnicksen implies that the Washington sequoia could have been saved from fire simply by raking around the tree. He does not mention that the tree was hollow from past fires, or that the fire in the tree's crown most likely started from a blowing ember landing in the opening to the hollow, 200 feet above the ground. No amount of raking would have changed that outcome. But why was the fire that produced the fateful ember allowed to burn in the first place? It was allowed to burn to restore resilience to a forest from which all fire, human or natural, has been excluded for more than a century. We cannot continue this exclusion. It is not possible, nor desirable.

The efficiency of the NPS program has been proven over time. The public overwhelmingly supported a recent comprehensive planning process to develop our new *Fire and Fuels Management Plan*. This plan is balanced and scientifically sound based on the current level of knowledge (not information from a generation ago). We have an integrated, multi-strategy program that consists of many different tools: fire suppression, wildland fire use (the management of lightning-caused fires), prescribed fire, and, yes even mechanical fuel reduction around structures. We use each tool at the right time and in the right place to safeguard the public and preserve park resources.

While Dr. Bonnicksen wants you to believe that all of our forest's problems can be solved with chainsaws, the National Park Service understands the complexity of our forest environment. Protecting these forests is not simply about reducing excess trees, it's about maintaining a healthy habitat for plants, mammals, and birds. It's about protecting local communities from large, unnatural wildfires. It's about maintaining a sense of wilderness where natural processes can exist. And, it's about leaving behind a legacy of good choices for future generations.

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