



## MISSING THE FOREST FOR THE TREES

**IT'S HARD TO WORRY ABOUT WILDFIRE** after the drenching winter that California has just endured. For the first time in a decade, wildflowers carpet the state's southern deserts, and the Bay Area is as green as Ireland. In Claremont Canyon, locale of some of the most desirable homes in the Berkeley hills, the trees and shrubs are plumping with water after five years of punishing drought. The fire danger seems minimal.

But these woods, however lovely they may be, are dangerous. They're poised to release stored energy in catastrophic fashion, as happened in the 1991 Oakland Hills fire that claimed 25 lives and destroyed more than 3,000 homes and apartments. That disaster was not necessarily a one-off, says Scott Stephens; he's worried it could happen again in the not too distant future.

A professor in Berkeley's Department of Environmental Science, Policy, and Management, Stephens gave a reporter a tour of Claremont Canyon not long ago, at one point stooping to examine a pile of wood chips steaming in the sun after a recent downpour.

"Wow," he said. "Check this out."

The sunlit side of the entire pile was teeming and crimson having become an overwinter site for a huge colony of ladybugs. Stephens stood up, smiling. He continued to smile as he turned and looked south, across slopes forested with live oak, ceanothus, buckeye, and elderberry.

"We treated this parcel 10 years ago, and it has come in beautifully," he said. "This is native vegetation, and when it's managed actively, it's resistant to catastrophic fire. Before we went to work on this parcel..." he turned and pointed north across the road, smile fading "...it looked like that." The north-side slope is as heavily forested as the south, but the trees are almost wholly eucalyptus; tall,

**Tinder stands:**  
The hills above the Claremont Resort have been rebuilt and reforested since the firestorm of 1991.

rangy blue gums, thick as the bristles on a brush and shaggy with peeling bark.

"You're looking at two worlds," said Stephens. "Over there, you have a system that's analogous to parts of Australia. It's ecologically simple and not particularly good habitat for California wildlife. Here on this side of the road, we have a natural California landscape, with native California flora that's rich in native wildlife."

In Australia, blue gums are called "gasoline trees"—and with good reason. Heavy with volatile oils, they burn explosively and send massive quantities of burning bark spiraling into the atmosphere, creating spot fires as much as 25 kilometers away.

For that reason, Stephens wants to see them cleared, and he described the process in detail. Condensed version: It takes a lot of chainsaws and woodchippers, not to mention crews painting the stumps of the freshly felled trees with herbicide. Forest restoration, Stephens acknowledges, is seldom a

pretty process, and things usually don't look so nice for a few years as the native vegetation grows in. Thus, such projects are not always popular, even among people who style themselves environmentalists.

But management of western forests is critical, says Stephens. Either we manage our forests—with chainsaws, heavy equipment, and controlled burns—or they will be radically changed.

That is already evident in the Sierra Nevada, where the drought has killed millions of trees. Drive to Yosemite National Park and you can't miss the mountainsides that, once green with ponderosa pine, are now a sickly russet and dry as tinder.

These impaired wooded landscapes are now going up in smoke, every summer and autumn burning with increasing intensity and frequency. As they burn, the base ecosystems of entire regions are shifting. In Southern California's Cleveland National Forest, for example, large swaths of Jeffrey pine have been utterly immolated, and the land is coming back as oak savanna.

As a result, says Stephens, the forests our grandchildren inherit will be different. "There'll be more hardwoods and grasslands and fewer conifers. That has some very worrisome implications. While they'll still have value as wildlife habitat, we're going to lose a lot of wildlife diversity. [The trees will] retain far less water, which will have a severe impact on water availability. And the carbon sequestration potential will be less. That's a major concern as we move deeper into an era of climate change."

Yet we can still avert wholesale loss of the Sierra's coniferous forests, says Stephens—if we manifest the will. "I understand that people instinctively resist change. But change—climate change—is here, and we have to respond to it. That's particularly the case with our forests."

Stephens looked down Claremont Canyon, where homes were tucked close against the heavy vegetation. Here, he said, the risk is even more acute.

"It's a public safety matter even more than an environmental one. The main issue here isn't losing wildlife diversity or reduced water retention. Here it's a matter of heavy loss of human life and property. If we don't act, we're going to see more fires like the Oakland Hills fire. It's inevitable."

—G.M.