USA: Eucalyptus, the largest weed

Ted Williams, author of the excellent article on the impacts of monoculture pine tree plantations in Southern US ("False Forests", Mother Jones magazine, http://bsd.mojones.com/mother_jones/MJ00/false_forests.html), has now published an equally excellent article focused on eucalyptus ("America's Largest Weed"). The following are some excerpts from his recent article:

If you smell like a cough drop when you stumble out of the California woods, it's because 100 of the world's 600 species of eucalyptus grow there. None is native. They were imported from Australia during the second half of the 19th century as we were hawking our redwoods to the Aussies. "Wonder trees," the eucs were called, because they shot up in coastal scrub and vast redwood clearcuts.

Eucs were planted with varying success across America, but they took off in California. In 1876 Ellwood Cooper planted 50,000 euc seedlings on his ranch near Santa Barbara. Three years later they were more than 40 feet high; 32 years after that they were 175 feet high. Blue gum, the most popular imported euc, was unleashed in 1853. By the 1870s it was a dominant feature in California's coastal and central landscapes.

As they continued to spread and grow, their thirsty roots blocked drains, tore up pavement, damaged foundations, and fueled wildfires.

Of the many eucalyptus species that evolved with fire, none is more incendiary than blue gum. "Gasoline trees," firefighters call them. Fire doesn't kill blue gums. Rather, they depend on fire to open their seedpods and clear out the competition. And they promote fire with their prolific combustible oil, copious litter, and long shreds of hanging bark designed to carry flames to the crowns. Blue gum eucalyptus doesn't just burn, it explodes, sending firebrands and seeds shooting hundreds of feet in all directions. Living next to one of these trees is like living next to a fireworks factory staffed by chain-smokers.

What are the costs of America's infatuation with the eucalyptus? And have we learned anything from it? My search for answers took me to Bolinas, California (population 1,500), an hour north of San Francisco at the end of a mountain road that threads along bare, fogbound headlands. On a bright October morning Geoff Geupel, terrestrial program director for the Point Reyes Bird Observatory (PRBO), led me through a grazing lease and down to Jack's Creek, in Point Reyes National Seashore. Blue gum eucs towered to the west and east, long, leathery leaves drooping earthward, trunks light brown--almost white in spots--and looking as if they had flirted with a debarker.

Between the euc groves, in the dry creekbed, grew some of the last coastal scrub in Marin County, a profusion of plants that belong here and are all vital to wildlife--coast live oak, California bay laurel, monkey flower, coyote bush, wax myrtle, California sagebrush, lizard tail, mule's ear, cow parsnip, willows, native bunchgrasses. The scrub had its own gray, understated beauty, a beauty largely unnoticed by the public. Coastal scrub never had a Joyce Kilmer to write sappy verse about it. Trees

don't belong on this riparian corridor or on most of the surrounding hills or, for that matter, in most of earth's terrestrial ecosystems. When the Boy Scouts started cluster-bombing Marin County with seedlings, Ansel Adams helped run them out, declaring, "I cannot think of a more tasteless undertaking than to plant trees in a naturally treeless area, and to impose an interpretation of natural beauty on a great landscape that is charged with beauty and wonder, and the excellence of eternity."

Geupel pointed out the rustling, fleeting forms of birds and called my attention to their vocalizations, most of them strange to my Yankee ears --the churring of wrentits; the quiet tseet of bushtits; the high, thin whistle of golden-crowned kinglets; the clicking of ruby-crowned kinglets; the metallic chink of California towees; the bossy flocking notes of white-crowned sparrows; the oh dear me of golden-crowned sparrows, fresh in from the Arctic and so full of blarney that they didn't know they weren't supposed to sing in autumn. In winter a resident race of white-crowned sparrows, rufous-crowned sparrows, and Bewick's wrens (all declining) forage for insects in the green leaves of live oaks, wax myrtle, and bay. They breed here, too.

In the eucalyptus grove to the west we met perfect silence, a scene from Keats's "La Belle Dame Sans Merci" in which the "sedge is wither'd from the lake and no birds sing." The eucs, I suppose, were beautiful in one sense, but their beauty struck me as cold and otherworldly, the beauty of the hollow-bodied fairy dame who sat sideways on the knight's horse before sucking out his youth. The aliens had sucked out the creek. As eucs' trunks move in the wind, their sinuous roots tear up huge chunks of earth that slide into the channel. A quarter-mile seaward they literally spill onto a beach strewn with their bleached carcasses. Trees totter on a high bluff, then fall, taking more topsoil with them.

The only native plants we encountered in the grove were shallow-rooted--mostly poison oak. I stuck my hand in euc leaf and bark litter and couldn't find the bottom; in California it can be four feet thick because the microbes and insects that eat it are in Australia. Native plants that manage to push through the litter often get poisoned; as a natural defense against competition, eucs exude their own herbicide, creating what botanists call "eucalyptus desolation."