

The Redwood Report

Redwood National and State Parks, California

29-30 June 2019

Happy Fourth of July



Two Roosevelt elk, which can grow to 1,300 pounds, stand in the middle of lunch. They are the largest of the four remaining North American elk species. Prairie Creek Redwoods State Park, Humboldt County.

Rare Beauty

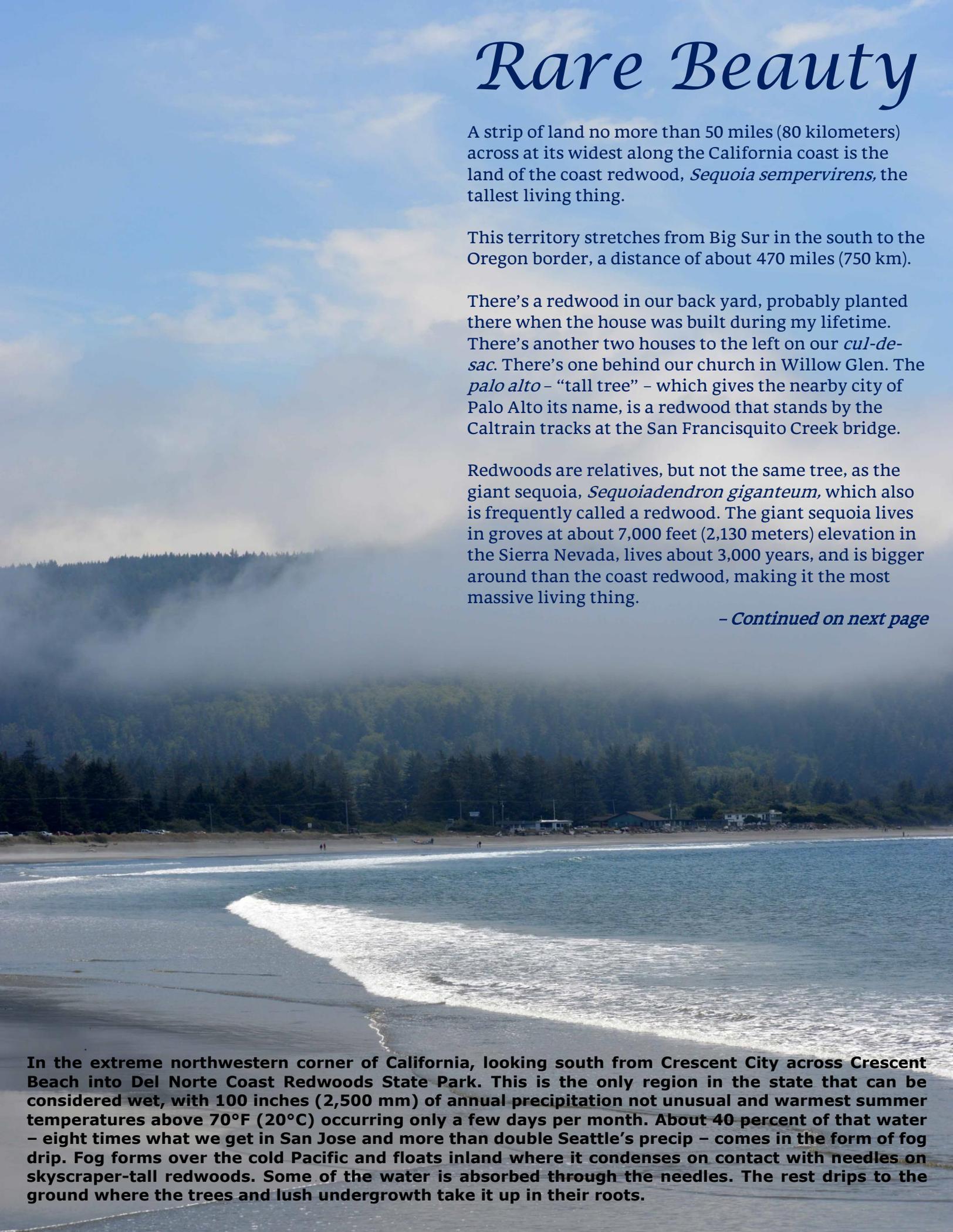
A strip of land no more than 50 miles (80 kilometers) across at its widest along the California coast is the land of the coast redwood, *Sequoia sempervirens*, the tallest living thing.

This territory stretches from Big Sur in the south to the Oregon border, a distance of about 470 miles (750 km).

There's a redwood in our back yard, probably planted there when the house was built during my lifetime. There's another two houses to the left on our *cul-de-sac*. There's one behind our church in Willow Glen. The *palo alto* - "tall tree" - which gives the nearby city of Palo Alto its name, is a redwood that stands by the Caltrain tracks at the San Francisquito Creek bridge.

Redwoods are relatives, but not the same tree, as the giant sequoia, *Sequoiadendron giganteum*, which also is frequently called a redwood. The giant sequoia lives in groves at about 7,000 feet (2,130 meters) elevation in the Sierra Nevada, lives about 3,000 years, and is bigger around than the coast redwood, making it the most massive living thing.

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In the extreme northwestern corner of California, looking south from Crescent City across Crescent Beach into Del Norte Coast Redwoods State Park. This is the only region in the state that can be considered wet, with 100 inches (2,500 mm) of annual precipitation not unusual and warmest summer temperatures above 70°F (20°C) occurring only a few days per month. About 40 percent of that water - eight times what we get in San Jose and more than double Seattle's precip - comes in the form of fog drip. Fog forms over the cold Pacific and floats inland where it condenses on contact with needles on skyscraper-tall redwoods. Some of the water is absorbed through the needles. The rest drips to the ground where the trees and lush undergrowth take it up in their roots.

Rare Beauty

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But it's not as tall as the coast redwood, which tops out, as of the 2006 discovery of the tree named Hyperion, at 380 feet (116m). That's as tall as a 35-story building, which would be illegal to build in downtown San Jose because the airport is too close.

Hyperion and eight more of 10 tallest redwoods are all located in Redwood National and State Parks in the far northwestern corner of California in Humboldt and Del Norte counties. Almost half the protected redwoods in the state are in this park cluster.

The top 10 are all named. In descending order they are Helios (Greek for "sun"), Icarus (the character in Greek mythology who flew too close to the sun, which melted the wax that held his wing feathers together), Stratosphere Giant, National Geographic, Orion,

Federation Giant, Paradox, Mendocino (named for the county where it's located) and Millennium. The shortest of these is 367 feet (112m).

But the people who know their exact locations have kept them secret to protect them from the tree huggers who, by crowding around them, would damage their fragile roots, and from vandals, who enjoy destroying things intentionally. The park service doesn't identify them or provide maps with their names.

For 20 million years these trees survived the most powerful earthquakes and tallest tsunamis on the planet, which sweep in from the Cascadia Subduction Zone just off the coast. Redwoods thrived during the frequent wildfires that have swept the region since long before the advent of humans, the match and the Coleman lantern. Their fire-resistant bark is a foot (300mm) thick and their sesame-size seeds flourish in scorched earth.

Yet since 1850, 96 percent of the two million-plus acres (800,000

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Emily at the base of a redwood in Jedidiah Smith Redwoods State Park in Del Norte County. A tree this size consumes about 150 gallons (570 liters) of water a day. That amount of water weighs more than half a ton. Trees lift water through microscopic tubes in certain interior tissues. As water evaporates through openings in needles or leaves, it creates negative pressure that pulls more water up. Scientists believe that the tree's ability to lift this much weight is a limiting factor on tree height.

Rare Beauty

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hectares) of coast redwoods have disappeared, making them an endangered species. Human loggers did the work.

The redwoods' remains are entombed in beautiful Victorian mansions, heavy furniture, weatherproof picnic tables and patio decks in the same region in which they once thrived.

The contiguous national and state parks Emily and I visited last weekend to create my annual Fourth of July newsletter from a national park hold 139,000 acres of the tallest and oldest redwoods. Every one was wrenched from the ownership of logging companies whose owners had no vision for their holdings but personal wealth.

The loggers and their employers are closely related to the fishermen who caught nearly every last sardine in Monterey Bay 75 years ago, who scoured the buffalo from the Great Plains and who claim human activity isn't changing Earth's climate even though we've been pumping carbon dioxide into the atmosphere at geometrically increasing rates for 180 years.

Who says that treasured, finite resources of our planet may be exhausted for the benefit of a tiny few?

We do.

Tall redwoods in Jedidiah Smith Redwoods State Park near Crescent City.



**Sunset at DeMartin Beach, False Klamath Cove in Del Norte Redwoods State Park.
The gray fog bank offshore will move in as the air cools.**



Emily's shot of me shooting the sunset at False Klamath Cove.