Del Norte Coast Redwoods

State Park



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Del Norte Coast Redwoods State Park 7 miles south of Crescent City on Hwy. 101 Crescent City, CA 95531 (707) 465-7335

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Jhe rugged California coast, scenic river canyons, dense forests, and steep cliffs create a mosaic of interdependent habitats in the Del Norte region.





Redwood National and State Parks



isitors to Del Norte Coast Redwoods State

Park experience the grandeur of an old-growth redwood forest on California's rugged coast. Inland, they can witness historic efforts to restore forests felled by a century of logging. The steep cliffs, lush river canyons, and rocky beaches invite hikers, cyclists, equestrians, and anglers.

This area has the state's heaviest rainfall. averaging 70 inches annually. Year-round temperatures vary from 30 to 80 degrees. Summer days bring morning fog to thirsty redwoods and ferns.

PARK HISTORY

Native People

The Tolowa and Yurok are the original inhabitants of the area now known as Del Norte Coast Redwoods State Park. The Tolowa derive from Athabascan-speaking peoples whose aboriginal lands extend north into Oregon and east along Mill Creek and the Smith River. The Yurok language has Algonquian roots; their aboriginal lands extend south to the Little River and east along the Klamath River.

Both the Tolowa and Yurok utilize the bountiful ocean. They also hunt and gather from inland mountain ranges and free-flowing rivers. Their important foods include salmon, steelhead, smelt, clams, deer, elk, berries, and acorns.

The region's indigenous people suffered enormous losses from genocide and disease when Euro-Americans arrived in the 19th century. Today's Tolowa and Yurok descendants flourish in a thriving societycontinuing their cultural heritage, life ways, traditional languages, and tribal governments.

The Legacy of Logging

European settlers came to the Del Norte coast in the 1850s. To build homes and businesses. logging quickly became the foremost industry; by the 1930s, many old-growth redwoods had been cut down.

Hobbs, Wall and Company established logging camps on Mill Creek's upper watershed in the 1920s. The company built a railroad line to transport temporary logging camps into the groves and ship logs back to mills in Crescent City. Constructing a railroad through the mountains was considered the most ambitious undertaking on the North Coast.

Redwood National and State Parks

Del Norte Coast Redwoods State Park was established in 1927. When Mill Creek Watershed was added to it in 2002. Del Norte became the state's fifth largest state park. It's also part of Redwood National and State Parks, which also includes Redwood National Park. Jedediah Smith Redwoods State Park. and Prairie Creek Redwoods State Parks. The 133,000 acres in these four parks are recognized by the United Nations as a World Heritage Site and an International Biosphere Reserve.

Mill Creek's old-growth trees and natural beauty made it a strong candidate for the first redwood national park in the 1960s. In 1968, however, a nearby 100,000-acre parcel was selected to become Redwood National Park. Loggers increased their pace in Mill Creek, and by 2002 when California State Parks acquired upper Mill Creek watershed, most of the big redwood trees were gone.

NATURAL HISTORY

Geology

Rhododendron Offshore and beneath the forest. layers of sandstone, shale, serpentine, chert, and greenstone (a blend called Franciscan complex) emerge eight miles from the ocean floor.

> These layers resulted from repeated tectonic plate collisions and processes of three plates—the North American, Pacific, and Gorda plates, which form the Mendocino Triple Junction south of Eureka.

> Offshore, isolated rock towers called "sea stacks" remain from erosion and coastline retreat.

Plants

Part of one of the largest contiguous sections of ancient coast redwood forest left in the world. Del Norte shelters 350foot redwoods as well as tanoak, madrone, red alder, big leaf maple, Douglas-fir, western hemlock, grand fir, and California bay trees. Sitka spruce trees hug the cliffs. Ferns, azaleas and orchids blanket the forest floor in lush colors and textures. Rhododendrons may reach 30 feet.

HOW SALMON FEED FORESTS

A variety of salmon, including Chinook, chum, and coho, depend on the clear, cool streams of Del Norte Coast Redwoods State Park. For a few months to a year, they feed on plankton and insects, and then head toward the sea. To prepare for that journey, they change dramatically. Their gills and kidneys develop an ability to process salt water and their bodies become more buoyant—less likely to swim and more likely to move with the current.

Once in the Pacific, salmon find richer fare, such as shrimp and fish, which helps them grow rapidly. Most salmon range from 7 to 50 pounds, but individual Chinook or "king" salmon can occasionally reach 100 pounds.

After two to six years in the ocean, salmon head back to their birthplaces to spawn. Along the way, coho males develop large teeth, bright red backs, and hooked jaws. Females prepare "redds," or nests, in clean gravel. The females deposit their eggs in the gravel, the males fertilize them, and then both adults die.

But that's far from the end of the salmon saga. Birds, insects, and other fish feast on dead salmon in the stream. Black bears and other scavengers drag carcasses out of the water and into the forest. Their leavings, filled with carbon and nutrients such as nitrogen and phosphorus, become a nutritious fish fertilizer for the trees. Along coastal streams with big salmon runs, up to 75 percent of the trees' nitrogen comes from their remains.

Plenty of people like to eat salmon. Some admire them for their long journeys and strange physical transformations. They certainly deserve credit for feeding the forests.



Wildlife

Scenic Mill and Rock Creeks provide habitat for Chinook, coho, and chum salmon, often sought by great blue herons and dippers. Federally threatened marbled murrelets and northern spotted owls nest high in the redwoods, while Steller's jays and hawks scold from the tree canopy. Hikers may spot a Roosevelt elk, mountain lion, bobcat, or black bear on a trail. Banana slugs, snakes, lizards, and salamanders slither among ferns.

RECREATION

Fishing—Licensed anglers may catch only cutthroat trout and hatchery steelhead in the park tributaries of the Smith River. Mill Creek is closed to fishing part of the year. For full fishing regulations and details, visit **www.wildlife.ca.gov/fishing**.

Trails—The Damnation Trail and the California Coastal Trail are steep and strenuous. The Coastal Trail is closed to cyclists north of Crescent Beach Overlook. Mill Creek's former mill site area is for day use only. Old logging roads form easy loops and out-and-back trails from the mill site parking lot. Observe all posted trail-use and "closed-area" signs. Wilson Beach on False Klamath Cove offers visitors a picnic area, wildlife watching, and tide pools. **Camping**—Mill Creek Campground's two loops have 143 sites without hookups. For details and site-specific camping reservations, call (800) 444-7275 or visit **www.parks.ca.gov**.

ACCESSIBLE FEATURES C

The coastal cliffs are reachable only by steep trails. Seven accessible campsites have paved pads with nearby accessible restrooms and showers. Accessibility is continually improving. For updates, call (916) 445-8949 or visit **http://access.parks.ca.gov**.

PLEASE REMEMBER

- Stay on established trails; use a detailed trail map to avoid getting lost on unmarked roads.
- All natural and cultural features are protected by law and may not be disturbed or removed.
- Do not feed wildlife; secure food and scented items in bear-resistant containers.
- Except for service animals, pets are not allowed on hiking trails.
- Dogs must be on a leash no more than six feet long during the day and must be confined to tents or vehicles at night.
- False Klamath Cove has hazardous waves. Use caution as it is unsafe for swimming.
- Mill site structures are hazardous and closed to the public.

NEARBY STATE PARKS

- Jedediah Smith Redwoods State Park 1440 Highway 199, Crescent City 95531 (707) 465-7335
- Prairie Creek Redwoods State Park
 127011 Newton B. Drury Scenic Parkway, Orick 95555 (707) 465-7335
- Tolowa Dunes State Park 1375 Elk Valley Road, Crescent City 95531 (707) 465-7335

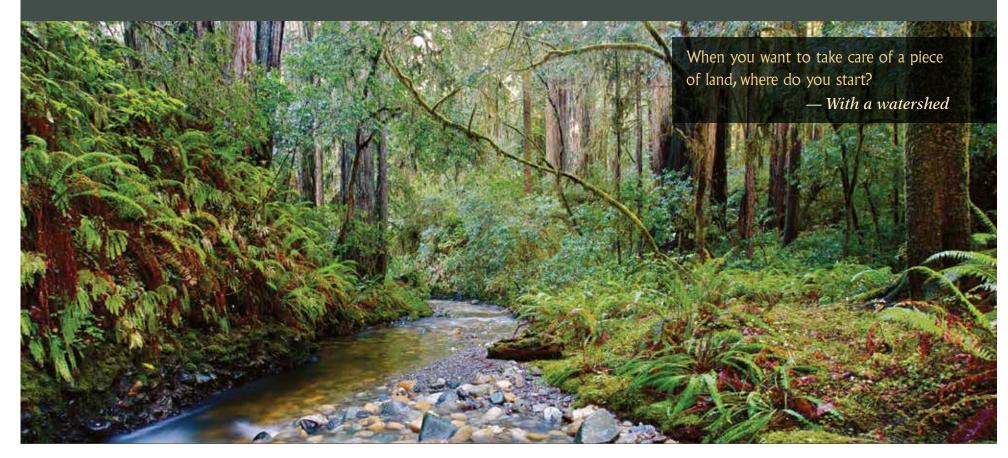
RESTORING MILL CREEK WATERSHED

A watershed is a drainage basin.

From ridgetops to valleys below, all the rain or snow that falls in a watershed drains into the same body of water. Disturbances on upper slopes can devastate life down below. Past logging around upper Mill Creek, for example, puts the salmon and tall trees downstream at risk. That's why California State Parks acquired Mill Creek's upper slopes in 2002 and devised a plan to restore the entire watershed to its lost splendor. At 25,000 acres—an area as big as San Francisco—this is the largest restoration project in state park history.

Restoring even a small portion of what's been lost in the upper basin will take decades. But some benefits are already clear:

- Mill Creek's coho salmon run—one of the most productive in the state—is growing;
- Native plants are thriving in healthy young forests;
- Nearby Jedediah Smith Redwoods State Park is less vulnerable to flooding and siltation; and
- Land managers are learning techniques that will help restore and manage redwood forests elsewhere.



WHAT LOGGERS LEFT — After more than a century of logging, thickets of spindly Douglas-fir replaced Mill Creek's lofty redwoods. Silt from a maze of logging roads muddied the watershed's glistening streams. Spotted owls, marbled murrelets, and wandering salamanders were displaced from their homes in ancient trees. Only 100 acres of unlogged, or "old-growth," redwood forest were left.

The large shell of the Stimson/Miller lumber mill, built in the 1950s, still stands on the Mill Creek property. One cathedral-like grove lies across the road from the mill. Bouquets of sword ferns are dappled with sunlight. A carpet of moss, sorrel, and redwood needles cushions the forest floor. This sad reminder of a paradise lost also serves as a sign of the watershed's potential to recover from the logging era.



Workers use heavy equipment to remove dirt dumped into a stream in the logging era.



A NEW BEGINNING — California State Parks, with the help of partners, raised \$60 million to buy the watershed; they have raised several million more to help restore and repair degraded resources. The partners include Save the Redwoods League, the U.S. Fish and Wildlife Service, California's Coastal Conservancy, the Department of Fish and Wildlife, the Wildlife Conservation Board, and the Smith River Alliance.

In the short term, the restoration is expected to promote vigorous, healthy forests and improve habitat in and alongside the watershed's streams. As a small part of a much larger complex of publicly owned land, the watershed will also provide more room to roam for wideranging wildlife—vital in a time of changing climate.

The ultimate goal is to help Mill Creek become a forest with old-growth characteristics: large and small live trees, fallen and standing dead trees, natural openings, and multiple layers of vegetation from the forest floor to the treetops.

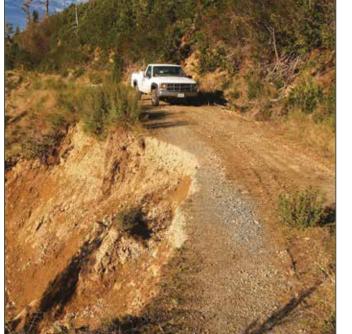
To move toward that kind of richness, three types of human help are needed: thinning forests, restoring streams, and removing roads.

THINNING FORESTS— The original forests here had more than 30 large trees per acre near the ridgetops and 20 or 30 per acre in the lower, redwood-dominated areas. After logging and planting, many areas ended up with 900 to 2,000 trees per acre—mostly Douglas-fir. Left alone, these unnaturally overcrowded stands could be expected to shade out everything beneath them in a few years.

With the help of scientists, State Parks began experimenting with different treatment options. In "control areas," they did nothing. In other areas, they cut down Douglas-fir to make room for the redwood and other species, aiming to reduce tree densities to 75 to 250 trees per acre. Where more sunlight could reach the forest floor, young redwoods flourished with less competition, and a more diverse mix of other plants appeared.



Some of Mill Creek Watershed's old logging roads and clearcuts from the 1980s and '90s.



Crumbling logging roads like this one can clog salmon streams with sediment.

RESTORING STREAMS— Where Hamilton Road crosses East Fork Mill Creek lies what biologists call "the bowling alley." Here the water flows in a straight line, with few pools or riffles. This uncluttered creek may look pleasant, but it is poor habitat for most of the aquatic creatures the park is trying to protect, including the threatened coho salmon. Decades ago, logging companies were asked to remove woody debris from streams, but now California State Parks is putting some wood back to slow flows, deepen pools, and give salmon resting and hiding places. Results of this work are visible from the Rock Creek Bridge about two miles upstream.

REMOVING ROADS — When this restoration began, Mill Creek basin's 39 square miles were carved up with 329 miles of dirt roads. While convenient for logging, they were a problem in a state park. The clean streambed gravel that salmon need to spawn was coated with silt from eroding roads. Even more siltation was expected as roads aged and began to fail, so teams of workers began removing unnecessary roads.



Native plants for Mill Creek and other restoration projects grow in an on-site greenhouse.

RESULTS— By 2015, the restoration team had thinned 4,000 acres of forest, placed 1,000 logs back in streams, and removed 70 miles of crumbling roads with 330 stream crossings. Forests once choked with scrawny Douglas-fir host redwoods, grand fir, and many other native species. Now more salmon are spawning, and the team continues to monitor fish populations, tree growth, and tree spacing and planting options.

Decades or even centuries will pass before Mill Creek Watershed can charm visitors with as many gigantic old trees as it once had. Yet this watershed is still an impressive place. Flora and fauna are flourishing, and little by little, a once-mighty forest is coming back. Word is getting out: dedicated people can fix the mistakes of the past. Damaged land can heal in our care.

CLIMATE CHANGE

Redwoods are helping us cope with climate change. *Do we need to help them?*

The size and longevity of redwoods help these forests store more climate-altering carbon dioxide than any other place on Earth. Even old redwoods continue to grow, each year adding more carbon-filled wood than smaller, younger trees do. After redwoods die, their rotresistant wood keeps much of that carbon out of the atmosphere for centuries.

In 2015, North Coast redwoods were thriving, despite rising temperatures, perhaps because they were getting more sunshine. But some scientists say that the heat, along with decreasing summer fog, could pose a threat in the decades to come.

Certain plants in Del Norte respond to environmental changes more quickly than redwoods. Sword ferns, for example, were shorter and had fewer leaves in 2015 than in 2012. Scientists wonder: Are they a sign of things to come for other species?



This park receives support in part through the nonprofit Redwood Parks Association 1111 Second Street, Crescent City, CA 95531 (707) 645-9150 www.redwoodparksassociation.org

