



Crystal Creek Water Ditch Trail



TRAILHEAD DIRECTIONS

Starting at the Whiskeytown Visitor Center, drive west on Hwy 299 for 8.4 miles. Turn left on Crystal Creek Road and cross the bridge. The trailhead and parking area are about 0.1 miles farther on the left.

TRAIL DESCRIPTION

The first 200 feet of trail drops about 35 feet via two switchbacks, and is the only section of trail with significant elevation change.



Clean out house

The clean out house is located at the second switchback. Grace, the daughter of Charles and Philena Camden had the structure built in 1913. This ingenious water powered rotary rake removes pinecones, leaves and other debris from the flowing water before it tunnels under Hwy 299 and flows east to the Camden house, about a half mile away.

The trail now follows the water ditch through a forest of canyon live oaks and ponderosa pines.

FEATURES

Difficulty Level: Easy
Length: 0.75 mile one way
Elevation: Essentially no elevation change
First half wheelchair accessible
Hiking only - no bicycles or pack animals

About 200 yards from the clean out house is the first of seven drainage crossovers that allow seasonal runoff from small gullies to cross but not flood the ditch.

The tumbling of Crystal Creek can be heard along the trail and the creek finally becomes visible at 0.25 mile. A short distance later, notice several stone retaining walls. These were originally made of logs and timber, some remnants of which are still visible in places.

Six hundred yards farther the hillside is too steep to support a ditch, even with retaining walls, hence the picturesque 250 foot trestle supporting the ditch flume and pedestrian boardwalk with a splendid vista of Crystal Creek. Originally both trestle and flume were made of timber, presumably from Camden's sawmill on nearby Mill Creek which was operating by 1853. Wheelchair accessibility ends at the beginning of the boardwalk.

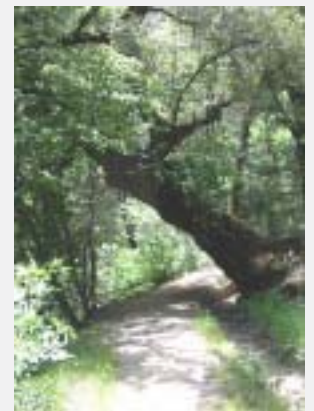
Another quarter mile brings us to the ditch headworks. Some nimbleness and care are required to pursue the rocky and narrow trail to its end. Note the tree roots precariously clutching the stone face on the south side of the tunnel.

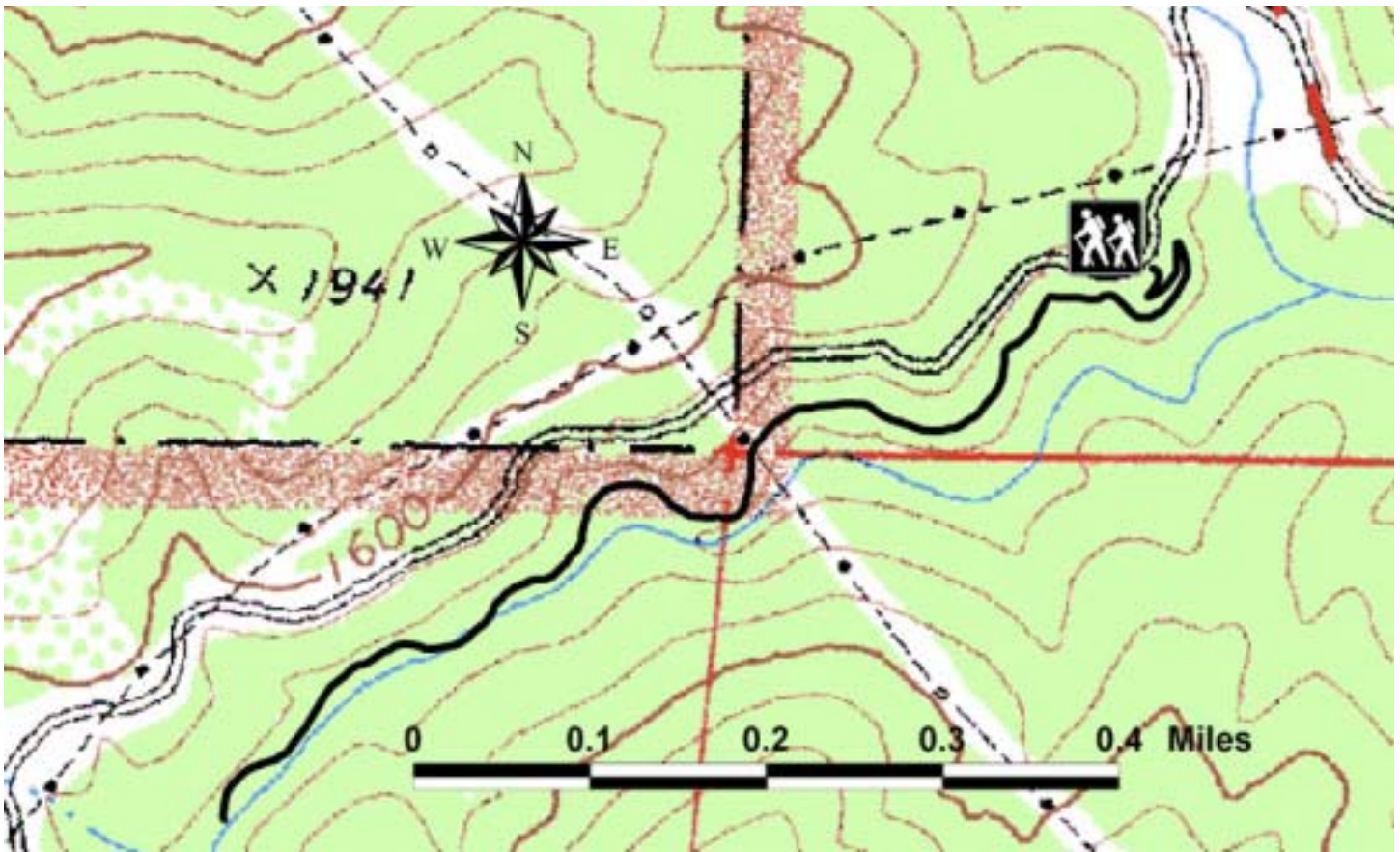
Trees along the trail are primarily blue oak, black oak, canyon live oak and ponderosa pine. As the trail progresses into the canyon, Douglas fir, incense cedar, alder and dogwood are seen.

Smaller plants transition from arid species like white-leaf manzanita, toyon, scrub oak and ceanothus at the beginning of the trail to spice bush, Western azalea and California wild grape. Riparian plants such as sword fern, bleeding heart, horsetail and tiger lily are seen near the trail's end.



Exercise caution when traversing the trestle boardwalk





Water Rights

"Between 1855 and 1858 I made the upper ditch from Crystal Creek down to the Tower house....", wrote Charles Camden in his 1900 autobiography.

Then, as now, water was a precious resource in a land where many streams dry up in the summer months.

Camden claimed water rights to Crystal Creek and Mill Creek and hired laborers to construct ditches to supply water to his sawmill on Mill Creek and to his scattered mining claims nearby. The surplus he sold profitably to other miners.

This particular ditch apparently was designed to supply water for creek side

placer mines, for domestic use at the Camden house, and for orchard irrigation. A century and a half later it is still in operation for the latter purpose. The system operates entirely by gravity, dropping some 41 feet in elevation over a distance of approximately 2.0 miles.

The trail follows only about one third of the original ditch, from the headworks to the clean out house. Originally the ditch continued past the cleanout house slicing diagonally across Crystal Creek Road and extending another 200 yards along the contour. From there it crossed the ravine and the roadbed of what is now Hwy 299, in a 900 foot U-tube constructed of 12 foot, bored pine logs.

Across Hwy 299, the ditch flows southeast towards the Tower House Historic District area and discharges into a redwood tank on the hillside. The excess water spills under French Gulch Road into Clear Creek.

DITCH ENGINEERING

Water is introduced into the ditch by means of a diversion dam across Crystal Creek. The dam pools water to an elevation where it spills into the ditch inlet through a concrete gate structure. A wooden baffle can be raised or lowered in the slots for coarse control of the flow rate.

Some 50 feet downstream of the inlet the ditch widens into an elongated settling basin. The increased cross-sectional area decreases the velocity and allows entrained silt, sand, and small pebbles to settle.



Ditch entrance gate

Farther on is a concrete sluice. The float at

the end acts as a flow controller and diverts excess water through the overflow back into Crystal Creek. The sluice discharges into a short tunnel carved through the steep stone hillside, a testament to the determination of the ditch makers.

The final engineering element is somewhat of a puzzle. The concrete structure is clearly the housing for an undershot water wheel. The puzzle is what it was used for since there is hardly room for even a small mill.



Concrete sluice discharges into short tunnel.

Trailguide Author: Marion Schmitz, Volunteer
Layout & Design: Phyllis Swanson, National Park Service