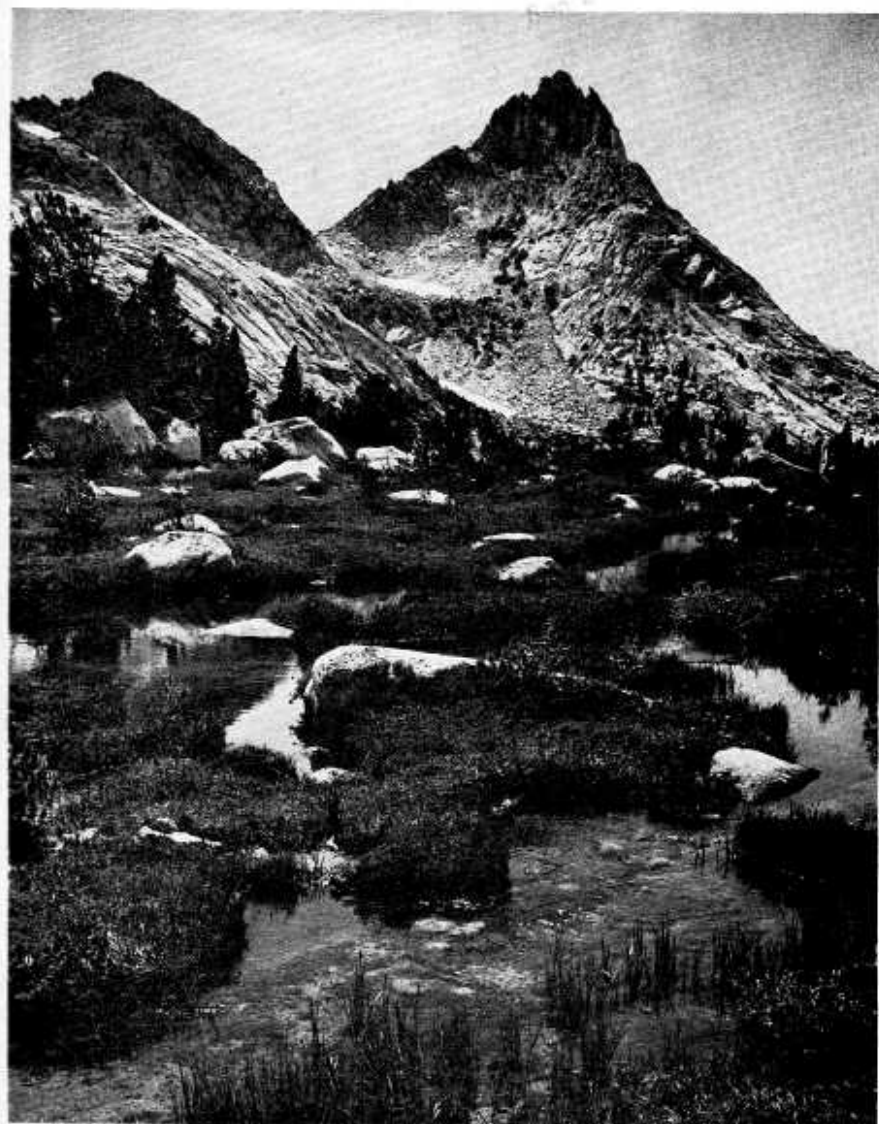


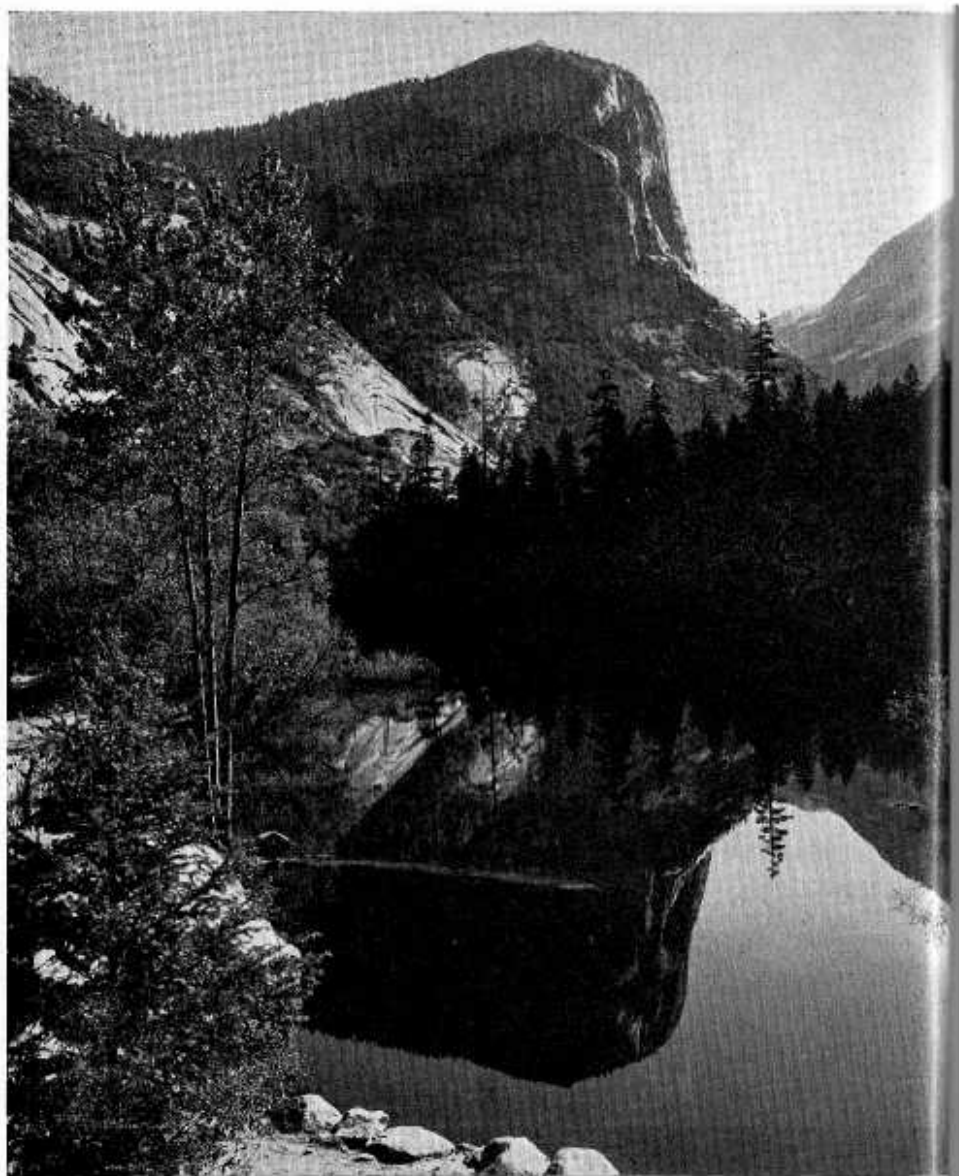
YOSEMITE NATURE NOTES

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Ragged Peak, Yosemite National Park.
—Ansel Adams



Mirror Lake and Mount Watkins, Morning, by Ansel Adams from "My Camera in Yosemite Valley," reproduction by permission of Virginia Adams and Houghton Mifflin Co.

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THE GREAT AMERICAN PARK OF THE YOSEMITE

By Frederick Law Olmsted

EDITOR'S NOTE: As the "father" of American landscape architecture, Frederick Law Olmsted's accomplishments led to his appointment in 1864 as chairman of the first commission to manage Yosemite Valley and Mariposa Grove (the Yosemite Grant by act of Congress, 1864) as a California state park. Thus he was Yosemite's first administrator. The following brilliant account, presented to the Yosemite Museum Library by his son, Frederick Law Olmsted, Jr., was originally published in the *New York Evening Post* in 1865.

To the Editors of the Evening Post:

With the early completion of the Pacific Railroad there can be no doubt that the Park established by act of Congress as a place of free recreation for the people of the United States and their guests forever, will be resorted to from all parts of the civilized world. Many intelligent men, nevertheless, have hardly yet heard of it, and hence an effort to give an account of the leading qualities of its scenery may be pardoned, however inadequate it is sure to be.

The main feature of the Yo Semite is best indicated in one word as a chasm. It is a chasm nearly a mile in average width, however, and more than ten miles in length. The central and broader part of this chasm is occupied at the bottom by a series of groves of magnificent trees, and meadows of the most varied, luxuriant, and exquisite herbage, through which meanders a broad stream of the clearest water, rippling over a pebbly bottom, and eddying among banks of ferns

and rushes; sometimes narrowed into sparkling rapids and sometimes expanding into placid pools which reflect the wondrous heights on either side. The walls of the chasm are generally half a mile, sometimes nearly a mile in height above these meadows, and where most lofty and nearly perpendicular, sometimes overjutting. At frequent intervals, however, they are cleft, broken, terraced, and sloped, and in these places, as well as everywhere upon the summit, they are overgrown by thick clusters of trees.

There is nothing strange or exotic in the character of the vegetation; most of the trees and plants, especially those of the meadows and waterside, are closely allied to and are not readily distinguished from those most common in the landscape of the Eastern States or the midland counties of England. The stream is such a one as Shakespeare delighted in, and brings pleasing reminiscences to the traveller of the Avon or the upper Thames.

Banks of heartsease and beds of cowslips and daisies are frequent, and thickets of dogwood, alder, and willow often fringe the shores. At several points streams of water flow into the chasm, descending at one leap from five hundred to fourteen hundred feet. One small stream falls, in three closely consecutive pitches, a distance of two thousand six hundred feet, which is more than fifteen times the height of the falls of Niagara. In the spray of these falls superb rainbows are seen.

At certain points the walls of rock are ploughed in polished horizontal furrows, at others moraines of boulders and pebbles are found, both evincing the terrific force with which in past ages of the earth's history a glacier has moved down the chasm from among the adjoining peaks of the Sierras. Beyond the lofty walls still loftier mountains rise, some crowned by forests, others in simple rounded cones of light, gray granite. The climate of the region is never dry like that of the lower parts of the State of California; even when, for several months, not a drop of rain has fallen twenty miles to the westward, and the country there is parched, and all vegetation withered, the Yo Semite continues to receive frequent soft showers, and to be dressed throughout in living green.

After midsummer a light, transparent haze generally pervades the atmosphere, giving an indescribable softness and exquisite dreamy charm to the scenery, like that procured by the Indian summer of the East. Clouds gathering at this season upon the snowy peaks which rise within forty miles on each side of the chasm to a height of over twelve thousand feet sometimes roll down over the cliffs in the afternoon, and, under the influence of the rays of the setting sun, form the most gor-

geous and magnificent thunderheads. The average elevation of the ground is higher than that of the highest peak of the White Mountains, or the Alleghenies, and the air is rare and bracing; yet, its temperature is never uncomfortably cool in summer, nor severe in winter.

Flowering shrubs of sweet fragrance and balmy herbs abound in the meadows, and there is everywhere a delicate odor of the prevailing foliage in the pines and cedars. The water of the streams is soft and limpid, as clear as crystal, abounds with trout and, except near its sources, is, during the heat of the summer, of an agreeable temperature for bathing. In the lower part of the valley there are copious mineral springs, the water of one of which is regarded by the aboriginal inhabitants as having remarkable curative properties. A basin still exists to which weak and sickly persons were brought for bathing. The water has not been analyzed, but that it possesses highly tonic as well as other medical qualities can be readily seen. In the neighboring mountains there are also springs strongly charged with carbonic acid gas, and said to resemble in taste the Empire Springs of Saratoga.

The other district, associated with this by the act of Congress, consists of four sections of land, about thirty miles distant from it, on which stand, in the midst of a forest composed of the usual trees and shrubs of the western slope of the Sierra Nevada, about six hundred mature trees of the giant sequoia. Among them is one known through numerous paintings and photographs as the Grizzly Giant, which probably is the noblest tree in the world. Besides this, there are hundreds of such beauty and stateliness that, to one who moves among them in the reverent mood to which they so strong-

ly incite the mind, it will not seem strange that intelligent travellers have declared that they would rather have passed by Niagara itself than have missed visiting this grove.

In the region intermediate between the two districts the scenery generally is of a grand character, consisting of granite mountains and a forest composed mainly of coniferous trees of great size, yet often more perfect, vigorous, and luxuriant than trees of half the size are ever found on the Atlantic side of the continent. It is not, however, in its grandeur or in its forest beauty that the attraction of this intermediate region consists, so much as in the more secluded charms of some of its glens, formed by mountain torrents fed from the snow banks of the higher Sierras.

These have worn deep and picturesque channels in the granite rocks, and in the moist shadows of their recesses grow tender plants of rare and peculiar loveliness. The broad parachute-like leaves of the peltate saxifrage, delicate ferns, soft mosses, and the most brilliant lichens abound, and in following up the ravines, cabinet pictures open at every turn, which, while composed of materials mainly new to the artist, constantly recall the most valued sketches of Calame in the Alps and Apennines.

The difference in the elevation of different parts of the district amounts to considerably more than a mile. Owing to this difference and the great variety of exposure and other circumstances there is a larger number of species of plants within the district than probably can be found within a similar space anywhere else on the continent. Professor Torrey, who has given the received botanical names to several hundred plants of California, states that on the space of a few acres of meadow



Frederick Law Olmsted, Sr., Yosemite's first administrator.

land he found about three hundred species, and that within sight of the trail usually followed by visitors, at least six hundred may be observed, most of them being small and delicate flowering plants.

By no statement of the elements of the scenery can any idea of that scenery be given, any more than a true impression can be conveyed of a human face by a measured account of its features. It is conceivable that any one or all of the cliffs of the Yo Semite might be changed in form and color, without lessening the enjoyment which is now obtained from the scenery. Nor is this enjoyment any more essentially derived from its meadows, its trees, its streams; least of all can it be attributed to the cascades. These, indeed, are scarcely to be named among the elements of the scenery. They are mere incidents, of far less consequence any day of the summer than the imperceptible humidity of the atmosphere and the soil. The chasm remains when they are dry,

and the scenery may be, and often is, more effective, by reason of some temporary condition of the air, of clouds, of moonlight, or of sunlight through mist or smoke, in the season when the cascades attract the least attention, than when their volume of water is largest and their roar like constant thunder.

There are falls of water elsewhere finer, there are more stupendous rocks, more beetling cliffs, there are deeper and more awful chasms, there may be as beautiful streams, as lovely meadows, there are larger trees. It is in no scene or scenes the charm consists, but in the miles of scenery with cliffs of awful height and rocks of vast magnitude and of varied and exquisite coloring, and banked and fringed and draped and shadowed by the tender foliage of noble and lovely trees and bushes, reflected from the most placid pools, and associated with the most tranquil meadows, the most playful streams, and every variety of soft and peaceful pastoral beauty.

The union of the deepest sublimity with the deepest beauty of nature, not in one feature or another, not in one part or one scene or another, not any landscape that can be framed by itself, but all around and wherever the visitor goes, constitutes the Yosemite the greatest glory of nature. No photograph or series of photographs, no paintings ever prepare a visitor so that he is not taken by surprise, for could the scenes be faithfully represented the visitor is affected not only by that upon which his eye is at any moment fixed, but by all that with which on every side it is associated, and of which it is seen only as an inherent part. For the same reason no description, no measurements, no comparisons are of much value. Indeed, the attention called by these to points in some definite way remarkable, by fixing the mind on mere matters of wonder or curiosity, prevents the true and far more extraordinary character of the scenery from being appreciated.



ADDITIONAL FACTS ON THE GIANT SEQUOIAS

By Gayle S. Alden, Ranger Naturalist

The magnificent giant sequoias are the largest and oldest trees in the world. Their age is attributed largely to the natural protections they have against the enemies fire, insects, and disease. Although the trees are resistant to these foes, they frequently suffer from their weakening effects. The reaction of the sequoias to such injuries and a few of their other little-known characteristics are of interest.

A sequoia severely injured at its base by fire will increase its growth in this area in an evident attempt to regain the support needed. If a tree begins to lean as a result of the destruction of a portion of its base, it may react in several ways in addition to increased growth. It may accelerate the enlargement of the branches on the opposite side from the lean. This tends to re-establish its center of gravity directly above its base. Branches on the side toward which the tree is leaning may drop off, decreasing the weight on that side. All of these reactions occur slowly. Thus the survival of the tree may depend upon the time it is given in which to react and upon prevention of further destruction by other agencies.

Brittleness of sequoia wood also seems to serve as a protective characteristic. Being brittle, the wood breaks easily and has little structural strength compared to that of other building materials. This means that it is not often sought for construction purposes though its other qualities make it valuable. When a sequoia falls, its trunk usually shatters into many relatively small sections with the tremendous impact of striking the ground. As much as 80 percent of the tree may be lost for use as lumber. Strangely, then, the giant sequoias appear to have a defense even against man, their greatest potential enemy. However, man has now become the trees' strongest ally, for most of the sequoia groves have been included in the Sierran national parks where protection is afforded them. In Yosemite's Mariposa Grove, major fires have been avoided for some 90 years. By eliminating fire—the trees' gravest natural threat—man is aiding these giant mature specimens to live longer, and the young trees, whose thinner bark renders them more vulnerable, to reach full stature. May man continue to be the giant sequoias' greatest friend.

NOTICE TO SUBSCRIBERS

It is a pleasure to announce that the August 1954 issue of Yosemite Nature Notes will be a completely revised edition of our booklet, "Birds of Yosemite National Park." We feel that the new edition, with many additional descriptions and illustrations and a beautiful colored cover, will be welcomed as a valuable, up-to-date reference. Subscribers will receive the new booklet in place of the usual monthly issue, at no additional cost.—Ed.

HIKING IN TUOLUMNE'S WONDERLAND

By Merrie Jo Warne, Yosemite Field School, 1953

A thunderous roar! Clouds of mist and spray! Then in a very short distance all is quiet and still. Deep, blue-green pools harbor lazy trout and reveal dark shadows caused by overhanging limbs. When following the course of the Tuolumne River through the high Sierra of Yosemite National Park, one discovers that the character and mood of the water are constantly changing.

The river forms many glorious spectacles, but descriptive words fail to convey the full strength and beauty which the hiker observes along the trail to Waterwheel Falls. It is about 9 miles of easy walking from Soda Springs in the western end of Tuolumne Meadows to this famed water display. The going is all downhill en route to the falls, so extra time should be allowed for the much more difficult return trip.

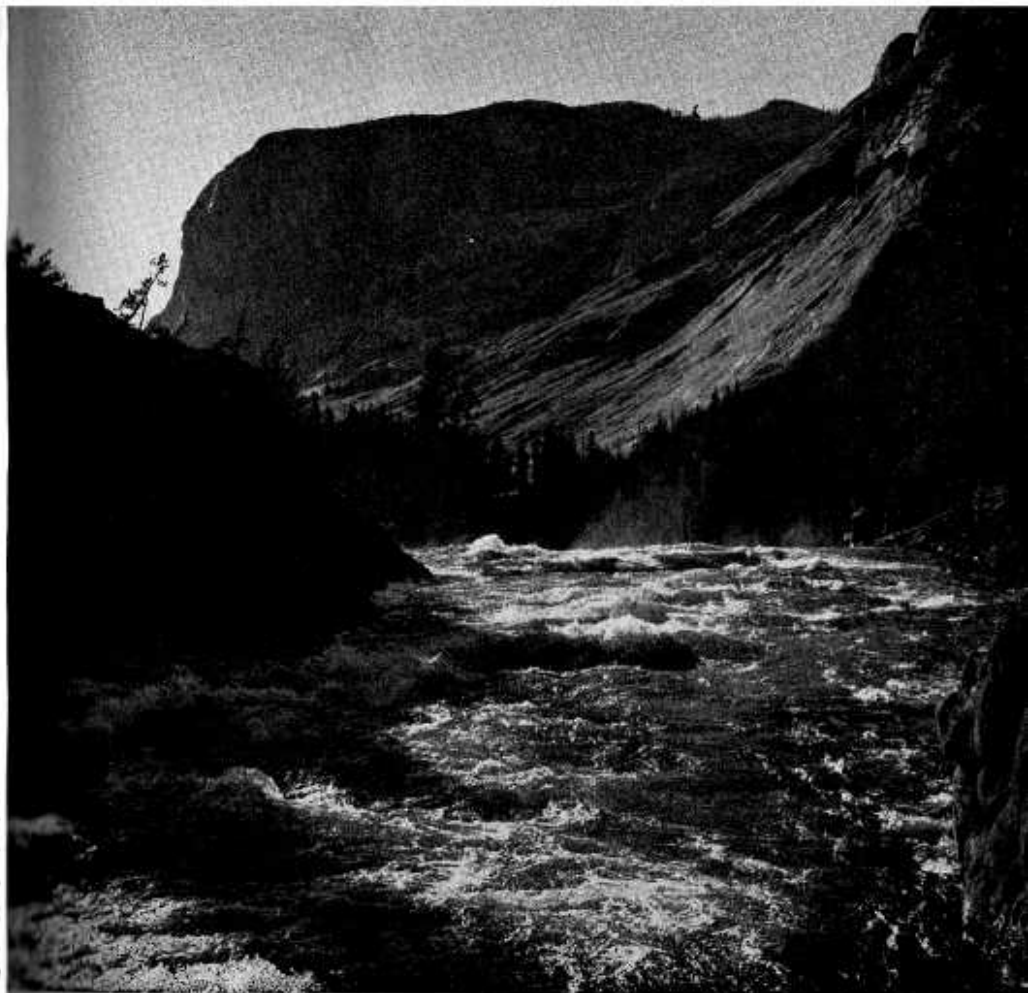
One Saturday in mid-August last year I took the trail to Waterwheel with three other Field Schoolers. It was a wonderful hike, the kind that leaves a pleasant lingering memory which is sure to crop up at unexpected moments for years to come. I have seen spectacular mountain landscapes before, but never have I been more impressed than by the power and sound of this plunging torrent. Wherever we looked along the way there was wild, unmarred natural beauty characterized by sharp contrasts in color, sound, and motion.

The scene varied continually. In one area the sky was bright, an intense cloudless blue. The canyon was relatively narrow and deep. The hues of its sheer granite walls were somber gray, blue, white, and purple. Here the river roared like a destructive tyrant as it crashed over a

precipitous ledge, to bound up again in clouds of boiling white foam and swirling spray. Around the next bend the canyon broadened and the waters were clear and calm, for there in deep pools flanked by a forest of quaking aspen the river flowed slowly as if to rest before it again thundered downward to beat the giant rounded boulders with its ruthless fury.

But let me get back to our hike. We left Soda Springs about seven in the morning and walked at a comfortable pace. It was quiet, and the night's frost still coated the short grasses and sedges. For the first part of the journey the trail did not follow the river, but cut across meadow and forest. A mile or so to the west a herd of 15 to 20 deer were grazing peacefully. They formed a picture that looked for all the world as if it had been taken from a storybook. Every few minutes we heard the high, piercing whistle of the "picket pin" or Belding ground squirrel, and as we walked along we noticed these tiny animals sitting erect to have a look at us. There were numerous lupines, shootingstars, and other flowers which offered brilliant splashes of color, and a flock of mountain bluebirds added movement to the setting.

After a while the trail entered a lodgepole pine forest and then came upon a large, fairly level granite expanse. Here were many glacial erratics, or great boulders which had been left scattered about as a glacier of long ago melted away. A few gnarled lodgepoles grew out of cracks in the white rock. Near this place the trail for the first time approached the river, which flowed in a smooth, rapid curve and eddied



Glen Aulin, Tuolumne Canyon, by Ansel Adams from "Yosemite and the Sierra Nevada," reproduction by permission of Houghton Mifflin Co.

up over the edge of the granite bank. The trail again entered the lodgepole forest, and from this point on followed the course of the Tuolumne.

Before long our path came out on the brink of the racing river and crossed on a high log bridge to the western side. For a while it passed over flat granite fields where there were some large glacially polished patches, more erratics, and the trees were twisted and stunted, but soon the trail threaded through another lovely forest. Now many mountain hemlocks were interspersed with the pines, and it was dark and cool. Red heather, Labrador tea, and corn lilies were abundant.

The trail suddenly began to drop and several switchbacks were encountered. Gradually we became aware of a constant sound, and as we progressed this was discernible as a mighty roar. The noise grew deafening, and we found that it was made by the river as it cascaded over a broad ledge to form the magnificent Tuolumne Falls. Though not a high waterfall, the force of the river as it crashed down into the seething pool below was tremendous. The dazzling white water stood out in bold contrast with the sky.

Tuolumne Falls marks the beginning of the river's abrupt descent into the Grand Canyon of the Tu-

olumne, and from there down to Waterwheel the scenery became more impressive with each step. The canyon began to take shape as the trail led us rapidly downward. Soon we noticed low cliffs on either side of the narrow gorge.

Just above Glen Aulin High Sierra Camp the river next vaulted over a series of steps to form White Cascade. Here again a great rumble greeted us as the water went boiling down the steep slope into the large emerald pool at its base. A small, shallow stream entered the Tuolumne near the bridge at Glen Aulin and its slow-moving water was lost in the turbulent rush of the river.

In the quaking aspen grove below Glen Aulin were a few scattered lodgepole pines lending a touch of reality to an otherwise magic forest. The aspens were slender and graceful. Their small round leaves danced and trembled in the slightest breeze and their greenish-white trunks with bold black scars added a ghostly note. The sunlight was sprinkled in tiny moving patches on the soft green grasses and ferns. There was a jumbled mass of color, for the entire forest floor was blanketed with wildflowers. An enchanting growth of a tall sky-blue lupine and a short-stemmed larkspur was scattered among the yellow-green foliage of corn lilies. Dead wood lay decaying among Mariposa lilies. The river was peaceful here and a high black-and-brown-streaked cliff was visible through the trees.

I was sure there could be no scenes more lovely than those we had passed, but as the trail continued downward the canyon became narrower and the cliffs towered higher overhead. The Tuolumne again became a raging, foaming mass as it hurtled down to

form California Falls, 6 miles below Soda Springs. A short distance farther the tumultuous water once more plunged over a ledge at Le Conte Falls.

Then after countless switchbacks we suddenly got our first view of Waterwheel Falls. We walked out on the steep, gray-white granite incline to absorb the splendor displayed before us. The slope was brown and slick where the river dashed over it. As the water struck the hollowed depressions in the incline, it was hurled up and back some 25 feet in a majestic wheel-like motion. The spray was white and glistening. Droplets sparkled in the sun and produced tiny rainbows.

Sitting near the top of the cataract, I surveyed the canyon below and the imposing cliffs flanking it. There were venerable, gnarled junipers with reddish bark and light-green foliage. Propped by a young juniper, a dead incense-cedar trunk leaned far out over the torrent—a glaring gray specter surrounded by rushing, living water. Another grizzled cedar, probably injured in past ages, had four giant limbs forming a rounded crown. About ten feet lower, three branches jutted off to the left to give the tree a grotesque outline. Below the main slope and waterwheels, a huge boulder cast a faint shadow. Although the gradient was more gentle there, I could see churning green pools flecked with white. The rocks and boulders were brown near the water, but were streaked black by innumerable lichens.

After watching and listening for an hour or so we returned to the path and followed it down the steep, dry canyon side. Plants of the chaparral type grew among the enormous boulders—chinquapin, huckleberry oak, and contorted, stunted manzanita. Near the base of the great ramp

a tiny trail branched off to the left and wandered down through the chinquapin. On a flat shelf some quarter of a mile below Waterwheel Falls was an intriguing campsite, nestled among tall, masterly conifers. The river bent sharply and entered a deep, green pool lined with white sand. Beneath the willows and

aspens along this quiet stretch were numerous deer tracks, and paw marks which we were unable to identify. There on a grassy bank we stopped at last to eat our trail lunches, and to rest before starting the long climb out of the wonderland which is the Grand Canyon of the Tuolumne.

LATE-BLOOMING SNOWPLANTS

By Richard J. Hartesveldt, Ranger Naturalist

On August 21, 1952, while seeking my way to the top of a high granite hill west of Soda Springs Meadow in Devils Postpile National Monument, I was considerably surprised to see a snowplant (*Sarcodes sanguinea*) in the prime of bloom. The heavy snow of the previous winter and the topography of the area were together largely responsible for the late appearance of this and other nearby specimens of the striking scarlet plant. Most of them

were located deep in a north-south-running notch in granite, where the last of the glaciers had plucked out fractured rock. The notch was at least a quarter of a mile long, narrow, and about 30 to 40 feet deep. The sun shone on the bottom of it for only a brief time each day, providing so little warmth that the snow still lay unmelted on the ground. It was not too unusual, then, that where spring was two months late, snowplants were still blooming.





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Dan Anderson