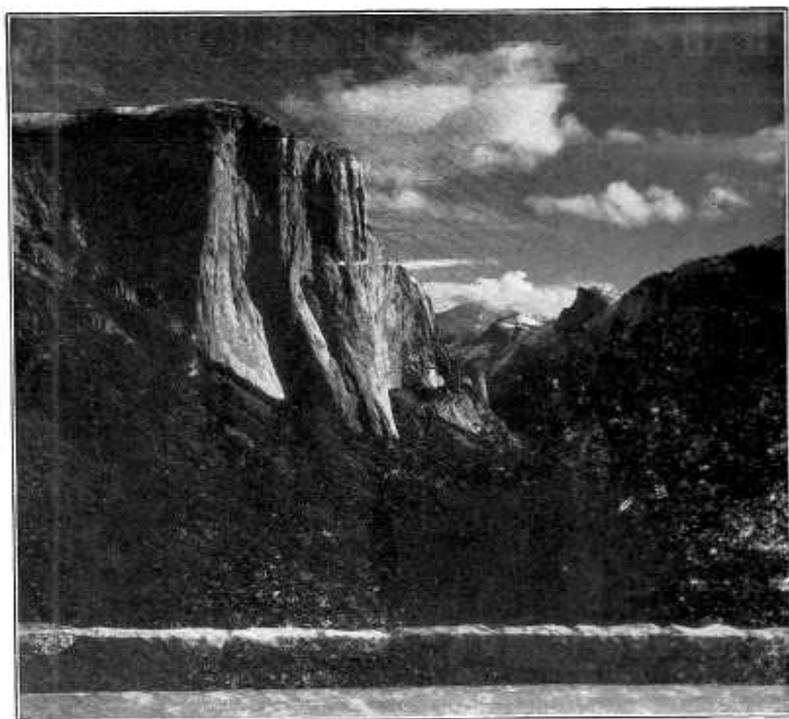


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The Famous Tree on El Capitan

(By JAMES E. COLE, Museum Preparator)

Every year thousands of Yosemite National Park visitors are shown a pine tree growing on the nearly vertical face of El Capitan. Most of these people are on guided trips with naturalists or in buses operated by the Yosemite Park and Curry Company, while the remainder have the tree pointed out by friends who previously had it shown them, for it is doubtful if the average person looking at El Capitan would notice it.

Recently facts regarding the height of this pine were discussed on a national radio broadcast. Consequently, many visitors who never before heard of the tree now want to see it. There has also been considerable misunderstanding relative to its height which has recently been clarified by the Park Engineering Department.

In the radio program referred to, Major Bowes said that the tree was 75 feet high many years ago when

he was in Yosemite, and he wondered if it was still there. Bert Harwell assured him that it was and that now it was thought to measure 87 feet. These remarks prompted a search of the records for the size of the pine when last measured. No report could be found in the Park files although Ansel Hall (Yosemite Valley, An Intimate Guide, 1929), states that the tree was 82.4 feet high in 1919. No data accompanies this statement so steps were taken to officially determine its height.

Since the solid granite below the tree would be extremely difficult, if not impossible to climb, it was necessary to call upon Park Engineer Hilton for engineers and instruments. Mr. E. C. Smith, Yosemite office engineer, was assigned to the problem. The method used required obtaining vertical and horizontal angles of the tree from both ends of a measured base line on the floor of the Valley. The re-

sulting angular data, by means of trigonometry, were converted into linear measurements which gave the height of the tree, the amount of clearance between the top of the tree and the overhanging rock, and the height of the tree above the Valley floor. These measurements indicate that the pine is 1157 feet above the Valley, that it is 80.5 feet tall, and that there is at least 8.5 feet clearance above the tree.

This data will be used by naturalists, not simply to point out an oddity, but as a method whereby visitors may gain some idea of the size of El Capitan. By pointing out pines in the foreground, comparable in height to the one on El Capitan, it is possible to more easily convey some conception of the magnitude of 3,000 feet of vertically exposed granite. If El Capitan were standing alone such devices would be unnecessary. But since it is near other perpendicular cliffs and in a Valley eminently noted for lofty vertical sidewalls, this method of comparison is useful in indicating the size of the largest piece of unfractured granite known in the world.

The tree, which is probably a Jeffrey Pine (*Pinus jeffreyi*), but may be a Western Yellow (*Pinus ponderosa*), is growing in a recess about one-third the way up the face of the cliff. There is no method of determining its age since the cliff is unscalable, but it has been growing there many years for early Yo-

osemite inhabitants, such as John Muir and Hutchings, mention it in their books. From all appearances it is a normal, healthy tree and should, unless it succumbs to attacks of insects, live and grow for many years yet.

The second most common question asked about this tree pertains to its manner of growth on solid granite. There is some evidence in the form of shrubs around the base to indicate that there may be considerable soil present on the ledge. Even though there were not, the tree nevertheless could grow, providing it had an adequate supply of moisture.

It is apparent even without the use of field glasses that this is true. The black streaks on the rock behind the tree are evidence of a constant seepage of water which feeds the roots. Practically all the food of plants is manufactured in the leaves from water and carbon dioxide. The small amount of minerals necessary for tree growth can be obtained from solid rock. In fact, it is so obtained, for regardless of the size of rock particles, whether of the finest dust or large boulders, they have to be dissolved by the roots before they can be used by the tree.

The survey by Mr. E. C. Smith not only has stilled the argument over the height of the tree, but also will correct the erroneous opinion of many people that the pine cannot grow higher because its top is

against the overhanging rock above. It is to be admitted that such appears to be the case when the tree is seen from the north road on the Valley floor. From the opposite side of the Valley, however, it is at once evident that there is considerable space above the tree. But even though it had reached the top

recess, there is supporting evidence in the form of other trees growing in somewhat similar recesses, which show that one of the upper branches would, providing it could reach out beyond the overhang, take the place of the original top and continue its upward growth.



The Jeffrey Pine on Sentinel Dome.

Another famous Yosemite tree growing under severe handicaps

A Red-letter Day

(By CHARLES W. MICHAEL)

Ornithologically in Yosemite Valley September is likely to be a month of surprises, for then it is that erratic wanderers among the birds are most often seen. During this month I wander forth sort of expecting adventure, hoping to meet up with some birds that are also seeking adventure. I look for the

stranger in a strange land, but now after 15 years of bird study in the Valley I can no longer hope to meet a complete stranger. I can, however, look forward to meeting the occasional rare visitor. Once in a year, perhaps, comes a red-letter day when one adventure follows another on a morning walk. Such a

day was September 19, 1935.

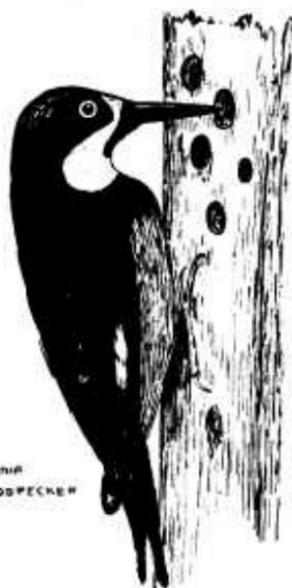
The walk started in the Museum garden. Green-backed goldfinches were swinging on the evening primrose stalks as they ripped into the seed pods. Chipping Sparrows and Sierra Juncos were picking up scattered seeds from the ground and with them were a number of White-crowned Sparrows—the first to be seen this fall. As I stepped out of the garden I caught sight of a dark bird winging in steady crow-like flight over the tree-tops. By its size, its manner of flight, and its sharply-pointed bill I was sure that it should be the Pinon Jay, a bird that I had only twice before seen in Yosemite Valley. On April 27, 1923, a small flock of these birds was seen, and on October 15, 1931, I had a long visit with a lone bird. The Pinon Jays belong on the east side of the Sierra among the Pinon Pines. Straight across country as a bird flies it is not far to the Pinon Pines, but there is a high mountain range to be crossed.

The next surprise, adventure to me, was the sight of a California Woodpecker feeding young in the nest. This is a very late nesting record for California Woodpeckers. At this season they should be storing acorns instead of feeding young.

As I crossed the meadow I scared up the first Song Sparrow of the fall season, and it was a treat to see him again in the Valley after a year's absence. Also a Savannah Sparrow leaped out of the grass to

hurry away in zig-zag flight with the peculiar side flipping of the tail which is a good field mark by which to identify this reclusive bird. A large flock of Red-winged Blackbirds, up from the lowlands no doubt, lifted from the grass and winged away in blackbird formation.

As I neared camp I heard the raucous-voiced Blue-fronted Jays scolding in unison. More adventure, I thought, an owl or a weasel. But when I arrived at the center of concern I found the jays perched about on a brush pile and very close to



CALIFORNIA
WOODPECKER

the ground. The jays were apparently very much excited, but the cause of the excitement I discovered was not an owl or a weasel, but a rattlesnake. And it was the first rattlesnake I had seen on the floor of the valley in many years. As

far as I could see, the snake paid not the least attention to the squalling jays. The snake did, however, soon slide into a crack between some rocks and the jays departed. I know the jays and they often inform us when something unusual is going on in the neighborhood.

At eleven o'clock when I was sitting at the table writing up my notes I heard the nasal whine of notes which announced a flock of Pinon Jays. I looked up and saw many birds settling in one of the *Chrysolepis* Oaks on the talus above camp. The birds seemed restless

and they kept up a constant chatter as they moved from tree to tree. As the birds moved across an open space of about 50 yards I was able to count 55 birds. Finally all birds left the trees together and in flock formation they winged directly across the valley toward the mouth of Indian Canyon.

The last adventure of the morning came when I discovered that the Sierra Creeper, after all these months, had found the suet tree. He did not go directly to the suet, but foraged on the trunk below the suet, gleaning crumbs that other birds had dropped.



Seven Day Hikes

(By RALPH ANDERSON,
Park Photographer)

Seven days in the High Sierra, each day bringing new experiences, hiking over comfortable trails, fishing rushing mountain streams, lunching on glacial boulders overlooking superb mountain panoramas: — these and more, are within the reach of all in Yosemite National Park during July and August.

But you may ask: "What about expense? I cannot afford to hire a guide to go back into the mountains, and I wouldn't think of going

on such an extended trip without one." The National Park Service provides free guide service for the Seven Day trip, and parties stop at High Sierra Camps where comfortable cots and bedding cost only a dollar a night. Real mountain meals served by hospitable caretakers cost a dollar each.

Lasting friendships are made at the evening campfires and on the trails in the solitude of the mountains. All cares and worries of everyday life are forgotten, and a new perspective, a new and vigorous

outlook on life is achieved. No one could possibly spend a week on mountain trails, in close communion with the vast forces of Nature and ever be the same again.

So easy is the trip that old and young join the happy outings. Congenial crowds include all ages from ten to sixty—and the groups are truly congenial after one or more days in the high country. The High Sierra Camps are located on an average of ten miles apart, thus giving everyone more than ample time for the easy hike plus any fishing, side trips, resting, or what not.

Conducted during the months of July and August, the short summer season of the Sierra, the wildflowers are at their best growing in profusion spreading gay carpets of brilliant color among the rocks and mountain meadows.

Briefly, the trip starts every Monday morning from Happy Isles in Yosemite Valley. Those who have made advance reservations at the Yosemite Museum, for the parties are necessarily limited to fifteen including the naturalist guide, are carefully inspected to make sure all are properly clothed for long hike. Sturdy shoes are essential, and sufficient shirts or sweaters are necessary for the cold nights of the higher elevations. Experience has taught us the following list is a good one:

- 1 sweater or coat
- 1 extra pair wool socks
- 1 extra shirt
- 1 first-aid kit—roll of adhesive tape

1 change of underwear

Necessary toilet articles

Whatever you do, wear good strong clothing. Many a hiker has worn his oldest clothes only to find they were worn out before the trip was completed.

Camera, fishing tackle, binoculars, string, knife, flashlight and topographic map are all handy, but not essential for the success of the trip.

From Happy Isles the party winds its way up the Merced Canyon past Vernal and Nevada Falls, through Little Yosemite Valley to Merced Lake—one of the most popular camps for fishermen. Quiet groves of Quaking Aspen open interesting vistas of gnarled Junipers high among surrounding granite boulders. Roaring cascades of the Merced River are a delight to a man's sense of sight and sound. And how those hikers enjoy dinner at six at the comfortable camp located at the upper end of Merced Lake!

The next day, after a sound night's sleep in the clear Sierra atmosphere, the refreshed outdoorsmen hike over Vogelsang Pass to catch grand glimpses of mountain scenery, fish some excellent trout streams, perhaps, and arrive leisurely at Vogelsang Camp that afternoon. Sunset and the surrounding peaks turn translucent with red or orange alpine glow. If fishing is good as usual, there will be trout for breakfast next morning.

Another snappy morning dawns for our hardy mountaineers. It is remarkable how quickly the human frame adapts itself to the strenuous

exercise of hiking mountain trails. The first day always seems the most difficult—muscles the owner never dreamed existed make their sore presence known. Sometimes the novice hiker will reason that he can't possibly go on for six more days of it, but gets up the next morning feeling somehow refreshed and eager for another good walk. Two days of this, and he is so absorbed in the interests of the trail-side that muscles no longer exist, at least so far as he is aware of them.

From Voglesang, the group may hike directly to Tuolumne Meadows, or cross a divide over a longer trail for more trout fishing down Lyell Fork to the Meadows. This is the starting point for many jaunts. On the Tioga Road, it is the stopping place for many eastern motorists enroute to Yosemite Valley. It is here that mountain climbing parties start out for the glaciers of Lyell, Maclure and Conness. A store is welcomed by those who forgot their tooth brushes, and candy bars never tasted quite so good as at Tuolumne Meadows after an all-day hike. Here is a campground for hundreds of fishermen who scatter like quail over the high country lakes and streams every summer.

An extra day at Tuolumne Meadows enables the naturalists-conducted parties to climb Mt. Dana, 13,050 ft. peak near Tioga Pass. This second-highest peak in Yosemite National Park overlooks

Mono Lake on the east and countless mountain peaks of the Sierra range. A living, grinding, glacier works on its northeast slope. Great beds of wildflowers on the other slopes are a delight to the beauty-lover as well as the botanist.

Two nights at Tuolumne Meadows the group joins with several hundred campers for programs of stunts and skits made up of local talent. These nightly programs are famous for spontaneity and impromptu entertainment. Incidents along the trail, and there are always many of them, are reenacted for the enjoyment of all.

On Friday the group leaves Tuolumne Meadows for Glen Aulin, considered by many the most beautifully situated High Sierra Camp. It is nestled at the foot of White Cascade in a rugged section of the Tuolumne Gorge. Many outdoorsmen stay here for days for the excellent fishing within easy walking distance. Waterwheel Falls, most spectacular in early summer, is only three miles below Glen Aulin and all hikers usually make this thrilling side trip.

Impressive beyond description are the thunderous cascades and waterfalls of the Tuolumne Gorge. Striking contrasts between placid pools and stirring rapids are met at every turn. A picturesque trail winds in and out among groves of quaking aspen at the water's edge.

By Saturday the group is well tanned, blistered heels comfortably taped, sun burned noses starting to

peel, and the hardy mountaineers start toward Tenaya Lake over the picturesque McGee Lake Trail. At Tenaya Lake the hikers have an opportunity to take the stage back to the Valley, but few take this easy way out. After days and nights in the Sierra they reluctantly turn home, and Lake Tenaya offers the last night's experience in the high country.

The complete circuit of High Sierra Camps is completed on Sunday when the hikers return to Yosemite over the Tenaya zig-zag trail and arrive at Mirror Lake. Back to civilization after seventy miles of scenic trails over a choice part of that 1176 square miles that

constitutes Yosemite National Park. Mountain peaks, living glaciers, flower fields and mountain meadows, animals of many descriptions large and small, trees of all elevations, sizes and shapes, and perhaps, disposition,—all leave their indelible impression on the minds of those vacationists. Years to come they will tell friends of their experiences, but words will never suffice to relate those intangible impressions, those subtle changes in viewpoint, that come to men and women after a week of this kind of life in the High Sierra.

For further information or reservations, write the Park Naturalist, Yosemite National Park, California.





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Dan Anderson