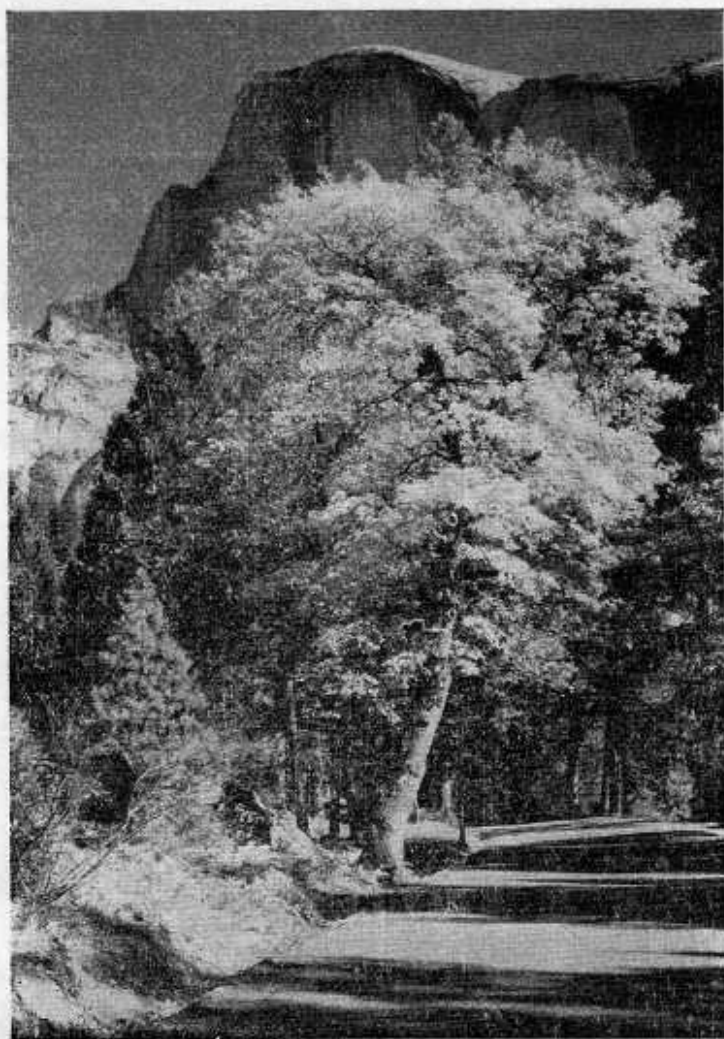


YOSEMITE NATURE NOTES



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History of the Firefall

By M. E. BEATTY
Assistant Park Naturalist

The firefall is a distinctive and internationally known feature which even rivals the natural scenic attractions of Yosemite, so far as the average visitor is concerned.

Most of our visitors who witness this impressive spectacle are desirous of knowing how the custom originated. Due to the meager information at hand, conflicting stories are oftentimes given out.

A description of the firefall follows for those not familiar with the practice. A bonfire is built nightly during the summer near the over-hanging rock at Glacier Point, 3254 feet above the valley floor. The wood for the fire consists mainly of red fir bark gathered during the day by a workman from down trees in the vicinity. Approximately one-quarter of a cord of wood is used for the larger bonfires.

The pile of bark is ignited about 7 p. m. and a program conducted by a ranger-naturalist is held around the fire between 8 and 9. By 9 o'clock, the time of the firefall, the fire has been reduced to a

glowing pile of embers.

The signal for the firefall is the extinguishing of the Camp Curry lights at the conclusion of their entertainment. The exchange of calls between Curry and Glacier may be heard from either place, and at the conclusion, the fire tender by means of a long handled shover, slowly pushes the glowing coals over the cliff.

This gives the effect of a solid stream of fire, dropping some 1400 feet vertically to an oblique ledge, embers sometimes dropping along this ledge an additional 1000 or 1500 feet. There is no fire hazard as very little vegetation exists on the granite walls.

While it is true that the Indians occasionally built signal fires on some of the higher promontories, there is no evidence to suppose they ever pushed the fire over the cliff.

Early guide books fail to mention or give reference to the firefall, although we are positive the custom prevailed at the time, at least occasionally. Our positive information starts in 1899, when Mr.

and Mrs. David A. Curry established the Curry Camping Company at what is now Camp Curry. David Curry learned of the firefall custom, which had fallen into disuse and decided to revive it for the benefit of his guests. He would occasionally send one of his employes up the trail to Glacier Point to build the fire and push it off. This was done more and more frequently, until it became a nightly occurrence.

Mr. Curry's, "Hello, Glacier" and "Let the fire fall," delivered with remarkable volume, won for him the title, "The Stentor of Yosemite." This custom has been continued ever since, although David Curry has passed away.

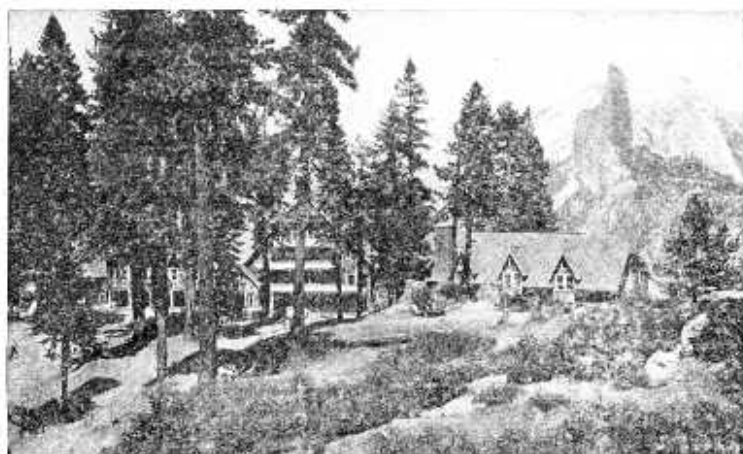
In August, 1928, the San Francisco Chronicle printed an article concerning Fred W Zimmerman, who claims the distinction of originating the firefall. He was quoted as follows:

My first trip to Yosemite Valley was in 1883. I came over the Big Oak Flat road in a buckboard pulled by two mules. One day, during that summer, I

climbed to Glacier Point, two-thirds of a mile above Yosemite Valley. I decided to spend the night there. The weather became cold, so I gathered a pile of cones and built a fire. When the cones had burned down to red hot coals I grasped a long stick and amused myself by knocking them out into space.

J. K. Barnard, who was manager of the Sentinel Hotel at the time, saw the flaming cones bouncing down the mountain side, spreading sparks in all directions as they came. He was very much pleased with the display. The following day he came to my camp near Half Dome and offered to pay me \$2 per night if I would build a fire at Glacier Point and shove it from the precipice each night for the pleasure of his guests. I accepted.

Fred McCauley claims for his father, James McCauley, the same distinction. McCauley came to Yosemite Valley in the spring of 1870, after spending a number of years in the mines around Mariposa. In



Glacier Point Hotel and Mountain House

1871, he was granted the privilege of building a trail to Glacier Point, what is now the four-mile trail.

In either 1871 or 1872 the idea of pushing the fire over the cliff was thought of and McCauley's guests traveled to the floor of the valley to witness the spectacle. It was so successful and effective that many people requested more. The orders became so numerous that finally McCauley decided to make a charge of \$1.50 for each firefall. This practice was continued irregularly for a number of years.

In addition to pushing the fire over, McCauley would soak gunny sacks in kerosene, light them, and after waving them back and fourth several times, throw them over the cliff.



High Sierra Hikes.

The first guided High Sierra hike for this season will leave Happy Isles Monday morning, June 18, under the leadership of Naturalist Borell, for Merced Lake, the first night's stop on this unique seven day feature of Yosemite's naturalist program. Each Monday morning thereafter until the middle of August another party will start around the circuit of the High Sierra Camps.

Averaging about nine miles of hiking each day, there is more than ample time for fishing, resting and photographing along the way. Nights are spent at comfortable High Sierra Camps. Congenial outdoorsmen gather around cheery campfires for relating the day's adventures.

The trip's circuit includes overnight stops at Merced Lake, Vogel-sang Lake, Tuolumne Meadows, Glen Aulin and Tenaya Lake. The party will climb Mt. Dana, 13,050 feet—40 feet less than Mt. Lyell, highest peak in the park.

A dollar a night and a dollar a meal constitute the expense, with free guide service, making the total cost for the seven days in the high mountains about \$25. Reservations are necessary since parties must be limited to fifteen persons.

Leaders designated for the first five trips are as follows:

June 18-24

Naturalist A. E. Borell

June 25-July 1

Ranger Naturalist R. P. Beal

July 2-8

Ranger Naturalist C. Sharsmith

July 9-15

Ass't Park Naturalist Ed. Beatty

July 16-22

Ranger Naturalist J. E. Cole

Glaciers of Yosemite

By M. E. BEATTY
Assistant Park Naturalist

When speaking of glaciers, one's thoughts immediately travel to Alaska, Iceland, or some other far northern region. Few people, even in California, are aware that our Sierra contains a number of small but actually live glaciers. As a matter of fact these ice bodies are larger and more extensive than others in North America of the same latitude.

In the Sierra-Cascade Range, running from the Tehachapi to Canada, a distance of over 1,000 miles, there are no glaciers of importance north of the Yosemite region until the volcanic peaks of Shasta, Hood, Rainier, etc. are reached. This seems contrary to the general conception that the further north one goes the larger the glaciers but a study of the topography gives the clue to the reason. The Yosemite region is directly east of San Francisco where the Coast Range is very low, allowing the vapor-laden ocean winds to reach the Sierra where, due to the high elevations, they are chilled and discharge their burden, mainly as snow. This accounts for the unusually heavy snow that forms the basis of our glaciers.

To the immediate north, the snowfall is less, consequently glaciers are smaller and fewer, due to the increased heights of the Coast Range and other coastal ranges in Northern California to-

gether with a decrease in the average height of the Sierra-Cascade Range.

This serves to explain the unusually heavy snowfall in the Sierra around the Yosemite region where the annual snowfall ranges from 20 feet to 60 feet with up to 20 feet of snow pack at one time.

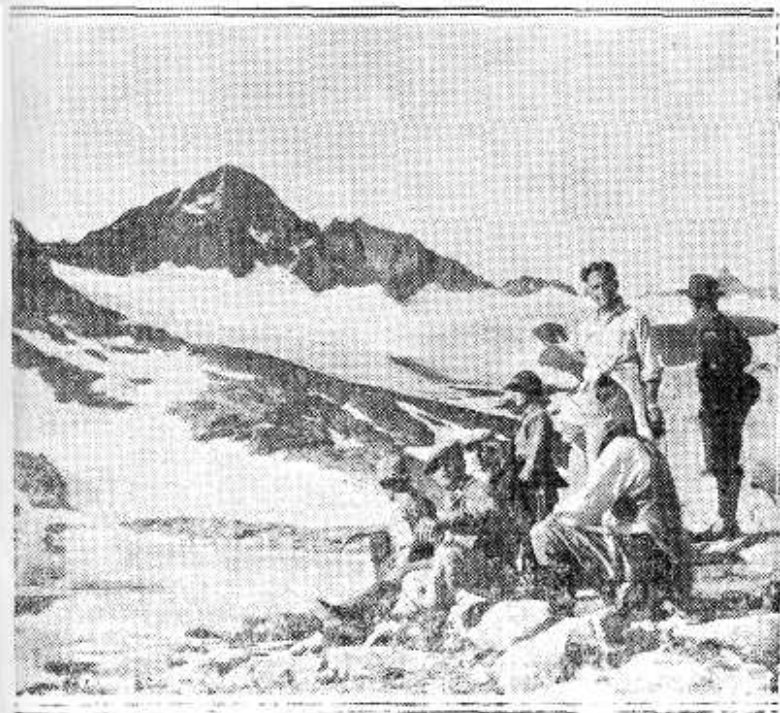
Most Yosemite visitors learn something of the part played by glaciers in carving Yosemite and other similar valleys of the Sierra during the Ice Age. How these gigantic bodies of ice traveled down the canyons of the Merced and the Tuolumne of 50 miles, deepening and widening the original river canyons. How the climate changes, bringing alternate periods of heavy and light snowfall. How glaciers originate in fields of perpetual snow and creep down valleys as slow moving rivers of ice to a point where melting, due to a warmer temperature, offsets the advance. Let us see just how these alternating weather intervals effect our glaciers. In Switzerland, where they have studied their glaciers for over a century, during the middle decades of the last century they were found to be gradually retreating while, during the latter decades, they showed a gradual advance. And now in the early decades of the 20th century they again find them retreating. In other words, the decrease or in-

crease in the glaciers is directly proportionate to the amount of snowfall. Our glaciers are undoubtedly reacting in the same manner although we have only recently attempted detailed study.

In 1931 the Naturalist Department of Yosemite National Park started annual measurements of the four Yosemite glaciers: Lyell, Maclure, Dana, and Conness. This work is in conjunction with similar glacial studies carried out by the United States Geological Survey throughout the continental United States. Statistics compiled by Dr. F. E. Matthes, chairman of

the committee of glaciology, from these studies shows American glaciers are at the present slowly losing ground. Alaskan glaciers advance at the rate of one or two feet per day while those of the Yosemite region only about one inch a day.

Mt. Lyell, 13,090 feet, is the highest peak in Yosemite National Park and Lyell glacier is credited as being the largest glacier in the Central Sierra. This ice mass is approximately one mile wide, considering both the east and west lobes, and about one-half mile long.



Hiking Party on Maclure Glacier

Lyell was first climbed by John B. Tileston of Boston, Massachusetts, on August 23, 1871, and since that time has been climbed by hundreds. It is rather easily reached from Tuolumne Meadows by a trail up the Lyell Fork of the Tuolumne, a distance of about 13 miles.

Mt. Maclure, 13,000 feet, adjoins Lyell on the west and has the second largest glacier of the Yosemite group. Dana glacier, on the east side of Mt. Dana, is probably the most accessible, involving a three mile hike from the Tioga Ranger station on the Tioga road. Mt. Dana, 13,500 feet, is undoubtedly the most climbed peak in the Sierra with as many as 500 climbing it in one season. One obtains a splendid view of the Dana glacier occupying the cirque basin to the east.

Conness glacier is best reached by driving to Saddle Bag Lake and then walking about four miles following the stream course to the snout of the glacier.

These glaciers, though small, have the same characteristics of the larger ones of Switzerland, Alaska, and Greenland. Their surfaces often present yawning fissures known as crevasses, caused by tension or straining of the ice as it moves over irregular surfaces. They also build up rock debris in belts or moraines both in front and to the side of the ice mass.

Those who know our Sierra glaciers find them beautiful to behold

as well as fascinating in the power they display in their work. One interested in geology can, from the ample evidence, read the story of the Ice Age and the important part they played at that time in the carving of the Yosemite.

TWILIGHT BY THE RIVER'S EDGE

By Natasha Smith
Field School 1932

Did you ever think of Yosemite valley at night as Nature's huge cradle with each daylight-loving bird and animal tucked away in its special little niche? Some choose trees, some holes, some shrubs as their resting places and still others sleep on the ground.

One evening as the shadows deepened, soft twitters told of many birds finding roosting places. I noticed a sandpiper family still foraging at the river's edge. They were working hard and paying strict attention to the many insects that come out just at twilight. It was dusk before the mother sandpiper led her babies up the bank into the grasses and hedges. The family was barely distinguishable as faint moving forms. Mainly by the call of the mother and the low answer of the chicks was I able to follow them as they threaded their way through the shadows. On a little knoll overlooking the surrounding territory grew several thick clumps of grass. The moving shadow-like forms faded into the darkness at the base of the largest of these tufts.

A soft, sweet cheep was heard, as the chicks settled down, then quiet reigned over all.

Snake Facts

By NATURALIST STAFF

Snakes are cold-blooded animals and cannot stand great fluctuations in temperature having little temperature control. Exposure to intense sunlight at midday can literally cook a snake to death in about 10 minutes time.

The only deadly poisonous snake in California is the rattlesnake.

Snakes as a whole are extremely beneficial in that they destroy myriads of insects and rodents.

Our most valuable snake, the Gopher snake, is commonly killed because his color pattern somewhat resembles that of the rattler. The Gopher snake feeds mainly on gophers, ground-squirrels and mice.

Snakes have no ears; they receive vibrations of sound through their tongue. They also taste odors in the air through their tongue.

Snakes do not swallow their young for protection against enemies.

Some snakes give birth to live young while others lay eggs, the young hatching out by natural heat.

Rattlesnakes have been found from sea level to 10,000 feet elevation.



Rubber Snake (*Charina bottae*)

A relative of the boas and pythons of the tropics. This species, however, seldom exceeds twenty-four inches in length. Its characteristic small head and blunt tail gives the appearance of being two-headed.

This snake is not only perfectly harmless but is extremely gentle and easy to handle.

NATURE NOTELETS

Western azaleas (*Rhododendron occidentale*) are now giving their best display of the season. An especially beautiful group of pink ones is to be found near the Washington and Lincoln trees.

There were no fish in any streams flowing into Mono Lake until planted there through interest of our Fish and Game Commission.

Strange Things

There is a stream flowing under the base of a Big Tree in the Merced Grove.

Evening Primroses burst into full bloom from the bud in around a minute's time.

Swifts are the swiftest flyers of all birds and our White-throated Swift is the swiftest Swift.

A wild gooseberry bush is growing nearly 100 feet above the ground on a six-foot-in-diameter limb of the Grizzly Giant.

Over 1,300 different flowering plants have been recorded in Yosemite National Park.

A trout weighing 12 pounds 9 ounces was taken from the Merced River near El Capitan last summer.

Two trees growing together at the base is rather a common sight, but in the Mariposa Grove there are two trees growing together at the top.

"Yosemite" means "Grizzly Bear," yet there are no Grizzlies left in California so far as is known.

The Water Ouzel is the only

song bird that has learned to dive into the water for food.

The California Woodpecker stores acorns for the acorns themselves and not for any worms that may get into them.

SUNSET AT WAWONA POINT

By Vera Margaret Christian

You stand at the crest of a mountain

Where no other feet have trod,
Watching a beautiful sunset,

Your soul in communion with God
You feel you are part of the silence,
And the breath-taking beauty below—

Of the crimson, the russet and yellow,

Cast from the sunset's glow.

The blue haze you see in the distance,

Dimly obscuring the sky,
Is a reflection cast by the shadow
Of a soul that is passing by.

The pine trees are sentinels of silence,

The beauty of all they enfold,
And the river has caught the reflection

Of the amber the blue and the gold,

The rim of the mountain beyond you,

When the magical ritual is done,
Eagerly races forward,

And embraces the setting sun.





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Dan Anderson