YOSEMITE NATURE NOTES

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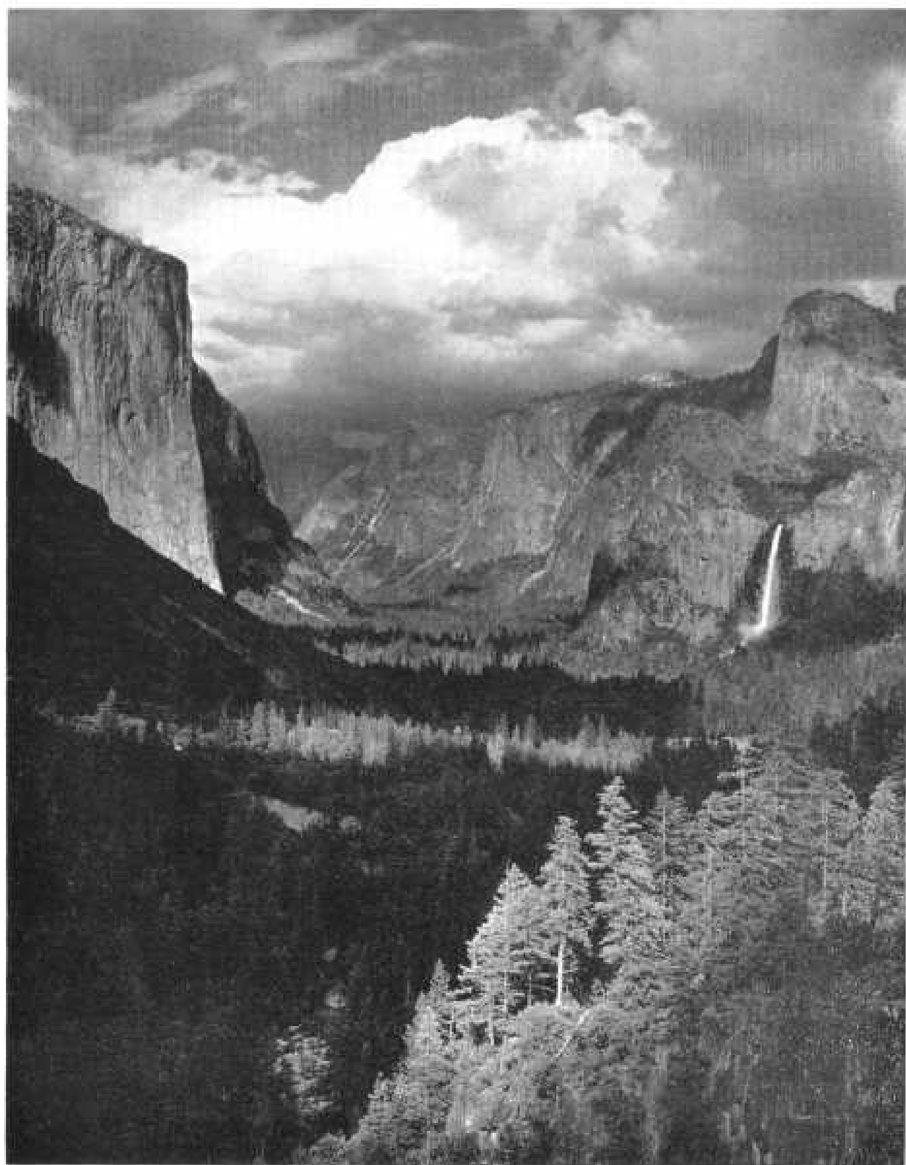
Vista of Cathedral Rocks, winter
—Ansel Adams



Yosemite Valley, by Ansel Adams from "Yosemite and the Sierra Nevada," reproduction by permission of Houghton Mifflin Co.

Yosemite Nature Notes
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THE DRAMA OF THE NATIONAL PARKS

By Carl P. Russell, Former Park Superintendent

EDITOR'S NOTE: Dr. Russell has been on leave of absence from the National Park Service since November 1, 1952, in order to accomplish his study and writing of a history of the western fur trade, through the granting of a Guggenheim fellowship. The following article constitutes the major portion of an address given by him on March 16, 1953, to the Town & Gown Club in Berkeley, California. We are indebted to him for permission to publish it.

To me one of the dramatic things about national parks is the story of our nation's action in establishing them. The concept did not spring full-blown from any one mind. As long ago as 1833 George Catlin, he who penetrated our western wilds to study and paint Indians, wrote of his hope that some of the unspoiled realms of the Missouri River country "might in future be seen preserved [by some great protecting policy of government] in their pristine beauty and wildness, in a *magnificent park*, where the world could see for ages to come, the native Indian in his classic attire, galloping his wild horse . . . amid the fleeting herds of elks and buffaloes. What a beautiful and thrilling specimen for America to preserve and hold up to the view of her refined citizens and the world, in future ages! A *nation's Park*, containing man and beast, in all the wild and freshness of their nature's beauty."

So far as I know there was no cocking of governmental ears when Catlin's idea was expressed. However, it did get some publicity both in the press and in Catlin's quite impressive two-volume work, *The Manners, Customs, and Conditions of the North American Indian*. It can be truthfully stated that the idea of *preserves* was first planted in the public mind by this earnest artist from Philadelphia and Albany long before any action was taken by the Government to establish any type of natural reservation for the use of the public.

Whether or not Henry Thoreau was one of Catlin's readers I do not know, but Catlin's earliest letters from the West, including the 1833 suggestion for a national park, were printed in the newspapers of both New York and Boston, and it is quite possible that they did come to the notice of the Yankee naturalist. At any rate, Thoreau, who was a student at Harvard when Catlin's first letters appeared in print, began in the 1840's to advocate parks for public "use and delight." By 1858 his feelings in this connection had matured to a state which caused him to write:

Why should not we . . . have our national preserves . . . in which the bear and panther, and some even of the hunter race, may still exist, and not be "civilized off the face of the earth" . . . for inspiration and our true re-creation? Or should we, like villains, grub them all up for poaching on our own national domains?

A friend of mine, Dr. Hans Huth, curator in the Art Institute of Chicago, did a very fine job a few years ago in reviewing the history of public appreciation of natural beauty spots in America. In a documented paper which he titled "Yosemite: The Story of an Idea,"* he traced meticulously the evidences left by authors, painters of pictures, and photographers which point to the fact that about 100 years ago there was the beginning of a definite trend toward a public consciousness of the need for parks. It is interesting to note that it was the destruction in 1852 of the giant sequoia, "Mother of the Forest," in the Calaveras Grove which crystallized public spirit in the matter of preserving representative stands of this tree. *Gleason's Pictorial*, *Atlantic Monthly*, *Harper's Weekly*, and some other publications of the 1850's raised quite a furor in protesting such vandalism. Oliver Wendell Holmes stirred public concern further by including a "Talk on Trees" in his *Autocrat of the Breakfast Table* in the late 1850's.

By the time that our eastern states were at all cognizant of the discovery of that phenomenal place, Yosemite Valley, and its companion wonder, Mariposa Grove, there already existed among intelligent readers of current journals quite a widespread sentiment in favor of nature appreciation. In spite of the fact that pioneer California was so far removed from the refinements of the cultured eastern seaboard, it was from California that the first practical suggestion came for Congressional action in setting up a great scenic reservation.

If one wishes to split hairs he can argue that the advocates of the Yosemite bill did not use the words "national park" in the language of the law which they propounded. Nevertheless, to all intent and purposes the Yosemite Act of 1864 created a national park. This, the world's first legislation enacted by a central government for the purpose of creating a scenic reservation for public use, was handled in the halls of Congress and signed by President Abraham Lincoln while the United States was in the throes of civil war. As Freeman Tilden observes:

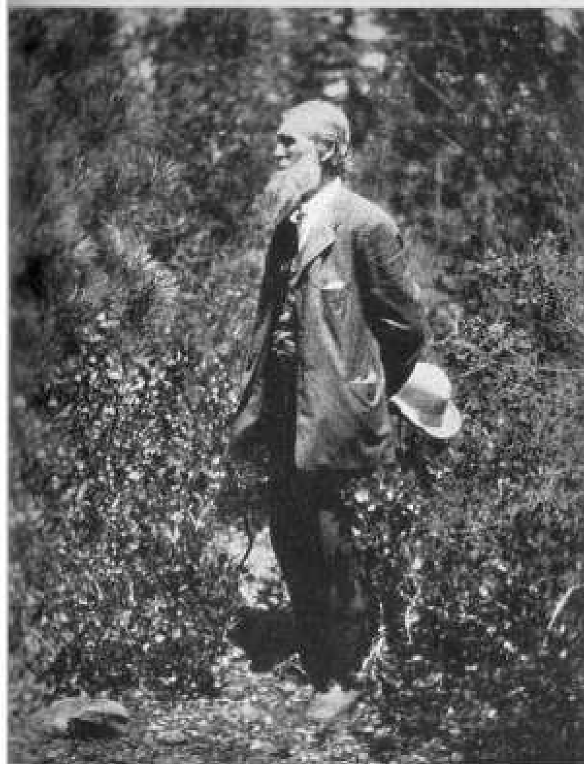
So novel in the history of civilized man, so successfully impractical—like one of the things that cannot happen, but do.

As I hinted earlier—here, I think, is one of the truly dramatic things about national parks.

This beginning of national-park legislation in 1864 did not precipitate immediately a landslide of similar laws either here or in foreign lands. Eight years elapsed before Yellowstone National Park was created. Another 10 or 12 years passed before the Belgians began setting up their preserves in South Africa. Soon thereafter the Muir influence began to be felt and presently our American parks system became a reality and scores of national parks came into being in many countries throughout the world.

I do not want to move away from the story of the Yosemite Grant without mentioning another significant incident of that momentous

*In the *Sierra Club Bulletin* 33(3):47-78, March 1948. Reprint available from Yosemite Natural History Association, 30c.



John Muir, the beloved naturalist who did much to awaken the public consciousness to the need for creating Yosemite and other national parks.

year, 1864. That year George P. Marsh published his *Man and Nature*—the first book to present America's conservation problem in anything like scientific manner. Subsequently he revised his chapter on forests of the United States, saying:

> It is desirable that some large and easily accessible region of American soil should remain as far as possible in its primitive condition, at once a museum for the instruction of the students, a garden for the recreation of the lovers of nature, and an asylum where indigenous trees . . . plants . . . beasts may dwell and perpetuate their kind.

All of this review of the doings of men so long dead may strike you as being strange substance for a talk in 1953. I offer it because it is proof that the "national-park idea" was born and nurtured at an earlier date than is usually stated, and that from the very beginning of the national-park movement there were some men who held to ideals very similar to ideals which we today are apt to call "new." Actually, "there is nothing new under the sun," but there is a tendency in some quarters to forget or ignore the rather mature proposals advanced by the earliest workers in the parks field.

I need but state that the two original national parks, Yosemite and Yellowstone, have multiplied to make a system of 28 national parks and 152 additional areas of various classes—a total land area of more than 24,000,000 acres administered by the National Park Service. Former Director Newton B. Drury appraised this great domain as "not just local romping grounds. They are recreational areas in the most literal and highest sense . . . an element in our culture and a symbol of the American way of life . . . ministering to the human mind and spirit. . . . [Knowledge of the parks] leads people's thoughts into channels upon which proper mental balance and perhaps even national sanity may depend."

THE FOLSOM BRIDGE

By Homer W. Robinson, Acting Superintendent, Millerton Lake National Recreation Area

The Mariposa County Board of Supervisors met in regular session on August 4, 1868, to conduct routine business of the county. Among the items presented to that authority was the application of one Philip Coulter to operate a ferry on the Merced River in Yosemite Valley, and to collect toll for its use.

Upon due consideration of the petition, the board issued a franchise to Coulter for the management of the ferry, and fixed the rates of toll as follows:

Horseman and horse (or mule)	$1.00
Footman	.50
Loose horse or mule	.25

Coulter apparently wasted no time in constructing his ferry and placing it in service, for the Mariposa County assessment roll for the year 1868 showed him as the owner of a ferry, ladders, and other improvements in Yosemite Valley with an appraised valuation of $300.

Business must have been good for him, but probably the operation of a ferry became somewhat precarious at times, or perhaps too slow, because by 1870 the ferry was replaced by a bridge. The assessment roll for that year listed Philip Coulter as the owner of the following property: Toll bridge and residence on Merced River in Yosemite Valley, on the trail leading to Coulterville and about one-fourth of a mile from Leidig's Hotel, and valued at $1,000; also ladders at Vernal Fall, valued at $500.

It seems that Coulter was a bit too optimistic in his program of expansion, for we find that in 1872 the rolls carried the single word "Mortgage" after his name. However, Ira B. Folsom was entered as the owner of the following: Bridge and other improvements in Yosemite Valley about one-fourth of a mile from Leidig's Hotel and known as Phil. Coulter's Bridge, valued at $500, mortgage $100; merchandise, $500; and one horse, $50.

Ira Folsom's bridge was located below the famous giant yellow pine. It was a big, long, wooden structure with a span of 110 feet. The level of the road leading to the eastern end of it was built up several feet above the surrounding ground, and this old road is still visible near Yellow Pine Beach.

Folsom maintained his bridge and also kept a saloon for several years, until the State of California purchased all of the private claims in Yosemite Valley. Folsom was paid $6,000 for his developments and business in 1874.

The old bridge seemingly was well constructed, as it was still standing in 1883. For that year the report of the board of commissioners, who then managed Yosemite Valley and Mariposa Grove for the State, mentioned the bridge with this comment: "Let me suggest building a new bridge at or near the site of the old 'Folsom Bridge,' now impassable." How long it continued to stand we do not know, but probably not later than 1890 or 1891. We do have a record of a spring flood in one of those years, which would have swept it away. This record is in the commission's report for the period, and though it does not refer to the Folsom Bridge, it states that one of the iron bridges across the Merced River was destroyed.

THE FORMATION OF A GLACIER

By Richard E. Shurbert, Yosemite Field School, 1953

There are many banks of snow that remain all year round in the high country of Yosemite National Park. A few of the larger ones are not merely snow, but also provide covering mantles for glaciers. A glacier is a body of ice consisting of recrystallized snow and showing evidence of present or former movement.

Ice, we recognize, is both a mineral and a rock. It forms whenever the temperature is low enough to freeze water. It may occur in rivers or lakes, in the atmosphere, and in soil when the temperature has been below freezing for some time. These types of ice have their distinctive characteristics.

The most distinctive and perhaps the most remarkable of all ice is true glacial ice. It is unlike the ice which most of us know, for it is not only a rock, but a metamorphic or "changed" rock. It is ice that has been changed from snow—by melting, refreezing, and subjection to pressure.

The first stage of the change from an accumulation of soft, fluffy snow into loose, granular ice usually takes place within a single season. Two steps are necessary to complete the change. The first is called sublimation, where the molecules of water evaporate from the edge of one snowflake and refreeze on the center of an adjoining flake, still maintaining the six-sided crystal which all snowflakes have. Each of these crystals when completely formed is a tiny fraction of an inch

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Mt. Lyell and the Lyell Glacier

in diameter. Before this step comes to an end the second step begins, and new crystals or granules start to melt where they come in contact with one another, through the slight pressure of their weight. The melt water runs down and refreezes on other granules below. These gradually become larger and near the end of a single year reach a size about the thickness of a dime.

The third and final step in the change of snow to glacial ice requires many seasons to accomplish. As the years pass, more snow and then more granules are deposited. The weight of the mass increases accordingly and causes a settling and compaction of the granules which slowly squeezes out the air between them. Little by little these ice granules, once full of air pockets, change to a solid form of ice. All that remains of the air are small entrapped bubbles. When the solid ice reaches a depth of about 100 feet, it becomes glacial ice. Then as its weight further increases, it acquires a plastic nature, similar to that of thick, cold honey, and is capable of slow flowing. When this flow begins, the mass of ice is called a glacier—a powerful tool of land sculpture.

UNSCHEDULED CAMPFIRE EVENT

By Sol A. Karlin, Ranger Naturalist

It was a typical early-summer's evening in Yosemite Valley, and all was going well at the naturalist campfire program in Camp 7. We had successfully completed the twilight music portion and the community singing. There were 40 minutes remaining before firefall in which to give the illustrated talk, its topic to be the Indians of Yosemite. In fact the talk had already started and the familiar part about the discovery of Yosemite Valley had just been mentioned. Suddenly a loud, clear voice rang out from the bridge that leads to Camp 16—"There's a bear in the river!"

Immediately that half of the audience nearest the bank of the Merced River bolted from their seats and swarmed toward the water. Nothing this speaker could say or do would have quieted the pandemonium that had burst forth. Several directions were shouted to the projectionist. The program was halted and the lights were turned on. At this precise moment the line of persons along the river quickly parted. A split second later a large, wet, black bear charged through the crowd. Several children were pulled back from the bear's apparent path. Then a good-sized throng of campers ran after the animal with flashbulb cameras, flashlights, and sticks. The frightened bear made it across the clearing in back of the stage and paused by a large black oak tree.

By now, the strong possibility of injury to some of these people was the chief concern of the ranger naturalist. Since his role as interpreter of natural history was no longer effective, and since he was the only uniformed person then available, his responsibility for protection of park visitors became most urgent. Therefore the microphone on the stage was abandoned. On

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Treed bruin

the way off the platform, a large flashlight was borrowed from an elderly gentleman. Then came a mad dash through the gathering to the oak tree where the bear was completely encircled. Imagine the scene: a crowd, several persons in depth, was milling about the bear within touching distance of it. The bear was standing on its hind legs with its back to the tree. It was enraged and ready to lash out at anyone.

It seems that fate was kind to those campers. Perhaps it was the angry appearance of the bear that convinced the crowd to heed the instructions of this writer. Most of the people returned to their seats in the campfire circle while a few remained behind to watch the bear climb the tree. The ranger patrol happened on the scene when the bear was comfortably situated in the tree. The rangers took over the protective task and relieved the naturalist from further responsibility.

About 10 minutes had elapsed from the time the program was interrupted until the speaker again took up his post at the microphone. Before the program was resumed, however, the audience was politely scolded on their dangerous behavior regarding bears.

After mopping his brow and thanking his lucky stars that nothing serious had happened, the naturalist turned his thoughts once more to his illustrated talk. Meanwhile, the very wet bruin lowered himself from the tree and was quietly chased out of sight by the ranger patrol.

The talk on Yosemite Indians was considerably shortened and firefall fell as scheduled that night. The campers applauded and left as if nothing unusual had occurred. For perhaps the first time in the recent history of Yosemite, no one asked the speaker at the end of the program, "Where can I go to see a bear?"

AN OUTPOST IN THE WILDERNESS

By Mary K. Ronsheim, Yosemite Field School, 1953

It was in the mid-1800's that Charles Darwin first proposed his idea of the survival of the fittest. Not only is this theory now generally accepted, but also modern man has been proving it in Yosemite National Park. Tuolumne Meadows is the testing ground.

Only the most hardy of our luxury-minded society find their way over the old Tioga Road, which is roundly condemned by many visitors and stoutly defended by others. A journey to Tuolumne Meadows is the 20th-century version of a pioneer trip. Tuolumne Meadows is a typical, though largest and most visited, edition of the high-mountain meadows found throughout the Sierra Nevada.

There are quite a few differences between the crowded Yosemite Valley and the serene Tuolumne Meadows. These differences extend beyond accommodations, and even beyond the people who visit each area. There is an intangible attitude about "the Meadows" which can be felt and observed, but not defined. The Tuolumne River and its tributaries meander peacefully along, in no great hurry. Perhaps the river sets the tone of living for the area, for while there is much activity, there is none of the seemingly desperate haste to "get places and do things" that is apparent in the valley.

One reason that Tuolumne Meadows is such a favored place with so many campers is that it is a convenient base for many varied pack trips of one or more days' duration. Possibly one of the most popular of all 1-day hikes is the 17-mile round-trip jaunt to Waterwheel Falls. This trip is actually not as strenuous as it sounds, for most of it is by easy trail. The "waterwheels" are not the only beautiful falls or cascades to be observed along here. There are Tuolumne Falls, White Cascade, and California and LeConte Falls, which, though not nearly so majestic as Yosemite Falls nor surrounded by the air of mystery of Bridalveil, have a charm all their own. Here the river is not a slow-moving stream, but a torrent of white water. Occasionally there are inviting deep pools where that fascinating bird, the water ouzel, can be observed. At Waterwheel Falls it is thrilling to watch the water appear to defy the laws of gravity and spurt upward over the rocks. Although the river is highest and most spectacular in July, these are falls that never dry up completely, but continue all summer long.

Echo Peaks, Cathedral Lake, Mount Dana, Kuna Crest—these places and many others almost literally invite and beg the more energetic campers to come for an all-day hike. It is hard and arduous work to climb to the top of peaks that are 11,000, 12,000, or even 13,000 feet high; yet as one rests on the top and gazes upon the view of mountains, valleys, and lakes that greets the eye, weary muscles are relaxed and the hiker's energy is restored. It is with a lighter heart and eased mental load that one climbs back down to the meadows.

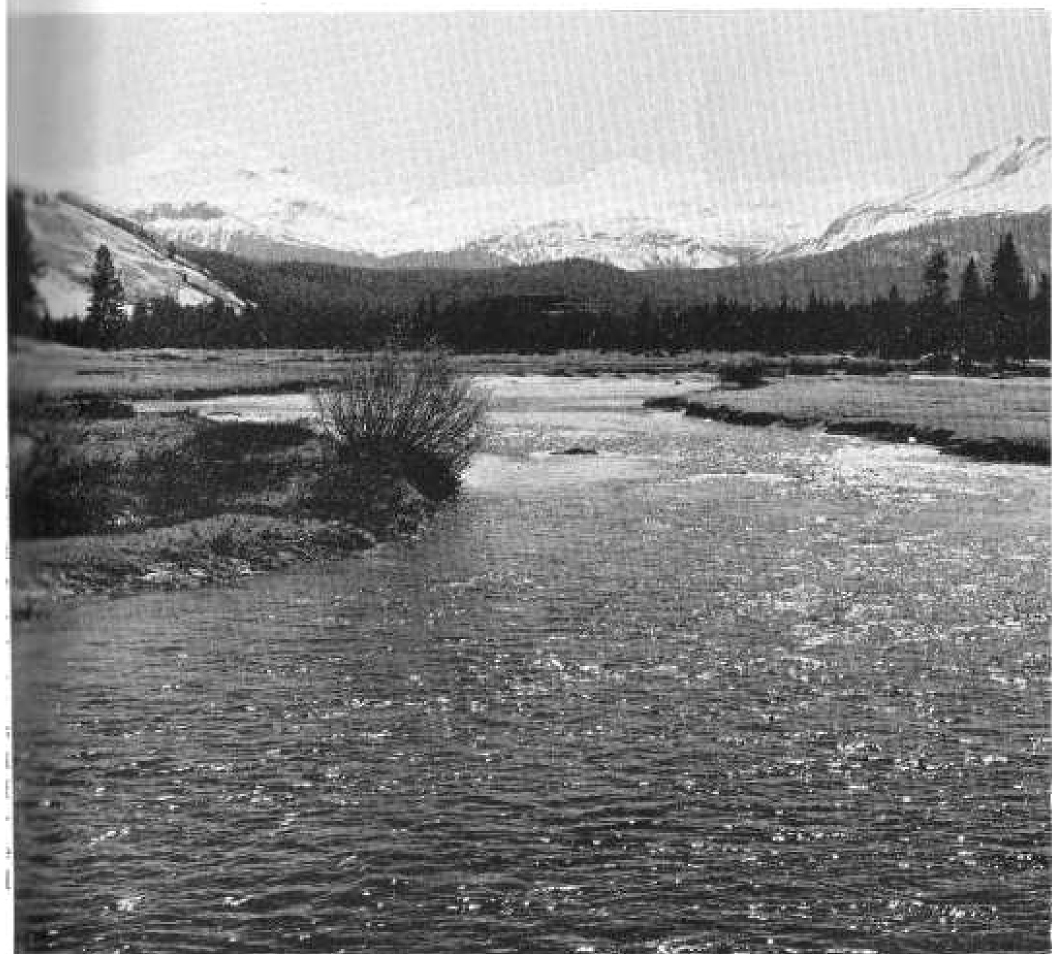
Accommodations in the campgrounds at Tuolumne Meadows are, no doubt, considered primitive by many. It is true that some campers sleep under the stars; it is true that campfires are the usual means of cooking; and it is true that only cold water is available for the public, and that it must be carried

a short distance. But these are the things that refresh one's spirit.

The visitors of Tuolumne Meadows are no better than those of Yosemite Valley. But Tuolumneites have rediscovered the wilderness that most Americans have lost or forgotten. They have found anew that although a rainstorm may be a discomfort, the sun will again come out, clothes and sleeping bags will dry, and life will go on. They are not too proud to admit that it takes willpower to climb out of a warm sleeping bag when the thermometer registers temperatures at or below freezing, but they have found out for themselves that camping in Tuolumne is worth a few so-called sacrifices. Missing from their lives are the jangle of telephones, the loud blare of radios, and many of the worries of a hurried world.

Yes, the Tioga Road is a hard road to drive. But the rewards along its winding grades are many. If one is careful, there is less danger on it than on many of our modern four-lane highways. In the same way, camping in Tuolumne Meadows is a rigorous experience. But, again, the rewards are many. The area offers a rich and varied vacation, but the taker must give part of himself, so that the serenity of Tuolumne can enter.

Lyell Fork of the Tuolumne River, Tuolumne Meadows, by Ansel Adams from "Yosemite and the Sierra Nevada," reproduction by permission of Houghton Mifflin Co.



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