

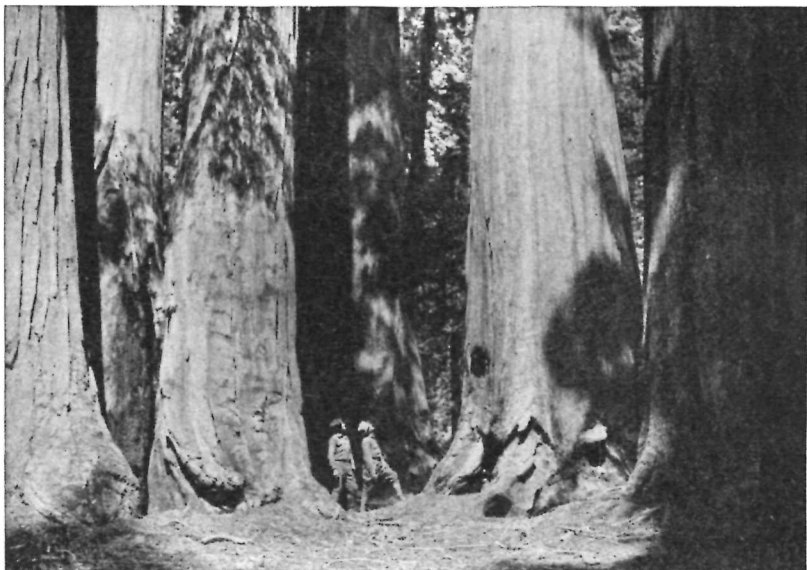
DEPARTMENT OF THE INTERIOR
JOHN BARTON PAYNE, SECRETARY
NATIONAL PARK SERVICE
STEPHEN T. MATHER, DIRECTOR

RULES AND REGULATIONS

SEQUOIA
AND
GENERAL GRANT
NATIONAL PARKS

1920

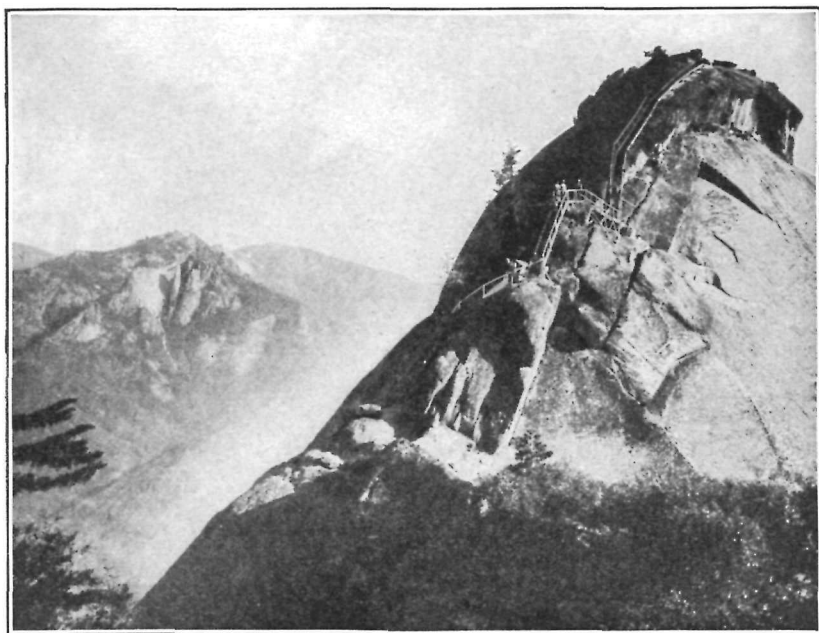
Season from May 24 to October 10



WASHINGTON
GOVERNMENT PRINTING OFFICE
1920



CAMPING OUT ON A GIANT SEQUOIA.



MORO ROCK.

Showing the new stairway, 346 feet in length, erected to the top of the monolith.

THE NATIONAL PARKS AT A GLANCE.

[Number, 19; total area, 10,859 square miles.]

National parks in order of creation.	Location.	Area in square miles.	Distinctive characteristics.
Hot Springs..... 1832	Middle Arkansas.....	1½	46 hot springs possessing curative properties—Many hotels and boarding houses—20 bath-houses under public control.
Yellowstone..... 1872	Northwestern Wy- oming.	3,348	More geysers than in all rest of world together—Boiling springs—Mud volcanoes—Petrified forests—Grand Canyon of the Yellowstone, remarkable for gorgeous coloring—Large lakes—Many large streams and waterfalls—Vast wilderness, greatest wild bird and animal preserve in world—Exceptional trout fishing.
Sequoia..... 1890	Middle eastern Cali- fornia.	252	The Big Tree National Park—12,000 sequoia trees over 10 feet in diameter, some 25 to 36 feet in diameter—Towering mountain ranges—Startling precipices—Cave of considerable size.
Yosemite..... 1890	Middle eastern Cali- fornia.	1,125	Valley of world-famed beauty—Lofty cliffs—Romantic vistas—Many waterfalls of extraordinary height—3 groves of big trees—High Sierra—Waterwheel falls—Good trout fishing.
General Grant..... 1890	Middle eastern Cali- fornia.	4	Created to preserve the celebrated General Grant Tree, 35 feet in diameter—6 miles from Sequoia National Park.
Mount Rainier..... 1899	West central Wash- ington.	324	Largest accessible single peak glacier system—28 glaciers, some of large size—48 square miles of glacier, 50 to 500 feet thick—Wonderful sub-alpine wild-flower fields.
Crater Lake..... 1902	Southwestern Oregon.	249	Lake of extraordinary blue in crater of extinct volcano—Sides 1,000 feet high—Interesting lava formations—Fine fishing.
Wind Cave..... 1903	South Dakota.....	17	Cavern having many miles of galleries and numerous chambers containing peculiar formations.
Platt..... 1904	Southern Oklahoma..	1½	Many sulphur and other springs possessing medicinal value.
Sullys Hill..... 1904	North Dakota.....	1½	Small park with woods, streams, and a lake—Is an important wild-animal preserve.
Mesa Verde..... 1906	Southwestern Colo- rado.	77	Most notable and best preserved prehistoric cliff dwellings in United States, if not in the world.
Glacier..... 1910	Northwestern Mon- tana.	1,534	Rugged mountain region of unsurpassed alpine character—250 glacier-fed lakes of romantic beauty—60 small glaciers—Precipices thousands of feet deep—Almost sensational scenery of marked individuality—Fine trout fishing.
Rocky Mountain... 1915	North middle Colo- rado.	397½	Heart of the Rockies—Snowy range, peaks 11,000 to 14,250 feet altitude—Remarkable records of glacial period.
Hawaii..... 1916	Hawaii.....	118	Three separate areas—Kilauea and Mauna Loa on Hawaii; Haleakala on Maui.
Lassen Volcanic... 1916	Northern California..	124	Only active volcano in United States proper—Lassen Peak 10,465 feet—Cinder Cone 6,879 feet—Hot springs—Mud geysers.
Mount McKinley... 1917	South central Alaska..	2,200	Highest mountain in North America—Rises higher above surrounding country than any other mountain in world.
Grand Canyon..... 1919	North central Arizona.	958	The greatest example of erosion and the most sublime spectacle in the world.
Lafayette..... 1919	Maine coast.....	8	The group of granite mountains upon Mount Desert Island.
Zion..... 1919	Southwestern Utah ...	120	Magnificent gorge (Zion Canyon), depth from 800 to 2,000 feet, with precipitous walls—Of great beauty and scenic interest.

The National Parks Portfolio

By ROBERT STERLING YARD

Pamphlet Edition

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35 cents

Book Edition

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securely in cloth
55 cents

A presentation of the national parks and national monuments in picture. The selection is from the best work of many photographers, professional and amateur. It contains nine sections descriptive each of a national park, and one larger section devoted to other parks and monuments. 260 pages, including 270 illustrations

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SEQUOIA AND GENERAL GRANT NATIONAL PARKS.

GENERAL DESCRIPTION.

The Sequoia and General Grant National Parks are in western central California. The former was created by the act of September 25, 1890, and contains 252 square miles, or 161,597 acres; the latter was established October 1, 1890, and contains 4 square miles, or 2,560 acres. They are situated on the Sierra Nevada's warmest slopes and contain some of the most luxuriant forests of America. They are the big-tree national parks in every sense. Here all native growths attain their greatest girth and height. The pines and firs and cedars are the noblest of their kind. Their open glades are gardens of wild flowers.

But their chief glory is the tree after which the parks are named, the *Sequoia Washingtoniana*, popularly known and widely celebrated as the Big Tree of California. Sequoia National Park contains more than 1,000,000 sequoia trees of all sizes, 12,000 of which exceed 10 feet in diameter. Among these are many monsters of great age. The General Sherman Tree, most celebrated of all, is 279.9 feet high with a diameter of 36.5 feet. It is the biggest and the oldest living thing. The Abraham Lincoln Tree is 270 feet high with a diameter of 31 feet. The William McKinley Tree is 290 feet high, with a diameter of 28 feet.

These trees occur in 12 groves scattered through the park. The largest and most famous of these is the Giant Forest, in whose 3,200 acres grow a half million sequoia trees, of which 5,000 exceed 10 feet in diameter. Here is found the General Sherman Tree and many of his peers. The Giant Forest was until recently the terminus of the automobile road from Visalia and the site of the public camp. This road, however, has now been completed to a point on the Marble Fork River several miles beyond the forest.

The country is one of the most beautiful in America, abounding in splendid streams, noble valleys, striking ridges, and towering mountains. An ever-increasing number of campers-out inhabit these forests during the long rainless summers. There is excellent trout fishing.

Six miles away, across the mountain, valley, and forest, lies the General Grant National Park. It was created to preserve for the public benefit the General Grant Tree and its splendid group of fellows. In this grove, which is as luxuriant in all growing things as the Giant Forest, are 10,000 sequoia trees, 190 of which exceed 10 feet in diameter. The General Grant Tree, which is second only to the General Sherman Tree in age and size, is 264 feet high and has a diameter of over 35 feet. A distinguished neighbor is the George Washington Tree, which is only 9 feet less in height and 6 feet less in diameter. The General Sherman and General Grant Trees are both nearly 4,000 years old.

LIVING UNDER THE SEQUOIAS.

Comfortable camps are maintained in both the Sequoia and General Grant National Parks.

Both also are very popular among campers-out, who come in automobiles and set up tents upon sites designated by the superintendent.

One camp ground, sufficiently large to accommodate all of the park visitors, is maintained in the General Grant National Park. In the Sequoia National Park there are seven camp grounds and five fenced pastures for tourists' horses.

The Giant Forest tourist camp now comprises an area of approximately 100 acres, all covered by the great Sequoia grove.

A new camp ground has been established at Cedar Creek for the benefit of those individuals who for any reason are unable to make the trip into the Giant Forest in one day.

In all instances camp grounds, fire wood, and water are furnished free of cost.

A wooden stairway and iron handrailing 346 feet in length has been constructed to the top of Moro Rock, whereby persons can ascend to the top of the rock with safety and obtain an unobstructed view of the best mountain scenery of the park.

Crystal Cave, a limestone cave remarkable for its size, the number and variety of its chambers, and the richness of its fantastic decorations, was discovered in the Sequoia National Park in 1918. A trail has been built to its entrance, but until proper lighting facilities can be provided it will be closed to the public.

THE PROPOSED ROOSEVELT NATIONAL PARK.

North and east of the Sequoia National Park, and easily accessible by trail from the Giant Forest, lies a large area of mountain-top country as distinguished in majesty as the park is in luxuriance. Its eastern boundary of about 70 miles is the very crest of the Sierra Nevada Mountains, including Mount Whitney, whose elevation of 14,501 feet is the loftiest in the United States. Along this magnificent crest lies a massing of mountain peaks of indescribable grandeur, for Mount Whitney is no towering elevation, but merely a granite climax; its peak is a little higher than its neighbors, that is all.

Eastward from this crest descend superbly tumbling slopes rich in the grandest scenery of America and the world, merging, below timberline, into innumerable lake-studded valleys which converge into the extraordinary valleys of the Kings and the Kern Rivers. Two branches of the Kings River flow through valleys destined, when known, to a celebrity second only to Yosemite Valley; one of these is the Tehipite Valley, the other the Kings River Canyon. These lie north of the Sequoia National Park, while on its east lies still another valley of future world celebrity, the Kern Canyon.

This area which, united with the present Sequoia National Park, would make a national park of 1,600 square miles, constitutes a total of supreme scenic magnificence. It would be unexcelled even in America for sublimity and unequalled anywhere for rich variety. It is penetrated by trails and affords, with its three foaming rivers, its thousands of streams, its hundreds of lakes, its splendid forests, occasional meadows, castellated valleys, inspiring passes, and lofty glacier-shouldered summits, the future camping-out resort of many thousands yearly.

The Tehipite Valley and the Kings River Canyon, which are more accessible now than the Kern Canyon, have striking nobility of scenery. The walls of both are as sheer as and are often loftier than Yosemite's. The rivers which flow through them are glacier-run

torrents of innumerable cascades and waterfalls, lined to the edge with forests and full of fighting trout.

Both valleys are guarded, like Yosemite, with gigantic rocks. The Tehipite Dome in the Tehipite Valley, and the Grand Sentinel in the Kings River Canyon, must be classed with Yosemite's greatest. The Tehipite Valley has grandeur for its keynote, as the Yosemite Valley has supreme beauty. The Kings River Canyon, with Paradise Valley a few miles upstream, is destined, at no great lapse of time, to become the summer resort of innumerable campers.

But, pending the disposition of this project by Congress, this noble country is accessible through the General Grant and Sequoia National Parks to all. Parkhood will develop its trails and render its use easy and comfortable in many ways.

ADMINISTRATION.

The representative of the National Park Service in charge of Sequoia and General Grant National Parks is the superintendent, Mr. Walter Fry. His address is Three Rivers, Calif. Chief Ranger Milo S. Decker is in immediate charge of General Grant Park.

The tourist season extends from May 24 to October 10. However, owing to the high elevation of the parks where the main tourist camps are situated, it is advisable for tourists to visit them between June 15 and October 1, as there is seldom rain or snow during that period and the atmosphere is usually cold and clear.

HOW TO REACH THE PARKS.

SEQUOIA NATIONAL PARK.

Visalia, Calif. (altitude 384 feet), is the gateway city of the Sequoia National Park and the High Sierra region, including the Great Western Divide, Kern River Canyon, and Mount Whitney, which is part of the territory it is proposed to add to the present park area by legislation providing for the establishment of the Roosevelt National Park. It is one of the oldest cities settled by Americans in California and has excellent hotel accommodations. A new concrete highway connects this city with Lemon Cove, 20 miles, and Three Rivers, 30 miles. From Three Rivers it is 32 miles to the Giant Forest, the last 20 miles of which are within the Sequoia National Park.

Visalia is on the Southern Pacific and Atchison, Topeka & Santa Fe Railroads and is also connected with Lemon Cove by the trains of the Visalia Electric Railroad, via Exeter, a station on the Southern Pacific Railroad. At Lemon Cove immediate transfer from the train is made to the automobile stages of the Sequoia National Park Stage Co. for Giant Forest. The running time of the automobile stages is about five hours.

Automobile stages leave Lemon Cove daily at 9.50 a. m.; arrive Giant Forest, Sequoia National Park (40 miles), 3 p. m.; leave Giant Forest 3.30 p. m. and arrive Lemon Cove 7.30 p. m.

Stop for lunch on up trip is made at Cedar Creek checking station.

Fares via Visalia Electric Railroad.

Between Visalia and Lemon Cove (21 miles), one way 65 cents, round trip \$1.10.
Between Exeter and Lemon Cove (11 miles), one way 35 cents, round trip 60 cents.

Stage fares to Sequoia National Park.¹

Between Lemon Cove and Giant Forest, one way \$6.50, round trip \$12.
 Between Three Rivers and Giant Forest, one way \$5.50, round trip \$10.
 Children under 10 years of age, one-half fare.
 Baggage allowance, 25 pounds; excess baggage, 2 cents per pound.
 Express, 2 cents per pound; minimum charge, 25 cents.

GENERAL GRANT NATIONAL PARK.

Fresno, Calif. (altitude 287 feet), is the gateway city of the General Grant National Park and the Kings River Canyon, Rae Lake, Kearsarge Pass, and other High Sierra territory included in the Roosevelt Park project. It is the geographical center of California and lies at about the center of the San Joaquin Valley. Fresno is also a point of departure for the Yosemite National Park. The hotel accommodations of this city are excellent.

A good automobile highway connects Fresno with General Grant National Park, via Sanger, Squaw Valley, and Dunlap. Fresno is on the Southern Pacific and Atchison, Topeka & Santa Fe Railroads and Sanger is a station on the Southern Pacific Railroad.

The Kings River Stage & Transportation Co. (address, Sanger, Calif.) operates automobile stages from Fresno and Sanger to the General Grant National Park.

These stages leave Fresno daily at 8 a. m.; arrive Sanger at 8.45 a. m.; leave Sanger at 9 a. m.; arrive General Grant National Park (60 miles) at 2.30 p. m.; leave General Grant National Park at 8 a. m.; arrive Sanger at 1 p. m. and arrive Fresno 2 p. m.

Stops for lunch are made in each direction.

Stage fares from Fresno and Sanger to General Grant National Park.¹

From Fresno to General Grant National Park, \$6.
 From General Grant National Park to Fresno, \$4.50.
 Round trip, \$9.
 From Sanger to General Grant National Park, \$5.50.
 From General Grant National Park to Sanger, \$4.
 Round trip, \$8.
 Baggage allowance, 50 pounds; excess baggage, \$1.25 per 100 pounds.

Mr. W. M. Collins (address, Visalia, Calif.) operates automobile stages from Visalia via Badger and Pinehurst to the General Grant National Park (48 miles).

Automobiles will leave Visalia Tuesdays, Thursdays, and Saturdays at 8 a. m.; arrive Badger, 10 a. m.; and General Grant National Park, 12 m.; and will leave General Grant National Park the same day at 4 p. m.; arrive Badger, 6 p. m., and Visalia, 8 p. m.

Special trips will be made from Visalia to General Grant National Park on alternate days under the same schedule when passengers are available.

Stage fares from Visalia to General Grant National Park.¹

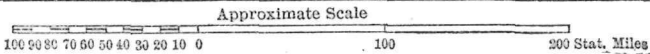
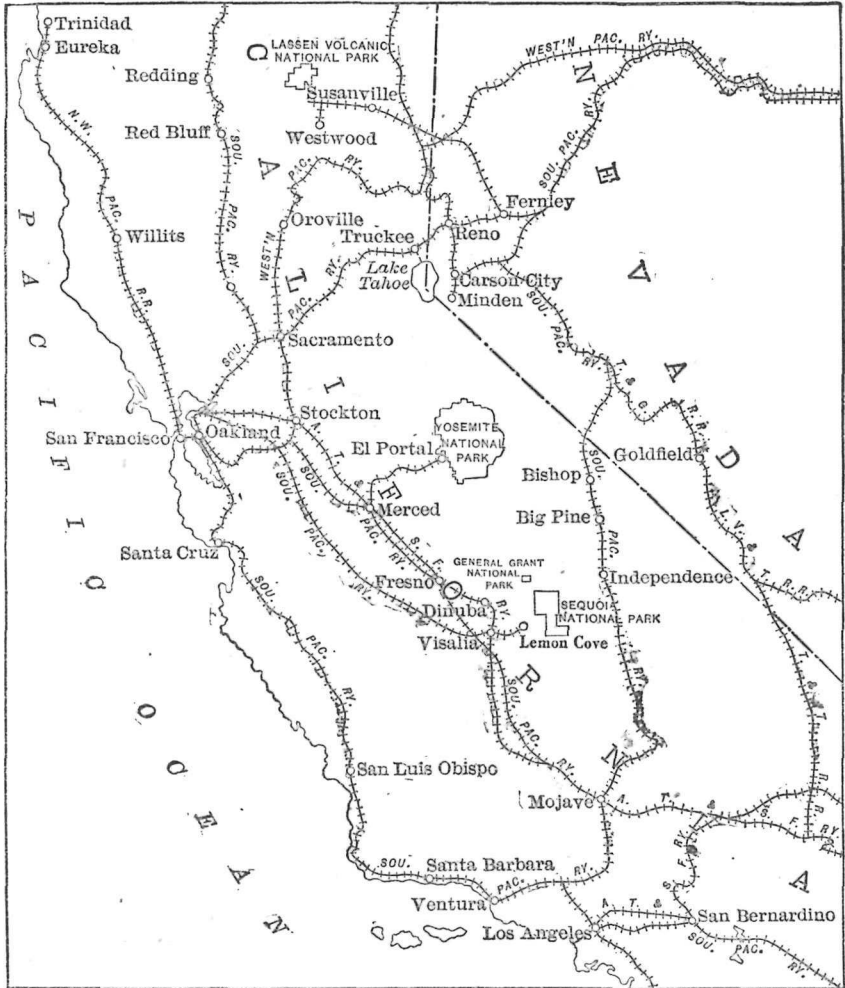
From Visalia to General Grant National Park, \$6.
 From Visalia to Badger, \$4.
 From Badger to General Grant National Park, \$3.
 Children under 9 years of age, one-half fare.
 Baggage allowance, 25 pounds; excess baggage, 2 cents per pound, minimum charge, 25 cents.

¹ The stage schedules and rates given above are not under the control of this Service, as the stage lines operate outside the park. The schedules and rates are those that will prevail according to information furnished to this Service; they are given for the information of the public, but are not to be considered official.

RAILROAD TICKETS.

During summer season round-trip excursion tickets, at reduced fares, are sold at certain stations in California to Sequoia National Park and to General Grant National Park as destinations.

Through excursion tickets to other destinations, reading via Southern Pacific Railroad, will be honored between Bakersfield and



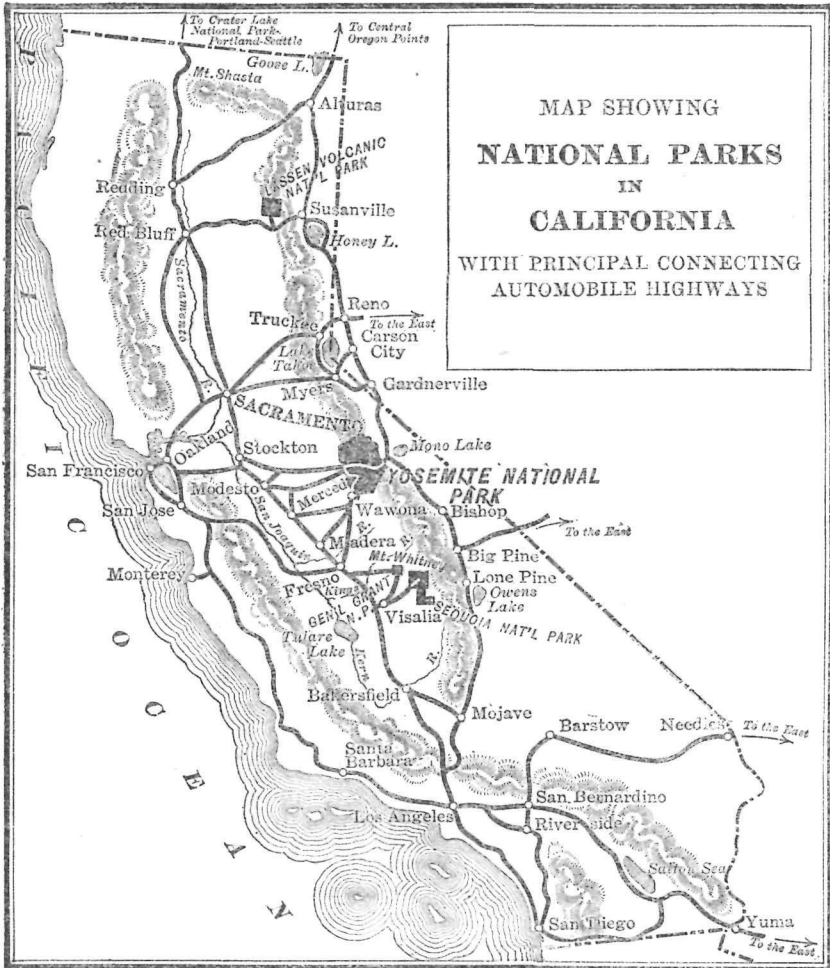
RAILROADS TRIBUTARY TO NATIONAL PARKS IN CALIFORNIA.

Fresno, via Visalia or Exeter and Sanger. Passengers holding such tickets may stop over at Visalia or Exeter for side trips to Sequoia National Park and at Sanger for side trips to General Grant National Park. Similar tickets reading via Atchison, Topeka & Santa Fe Railroad will be honored between Corcoran and Fresno, via Visalia, where stop over may be made for side trip to Sequoia National Park. Hold-

ers of one-way tickets may also stop over at Visalia, Exeter, and Sanger for purpose of making side trips to the parks.

DETAILED TRAVEL INFORMATION.

For further information regarding railroad fares, service, etc., apply to railroad ticket agents, or address C. S. Lee, passenger traffic manager, Southern Pacific lines, San Francisco, Calif., or W. J.



Black, passenger traffic manager, Atchison, Topeka and Santa Fe Railroad, Chicago, Ill.

POST OFFICES.

The post office is Giant Forest, Calif., from May 15 to October 10; at other times, Three Rivers, Calif. There is also for General Grant National Park the General Grant National Park, Calif., post office.

TELEGRAMS.

Telegrams should be addressed to Three Rivers, Calif., from which they will be telephoned to the superintendent's office in Giant Forest.

WHAT TO WEAR; WHAT TO TAKE WITH YOU.

As a rule tourists are inclined to carry too much. A very inexpensive and simple outfit is required—old clothes and stout shoes are the rule. The following list is about all that is required:

- | | |
|--|--|
| 1 suit of old clothes. | 1 pair of canvas leggings (if shoes are worn). |
| 1 sweater or wool jacket. | 2 pairs of cotton gloves. |
| 2 suits of wool underwear (medium weight). | 1 old felt hat. |
| 3 pairs of wool socks (heavy). | 1 saddle slicker or light raincoat. |
| 1 pair of stout lace shoes or hunting boots. | |

For carrying luggage a dunnage bag of heavy canvas is all that is necessary.

For camping out a mess kit, frying pan, coffee pot, dutch oven, or baking reflector are absolutely necessary. Utensils and equipment can be procured along the route of travel at the following points: Visalia, Exeter, Lemon Cove, or Three Rivers, the latter being nearest to Sequoia National Park, and Fresno, or Sanger, on the route to General Grant National Park.

FISHING IN THE PARKS.

Fishing will be available in the Sequoia National Park during the 1920 season in the following sections, where the fish will be found plentiful, and the following trout may be caught:

<i>Waters.</i>	<i>Species.</i>
Middle Fork Kaweah River.....	Rainbow (<i>Salmo shasta</i>).
	Steelhead (<i>Salmo rivularis</i>).
South Fork Kaweah River.....	Rainbow.
East Fork Kaweah River.....	Rainbow.
Marble Fork River below Kings River trail crossing.....	Cut-throat (<i>Salmo clarkii</i>).
	Black-spotted (<i>Salmo henshawi</i> ?).
Marble Fork River above Kings River trail crossing.....	Rainbow.
North Fork Kaweah River.....	Rainbow.
Twin Lakes.....	Loch Leven (<i>Salmo levenensis</i>).
Granite Basin.....	Kern River rainbow (<i>Salmo gilberti</i>).
Little Kern River.....	Kern River rainbow.
Buck Canyon.....	Rainbow.
Stony Creek.....	Eastern brook (<i>Salvelinus fontinalis</i>).
Log Meadow Creek.....	Eastern brook.
Cactus Creek.....	Rainbow.
Wolverton Creek.....	Rainbow.
Clover Creek.....	Rainbow.
Silliman Creek.....	Rainbow.
Evelyn Lake.....	Kern river rainbow.
Dorst Creek.....	Golden trout of Volcano Creek (<i>Salmo roosevelti</i>).
Horse Creek.....	Kern river rainbow.
Suwanee River.....	Eastern brook.
Halstead Meadow Creek.....	Rainbow.

NOTES ON FISH.

Kern River trout (*Salmo gilberti*). This trout is a beautiful fish, well built and symmetrical, and very rich in coloration when in prime condition; often attaining a length of 32 inches and a weight of 6 pounds. As a game fish it will stand easily among the best, readily taking fly or bait.

Golden trout of Volcano Creek (*Salmo roosevelti*). The brilliancy and richness of coloration of this trout is not equaled in any other known species. Although the fish seldom exceeds 12 inches in length or a weight of 11 ounces, it is remarkably game, rising readily to the artificial fly.

Rainbow trout (*Salmo shasta*). This trout is highly prized as a game and food fish. It often attains a length of 20 inches or more and a weight of over 3 pounds. No trout surpasses the rainbow in rising to the artificial fly.

Steelhead trout (*Salmo rivularis*). The steelhead is one of the most attractive and hardest fighters of the trout kind. A length of 20 inches and a weight of 3 pounds are often exceeded by this fish. It responds equally well to artificial lure or natural bait.

Cut-throat trout (*Salmo clarkii*). This trout is an excellent food fish, but is less active as a game fish than other species. It will take either fly or bait very freely.

Black-spotted trout (*Salmo henshawi*?). An excellent food fish, but less game than many other species. This fish seldom attains a length of over 18 inches or a weight above 1½ pounds. It also takes the artificial fly or bait very readily.

Loch Leven trout (*Salmo levenensis*). This mountain-lake trout is an excellent food fish and makes a game fight when hooked. A length of 24 inches and a weight as high as 4 pounds are often attained. Ordinarily it will freely take fly or bait, although in breeding season, like most other species, it seldom rises to any kind of lure.

Eastern brook trout (*Salvelinus fontinalis*). This fish is a highly esteemed food and game fish. In these waters it seldom exceeds 8 inches in length. It will take fly or bait and makes a game fight when hooked.

Owing to the scarcity and smallness of fish, the following waters in Sequoia Park will be closed to fishing during the 1920 season: Hockett Lakes, Blossom Lakes, Whitman Creek, Cow Creek, Soda Creek, and Sequoia Creek.

Persons desiring to fish in the waters of the Sequoia National Park must secure a sporting fishing license, as required by the laws of California. These laws provide that every person over the age of 18 who obtains fish without procuring a license is guilty of a misdemeanor. The license fee is \$1.

These licenses may be obtained from any clerk or from the State board of fish and game commissioners or from the representative of the commission in the park. All fishing must be done in conformity with the State laws regarding open season, size of fish, and limit of catch.

Fishing tackle and supplies may be purchased at the Giant Forest store in the park, Three Rivers, or other towns along the route of travel.

Because of scarcity of fish in General Grant National Park, fishing is not recommended within the park.

CAMPS AND TRANSPORTATION WITHIN THE PARKS.

SEQUOIA NATIONAL PARK.

At the Giant Forest there is a general store, telephone station, livery stable, and two photograph galleries.

The Kings River Parks Co. maintains a permanent public camp in the Giant Forest.

The authorized rates are as follows:

Authorized rates at Giant Forest Camp.

Board and lodging in camp without bath (American plan):	
Per person, per day, two persons in room	\$4. 00
Per person, per week.....	26. 00
Per person, per month.....	100. 00
Baths, extra.....	. 50
Transient rates:	
Breakfast.....	1. 00
Lunch.....	1. 00
Dinner.....	1. 25
Lodging.....	1. 25
Baths.....	. 50
One-half of the regular rate will be charged for children under 5 years of age.	

Guests desiring extra tent room will be charged as follows:	
Tent capacity of 4 persons occupied by two, per day each extra.....	1. 25
Tent capacity of 2 persons occupied by 1, per day extra.....	1. 25

*During the season 1920 a few specially appointed cottages with hot and cold baths will be maintained.

Rates for special accommodations, including board and lodging.

Per day per person.....	\$5. 00
Per day, 2 persons.....	10. 00
Where such a room with a capacity of two is occupied by one person, a charge of \$2 per day extra will be made.	

The Kings River Parks Co. also maintains a saddle and pack animal transportation service in the Sequoia National Park. The authorized rates are as follows:

Rates for special trips in the park and vicinity.

To Sherman Tree and return.....	\$2. 50
To Sherman Tree, Wolverton, and return via Circle Meadow.....	4. 00
To Moro Rock and return.....	2. 50
To Moro Rock and return via Crescent, Log, and Huckleberry Meadows.....	3. 50
To Alta and return.....	6. 00
To Twin Lakes and return.....	6. 00

For parties of four or more persons a guide will accompany the party without extra charge. For parties of less than four persons a charge will be made for the guide at the regular rate of \$6 per day, or \$3.50 per half day.

Livery rates inside of the park.

Feeding animals hay, per night, each.....	\$1. 00
Feeding animals hay and barley, per night, each.....	1. 75
One feed of hay or barley.....	. 50

For those accustomed to riding, special riding animals can be rented for use in the immediate vicinity of Giant Forest. In such cases horses may be taken without guides and when so taken the customer will be responsible for any damage or loss of the equipment or horses and must in all cases agree to stay in the territory designated by the National Park Service.

Rates for special riding animals.

Saddle horses, per day.....	\$4. 00-\$5. 00
Saddle horses, per half day.....	2. 50- 3. 00
According to equipment and horses.	

The Sequoia National Park is a point of departure for Horse Corral Meadows, Kings River Canyon, Kearsarge Pass, Kern River Canyon, Mount Whitney, and other points in the proposed Roosevelt National Park.

Rates for saddle and pack train and guide service.

Saddle horses, per day.....	\$2. 50-\$3. 50
Pack mules, per day.....	2. 50
Guides or packers, with horse, per day.....	6. 00
Cooks, with horse, per day.....	6. 00-10. 00
Pack donkeys, per day.....	1. 50

The Kings River Parks Co. will quote a special price for parties of four or more, including supplies, cook, equipment, etc., for long trips.

The Sequoia National Park Stage Co. operates an auto stage service from Giant Forest to points of interest in the park on regular schedule, allowing sufficient time at the points of interest to sight-see or make photographs, at the following rates:

Authorized rates of Sequoia National Park Stage Co.

Parker Group, Moro Rock, and return—	
One person.....	\$1. 00
Two or more, each.....	. 75
Admiration Point and return—	
One person.....	3. 00
Two or more, each.....	2. 50
General Sherman Tree and return—	
One person.....	1. 00
Two or more, each.....	. 75
General Sherman Tree, Wolverton and return—	
One person.....	2. 00
Two or more, each.....	1. 50

Special five or seven-passenger touring cars, are also available for these trips, providing exclusive service and independent schedule for small additional charge.

GENERAL GRANT NATIONAL PARK.

In General Grant National Park there is a general store, telephone station, photograph gallery, and gasoline supply station.

The Kings River Parks Co. maintains a permanent camp, the general store mentioned above, and a saddle and pack animal transportation service in the park and into the surrounding mountains. The authorized rates are as follows:

Rates for camp accommodations in General Grant National Park.

Board and lodging in camp, without bath (American plan):	
Per person, per day, two persons in room.....	\$4. 00
Per person, per week.....	26. 00
Per person, per month.....	100. 00
Baths, extra.....	. 50
Transient rates:	
Breakfast.....	1. 00
Lunch.....	1. 00
Dinner.....	1. 25
Lodging.....	1. 25
Baths.....	. 50
One-half of regular rate will be charged for children under 5 years of age.	

Guests desiring extra tent room will be charged as follows:

Tent, capacity of four persons, occupied by two, per day each, extra....	\$1. 25
Tent, capacity of two persons, occupied by one, per day, extra.....	1. 25

During the season of 1920 a few specially appointed cottages, with hot and cold baths, will be maintained.

Rates for special accommodations, including board and lodging.

Per day, per person.....	\$5. 00
Per day, two persons.....	10. 00

Where such a room, with a capacity of two, is occupied by one person a charge of \$2 per day will be made.

Livery rates inside of the park.

Feeding animal hay, per night, each.....	\$1. 00
Feeding animals hay and barley, per night, each.....	1. 75
One feed of hay or barley.....	. 50

For those accustomed to riding, special riding animals can be rented for use in the immediate vicinity of General Grant National Park. In such cases horses may be taken without guides, and when so taken the customer will be responsible for any damage or loss of the equipment or horses, and must in all cases agree to stay in the territory designated by the National Park Service.

Rates for special riding animals.

Saddle horses, per day.....	\$4. 00-\$5. 00
Saddle horses, half day.....	2. 50- 3. 00

According to equipment and horses.

General Grant National Park is a point of departure for Horse Corral Meadows, Kings River Canyon, Kearsarge Pass, Mount Brewer, Rae Lake, Mount Whitney, Middle Fork (Tehipite) Canyon, Simpson Meadow, and other points in the proposed Roosevelt National Park.

Rates for saddle and pack train and guide service.

Saddle horses, per day.....	\$2. 50-\$3. 50
Pack mules, per day.....	2. 50
Guides or packers with horse, per day.....	6. 00
Cooks with horses, per day.....	6. 00-10. 00
Pack donkeys, per day.....	1. 50

The Kings River Parks Co. will quote special prices for parties of four or more, including supplies, cook, equipment, etc., for long trips.

JOHN MUIR'S DESCRIPTION OF THE GIANT SEQUOIA.

From John Muir's "Our National Parks"¹ is taken the following description of the celebrated sequoia trees:

"The big tree (*Sequoia gigantea*)² is nature's forest masterpiece, and, so far as I know, the greatest of living things. It belongs to an ancient stock, as its remains in old rocks show, and has a strange air of other days about it, a thoroughbred look inherited from the long ago—the auld lang syne of trees. Once the genus was common, and with many species flourished in the now desolate Arctic regions, in the interior of North America, and in Europe; but in long, eventful wanderings from climate to climate only two species have survived the hardships they had to encounter, the gigantea and sem-

¹ Used by permission of the Houghton Mifflin Co., authorized publishers.

² According to Sudworth, the technical name, which has been in dispute among authors, is, on grounds of priority, *Sequoia washingtoniana*, which he gave it in 1851. It has also been called *Sequoia wellingtoniana*.

pervirens, the former now restricted to the western slopes of the Sierra, the other to the Coast Mountains, and both to California, excepting a few groves of redwood which extend into Oregon.

"The Pacific coast in general is the paradise of conifers. Here nearly all of them are giants, and display a beauty and magnificence unknown elsewhere. The climate is mild, the ground never freezes, and moisture and sunshine abound all the year.

"Nevertheless it is not easy to account for the colossal size of the sequoias. The largest are about 300 feet high and 30 feet in diameter. Who of all the dwellers of the plains and prairies and fertile home forests of round-headed oak and maple, hickory, and elm, ever dreamed that earth could bear such growths, trees that the familiar pines and firs seems to know nothing about—lonely, silent, serene, with a physiognomy almost godlike; and so old, thousands of them still living had already counted their years by tens of centuries when Columbus set sail from Spain and were in the vigor of youth or middle age when the star led the Chaldean sages to the infant Saviour's cradle? As far as man is concerned they are the same yesterday, to-day, and forever emblems of permanence.

"No description can give any adequate idea of their singular majesty, much less of their beauty. Excepting the sugar pine, most of their neighbors with pointed tops seem to be forever shouting 'Excelsior,' while the big tree, though soaring above them all, seems satisfied, its rounded head poised lightly as a cloud giving no impression of trying to go higher. Only in youth does it show like other conifers a heavenward yearning, keenly aspiring with a long, quick-growing top. Indeed the whole tree for the first century or two, or until 100 to 150 feet high, is arrowhead in form, and, compared with the solemn rigidity of age, is as sensitive to the wind as a squirrel tail. The lower branches are gradually dropped as it grows older and the upper ones thinned out until comparatively few are left. These, however, are developed to great size, divide again and again, and terminate in bossy rounded masses of leafy branchlets, while the head becomes dome shaped.

"Then poised in fullness of strength and beauty, stern and solemn in mien, it glows with eager, enthusiastic life, quivering to the tip of every leaf and branch and far-reaching root, calm as a granite dome, the first to feel the touch of the rosy beams of the morning, the last to bid the sun good night.

"ITS STATELINESS AND DENSELY MASSED FOLIAGE.

"Perfect specimens, unhurt by running fires or lightning, are singularly regular and symmetrical in general form, though not at all conventional, showing infinite variety in sure unity and harmony of plan. The immensely strong, stately shafts, with rich purplish brown bark, are free of limbs for 150 feet or so, though dense tufts of sprays occur here and there, producing an ornamental effect, while long, parallel furrows give a fluted columnar appearance. It shoots forth its limbs with equal boldness in every direction, showing no weather side. On the old trees the main branches are crooked and rugged and strike rigidly outward mostly at right angles from the trunk, but there is always a certain measured restraint in their reach which keeps them within bounds.

"No other Sierra tree has foliage so densely massed or outline so finely, firmly drawn, and so obediently subordinate to an ideal type. A particularly knotty, angular, ungovernable-looking branch, 5 to 8 feet in diameter and perhaps 1,000 years old, may occasionally be seen pushing out from the trunk as if determined to break across the bounds of the regular curve, but like all the others, as soon as the general outline is approached the huge limb dissolves into massy bosses of branchlets and sprays, as if the tree were growing beneath an invisible bell glass against the sides of which the branches were molded, while many small, varied departures from the ideal form give the impression of freedom to grow as they like.

"Except in picturesque old age, after being struck by lightning and broken by a thousand snowstorms, this regularity of form is one of the big tree's most distinguishing characteristics. Another is the simple sculptural beauty of the trunk and its great thickness as compared with its height and the width of the branches, many of them being from 8 to 10 feet in diameter at a height of 200 feet from the ground, and seeming more like finely modeled and sculptured architectural columns than the stems of trees, while the great strong limbs are like rafters supporting the magnificent dome head.

"THE MAGNITUDE OF ITS ROOT SYSTEM.

"The root system corresponds in magnitude with the other dimensions of the tree, forming a flat far-reaching spongy network 200 feet or more in width without any taproot, and the instep is so grand and fine, so suggestive of endless strength, it is long ere the eye is released to look above it. The natural swell of the roots, though at first sight excessive, gives rise to buttresses no greater than are required for beauty as well as strength, as at once appears when you stand back far enough to see the whole tree in its true proportions. The fineness of the taper of the trunk is shown by its thickness at great heights—a diameter of 10 feet at a height of 200 being, as we have seen, not uncommon. Indeed, the boles of but few trees hold their thickness as well as sequoia.

"Resolute, consummate, determined in form, always beheld with wondering admiration, the big tree always seems unfamiliar, standing alone, unrelated, with peculiar physiognomy, awfully solemn and earnest. Nevertheless, there is nothing alien in its looks. The Madrona, clad in thin, smooth, red and yellow bark and big glossy leaves, seems, in the dark coniferous forests of Washington and Vancouver Island, like some lost wanderer from the magnolia groves of the South, while the sequoia, with all its strangeness, seems more at home than any of its neighbors, holding the best right to the ground as the oldest, strongest inhabitant.

"One soon becomes acquainted with new species of pine and fir and spruce as with friendly people, shaking their outstretched branches like shaking hands, and fondling their beautiful little ones; while the venerable aboriginal sequoia, ancient of other days, keeps you at a distance, taking no notice of you, speaking only to the winds, thinking only of the sky, looking as strange in aspect and behavior among the neighboring trees as would the mastodon or hairy elephant among the homely bears and deer. Only the Sierra juniper is at all like it, standing rigid and unconquerable on glacial pavements for

thousands of years, grim, rusty, silent, uncommunicative, with an air of antiquity about as pronounced as that so characteristic of sequoia.

"The bark of full-grown trees is from 1 to 2 feet thick, rich cinnamon brown, purplish on young trees and shady parts of the old, forming magnificent masses of color with the underbrush and beds of flowers. Toward the end of winter the trees themselves bloom while the snow is still 8 or 10 feet deep. The pistillate flowers are about three-eighths of an inch long, pale green, and grown in countless thousands on the ends of the sprays. The staminate are still more abundant, pale yellow, a fourth of an inch long, and when the golden pollen is ripe they color the whole tree and dust the air and the ground far and near.

"The cones are bright, grass-green in color, about $2\frac{1}{2}$ inches long, $1\frac{1}{2}$ wide, and are made up of 30 or 40 strong, closely packed, rhomboidal scales with four to eight seeds at the base of each. The seeds are extremely small and light, being only from an eighth to a fourth of an inch long and wide, including a filmy surrounding wing, which causes them to glint and waver in falling and enables the wind to carry them considerable distances from the tree.

"The faint lisp of snowflakes as they light is one of the smallest sounds mortal can hear. The sound of falling sequoia seeds, even when they happen to strike on flat leaves or flakes of barks, is about as faint. Very different is the bumping and thudding of the falling cones. Most of them are cut off by the Douglas squirrel and stored for the sake of the seeds, small as they are. In the calm Indian summer these busy harvesters with ivory sickles go to work early in the morning, as soon as breakfast is over, and nearly all day the ripe cones fall in a steady pattering, bumping shower. Unless harvested in this way they discharge their seeds and remain on the trees for many years. In fruitful seasons the trees are fairly laden. On two small specimen branches $1\frac{1}{2}$ and 2 inches in diameter I counted 480 cones. No other California conifer produces nearly so many seeds, excepting perhaps its relative, the redwood of the coast mountains. Millions are ripened annually by a single tree, and the product of one of the main groves in a fruitful year would suffice to plant all the mountain ranges of the world.

"NATURE'S GIANT BIRDHOUSES.

"The dense tufted sprays make snug nesting places for birds, and in some of the loftiest, leafiest towers of verdure thousands of generations have been reared, the great solemn trees shedding off flocks of merry singers every year from nests, like the flocks of winged seeds from the cones.

"The big tree keeps its youth far longer than any of its neighbors. Most silver firs are old in their second or third century, pines in their fourth or fifth, while the big tree growing beside them is still in the bloom of its youth, juvenile in every feature at the age of old pines, and can not be said to attain anything like prime size and beauty before its fifteen hundredth year, or under favorable circumstances become old before its three thousandth.

"Many, no doubt, are much older than this. On one of the Kings River giants, 35 feet 8 inches in diameter exclusive of bark, I counted upward of 4,000 annual wood rings, in which there was no trace of decay after all these centuries of mountain weather.

“THE OLDEST LIVING THING.

“There is no absolute limit to the existence of any tree. Their death is due to accidents, not, as of animals, to the wearing out of organs. Only the leaves die of old age, their fall is foretold in their structure; but the leaves are renewed every year and so also are the other essential organs—wood, roots, bark, buds. Most of the Sierra trees die of disease. Thus, the magnificent silver firs are devoured by fungi, and comparatively few of them live to see their three hundredth birth year. But nothing hurts the big tree. I never saw one that was sick or showed the slightest sign of decay. It lives on through indefinite thousands of years until burned, blown down, undermined, or shattered by some tremendous lightning stroke.

“No ordinary bolt ever seriously hurts sequoia. In all my walks I have seen only one that was thus killed outright. Lightning, though rare in the California lowlands, is common on the Sierra. Almost every day in June and July small thunderstorms refresh the main forest belt. Clouds like snowy mountains of marvelous beauty grow rapidly in the calm sky about midday and cast cooling shadows and showers that seldom last more than an hour. Nevertheless these brief, kind storms wound or kill a good many trees. I have seen silver firs 200 feet high split into long peeled rails and slivers down to the roots, leaving not even a stump, the rails radiating like the spokes of a wheel from a hole in the ground where the tree stood. But the sequoia, instead of being split and slivered, usually has 40 or 50 feet of its brash knotty top smashed off in short chunks about the size of cordwood, the beautiful rosy red ruins covering the ground in a circle a hundred feet wide or more. I never saw any that had been cut down to the ground or even to below the branches except one in the Stanislaus Grove, about 12 feet in diameter, the greater part of which was smashed to fragments, leaving only a leafless stump about 75 feet high. It is a curious fact that all the very old sequoias have lost their heads by lightning. ‘All things come to him who waits.’

“But of all living things sequoia is perhaps the only one able to wait long enough to make sure of being struck by lightning. Thousands of years it stands ready and waiting, offering its head to every passing cloud as if inviting its fate, praying for heaven’s fire as a blessing; and when at last the old head is off, another of the same shape immediately begins to grow on.”

SEQUOIA GROVES OF THE PARKS.

Names.	Area.	Trees exceeding 10 feet in diameter.	Total number trees of all sizes.
<i>Acres.</i>			
Sequoia National Park:			
Giant Forest Grove.....	3,200	5,000	500,000
Muir Grove.....	2,240	3,000	350,100
Garfield Grove.....	1,820	2,500	300,400
Atwell Grove.....	850	590	2,000
Dennison Grove.....	480	500	1,175
Suwanee River Grove.....	320	129	1,000
Squirrel Creek Grove.....	90	91	200
Redwood Creek Grove.....	70	70	500
Salt Creek Grove.....	60	10	25
Homer Nose Grove.....	25	5	500
Lost Grove.....	10	9	50
Eden Grove.....	10	6	
General Grant National Park:			
General Grant Grove.....	235	190	10,000
Total.....	9,410	12,100	1,166,000

In four of the groves above mentioned certain trees have been named, while in all other groves they have not. The following is a list of a few of the principal trees, with their names, height, and diameter:

Height and diameter of principal trees.

GIANT FOREST GROVE.

General Sherman, height, 279.9 feet; diameter, 36.5 feet.
Abraham Lincoln, height, 270 feet; diameter, 31 feet.
William McKinley, height, 291 feet; diameter, 28 feet.

MUIR GROVE.

Dalton, height, 292 feet; diameter, 27 feet.

GARFIELD GROVE.

California, height, 260 feet; diameter, 30 feet.

GENERAL GRANT GROVE.

General Grant, height, 264 feet; diameter, 35 feet.
George Washington, height, 255 feet; diameter, 29 feet.

The General Sherman Tree was discovered by James Wolverton, a hunter and trapper, on August 7, 1879, at which time he named the tree in honor of Gen. Sherman, under whom he had served during the Civil War. The dimensions of this tree are as follows:

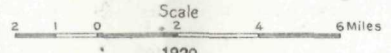
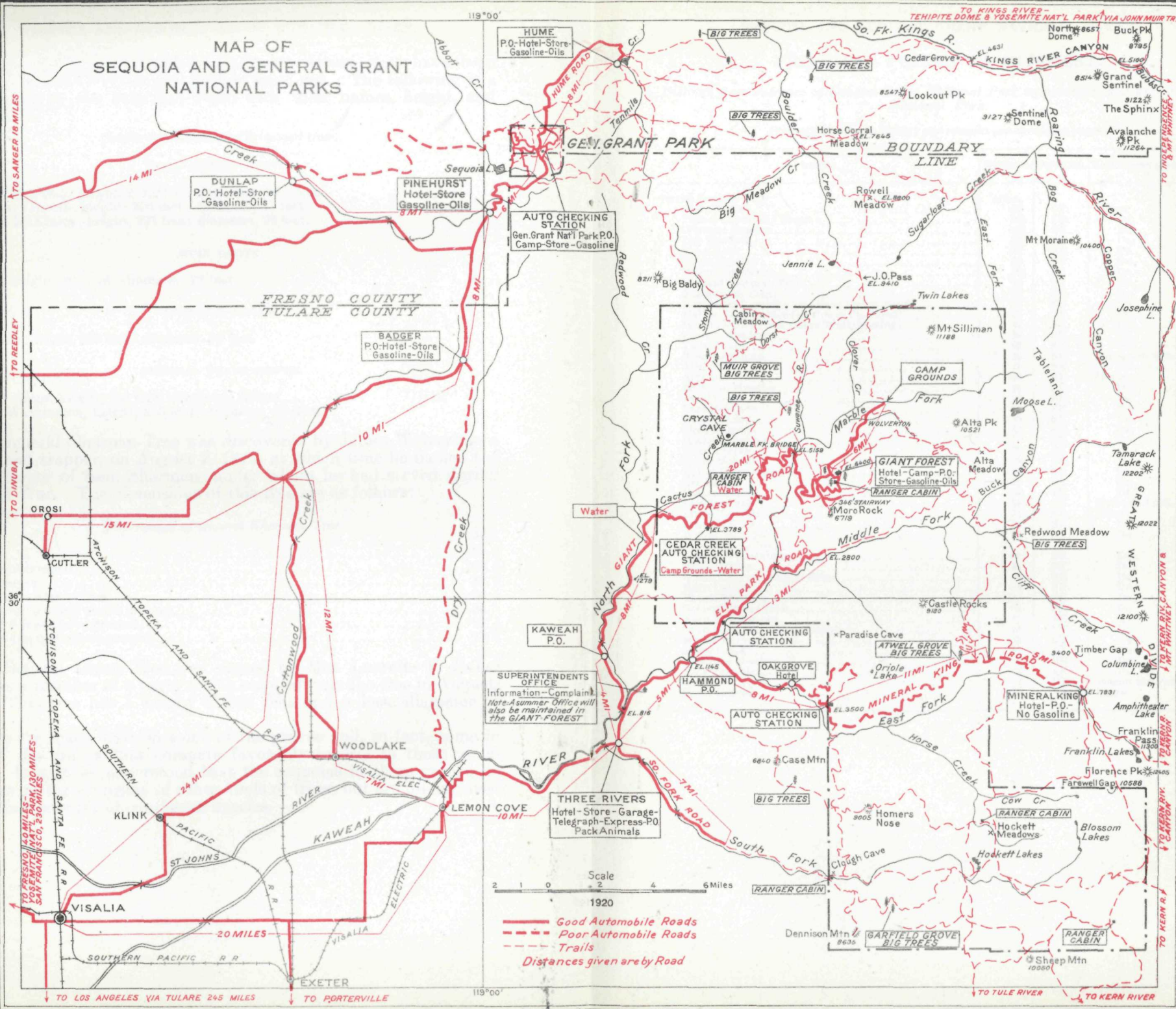
Dimensions of General Sherman Tree.

	Feet.
Height.....	279.9
Base circumference.....	102.8
Base diameter.....	32.7
Greatest diameter at base.....	36.5
Circumference 6 feet above ground.....	86
Diameter 6 feet above ground.....	27.4
Diameter 100 feet above ground.....	17.7

The General Grant Tree was named by Mrs. Lucretia P. Baker who was a member of a party which camped near the tree in August, 1867. This tree has a height of 264 feet and a base diameter of 35 feet.

There are many trees in some of the groves and, in fact, some in each of the groves that compare favorably in size to those herein given. It is to be understood that the sequoias in these groups do not grow to the exclusion of other kinds of trees, but are interspersed with other growths of coniferous species.

MAP OF SEQUOIA AND GENERAL GRANT NATIONAL PARKS



- Good Automobile Roads
- - - Poor Automobile Roads
- Trails
- Distances given are by Road

TO SANGER 18 MILES

TO REEDLEY

TO DINUBA

OROSI

GUTLER

TO FRESNO 140 MILES
TO YOSEMITE NAT'L PARK 130 MILES
TO SAN FRANCISCO 250 MILES

TO LOS ANGELES VIA TULARE 245 MILES

TO PORTERVILLE

119°00'

PRINCIPAL POINTS OF INTEREST.

Distance from entrance of General Grant National Park to points in and near Sequoia National Park.

[For altitude of each locality and remarks see succeeding pages.]

Names.	Distance.	Direction.	Best means of reaching.
In the Sequoia Park:			
	<i>Miles.</i>		
Giant Forest.....	31	SE.	Horse.
Parker Group Big Trees.....	32½	SE.	Do.
Crescent Meadow.....	32½	SE.	Do.
Log Meadow.....	32½	SE.	Do.
Moro Rock.....	33	SE.	Do.
Circle Meadow.....	32	SE.	Do.
Wolverton Camp.....	32½	SE.	Do.
General Sherman Tree.....	33	SE.	Do.
Admiration Point.....	32	SE.	Do.
Marble Fork Bridge (on Giant Forest Road).....	29	SE.	Do.
Marble Fork Bridge (on Power Co. Road).....	43	SE.	Do.
Marble Fork (Twin Lakes Trail Crossing).....	37	SE.	Do.
Cahoon Meadow.....	29	SE.	Do.
Twin Lakes.....	32	SE.	Do.
Mount Silliman.....	30	SE.	Horse and foot.
Alta Peak.....	41	SE.	Do.
Alta Meadow.....	40	SE.	Horse.
Halstead Meadow.....	21	SE.	Do.
Dorst Creek.....	19	SE.	Do.
Paradise Cave.....	56	SE.	Do.
Oriole Lodge.....	56	SE.	Do.
Clough Cave.....	63	SE.	Do.
Hockett Meadow.....	77	SE.	Do.
Lake Evelyn.....	79	SE.	Do.
Cabin Meadow.....	79	SE.	Do.
Quinn Horse Camp.....	85	SE.	Do.
Elk Park.....	39	SE.	Do.
Hospital Rock.....	39	SE.	Do.
Belville Lake.....	34	SE.	Horse and foot.
Little Kern River.....	81	SE.	Horse.
Summit Lake.....	75	SE.	Do.
Willow Meadow.....	28	SE.	Do.
Near the Sequoia Park:			
Vandever Mountain.....	66	SE.	Do.
Mineral King.....	61	SE.	Do.
Grand Canyon of Kern River.....	86	SE.	Do.
Kern Lakes.....	84	SE.	Do.
Mount Whitney.....	111	SE.	Do.
Golden Trout Creek.....	86	SE.	Do.
Kern Hot Springs.....	91	SE.	Do.
Grand Canyon of Kings River.....	28	NE.	Do.
Mount Brewer.....	38	SE.	Do.
Stony Creek.....	15	SE.	Do.
Redwood Meadow.....	50	SE.	Do.
Bear Trap Meadow.....	12	SE.	Do.
Hume.....	8	NE.	Wagon or automobile.
Cedar Grove.....	28	NE.	Horse.

Points of interest in and adjacent to the Sequoia National Park.

[All distances are from Giant Forest post office.]

IN THE PARK.

Name.	Distance.	Direction.	Elevation above sea level.	Best means of reaching.	Remarks.
	<i>Miles.</i>		<i>Feet.</i>		
Parker Group Big Trees.....	1½	SE.	6, 214	Automobile.....	Magnificent grove Sequoia timber; good place to camp.
Moro Rock.....	2	SE.	6, 719	.....do.....	Magnificent scenery.
Crescent Meadow.....	1½	SE.	6, 420	Horse.....	Pretty mountain meadow; good camping place.
Log Meadow.....	1¾	SE.	6, 900	.....do.....	Pretty mountain meadow; chimney tree; huge hollow log, once used as hunter's cabin.
Circle Meadow.....	1	E.	6, 550	.....do.....	Huge fallen Sequoia tree, hollow, 174 feet of which can be walked through; also Wolverton house tree; good camping place.
Wolverton Camp.....	4	NE.	8, 250	Automobile.....	Excellent place to camp; good fishing.
General Sherman Tree.....	2	NE.	7, 210	.....do.....	Largest tree in the world; height, 279.9 feet; base circumference, 102.8 feet.
Admiration Point.....	8	W.	4, 750	.....do.....	Beautiful scenery; precipitous cliff (2,029 feet) can be looked over.
Marble Fork Bridge (on Giant Forest Road).....	4	W.	5, 100	.....do.....	Beautiful mountain stream and bridge.
Marble Fork Bridge (on Elk Park Road).....	12	SW.	2, 000	.....do.....	Good fishing; plenty of forage for stock; good camping and bathing; beautiful scenery of two mountain rivers.
Marble Fork (Twin Lakes Trail Crossing).....	6	NE.	6, 719	Automobile.....	Beautiful scenery; good fishing; good camping.
Cahoon Meadow.....	10	NE.	8, 246	Horse.....	Beautiful mountain meadow; good camping.
Twin Lakes.....	12½	NE.	10, 238	.....do.....	Two beautiful mountain lakes; one of the most interesting and beautiful sights in the park; good fishing and good camping.
Mount Sillman.....	9½	NE.	11, 188	Horse and foot.....	Gorgeous scenery; good view of Mount Whitney.
Alta Peak.....	10	E.	11, 211	.....do.....	A point from which the best panoramic view of the terrain of the park may be obtained.
Alta Meadow.....	9	E.	9, 000	Horse.....	Fine scenery and good camping place.
Halstead Meadow.....	10	NW.	8, 400	.....do.....	Beautiful mountain meadow; good fishing and good camping.
Dorst Creek.....	12	NW.	6, 500	.....do.....	Fine mountain stream near Muir Grove Big Trees; good camping.
General Grant National Park.....	33	NW.	6, 675	.....do.....	General tourist camp where both tourist accommodations and mail facilities can be procured; magnificent Sequoia grove big trees.
Paradise Cave.....	25	S.	5, 700	.....do.....	Large cave not fully explored; very beautiful and attractive.
Oriole Lodge.....	25	S.	5, 500	Automobile.....	Tourist camp and sawmill on private holdings, near Oriole Lake; one of the attractions of the vicinity.
Clough Cave.....	32	S.	4, 050	Horse.....	A beautiful and interesting cave; fair fishing; good camping.
Vandever Mountain.....	40	SE.	11, 900	.....do.....	The highest elevation in the park; a point from which may best be seen the Whitney Range of mountains, Kern River Canyon, and the Great Western Divide.
Crystal Cave.....	8	NW.	4, 300	Automobile and horse.....	Cave of many connecting chambers magnificently decorated by nature with limestone crystals; recently discovered.
Hockett Meadow.....	40	SE.	8, 500	Horse.....	Large mountain meadow; headquarters of park rangers; Hockett Lake, Sand and Mitchel Meadows in vicinity; good fishing; good camping.
Lake Evelyn.....	46	SE.	8, 000	.....do.....	Deep mountain lake near Hockett Meadow; fair fishing; good place to camp.
Cabin Meadow.....	48	SE.	8, 800	.....do.....	Beautiful meadow; excellent fishing; good camping place.
Quinn Horse Camp.....	54	SE.	8, 500	.....do.....	Headquarters of park ranger; large soda spring near cabin; fair fishing; good place to camp.

Elk Park.....	8	S.	3,000	Automobile.....	Section of Sequoia Park set aside for herd of elk, where these animals are now kept; excellent fishing; good camping.
Hospital Rock.....	8	S.	3,000	do.....	Huge rock, supposed to have been occupied by a prehistoric race; numerous hieroglyphics painted on it; good fishing; good camping.
Belville Lake.....	15	NE.	10,300	Horse and foot..	The most beautiful lake in the park; fine place for an outing.
Little Kern River.....	50	SE.	8,600	Horse.....	Gorgeous scenery; a botanist's paradise; good fishing; good camping.
Summit Lake.....	44	SE.	9,100	do.....	Beautiful mountain lake; good place for an outing.
Willow Meadow.....	8	NE.	7,000	do.....	Good place to spend a season; good fishing; good camping.

OUTSIDE THE PARK.

Mineral King.....	30	SE.	7,830	Automobile.....	Village containing many summer inhabitants; once a mining town; a post office and store; good place to camp; fair fishing.
Grand Canyon of Kern River.....	55	SE.	6,600	Horse.....	Box canyon on river some 20 miles in length and over 2,000 feet in depth; one of the best trout streams in the world.
Kern Lakes.....	53	SE.	6,250	do.....	Two beautiful lakes on river; magnificent scenery; excellent fishing; good boating and bathing; good camping.
Mount Whitney.....	80	E.	14,501	do.....	The highest mountain in the United States proper; from the top of this mountain the landscape scenery can not be excelled elsewhere.
Golden Trout Creek.....	55	SE.	6,500	do.....	The home of the noted golden trout fish, and where first discovered; excellent fishing; good camping; magnificent scenery.
Kern Hot Springs.....	60	SE.	7,200	do.....	Large hot spring; fine bathing; fine camping; excellent fishing; beautiful scenery.
Grand Canyon of Kings River.....	35	NE.	4,631	do.....	Box canyon, some 15 miles in length and over 2,000 feet in depth, river passing through; excellent fishing.
Mount Brewer.....	45	NE.	13,577	do.....	Superb view of Mount Brewer from the heights near Lake Bryanthus reached by Bubbs Creek trail.
Stony Creek.....	16	NW.	6,500	do.....	Pretty mountain stream and meadow; good fishing; good camping.
Redwood Meadow.....	19	SE.	6,300	do.....	Beautiful young grove Sequoia timber; good camping.
Bear Trap Meadow.....	19	NW.	7,000	do.....	Fine meadow; good fishing; good place to camp.
Hume.....	31	NW.	5,300	do.....	Lumbering town; huge sawmill; beautiful lake; campers' supplies; good boating and bathing; good place to camp.
Sequoia Lake.....	34	NW.	5,300	Automobile.....	Beautiful mountain lake; good fishing, boating, and bathing; good place to camp.
Cedar Grove.....	35	NE.	4,631	Horse.....	Good place to camp.

CHECK LIST OF BIRDS OF SEQUOIA AND GENERAL GRANT NATIONAL PARKS AND VICINITY.

[Compiled and identified by WALTER FRY, superintendent.]

Order PYGOPODES. Diving Birds.

Family GAVIIDAE. Loons.

Loon. *Gavia immer*. Rare winter visitant.

Order STEGANOPODES. Totipalmate Swimmers.

Family PHALACROCORACIDAE. Cormorants.

Farallon Cormorant. *Phalacrocorax auritus albociliatus*. Rare winter resident.

Order ANSERES. Lamellirostral Swimmers.

Family ANATIDAE. Ducks, Geese, and Swans.

American Merganser. *Mergus americanus*. Winter visitant.
 Red-breasted Merganser. *Mergus serrator*. Fall migrant.
 Hooded Merganser. *Lophodytes cucullatus*. Winter visitant.
 Mallard. *Anas platyrhynchos*. Common winter resident.
 Green-winged Teal. *Nettion carolinense*. Winter resident.
 Blue-winged Teal. *Querquedula discors*. Rare winter visitant.
 Cinnamon Teal. *Querquedula cyanoptera*. Winter visitant.
 Shoveller. *Spatula clypeata*. Common winter resident.
 American Pintail. *Dafila acuta tzitzihoa*. Fall migrant.
 Wood Duck. *Aix sponsa*. Rare winter visitant.
 Canvasback. *Marila valisineria*. Winter visitant.
 Ring-necked Duck. *Marila collaris*. Rare winter visitant.
 Buffle-head. *Charitnetta albeola*. Rare winter visitant.
 Snow Goose. *Chen hyperborea hyperborea*. Very rare winter visitant.
 Canada Goose. *Branta canadensis canadensis*. Rare winter visitant.
 Whistling Swan. *Olor columbianus*. Very rare winter visitant.

Order HERODIONES. Herons, Ibises, etc.

Family ARDEIDAE. Herons, Egrets, Bitterns.

American Bittern. *Botaurus lentiginosus*. Summer resident.
 California Blue Heron. *Ardea herodias hyperonca*. Summer visitor.
 Anthony Green Heron. *Butorides virescens anthonyi*. Rare summer resident.
 Black-crowned Night Heron. *Nycticorax nycticorax naevius*. Rare spring migrant.

Order PALUDIOCLAE. Cranes, Rails, etc.

Family RALLIDAE. Rails, Gallinules, and Coots.

Coot. *Fulica americana*. Summer resident.

Order LIMICOLAE. Shore Birds.

Family RECURVIROSTRIDAE. Avocets and Stilts.

Black-necked Stilt. *Himantopus mexicanus*. Spring migrant.

Family SCOLOPACIDAE. Snipes and Sandpipers.

Wilson Snipe. *Gallinago delicata*. Common winter visitant.
 Least Sandpiper. *Pisobia minutilla minutilla*. Winter visitant.

Family CHARADRIIDAE. Plovers.

Killdeer. *Oxyechus vociferus vociferus*. Resident.
 Mountain Plover. *Podasocys montanus*. Winter visitant.

Order GALLINAE. Grouse, Turkeys, Pheasants, Quail, etc.

Family TETRAONIDAE. Grouse.

Plumed Partridge (commonly called mountain quail). *Oreortyx picta plumifera*. Resident; common at high elevations.
 Valley Partridge (commonly called valley quail). *Lophortyx californica vallicola*. Abundant resident of the foothills.
 Sierra Grouse. *Dendragapus obscurus sierrae*. Resident; plentiful at all high altitudes.

Order COLUMBAE. Pigeons.

Family COLUMBIDAE. Pigeons.

Band-tailed Pigeon. *Chloroenas fasciata fasciata*. Resident.
 Western Mourning Dove. *Zenaidura macroura marginella*. Resident everywhere.

Order RAPTORES. Vultures, Eagles, Hawks, Owls, etc.

Family CATHARTIDAE. American Vultures.

California Vulture; California Condor. *Gymnogyps californianus*. Resident; very rare.
 Turkey Vulture. *Cathartes aura septentrionalis*. Common resident.

Family FALCONIDAE. Hawks and Eagles.

White-tailed Kite. *Elanus leucurus*. Resident at low elevations.
 Sharp-shinned Hawk. *Accipiter velox*. Winter visitant.
 Cooper Hawk. *Accipiter cooperii*. Resident.
 Western Red-tail. *Buteo borealis calurus*. Resident.
 Red-bellied Hawk. *Buteo lineatus elegans*. Rare resident.
 Swainson Hawk. *Buteo swainsoni*. Rare spring visitant.
 Ferruginous Rough-leg; Squirrel Hawk. *Archibuteo ferrugineus*. Rare migrant.
 Golden Eagle. *Aquila chrysaetos*. Common resident.
 Bald Eagle. *Haliaeetus leucocephalus leucocephalus*. Common resident.
 Prairie Falcon. *Hierofalco mexicanus*. Rare winter visitant.
 Pigeon Hawk. *Tinnunculus columbarius columbarius*. Common winter visitant.
 Western Sparrow Hawk. *Cerchneis sparveria phalaena*. Common resident.

Family TYTONIDAE. Barn Owls.

Barn Owl. *Tyto alba pratincola*. Common resident of the foothills.

Family BUBONIDAE. Horned Owls.

Long-eared Owl. *Asio wilsonianus*. Rare resident.
 Short-eared Owl. *Asio flammeus flammeus*. Rare winter visitant.
 Spotted Owl. *Strix occidentalis occidentalis*. Rare resident.
 Saw-whet Owl. *Cryptoglaux acadica acadica*. Resident in winter.
 California Screech Owl. *Otus asio bendirei*. Very common resident.
 Pacific Horned Owl. *Bubo virginianus pacificus*. Resident.
 California Pygmy Owl. *Glaucidium gnoma californicum*. Very common resident.

Order COCCYGES. Cuckoos, etc.

Family CUCULIDAE. Cuckoos.

Road-runner. *Geococcyx californianus*. Common resident.
 California Cuckoo. *Coccyzus americanus occidentalis*. Rare summer resident.

Family ALCEDINIDAE. Kingfishers.

Belted Kingfisher. *Streptoceryle aleyon aleyon*. Occasional summer resident.

Order PICI. Woodpeckers, etc.

Family PICIDAE. Woodpeckers.

Cabanis Woodpecker. *Dryobates villosus hyloscopus*. Common resident.

Willow Woodpecker. *Dryobates pubescens turati*. Occasional summer resident.

Red-breasted Sapsucker. *Sphyrapicus ruber ruber*. Winter visitant.

California Woodpecker. *Balanosphyra formicivora bairdi*. Common resident.

Lewis Woodpecker. *Asyndesmus lewisi*. Winter visitant.

Red-naped Sapsucker. *Sphyrapicus varius nuchalis*. Rare winter visitant.

Red-shafted Flicker. *Colaptes cafer collaris*. Common resident.

Northern white-headed Woodpecker. *Xenopicus albolarvatus albolarvatus*. Common resident in the middle elevations.

Order MACROCHIRES. Goatsuckers, Swifts, and Hummingbirds.

Family CAPRIMULGIDAE. Goatsuckers.

Dusky Poor-will. *Phalaenoptilus nuttallii californicus*. Common resident.

Family CHORDEILIDAE. Nighthawks.

Pacific Nighthawk. *Chordeiles minor hesperis*. Occasional summer resident.

Family MICROPODIDAE. Swifts.

Black Swift. *Nephoecetes niger borealis*. Summer resident.

Vaux Swift. *Chaetura vauxi*. Migrant.

White-throated Swift. *Acronautes melanoleucus*. Summer visitant.

Family TROCHILIDAE. Hummingbirds.

Black-chinned Hummingbird. *Archilochus alexandri*. Common summer visitant at lower elevations.

Anna Hummingbird. *Calypte anna*. Summer visitant.

Rufous Hummingbird. *Selasphorus rufus*. Abundant summer resident.

Calliope Hummingbird. *Stellula calliope*. Summer visitant.

Order PASSERES. Perching Birds.

Family TYRANNIDAE. Tyrant Flycatchers.

Arkansas Kingbird. *Tyrannus verticalis*. Summer resident.

Ash-throated Flycatcher. *Mniarchus cinerascens cinerascens*. Summer visitant.

Black Phoebe. *Sayornis nigricans*. Resident.

Olive-sided Flycatcher. *Nuttallornis borealis*. Summer visitant.

Western Wood Pewee. *Mpicochanes richardsonii richardsonii*. Resident in summer.

Little Flycatcher. *Empidonax traillii brewsteri*. Summer resident.

Western Flycatcher. *Empidonax difficilis difficilis*. Summer resident.

Family ALAUDIDAE. Larks.

California Horned Lark. *Otocoris alpestris actia*. Resident at Barnafe Flats.

Family CORVIDAE. Crows, Jays, Magpies, etc.

Yellow-billed Magpie. *Pica nuttallii*. Summer visitant.

California Jay. *Aphelocoma californica immanis*. Common resident.

Western Raven. *Corvus corax clarionensis*. Common resident.

Western Crow. *Corvus brachyrhynchos hesperis*. Common resident.

Clark Nutcracker. *Nucifraga columbiana*. Common resident.

Blue-fronted Jay. *Cyanocitta stelleri frontalis*. Abundant resident of the higher elevations.

Family ICTERIDAE. Blackbirds, Orioles, etc.

- Yellow-headed Blackbird. *Xanthocephalus xanthocephalus*. Summer visitant.
 San Diego Red-wing. *Agelaius phoeniceus neutralis*. Fall migrant.
 Tricolored Blackbird. *Agelaius tricolor*. Common resident.
 Bullock Oriole. *Icterus bullockii bullockii*. Summer resident.
 Brewer Blackbird. *Euphagus cyanocephalus*. Resident.

Family FRINGILLIDAE. Finches, Sparrows, etc.

- California Evening Grosbeak. *Hesperiphona vespertina californica*. Rare summer visitant.
 California Pine Grosbeak. *Pinicola enucleator californica*. Resident.
 California Purple Finch. *Curpodacus purpureus californicus*. Common resident.
 Cassin Purple Finch. *Carpodacus cassinii*. Resident.
 House Finch. *Carpodacus mexicanus frontalis*. Resident, very plentiful.
 Willow Goldfinch. *Astragalinus tristis sibiricamans*. Rare resident at lower elevations.
 Green-backed Goldfinch. *Astragalinus psaltria hesperophilus*. Abundant resident.
 Lawrence Goldfinch. *Astragalinus lawrencii*. Summer visitant.
 Pine Siskin. *Spinus pinus pinus*. Resident.
 English Sparrow. *Passer domesticus hostilis*. Resident.
 Western Vesper Sparrow. *Pooecetes gramineus confinis*. Summer resident.
 Nevada Savannah Sparrow. *Passerculus sandwichensis nevadensis*. Fall migrant.
 Western Lark Sparrow. *Chondestes grammacus strigatus*. Resident, very rare.
 Gambel Sparrow. *Zonotrichia gambelii*. Winter visitant.
 Western Chipping Sparrow. *Spizella passerina arizonae*. Rare resident.
 Brewer Sparrow. *Spizella breweri*. Rare resident of foothills.
 Thurber Junco. *Junco oreganus thurberi*. Summer resident.
 Bell Sparrow. *Amphispiza belli belli*. Resident in foothills.
 Modoc Song Sparrow. *Melospiza melodia fisherella*. Resident.
 Lincoln Sparrow. *Melospiza lincolni lincolni*. Summer resident at high altitudes.
 Thick-billed Sparrow. *Passerella iliaca megarhyncha*. Summer resident.
 White-crowned Sparrow. *Zonotrichia leucophrys leucophrys*. Common resident above the elevations of 8,000 feet.
 Stephens Fox Sparrow. *Passerella iliaca stephensi*. Common resident between the elevations of 6,000 and 8,000 feet.
 Sacramento Towhee. *Pipilo maculatus fulcinellus*. Winter visitant.
 Northern Brown Towhee. *Pipilo crissalis carolae*. Common resident.
 Green-tailed Towhee. *Oreospiza chlorura*. Winter visitant.
 Pacific Black-headed Grosbeak. *Zamelodia melanocephala capitalis*. Summer resident.
 Lazuli Bunting. *Passerina amoena*. Common summer resident.

Family TANAGRIDAE. Tanagers.

- Louisiana Tanager; Western Tanager. *Piranga ludoviciana*. Summer visitant; leaves immediately after nesting period.

Family HIRUNDINIDAE. Swallows.

- Western Martin. *Progne subis hesperia*. Summer visitant.
 Barn Swallow. *Hirundo rustica erythrogastris*. Summer resident at the Marble Fork Bridge.
 Tree Swallow. *Iridoprocne bicolor*. Abundant summer resident.
 Violet-green Swallow. *Tachycineta thalassina lepida*. Common summer resident.
 Bank Swallow. *Riparia riparia riparia*. Summer resident in Elk Park.
 Rough-winged Swallow. *Stelgidopteryx serripennis serripennis*. Rare Summer resident.

Family BOMBYCILLIDAE. Waxwings and Phainopeplas.

- Cedar Waxwing. *Bombycilla cedrorum*. Irregular winter visitant.

Family LANIIDAE. Shirkes.

- California Shrike. *Lanius ludovicianus gambeli*. Summer resident.

Family VIREONIDAE. Vireos.

Western Warbling Vireo. *Vireosylva gilva swainsonii*. Common summer visitant.
Cassin Vireo. *Lanivireo solitarius cassinii*. Abundant summer resident.

Family MNIOTILTIDAE. Wood Warblers.

Lutescent Warbler. *Vermivora celata lutescens*. Summer visitant.
Brewster Yellow Warbler. *Dendroica aestiva brewsteri*. Abundant summer resident.
Calaveras Warbler. *Vermivora ruficapilla gulturalis*. Common summer resident
between the elevations of 5,500 to 7,500 feet.
Audubon Warbler. *Dendroica auduboni auduboni*. Winter visitant; occasional
summer resident.
Black-throated Gray Warbler. *Dendroica nigrescens*. Summer resident.
Townsend Warbler. *Dendroica townsendi*. Common migrant.
Hermit Warbler. *Dendroica occidentalis*. Migrant and probably summer resident.
Macgillivray Warbler. *Oporornis tolmiei*. Summer resident.
Pacific Yellow-throat. *Geothlypis trichas arizela*. Rare resident in Elk Park.
Long-tailed Chat. *Icteria virens longicauda*. Summer visitant along the streams.
Golden Pileolated Warbler. *Wilsonia pusilla chryseola*. Rare summer visitant along
the streams of the foothills.

Family MOTACILLIDAE. Wagtails.

Pipit. *Anthus spinoletta rubescens*. Common winter visitant.

Family CINCLIDAE. Dippers.

Dipper; Northern Water Ouzel. *Cinclus mexicanus unicolor*. Common resident
along the streams.

Family MIMIDAE. Thrashers, etc.

Western Mocking Bird. *Mimus polyglottos leucopterus*. Very rare summer visitant
at low elevations.
California Thrasher. *Toxostoma redivivum redivivum*. Common resident.

Family TROGLODYTIDAE. Wrens.

Rock Wren. *Salpinctes obsoletus obsoletus*. Resident in low elevations.
Dotted Canyon Wren. *Catherpes mexicanus punctulatus*. Common resident.
Parkman Wren. *Troglodytes aedon parkmanii*. Resident in foothills.

Family CERTHIIDAE. Creepers.

Sierra Creeper. *Certhia familiaris zelotes*. Resident at high elevations.

Family SITIDAE. Nuthatches.

Slender-billed Nuthatch. *Sitta carolinensis aculeata*. Common resident.
Red-breasted Nuthatch. *Sitta canadensis*. Common summer resident in the eleva-
tions between 7,000 and 11,000 feet.

Family PARIDAE. Titmice.

Plain Titmouse. *Bacolophus inornatus inornatus*. Common resident.
Bailey Chickadee. *Penthestes gambeli baileyae*. Resident.
Short-tailed Mountain Chickadee. *Penthestes gambeli abbreviatus*. Summer resident
and winter visitant above the elevation of 5,500 feet.
Pallid Wren-tit. *Chamaea fasciata henshawi*. Occasional winter visitant.
California Bush-tit. *Psaltriparus minimus californicus*. Common resident.

Family SYLVIIDÆ. Kinglets, Gnatcatchers, etc.

Western Golden-crowned Kinglet. *Regulus regulus olivaceus*. Winter visitant.
 Western Ruby-crowned Kinglet. *Corthylio calendula cineraceus*. Winter visitant.
 Western Gnatcatcher. *Poliophtila caerulea obscura*. Rare resident.

Family TURDIDÆ. Thrushes, Solitaires, Bluebirds, etc.

Townsend Solitaire. *Myadestes townsendii*. Winter visitant and occasional summer resident.
 Russet-backed Thrush. *Hylocichla ustulata ustulata*. Spring and summer visitant.
 Sierra Hermit Thrush. *Hylocichla guttata sequoiensis*. Occasional summer resident.
 Western Robin. *Planesticus migratorius propinquus*. Resident; very plentiful everywhere.
 San Pedro Bluebird. *Sialia mexicana anabelae*. Very rare summer resident.
 Mountain Bluebird. *Sialia currucoides*. Summer resident at high elevations.

CHECK LIST OF MAMMALS.

Order UNGULATA. Deer, Antelope, Cattle, Sheep, and Goats.

[All species indicated with *inhabit both parks, otherwise Sequoia Park only.]

Family CERVIDÆ. Deer.

California Wapiti. *Cervus nannodes Merriam*. Twenty elk were transferred from Kern County, Cal., to the park in 1905, four of which died soon after arrival from their injuries sustained while in captivity. The elk were at first kept within fenced inclosure in a section of the park on the Middle Fork of the Kaweah River, but now roam in many other parts of the park and adjacent territory. Young have been born, and it is now estimated that there are from 40 to 50 head in the herd. The first calf elk was born in the park on March 9, 1906. Young are born from March to May; twins are infrequent.
 California Mule Deer. **Odocoileus hemionus californicus* (Caton). Deer are very abundant in the parks; a conservative estimate of their number has been set at 3,000 within the Sequoia Park. They may be seen in all portions of the parks during summer season. Fawns are dropped during June and July. Twins and triplets are frequent.

Family BOVIDÆ. Sheep.

Sierra Mountain Sheep. *Ovis canadensis sierræ* Grinnell. These sheep from the eastern slope of Mount Baxter have recently been described as a distinct species and there are still a number of them on the eastern slope of the Sierra. They are of unusual occurrence in the park, and were last seen September 10, 1918, on the north spur of Mount Silliman at an elevation of 11,200 feet. The lambing season is principally March and April, and records would indicate that only one lamb at a time is born.

Order RODENTIA. Rodents or Gnawers.

Family SCIURIDÆ. Squirrels.

Yellow-bellied Marmot. **Marmota flaviventer sierræ* (Audubon and Bachman). Very abundant throughout their range, and may be seen at all times during summer and autumn seasons. They live principally in crevices of rocks near glade or stream, and are most plentiful at Hockett and Sand Meadows. They are often called ground hog and woodchuck. They furnish much of the food for the lion, wolf, and lynx, and are often used as food by man.
 Fisher's Ground Squirrel. **Citellus beecheyi fisheri* (Merriam). Not plentiful throughout their range; principally along road and trail thoroughfares near water. They are a serious pest to agriculture and spread contagion; and the State of California has enacted a law compelling their destruction, which is expected to lead to their final extermination.
 Alpine Chipmunk. *Eutamias alpinus* (Merriam). Fairly abundant in the park and found most plentifully in the vicinity of Mount Silliman and Alta along the upper edge of timberline.

Sierra Golden-mantled Ground Squirrel. **Callospermophilus lateralis chrysoideirus* (Merriam). Fairly abundant in the parks and a source of great pleasure to park visitors.

Sierra Nevada Chipmunk. **Eutamias frater* (Allen). Very abundant in the parks.

Columbia Gray Squirrel. **Sciurus griseus griseus* Ord. Very abundant.

Sierra Chickaree. **Sciurus douglasii albolimbatus* Allen. Very abundant.

San Bernardino Chipmunk. **Eutamias speciosus speciosus* (Merriam). Very abundant between the elevations of 6,000 and 11,000 feet.

FAMILY APLODONTIDÆ. Beaver.

California Mountain Beaver. *Aplodontia rufa californica* (Peters). Not abundant in the park, but are occasionally seen in the headwaters of the Marble Fork River and Clover Creek. They have never been seen below the 8,000-foot level.

FAMILY PETAURISTIDÆ. Flying squirrel.

San Bernardino Flying Squirrel. **Glaucmys alpinus californicus* (Rhoads). Not abundant in the parks, and owing to their nocturnal habit are seldom seen by park visitors.

Sierra Nevada Flying Squirrel. **Glaucmys sabrinus lascivus* (Bang). Fairly abundant between the elevations of 6,000 and 7,500 feet in the heavy forest belt.

FAMILY MURIDÆ. Rats and Mice.

Common House Mouse. *Mus musculus* Linn. This mouse introduced from Europe inhabits the greater portion of the settlement in the valley west of the park, and has drifted into the park to a point at Rocky Gulch station, which is the only place at which it has been seen in the park.

California Mouse. *Peromyscus californicus californicus* (Gambel). Not abundant in the park; they inhabit principally the chemical thickets of the foothills near the western park boundary.

Gambel Mouse. **Peromyscus naniculatus gambelli* (Baird). Gambel mice are more plentiful than all other species.

Big-eared Mouse. **Peromyscus truei gilberti* (Allen). Live principally in the brush thickets near the open forests. Not abundant.

Streator Brush Rat. **Neotoma fuscipes streatori* Merriam. Very abundant throughout their range and menace to campers, as they will carry away foodstuff and small camp articles if given the opportunity.

Bushy-tailed Wood Rat. **Neotoma cinerea cinerea* (Ord). Abundant between the elevations of 7,000 and 10,500 feet.

Intermediate Wood Rat. **Neotoma intermedia intermedia* (Rhoads). Fairly abundant in the heavy forest belt between the elevations of 5,500 and 7,500 feet.

California Meadow Mouse. *Microtus californicus californicus* (Pellae). Inhabits principally grassy localities, both wet and dry. Fairly abundant.

Cantakerous Meadow Mouse. **Microtus mordax mordax* (Merriam). These mice are to be found about all the meadows throughout their range and are fairly abundant.

FAMILY GEOMYDÆ. Pocket Gophers.

Alpine Pocket Gopher. **Thomomys alpinus alpinus* Merriam. Fairly abundant throughout their zones, but most plentiful near the streams and marsh places.

Fresno Pocket Gopher. **Thomomys angularis pascalis* Merriam. Found in most places throughout their range, appearing most abundant where there is rich, loose soil, other than in marsh places. Never found above the elevation of 3,000 feet.

Yosemite Pocket Gopher. *Thomomys alpinus awahnee* (Merriam). Very abundant between the elevations of 8,500 to 12,000 feet around grassy meadows and where there is rich, loose soil.

FAMILY HETEROMYDÆ. Pocket Rats and Pocket Mice.

Allen Pocket Mouse. *Perognathus californicus dispar* Osgood. The only place in the park that the Allen pocket mouse has been seen is at Salt Spring on the Middle Fork of the Kaweah River, where it inhabits a grass meadow of wild oats.

Tulare Pocket Rat. *Dipodomys merriami nitratoides* Merriam. Of rare occurrence in the park, having been seen only in the vicinity just below the junction of the Middle and Marble Forks of the Kaweah River, where they inhabit the open grass ridges.

Family ZAPODIDÆ. Jumping Mice.

Allen Jumping Mouse. **Zapus trinotatus alleni* Elliot. Fairly abundant throughout their range, inhabiting principally the grassy meadows bordering the open forests.

Family ERETHIZONTIDÆ. American Porcupine.

Western Porcupine. *Erethizon epixanthum epixanthum* Brandt. Porcupines inhabit but few localities of the park, and have only been seen at Alta and Willow Meadows, where they are found living in the cliff crevices. Their workings are also visible at Putnam Canyon, where they have done harm to small coniferous timber by gnawing away the bark, the innermost portion of which is consumed as food. Young, usually two to four in number, are born from May to July, and but one litter is produced during a season.

Order LAGOMORPHA. Pikas, Hares, and Rabbits.

Family OCHOTONIDÆ. Pikas.

Mount Whitney Pika. *Ochotona schisticeps albatus* Grinnell. Found in various places throughout their range, living principally in the "rock slides" along the steep slopes, where they live in family groups. They are found most abundant in the vicinity of Mount Vandever, Alta, Silliman, Twin, and Evelyn Lakes, the latter mentioned being the lowest place of their occurrence in the park, at the elevation of 8,000 feet. Their breeding season extends over approximate period June 1 to August 15. Usually four or five young are produced at a time and but one litter during a season. They are often called little chief hares, conies, and starved rats. These little animals are a source of great pleasure to the scientist and park visitors.

Family LEPORIDÆ. Hares and Rabbits.

Sierra Prairie Hare. *Lepus campestris sierrae* Merriam. Not plentiful in the park, but may be seen during summer season in the vicinity of Alta Meadow, Granite Basin near the summit of Mount Vandever, and at Twin Peaks. They are commonly called "snowshoe rabbits."

California Hare, Jack Rabbit. *Lepus californicus richardsonii* (Bachman). This species of hare is abundant in the territory adjacent to the park to the west, in both foothill and valley, but is found within the park to the extent of about 2 miles along the Middle Fork of the Kaweah River, where they may be seen at all seasons during the year.

Bachman Brush Hare, "Cottontail." *Sylvilagus bachmani bachmani* (Waterhouse). Brush hare are very common in the park and may be seen at all times during the year throughout their range.

shy Brush Hare, "Blue Rabbit." *Sylvilagus bachmani cinerascens* (Allen). Fairly abundant throughout their range, living principally in the chemical thickets, at which place they may be seen throughout the year.

Order CARNIVORA. Flesh-Eating Mammals.

Family URSIDÆ. Bears.

Black and Brown Bear. **Ursus americanus americanus* Pallas. Found in all portions of the parks where food is plentiful. They are not ferocious, and under all ordinary circumstances will run away from presence of man. Their hibernating period usually dates from December to March, during which time young are born. The young are commonly two, occasionally four in number. Young of the same litter often vary in color from cinnamon brown, black, black with white breast. Their number is estimated at 700 in the Sequoia Park.

Family CANIDÆ. Dogs, Wolves, Foxes.

Mountain Coyote. **Canis lestes* Merriam. Not abundant, and are seldom seen. They are found most plentiful during summer in the vicinity of Alta and Hockett Meadows and Little Kern River. They come lower into the heavy forest belt during winter. Owing to their being a habitant of the extreme high elevations they do but little damage to domestic stock, their principal food being that of the deer, ground hog, rats, mice, etc. They raise their young usually three to seven in number during the month of June in rock crevices or in burrows dug by themselves.

- Valley Coyote. **Canis ochropus* Eschscholtz. Inhabit principally the valley and foothill region west of the parks, but during the summer season they frequent the higher elevations, going well into the transition zone, returning again in the autumn. Young, ranging from four to eight in number, are born during the month of May in burrows dug by the female. They are a serious pest to game, killing all kinds of small game and often the deer.
- High Sierra Fox. **Vulpes necator* Merriam. Not abundant in the parks, but are occasionally seen in the vicinity of Cahoon, Alta, and Willow Meadows. Several specimens have been trapped in the vicinity of Atwell Mill and Mineral King, east of the park.
- California Gray Fox. **Urocyon californicus californicus* (Mearns). Very abundant in the parks, but are most plentiful in the more brushy country below the coniferous belt, where they live near the openings.

Family FELIDÆ. Cats.

- Pacific Coast Cougar. The Mountain Lion. **Felis oregonensis oregonensis* Rafinesque. Not abundant in the parks, perhaps not exceeding half dozen individual animals at any one time. They are very wary and greatly avoid presence of man. They inhabit principally rough, broken country, raising their young (commonly two, sometimes three or four) in dense brush thickets or rock crevices. Being strong and powerful they prefer large game, such as deer, colts, hogs, etc. They were once abundant throughout the Sierra.
- California Lynx. **Lynx ruffus californicus* Mearns. Fairly abundant throughout the parks, and may be expected in any portion thereof during summer season; but owing to deep snow in the higher elevations in winter they are forced down below the coniferous forest in the more brushy country. They prey on all the small animals and birds and frequently kill small fawns. They are not courageous, and under ordinary circumstances flee from presence of man, but will fight when crowded. Young, usually two in number, are born in April and May.

Family PROCYONIDÆ. Raccoons, etc.

- California Ring-Tailed Cat. **Bassariscus astutus raptor* (Baird). Fairly abundant throughout their range in the parks, but most plentiful in the territory below the coniferous forests. Their presence is often noted at Colony Mill, Rocky Gulch, Clough Cave, and Cedar Creek, where no doubt they seek mice that inhabit these places. Kittens, usually four in number, are born during the months of May and June and but one litter during a season is produced. They are easily tamed, often becoming pets. The animal is often called "civet cat," but the name is erroneous.
- California Raccoon. **Procyon psora psora* (Gray). Not abundant throughout their range in the park, only appearing along branches of the Kaweah River, where they pass the day in hollow trees or crevices of rocks, doing most of their hunting for food at nighttime.

Family MUSTELIDÆ. Weasels, etc.

- Western Badger. **Taxidea taxus neglecta* (Mearns). Not common in the parks, and owing to their nocturnal habits are seldom seen. They are found in most localities along open ridges in the lower and around the meadows in the higher elevations, and seem most plentiful at Hockett and Sand Meadows. They live in burrows dug by themselves.
- Sierra Nevada Wolverine. **Gulo luscus luteus* Elliott. Rare, and seldom seen in the parks. They are most numerous in the vicinity of Mount Vandever, Silliman, and Alta. They are very voracious and eat anything in way of flesh that they can capture or find dead. They can not run fast enough to catch many animals, and obtain most of their food by opening the burrows of other animals, their long claws and great strength enabling them to dig rapidly. Under ordinary circumstances they will not attack man, neither do they seem to fear him, and will fight viciously when captured. Little is known about the breeding habits of wolverine, but young are supposed to be born during the month of June and range from one to four in number.
- Western Spotted Skunk. **Spilogale phenax phenax* Merriam. Very abundant in the parks, and may be seen during all seasons of the year. They live about the ledges, dense brush thickets, and in burrows dug by themselves. They are principally crepuscular and nocturnal in habit. They are bold, and have so much confidence in their means of offense and defense that they seldom run from anything.

- California Skunk. **Mephitis occidentalis occidentalis* Baird. Abundant in the parks and may be seen at all seasons of the year. They seem to have little choice of locality, and may be found any place where they can obtain food and shelter. They usually occupy hollow logs, piles of brush, or dig burrows for themselves. They are self-reliant, bold, and inquisitive. They do not fear man or beast. They are chiefly crepuscular and nocturnal in habit.
- Pacific Pine Marten. **Martes caurina caurina* (Merriam). Abundant in the parks throughout the coniferous forest belts. They roam about at all seasons and are often seen in immediate vicinity of tourist camps during the summer.
- Pacific Fisher. **Martes pennanti pacifica* (Rhoads). Fairly abundant in the parks. They live principally near wet meadows and streams. Owing to their nocturnal habit they are seldom seen.
- California Weasel. *Mustela xanthogenys xanthogenys* Gray. The only known place that California weasels inhabit in the park is at the junction of the Middle and Marble Forks of the Kaweah River. They are sometimes killed west of the park but are not plentiful.
- Mountain Weasel. **Mustela arizonensis* (Mearns). Generally distributed throughout the parks, but common in few localities. They are most plentiful in the heavy forest belt in the vicinity of Giant Forest.
- Little Mountain Weasel. *Mustela muricus* (Bangs). Fairly abundant between the elevations of 6,000 and 10,000 feet.

Order INSECTIVORA. Moles and Shrews.

Family TALPIDÆ. Moles.

- California Mole. **Scapanus latimanus latimanus* (Bachman). Not abundant in the parks, but found in most places where the soil is loose and of good depth. They are entirely subterranean in habits. They eat no vegetable food. Their principal food is grubs and other larvæ, insects, and earthworms.
- Southern California Mole. **Scapanus latimanus occultus* Grinnell and Swarth. Fairly abundant between the elevations of 4,000 and 10,500 feet.

Family SORICIDÆ. Shrews.

- California Shrew. *Sorex californicus californicus* Merriam. Not abundant in the park. They are found most plentifully in the lower elevations, where they inhabit principally the open ridges in summer and the dense brush thickets in winter. They have never been found above the 3,000-foot level.
- Sierra Nevada Shrew. *Sorex amoenus* Merriam. Not abundant in the park. They are found most plentifully in the vicinity of Little Kern River, Hockett, and Sand Meadows, where they inhabit wet meadows and places along the grassy banks of streams.
- Monterey Shrew. **Sorex montereyensis* Merriam. Not abundant in the parks. They inhabit principally the heavy forest belt, and have been seen no farther south than at Giant Forest.
- Dusky Shrew. *Sorex obscurus obscurus* Merriam. Fairly abundant between the elevations of 8,000 to 11,000 feet.

Order CHIROPTERA. Bats.

Family VESPERTILONIDÆ. Bats.

- Little California Bat. *Myotis californicus californicus* (Audubon and Bachman). Not abundant in the park, but appear most plentiful during autumnal migration. They may be seen at twilight coming from crevices in rocks along the banks of the Middle Fork of the Kaweah River.
- Western Red Bat. *Nycterus borealis veliotis* (H. Allen). Have been seen only at Clough Cave and Marble Fork Bridge in Elk Park.
- Hoary Bat. **Nycterus cinerea* (Beauvois). Inhabit the more dense forests of the parks. They migrate from the parks during winter. They are not plentiful.

RULES AND REGULATIONS.

GENERAL REGULATIONS.

[In effect Mar. 1, 1920.]

The following rules and regulations for the government of the Sequoia and General Grant National Parks are hereby established and made public pursuant to authority conferred by the acts of Congress approved September 25, 1890 (26 Stat., 478), October 1, 1890 (26 Stat., 650), and August 25, 1916 (39 Stat., 535):

1. *Preservation of natural features and curiosities.*—The destruction, injury, or defacement or disturbance in any way of the public buildings, signs, equipment, or other property, or the trees, flowers, vegetation, rocks, minerals, animal or bird or other life, or other natural conditions and curiosities in the park, is prohibited.

2. *Camping.*—No camp shall be made along roads except at designated localities. Blankets, clothing, hammocks, or any other article likely to frighten teams shall not be hung near the road.

Many successive parties camp on the same sites during the season; therefore camp grounds shall be thoroughly cleaned before they are abandoned. Tin cans, bottles, cast-off clothing, and all other debris shall be placed in garbage cans or pits provided for the purpose. When camps are made in unfrequented localities where pits or cans may not be provided, all refuse shall be burned or hidden where it will not be offensive to the eye.

Campers may use dead or fallen timber only, for fuel.

3. *Fires.*—Fires constitute one of the greatest perils to the park; they shall not be kindled near trees, dead wood, moss, dry leaves, forest mold, or other vegetable refuse, but in some open space on rocks or earth. Should camp be made in a locality where no such open space exists or is provided, the dead wood, moss, dry leaves, etc., shall be scraped away to the rock or earth over an area considerably larger than that required for the fire.

Fires shall be lighted only when necessary and when no longer needed shall be completely extinguished and all embers and bed smothered with earth or water, so that there remains no possibility of reignition.

Especial care shall be taken that no lighted match, cigar, or cigarette is dropped in any grass, twigs, leaves, or tree mold.

4. *Hunting.*—The park is a sanctuary for wild life of every sort, and hunting, killing, wounding, capturing, or frightening any bird or wild animal in the park, except dangerous animals when it is necessary to prevent them from destroying life or inflicting injury, is prohibited.

The outfits, including guns, traps, teams, horses, or means of transportation used by persons engaged in hunting, killing, trapping, ensnaring, or capturing birds or wild animals, or in possession of game killed on the park lands under circumstances other than prescribed above, shall be taken up by the superintendent and held subject to the order of the Director of the National Park Service, except in cases where it is shown by satisfactory evidence that the outfit is not the property of the person or persons violating this regulation, and the actual owner was not a party to such violation. Firearms are prohibited in the park except on written permission of the superintendent. Visitors entering or traveling through the park to places beyond shall, at entrance, report and surrender all firearms, traps, nets, seines, or explosives in their possession to the first park officer, and in proper cases may obtain his written leave to carry them through the park sealed. The Government assumes no responsibilities for loss or damage to any firearms, traps, nets, seines, or other property so surrendered to any park officer, nor are park officers authorized to accept the responsibility of custody of any property for the convenience of visitors.

5. *Fishing.*—Fishing with nets, seines, traps, or by the use of drugs or explosives, or in any other way than with hook and line, or for merchandise or profit, is prohibited. Fishing in particular water may be suspended, or the number of fish that may be taken by one person in any one day from the various streams or lakes may be regulated by the superintendent. All fish hooked less than 6 inches long shall be carefully handled with moist hands and returned at once to the water, if not seriously injured. Fish retained shall be killed. Twenty fish shall constitute the limit for a day's catch.

6. *Private operations.*—No person, firm, or corporation shall reside permanently, engage in any business, operate a moving-picture camera, or erect buildings upon

the Government lands in the parks without permission in writing from the Director of the National Park Service, Washington, D. C. Applications for such permission may be addressed to the Director or to the superintendent of the park.

7. *Gambling.*—Gambling in any form or the operation of gambling devices, whether for merchandise or otherwise, is prohibited.

8. *Advertisements.*—Private notices or advertisements shall not be posted or displayed within the parks, excepting such as the park superintendent deems necessary for the convenience and guidance of the public.

9. *Mining claims.*—The location of mining claims is prohibited on Government lands in the parks.

10. *Patented land.*—Owners of patented lands within the park limits are entitled to the full use and enjoyment thereof; the boundaries of such lands, however, shall be determined and marked and defined, so that they may be readily distinguished from the park lands. While no limitations or conditions are imposed upon the use of private lands so long as such use does not interfere with or injure the parks, private owners shall provide against trespass by their live stock upon the park lands, and all trespasses committed will be punished to the full extent of the law. Stock may be taken over the park lands to patented private lands with the written permission and under the supervision of the superintendent, but such permission and supervision are not required when access to such private lands is had wholly over roads or lands not owned or controlled by the United States.

11. *Grazing.*—The running at large, herding, or grazing of live stock of any kind on the Government lands in the parks, as well as the driving of live stock over same, is prohibited, except where authority therefor has been granted by the superintendent. Live stock found improperly on the park lands may be impounded and held until claimed by the owner and the trespass adjusted.

12. *Authorized operators.*—All persons, firms, or corporations holding franchises in the parks shall keep the grounds used by them properly policed and shall maintain the premises in a sanitary condition to the satisfaction of the superintendent. No operator shall retain in his employment a person whose presence in the parks may be deemed by the superintendent subversive of good order and management of the parks.

All operators shall require each of their employees to wear a metal badge, with a number thereon, or other mark of identification, the name and the number corresponding therewith, or the identification mark, being registered in the superintendent's office. These badges must be worn in plain sight on the hat or cap.

13. *Dogs and cats.*—Cats are not permitted on the Government lands in the parks and dogs only to those persons passing through the parks to the territory beyond, in which instances they shall be kept tied while crossing the parks.

14. *Dead animals.*—All domestic or grazed animals that may die on Government lands in the parks at any tourist camp or along any of the public thoroughfares shall be buried immediately by the owner or person having charge of such animals, at least 2 feet beneath the grounds, and in no case less than one-fourth mile from any camp or thoroughfare.

15. *Travel on trails.*—Pedestrians on trails, when saddle or pack animals are passing them, shall remain quiet until the animals have passed.

Persons traveling on the trails of the parks, either on foot or on saddle animals, shall not make short cuts, but shall confine themselves to the main trails.

16. *Travel—General.*—(a) Saddle horses, pack trains, and horse-drawn vehicles have right of way over motor-propelled vehicles at all times.

(b) On sidehill grades throughout the parks motor-driven vehicles shall take the outer side of the road when meeting or passing vehicles of any kind drawn by animals; likewise, freight, baggage, and heavy camping outfits shall take the outer side of the road on sidehill grades when meeting or passing passenger vehicles drawn by animals.

(c) Wagons used for hauling heavy freight over the park roads shall have tires not less than 4 inches in width.

(d) All vehicles shall be equipped with lights for night travel. At least one light shall be carried on the left front side of horse-drawn vehicles in a position such as to be visible from both front and rear.

17. *Miscellaneous.*—(a) Campers and others shall not wash clothing or cooking utensils in the waters of the parks or in any way pollute them, or bathe in any of the streams near the regularly traveled thoroughfares in the parks without suitable bathing clothes.

(b) Stock shall not be tied so as to permit their entering any of the streams of the parks. All animals shall be kept a sufficient distance from camping grounds not to litter the ground and make unfit to use the area which may be used later as tent sites.

(c) Campers and all others, save those holding licenses from the Director of the National Park Service, are prohibited from hiring their horses, trappings, or vehicles to tourists or visitors in the parks.

(d) All complaints by tourists and others as to service, etc., rendered in the parks should be made to the superintendent, in writing, before the complainant leaves the park. Oral complaints will be heard daily during office hours.

18. *Fines and penalties.*—Persons who render themselves obnoxious by disorderly conduct or bad behavior shall be subjected to the punishment hereinafter prescribed for violation of the foregoing regulations, or they may be summarily removed from the parks by the superintendent and not allowed to return without permission in writing from the Director of the National Park Service or the superintendent of the parks.

Any person who violates any of the foregoing regulations shall be deemed guilty of a misdemeanor, and shall be fined not more than \$500 or imprisoned not more than one year, or both.

AUTOMOBILE AND MOTORCYCLE REGULATIONS.

Pursuant to authority conferred by the acts of Congress approved September 25, 1890 (26 Stat., 478); October 1, 1890 (26 Stat., 650); and August 25, 1916 (39 Stat., 535), the following regulations governing the admission of automobiles and motorcycles into the Sequoia and General Grant National Parks are hereby established and made public:

1. *Entrances.*—Automobiles and motorcycles may enter and leave the Sequoia National Park on the west from Visalia and Lemon Cove by any of the three entrances from Three Rivers, i. e., the Giant Forest Road, the Middle Fork Road to near Moro Rock, and the Mineral King Road, and may enter and leave the General Grant National Park on all roads leading into or from the park.

2. *Automobiles.*—The parks are open to automobiles operated for pleasure, but not to those carrying passengers who are paying, either directly or indirectly, for the use of machines (excepting, however, automobiles used by transportation lines operating under Government franchise).

Careful driving is demanded of all persons using the roads.

The Government is in no way responsible for any kind of accident.

3. *Automobile trucks.*—Automobile trucks are admitted to the parks under the same conditions as automobiles except that trucks of more than 3-tons capacity are not permitted on any of the park roads.

4. *Motorcycles.*—Motorcycles are admitted to the parks under the same conditions as automobiles, and are subject to the same regulations, as far as they are applicable. Automobiles and horse-drawn vehicles shall have the right of way over motorcycles.

5. *Intoxication.*—No person who is under the influence of intoxicating liquor and no person who is addicted to the use of narcotic drugs shall be permitted to operate or drive a motor vehicle of any kind on the park roads.

6. *Roads—Hours.*—The use of automobiles will be permitted on the Giant Forest Road, from the western boundary of Sequoia National Park to Giant Forest tourists' camp grounds and return, at all hours. Automobiles will not be permitted to enter or leave General Grant National Park before 6 a. m. or after 9 p. m., except in case of emergency.

7. *Permits.*—Permits for Sequoia National Park shall be secured from the superintendent at Three Rivers, Calif., or from his authorized representative at Cedar Creek Station on the Giant Forest Road in the park.

Permits for General Grant National Park shall be secured at the office of the superintendent or at the ranger headquarters in the park.

Permits are good for the entire season, expiring on December 31 of the year of issue. The permit shall be conveniently kept so that it can be exhibited to park rangers on demand. Each permit shall be exhibited to the checking ranger for verification on exit from the park.

8. *Fee.*—The fee for an automobile or motorcycle permit in Sequoia National Park is \$2.50; and in General Grant National Park 50 cents. These fees are payable in cash only.

9. *Distance apart—Gears and brakes.*—Automobiles while in motion shall be not less than 50 yards apart, except for purpose of passing, which is permissible only on comparatively level stretches of road or on slight grades. All automobiles, except while shifting gears, shall retain their gears constantly enmeshed. The driver of

such automobile will be required to satisfy the ranger issuing the permit that all parts of his machine, particularly the brakes and tires, are in first-class working order and capable of making the trip; and that there is sufficient gasoline in the tank to reach the next place where it may be obtained. The automobile shall carry at least one extra tire. Motorcycles not equipped with brakes in good working order are not permitted to enter the park.

10. *Speed.*—Speed is limited to 12 miles per hour on grades and when rounding sharp curves. On straight open stretches, when no team is nearer than 200 yards, the speed may be increased to 20 miles per hour.

11. *Horns.*—The horn shall be sounded on approaching curves or stretches of road concealed for any considerable distance by slopes, overhanging trees, or other obstacles, and before meeting or passing other automobiles, motorcycles, riding or driving animals, or pedestrians.

12. *Lights.*—All automobiles shall be equipped with head and tail lights, the headlights to be of sufficient brilliancy to insure safety in driving at night and all lights shall be kept lighted after sunset when automobile is on the roads. Headlights shall be dimmed when meeting other automobiles, motorcycles, riding or driving animals, or pedestrians.

13. *Muffler cut-outs.*—Muffler cut-outs shall be closed while approaching or passing riding horses, horse-drawn vehicles, hotels, camps, or checking stations.

14. *Teams.*—When teams, saddle horses, or pack trains approach, automobiles shall take the outer edge of the roadway, regardless of the direction in which they may be going, taking care that sufficient room is left on the inside for the passage of vehicles and animals. Teams have the right of way, and automobiles shall be backed or otherwise handled as may be necessary so as to enable teams to pass with safety. In no case shall automobiles pass animals on the road at a speed greater than 8 miles an hour.

15. *Overtaking vehicles.*—Any vehicle traveling slowly upon any of the park roads shall, when overtaken by a faster-moving motor vehicle and upon suitable signal from such overtaking vehicle, give way to the right, in case of motor-driven vehicles, and to the inside, or bank side of the road, in case of horse-drawn vehicle, allowing the overtaking vehicle reasonably free passage, provided the overtaking vehicle does not exceed the speed limits specified for the road in question.

When automobiles, going in opposite directions, meet on a grade, the ascending machine has right of way, and the descending machine shall be backed or otherwise handled as may be necessary to enable the ascending machine to pass with safety.

16. *Accidents—Stop-overs.*—If, because of accident or stop for any reason, automobiles are unable to keep going they shall be immediately parked off the road, or, where this is impossible, on the outer edge of the road.

17. *Fines and penalties.*—Violation of any of the foregoing regulations will be punishable by revocation of automobile permit or by immediate ejection from the park, or by a fine not to exceed \$500, or by any combination of the three, and be cause for refusal to issue new automobile permit to the owner without prior sanction in writing from the Director of the National Park Service, or the superintendent of the park.

18. *Exceptions.*—Paragraphs 2, 4, 5, 6, and 7 hereof are not applicable to motor traffic on the Middle Fork and Mineral King roads in Sequoia National Park.

19. *Reduced engine power, gasoline, etc.*—Due to the high altitude of the park roads, ranging as high as 8,000 feet, the power of all automobiles is much reduced, so that a leaner mixture and about 40 per cent more gasoline will be required than for the same distance at lower altitudes. Likewise, one gear lower will generally have to be used on grades than would have to be used in other places. A further effect that must be watched is the heating of the engine on long grades, which may become serious unless care is used. Gasoline can be purchased at regular supply stations as per posted notices.

MAPS.

The following maps may be obtained from the Director of the United States Geological Survey, Washington, D. C., at the prices given, postage prepaid. Remittances should be made by money order or in cash:

The Sequoia and General Grant National Parks are mapped on the Tehipite and Kaweah quadrangles, scale 2 miles to the inch. Price, 10 cents each.¹

¹ May be purchased also by personal application at the office of the superintendent of the park, but that office can not fill mail orders.

The area north and east of the parks included in the proposed Roosevelt National Park is mapped on the Mount Goddard, Bishop, Olancha, and Mount Whitney quadrangles, scale 2 miles to the inch. Price, 10 cents each.

On these quadrangle maps the roads and trails are printed in black, the streams and lakes in blue, and the relief is indicated by brown contour lines.

LITERATURE.

GOVERNMENT PUBLICATIONS.

Government publications on Sequoia and General Grant National Parks may be obtained as indicated below. Separate communications should be addressed to the officers mentioned.

DISTRIBUTED FREE BY THE NATIONAL PARK SERVICE.

The three following publications may be obtained free by written request addressed to the Director of the National Park Service, Washington, D. C., or by personal application to the office of the superintendent of the park:

Glimpses of Our National Parks. 48 pages.

Contains descriptions of the most important features of the principal national parks.

Automobile road map of Sequoia and General Grant National Parks.

Shows the park road system, trail system, camps, garages, superintendent's office, routes to the parks, etc. Also contains suggestions to motorists. Printed in two colors.

Map of National Parks and Monuments.

Shows location of all of the national parks and monuments, administered by the National Park Service, and all railroad routes to the reservations.

SOLD BY THE SUPERINTENDENT OF DOCUMENTS.

The following publications may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices given, postage prepaid. Remittances should be made by money order or in cash:

The National Parks Portfolio. By Robert Sterling Yard. 260 pages, including 270 illustrations. Pamphlet edition, loose in flexible cover, 35 cents; book edition, containing same material securely bound in cloth, 55 cents.

Contains nine sections, each descriptive of a national park and one larger section devoted to other parks and monuments.

"The Secret of the Big Trees," by Ellsworth Huntington, 24 pp., including 14 illustrations. 5 cents.

Contains an account of the climatic changes indicated by the growth rings and compares the climatic conditions in California with those of Asia.

Forests of Yosemite, Sequoia, and General Grant National Parks, by C. L. Hill. 1916. 40 pages, including 23 illustrations. 20 cents.

Contains descriptions of the forest cover and of the principal species.

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- BRYCE, JAMES. University and historical addresses. 1913. 433 pp.
 "National Parks, the need of the future," pp. 389-406.
- CLARK, GALEN. "The big trees of California." 1907. 104 pp.
- JEPSON, W. L. "The silva of California." Memoirs of the University of California. Vol. 2, 1910. 480 pp. Illustrated.
- . "The trees of California." 1909. 228 pp. Illustrated.
- MUIR, JOHN. Our national parks. 1909. 382 pp. Illustrated.
 Sequoia and General Grant National Parks on pp. 268-330.
- MILLS, ENOS A. Your National Parks. 532 pages. Illustrated. Price, \$2.50.
 Houghton Mifflin Co., 1917.
 Sequoia and General Grant National Parks on pp. 99-115; 455-459.
- YARD, ROBERT STERLING. The Top of the Continent. 1917. pp. 244.
 Sequoia National Park, on pp. 188-212.
- . The Book of the National Parks. 420 pp. Scribners, 1919. Price, \$3.
 Sequoia and General Grant National Parks on pp. 69-92.

OTHER NATIONAL PARKS.

Rules and regulations similar to this for other national parks listed below may be obtained free of charge by writing to the Director of the National Park Service, Washington, D. C.:

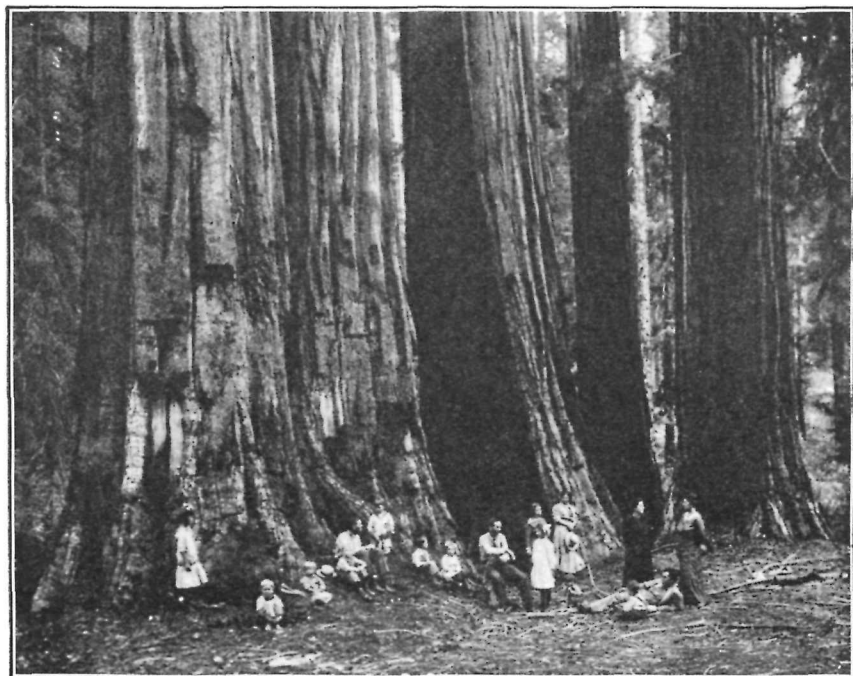
Yosemite National Park.	The Hot Springs of Arkansas.
Mount Rainier National Park.	Glacier National Park.
Crater Lake National Park.	Rocky Mountain National Park.
Mesa Verde National Park.	Wind Cave National Park.
Yellowstone National Park.	Grand Canyon National Park.

NATIONAL MONUMENTS.

The following publication relating to the national monuments may be obtained free of charge by writing to the Director of the National Park Service, Washington, D. C.:

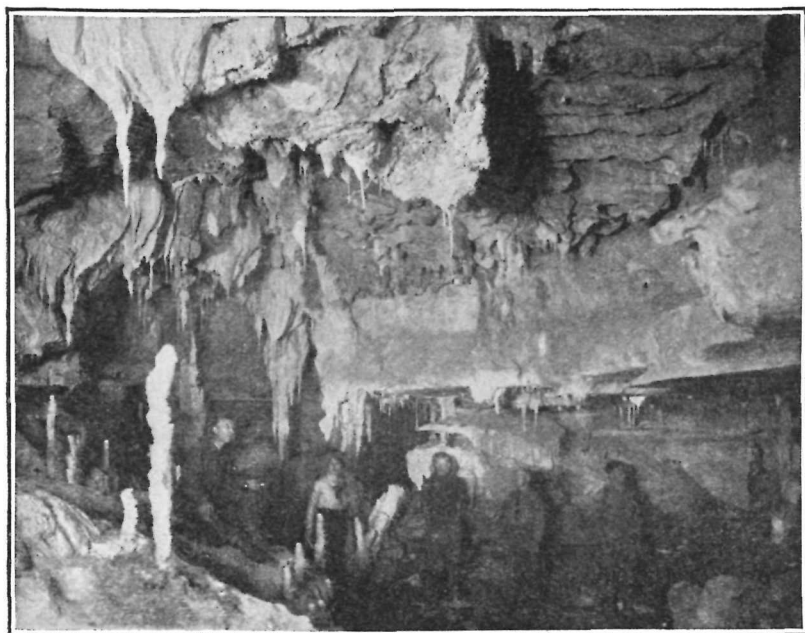
Casa Grande National Monument.





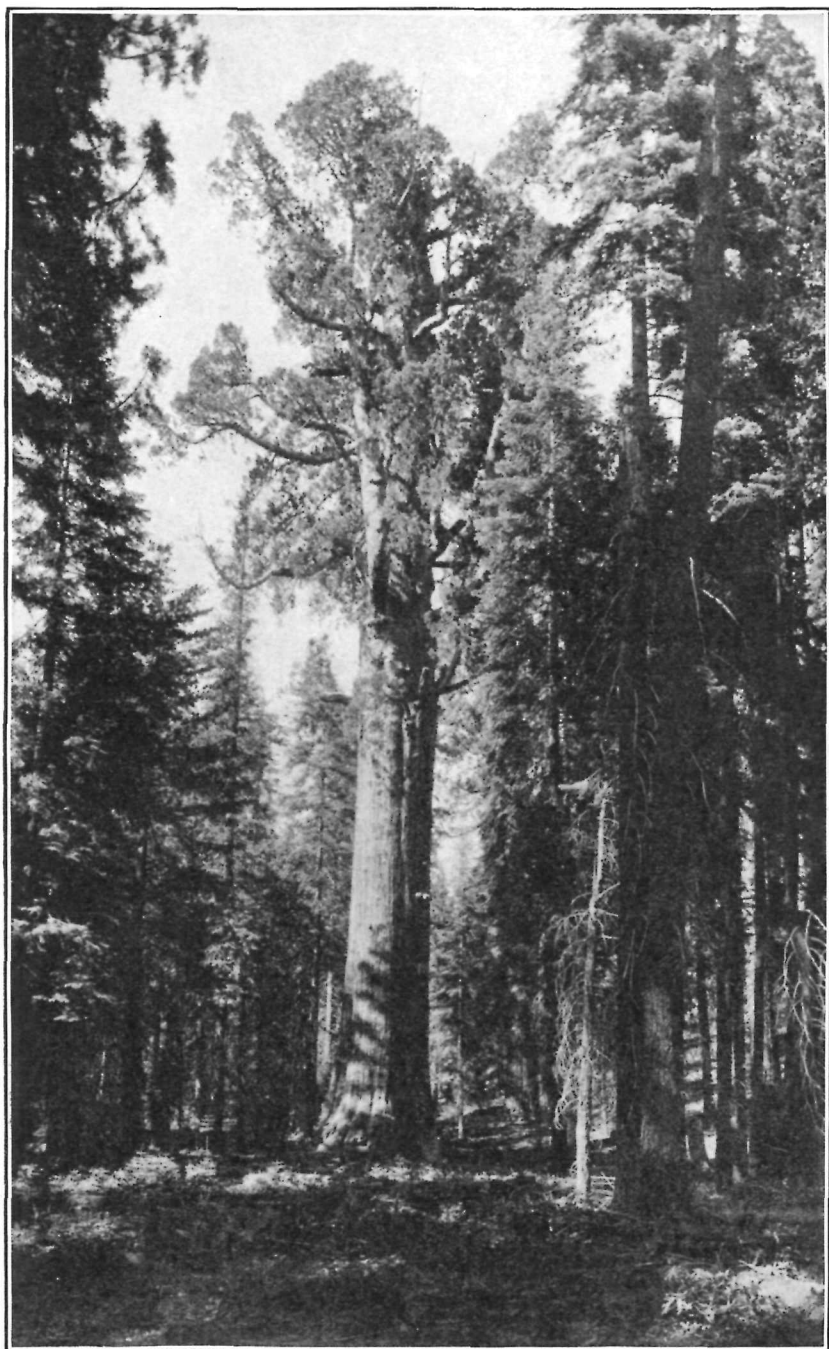
Photograph by J. E. Roberts.

PICNIC PARTY AMONG THE BIG TREES.



Photograph by Lindley Eddy.

MAIN GALLERY OF CRYSTAL CAVE.



THE GENERAL SHERMAN TREE.

The biggest and oldest living thing in the world.