

REPORT
OF THE
ACTING SUPERINTENDENT
OF THE
SEQUOIA AND GENERAL GRANT NATIONAL PARKS,
IN THE
STATE OF CALIFORNIA,
TO THE
SECRETARY OF THE INTERIOR.

1905.

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ANNUAL REPORT OF THE ACTING SUPERINTENDENT OF THE SEQUOIA AND GENERAL GRANT NATIONAL PARKS.

SEQUOIA AND GENERAL GRANT NATIONAL PARKS,
OFFICE OF THE ACTING SUPERINTENDENT,
Three Rivers, Cal., September 25, 1905.

INTRODUCTORY.

SIR: I have the honor to submit the following report of my duty as acting superintendent of the Sequoia and General Grant National Parks, California.

I was ordered to this park in the early part of April to look over camp sites. I then traveled over as much of the park as weather and time permitted, and had particularly an opportunity to observe the condition of the road to Colony Mill and part of the way to Giant Forest. I then returned to my post at the Presidio of Monterey, California, and marched here, arriving at the camp, near the ford of the North Fork of the Kaweah River, on May 3. During the month of May and a part of June the park was guarded by patrols sent out from this camp, the weather being inclement and snow in the mountains preventing detachments from being sent out and located permanently or of the camp being moved into the park.

The headquarters camp was moved about June 19 to the camp near Giant Forest, on Sequoia Creek, occupied last year by Captain Hamilton. The quartermaster department built tent floors and tent frames at that camp this year, and these floors and frames, being in sections, are stored under cover at the camp near Giant Forest for the benefit of the troop which may come here next season. During the summer months the weather in this valley gets very hot, while at the camp near Giant Forest the weather is cool and healthful, and the water in Sequoia Creek is always cool and of excellent and healthy quality, as shown by the excellent physical condition and good health of the men camped there this year. The water commences to run low in Sequoia Creek about the end of September.

For the benefit of those who may succeed me in this park, I would suggest that no campers be allowed on the upstream side of Sequoia Creek at any time. This precaution will always keep the water pure and healthy for the benefit of the troops, and the presence of campers might have a different effect, and sickness might result.

DETACHMENTS.

On June 1 a détachment of one noncommissioned officer and three men was sent to the General Grant Park. At first there did not appear to be any necessity for this detachment, but after consideration it was deemed prudent to send the detachment. At one time during the summer Ranger Davis, who was alone in the park, was seriously hurt by being thrown from his horse. The advantage of sending the detachment to the park was then apparent, as Ranger Davis was injured during the tourist season, and the park was well guarded by this detachment during his absence. A detachment was also established at Cloughs Cave, on the South Fork of the Kaweah River; at Cold Springs, on the Mineral King road; at Cedar Creek, on the Colony Mill road, and at the camp at Giant Forest. The detachment at Cloughs Cave watched the entrance to the park on the west and patrolled over to Hockett Meadows, down to Quinn's horse camp, and to the Little Kern River. This side of the park was also well protected by Ranger Blossom, who was in charge of the trail work.

The detachment at Cold Springs patrolled along the Mineral King road and that part of the park adjoining.

The detachment at Cedar Creek examined all parties entering the park along the Giant Forest road, and patrols were sent out from the detachment at Giant Forest to patrol in all directions east and north of that place. This, together with patrols made by Ranger Fry himself, and some special patrols under my direction, in my opinion kept the park well guarded and the regulations well enforced this year, although my troop was materially reduced in strength by the discharge of men for the convenience of the Government preparatory to its departure for the Philippine Islands early in November.

The soldiers on the detachments were permitted to carry their carbines this year, with instructions to use them only in killing mountain lions and coyotes, and so far I have been unable to learn of any soldier using his carbine for any other purpose. Two mountain lions were killed by Sergeant Lucier, of the Cold Springs detachment, and one wild cat by Sergeant Eckley, of the Cedar Creek detachment.

PARK RANGERS.

Rangers Britten and Blossom for the Sequoia Park, and Ranger Davis for the General Grant National Park, reported soon after my arrival at the camp at Kaweah. Ranger Blossom was assigned to the duty of patrolling in the southern part of the park and given supervision of the construction of trails in that vicinity. Ranger Britten was placed on duty in the north part of the park, and his experience and knowledge of the park was a great aid to me. I believe him to be a reliable and trustworthy man, who has the interest of the Government and this park at heart. During the season he went for service in the forest reserve, and Mr. Walter Fry was appointed ranger in his place and assigned to duty in the northern part of the park.

The rangers now on duty in these parks I consider men of excellent character, and in the performance of their duties reliable. I would recommend that the pay of the rangers be increased at least

\$200 per year, as, for the proper and efficient performance of their duties, I do not think their present pay is sufficient. They are required to keep a horse, but, under the present conditions in this park, to properly patrol, a ranger must have two horses and three pack mules; otherwise the ranger can only leave his home to patrol so far into the park as will enable him to return by night, so that if he goes to the east boundary of the park or to any special point in it he must always take along pack mules.

There is a cabin at Colony Mill and one at Rocky Gulch, the only cabins within the park affording shelter for a ranger and his horse in inclement weather. Ranger Fry has informed me that hay costs him \$30 per ton at Colony Mill.

In this connection I would recommend that cabins be built within the park—one to the east of Giant Forest, one in the Black Oak country, one at Hockett Meadows, and one at Cloughs Cave. These cabins would afford shelter for the rangers and a storage place for supplies and would do away with the necessity of being driven from the mountains by storms, as is the case now, there being no shelter.

The duties of the rangers in this park are lonely and dangerous and are performed far removed from the haunts of men, and their pay should be such as to enable them, in addition to reasonably meeting the expenses which their duties demand, to make some provision for the possibility of their being disabled in the performance of their duties, a contingency which, I understand, the Government does not provide for in their case. The cabins are a necessity.

DEPUTY PARK RANGERS.

Mr. Ralph Hopping was appointed deputy ranger, without pay, to assist in enforcing the park regulations during the tourist season. Broder and Hopping were authorized to transport tourists through the park and to establish the Sierra Camp for their accommodation, and they were permitted to drive cattle into the vicinity of the Sierra Camp and the Giant Forest for the purpose of supplying milk and beef to tourists in the Sierra Camp, to the soldiers in camp at Giant Forest, and to workmen employed in the park.

GRAZING IN THE PARK.

Cattle were discovered grazing near the north line of the park and some near the southeast corner. The owners were notified and the cattle driven out, it appearing that the cattle strayed in during the absence of the owners, and that there was at no time any intention to trespass. Early in the season a number of sheep were grazed up the South Fork of the Kaweah River until they got close to the park line and then returned without having trespassed on the park land. I have known of no sheep being within the limits of the park this season.

There was one small fire discovered in the park this season near Giant Forest, supposed to be due to a spark from some camp fire which smoldered for several days. The fire was discovered and extinguished before it spread or any damage was done.

GUNS.

Guns found in the possession of persons entering the park were sealed and permits given to take the guns through the park without breaking the seals. I have heard of no violation of the regulations in regard to the use of guns in the park until September 19, when a man (Arnet Stephens), mentioned in my letter of September 6, who, I was informed postponed a hunting trip until after the departure of the troop from the park, thinking it would be easier to encroach on the park limits, was found in company with another with their guns unsealed in the Hockett Meadows. This man, I was informed, went about three weeks ago to Atwells Mill, having the guns sealed at Cold Springs en route. Ranger Blossom, who was superintending the work on the Tar Gap trail, completed the work on the 18th and withdrew with the workmen down the South Fork trail. On that date I arrived at Hockett Meadows on a tour of inspection and was informed that Stephens and his companion had on that day come in over the trail through the park and camped on a corner of the Reserve, close to the boundary, while Ranger Blossom was temporarily absent. Stephens probably concluding that Ranger Blossom had gone down the South Fork trail, and that it would take a day at least to perform that journey and another day to return, left his camp on the reserve early on the morning of the 19th, and not suspecting my presence in that part of the country, marched directly into my camp en route to Cahoon Meadows, a good game country, where he could have two days good hunting before Ranger Blossom or a detail could return, and from which he could go out over the Salt Creek trail to the reserve, without being observed. I had Ranger Fry, who was with me, take one gun and Ranger Blossom take the other and receipt for them. I then directed Stephens and his companion to proceed down the South Fork trail and out of the park. I informed Mr. Stephens of what I had heard in regard to his intention to hunt, and also of his movements during the past three weeks. I think this, together with the fact of his being found in the park with the evident intention to hunt, will have a good effect upon others who might intend to violate the regulations, and that they will not feel so safe when they fear that their intentions and movements will be reported to the authorities.

In my opinion, tourists entering this park have no use for guns. Hunting is at no time permitted, and the game is not threatening or dangerous. The excuse might be offered that the tourists were en route to the forest reserve and were simply taking their guns through. I would therefore recommend that the carrying of guns through the park be permitted only on the Mineral King road, which is a county road, and that it be made generally known that no gun will be permitted within the park at any other place without first obtaining the permission of the acting superintendent, and that this permission be generally denied, except to those for whom the acting superintendent himself could be individually responsible. The sealing of guns would soon lead to the belief that the general right to carry guns in the park exists, and that the absence of one authorized to seal the gun at the point where the park was entered was sufficient justification for entering the park with an unsealed gun. Notices and regulations are

soon ignored and lose their effect when privileges begin to be considered as rights, and the work of the rangers and guards is increased, as a practice once tolerated, because of a misunderstanding or mistaken belief, grows into an ungovernable nuisance and a source of never-ending trouble. I therefore consider it best to have it generally known that no persons will be permitted to carry guns in the park, except over the Mineral King road, above mentioned. There would then be no excuse for a man being found in the park with an unsealed gun. Rangers and guards can not be at all points, especially along the reserve, at which people enter.

GAME AND FISH.

No hunting should be permitted at any time or under any circumstances in this park, except to the rangers, for mountain lion, coyotes, and wild-cats. I found one dead deer near the General Sherman tree, on which a bear was feeding and which appeared to have been killed by a lion, as an examination did not show any indication of its having been shot. It was reported that the "lone elk" on the Middle Fork was seen once and his tracks several times. Elk should be put inside the wire fence in the valley of the Middle and Marble forks. Large elk can not be transported, as they are strong, nervous, and aggressive, and will fight, kick, and worry themselves to death, but young elk can be captured, and the problem of transportation should be easy enough of solution; this I understand is all that prevents elk in numbers being in the park now. The valley of the Middle and Marble forks is one of the best places for the increase, protection, feed, and shelter of game. It should be preserved without interference, and any suggestion of encroachment should be met with a prompt and decided refusal.

This park should be a great game preserve, for while permission to hunt can not but cause the numbers to become less outside, here there should be no open season, and the game should be secure in life, liberty, and against molestation. Its preservation is a duty to the future as well as to the present.

Fishing was found to be fairly good in the principal streams of the park, but the absence of large trout caused me to prohibit fishing in all the streams except the Marble Fork, where the trout were found to be large and numerous. This can be accounted for by the fact that, except in the vicinity of the bridge, those who desire the pleasure of fishing in this stream must be good mountaineers, as they must go some two or three thousand feet down the side of a steep mountain to reach the river, and then their difficulties are only partly overcome, because the general course of the river is precipitous and dangerous. He who ventures can have pains for his trouble and fish for his pains. Those who come to these mountains should disregard trouble, pains, and danger; they are part of the pleasures of this place, and those who do will always find good fishing in the Marble Fork. I would suggest that the streams of this park be stocked with fish. A history of the result of stocking can be given by Rangers Blossom and Fry, and they can probably explain why in some parts of a stream fish thrive while they disappear from other parts of the same stream.

ROADS AND TRAILS.

The road from the park line to the Old Colony Mill was widened, except where the solid rock on the upper side of the road prevented; rocks were blasted out of the roadbed, and it was reduced to a smooth surface and even grade; sharp convex points were cut away, making the road straighter and wider, and concave places were widened so that teams could swing around without danger and with ease. At a point between Cedar Creek and the Old Colony Mill, where the road was narrow and on the side of a steep grade, holes were drilled in the side of the sloping rock, steel bars inserted therein, and the retaining wall built against these bars; the rock on the upper side of the road was blasted out, and an inclosed drain put on the inner side to convey away the water which, until the dry season, pours over the rocks and at which animals shy. The road at this place was made wide enough for wagons to pass, in order to make as safe as practicable a particularly dangerous place. I would request the notice of the next acting superintendent to this place in the road to observe the effect of the winter storms upon it. It looks well now, but might not stand the effect of storms so well, and something useful in mountain-road building might be learned from its condition next summer. Landslides which obstructed the road on the steep grade near Colony Mill were removed, and the road to Giant Forest, which was badly washed and cut by winter rains and storms, repaired.

The reservoir at Watsons Springs, on the Park road, was completed. The construction was delayed until the surface water, running in the depression down the mountain side, dried up; then the rock was blasted until the spring was found, a reservoir was put in and closely cemented to prevent surface water from entering. The water was then conveyed by a buried pipe to the roadside. There a nice cool stream of water runs constantly, a refreshing source of relief for weary, warm travelers from the hot valley.

The road within the park limits is now in a good general condition, and beyond the money retained from this year's appropriation, which should be sufficient to put road and trails in a good condition for next season, I would recommend no expenditure for repairs for next year. I would recommend that Ranger Fry be authorized to spend \$150 to hire a man for three months to aid him in making turnouts and ditching where necessary to guard against the destructive effects of rain and floods on the steep grades, and in taking up the flooring of the Marble Fork Bridge after the tourist season closes. This is necessary to let the snow fall into the river, as its weight endangers the bridge. The roads are in good condition, and their condition next season will be a good indication of the interest of the park employees, and I see no reason why the opening of next season should not find the road and trails in nearly as good condition as at present, without drawing upon the next appropriation for repairs.

A judicious use of retained money will leave the next appropriation for original work of a permanent nature. There is one place, near the Colony Mill, where the road is narrow and dangerous. This should be widened, and as the work would require the removal of about 2,000 cubic yards of granite rock, it is expensive, but I believe it should be done for the safety of the traveling public. Ranger Fry

knows the location and will point it out to the next acting superintendent for his judgment. This is the only work I would recommend to have done on the road from the next appropriation. Much more could be indicated, but it is left for my successors to take up gradually such parts of progressive improvement as the development of the park demands. I only ask to have a necessary piece of work done, which, by the careful expenditure of a reasonable appropriation, can be finished next season.

I am of the opinion that by the end of this month nearly 30 miles of new trail will have been constructed in this park this year. The new trail up the South Fork of the Kaweah to Hockett Meadows was completed. A trail from Hockett Meadows to Little Kern River and from Hockett Meadows around the mountain near Tar Gap has been completed, with the exception of about 1 mile, which runs through the reserve. I would recommend that Ranger Blossom be authorized to complete the trail through the reserve, as it is the connecting link between the trail in the park at this place. A trail was constructed on the north side of the park from beyond Old Colony Mill to Admiration Point near the falls of the Marble Fork. About 2 $\frac{3}{4}$ miles of trail was constructed between Seven Mile Hill and Sugar Bowl, and work is progressing now on the Black Oak trail.

The old trails along the South Fork and through Tar Gap were rough, steep, and discouraging, and in the language of the place, "had a bad name." The new trail has a good name, and one can ride from one end to the other without dismounting and without fear. The Seven Mile Hill trail should be completed next year; the necessity will be self-evident when seen. The Black Oak trail should be completed. It shortens the distance to the General Grant Park about 10 miles and enables patrols to be made in a part of the park which can not be guarded now.

As an acting superintendent can not be present while work is going on in different parts of the park, he should have some idea of the amount of labor required for a specific piece of work; otherwise he is in the hands of others, and lack of information is soon taken advantage of by employees who are ever ready with excuses, reasons, and delays; public employment is then looked upon as a private "snap." Results for the expenditure of public money should be looked for and required, and anything showing a tendency to distribution under the guise of employment without compensatory results should receive a speedy check. In order to be able to have a check on the work done in the park, I would suggest the following as part of a guiding line, which can be departed from as conditions require:

Two men and two horses, with a plow, should loosen 40 yards of earth per hour. One man with a pick should loosen 40 yards per day. One man should load 2 yards of earth per hour in a wagon. A drag scraper should haul, at 40, 50, and 75 feet, 22, 14, and 10 yards of earth per hour at the respective distances. At 100 feet a cart should haul 12, a wheel scraper 6, and a drag scraper 8 yards per hour. At 200 feet, 10, 5, and 4 yards, as above. A wagon should be loaded in four minutes and a cart in two. There should be 6 shovelers for each wagon at loading point, and 3 for each cart. A gang should not be required to load more than 10 wagons or carts per hour. One man should spread 10 yards per hour. In rock, drilling should be done at

about 8 inches per hour, and three-fourths pound of explosive used for each cubic foot of rock removed.

The above gives the foundation points of the very practical part and no more; just such points as would have been useful to me when I came to this park, so briefly it may be stated that earth costs 25 cents, shale \$1.25, and rock \$3 per yard. I consider this as above the average, but if accepted as a basis by one new to the park the Government may be certain of definite results for money expended.

Trails are good in this park wherever built, and they should be systematically continued until the park is well cut with them. They are a protection against fire, and make guarding easier.

MORO ROCK.

This rock is large and precipitous. From the top a view of the valley of the Middle Fork, about 4,000 feet down, and across the canyon to the Castle rock is one of the finest views in the park. The climb to the top is difficult and dangerous, but people will risk anything for sensation and scenery, and as people will take the risk, I would recommend that crude steps be cut to the top and a hand rail put in to enable all who wish to climb to be able to do so with safety.

A recommendation for safety will probably be made at some future time, in regard to Admiration Point, to which a trail was built this year, but the place is not yet sufficiently known or visited, although here one can look down a perpendicular distance of 1,500 feet or more, get a complete view of the falls of the Marble Fork, about 2,000 feet high, and have the same scene along the valley of the Marble Fork that is had along the Middle Fork from Moro rock.

SEQUOIA TREES.

These trees are among the natural wonders of this park, and every effort should be made toward their preservation and propagation.

When a tree is seen with the stamp of two or three thousand years upon it, with no surroundings to indicate that it ever had an ancestor, the mind soon finds itself at the end of its questioning in contemplation of the great age of the tree and wonder from whence it sprung. If for no other reason than the preservation of these trees, no encroachment should on any pretext be permitted on a foot of this park. If a plausible pretext can be advanced for an encroachment on the park, one just as plausible can be advanced at a later date for attacking these trees. No opening should be given that could possibly lead to a suggestion of destroying in a year trees that took three thousand years to grow. Sequoia trees that have been shedding seed for one thousand years are seen standing alone with no young trees in their vicinity. The ground near these trees is generally covered by withered needles, leaves, etc., which fall, and as the seed of the Sequoia is very small, light, and delicate it never reaches the ground through the covering mass, and so for centuries these seeds have been falling and dying, leaving the old tree to stand and reign alone in its grandeur and glory. This seems to be a wise provision of nature to keep these trees in check, for once a young Sequoia starts it will fight for existence against everything, and death is a stranger to it so

long as it can keep a root in the earth, get a ray of sunlight, and keep a connecting strip of bark from the ground to a live branch. If the covering mass of needles is burnt and the seed falls in the ashes, they then reach the soil and young seedlings spring up by thousands. Ranger Davis, of the General Grant Park, is an authority on this, and I would suggest that he be directed and encouraged to raise young Sequoia seedlings, and an assistant be given him for that purpose if he deems it necessary.

On the 10th of this month I shipped by express to the Yellowstone National Park about a dozen young Sequoias to be transplanted there. Should these thrive the gradual scattering of these trees through the country can be slowly made. When it is considered that the young trees shipped were taken from the ground in this park in September, not the month in which shipment and transplanting should take place, it will be seen, if they take root and grow, that young Sequoias can be shipped at any time.

Trees transplanted under my direction in this park last July are doing well, and so transplanting can take place in this park at any time during the season when the sap is running.

I believe these trees, if properly handled, will grow in any place and in any climate. They grow in the valley and in Visalia, where the temperature often stands at from 100 to 110° in summer. They grow at a height of about 7,000 feet. They grow where the soil is a rich loam and thrive on the barren side of a rocky mountain. Underbrush and opposing trees have been cleaned away from around more than 1,000 young Sequoia trees near the Giant Forest this year. They seem to do very well, but it would be advisable to observe the effect of the winter storms and snows upon them. If they are found to thrive next summer I would recommend that a systematic search be made of the forest to discover young trees and that clearing be made around them, such as I made this year, and that where numerous they be thinned out and transplanted.

Around the Giant Forest there seems to be a fight going on between the Sequoias and the other trees of the forest, while in the grove up the South Fork, near Hockett Meadows, where the Sequoias seem to have gotten the upper hand, this opposition does not seem to exist. Young trees are there growing in forests by the thousand. It is there that I noticed them growing on the side of a barren, rocky mountain, young trees being very numerous. I thought once that I understood the nature of these trees rather well, but I find contradiction, and have concluded that what one learns in a season is limited. Mr. Fry knows what was done this year, and can observe for next season and report results.

Live trees should be protected and the growth of young ones encouraged. Fallen trees should not be disturbed, but should be left as natural wonders. Sequoias are slow to decay, and are not attacked by insects. There is some substance in the wood which is poison to them and guards the down timber from decay for years.

To permit the cutting down of trees for commercial purposes would encourage a desire to cut standing trees, and I would venture the opinion that if only limited permission were granted the Sequoia big trees would disappear from the park in twenty years.

TIMBER.

At the rate at which forests are becoming denuded by the operation of private lumber companies it is probable that there will be little timber left in twenty-five years, except what is owned by the Government. Any suggestion to cut ripe and mature timber in the park should therefore be discountenanced. The cutting of ripe and mature timber would be a temptation to prey upon unripe and immature timber, and the felling and removal would result in the destruction of young trees, making destruction many times more destructive. Again the question would arise, What is ripe and mature timber? Sugar and yellow pines may be ripe and mature, having reached the limit of their growth, while Sequoias, many times larger, would not be ripe and mature for 2,000 years to come. What then would be considered? The size of the trees and their lumber value, or their ripeness and maturity? I fear the commercial instinct would decide that size and value constituted maturity.

Systematic forestry, or the planting of a young tree for every large one cut, may at first look well, but in practice it would be but the planting of only one young tree for each large one and for dozens of young ones destroyed by felling and hauling. Systematic forestry should not be permitted to exercise its misleading influence to the extent of encouraging the hope that the live or dead timber of this park will at any time be placed on the market, but its beneficial influence should always be sought by encouraging and seeking the best methods for promoting the growth of young trees and the protection of the old ones. The advantage of removing down timber, both as a commercial venture and as a protection to the park against fires, may be represented. I would consider such a representation as only a desire to get a foothold in the park. There is not sufficient down timber (except Sequoias) of commercial value in the park to justify any permission to work or haul it. The down timber consists of dead firs and pines, which are pretty well decayed before they fall. In a few years these dead trees decay and return to dust, thus aiding to replace on the steep mountain sides the soil washed down by the rains and floods. These dead trees are of as much commercial value and as great a benefit decaying on the mountain sides of this park as they would be in the sawmills of a lumber company. Thick undergrowth springs up around them; they aid in preserving the forest; the preserved forest prevents destructive floods and burning drought. So far as I can observe the life and welfare of Tulare County depends upon the preservation of the forests in this park and upon the preservation of the park itself against encroachment.

The Kaweah River is the main artery of the county, carrying water for irrigation purposes. It is water that keeps this valley, with its tropical summer heat, from becoming a desert. It is water that causes its fruit orchards and agricultural industries to bloom and prosper, and the main source of this water supply is the Kaweah River. The Kaweah River receives its water mainly from the rain, snows, and springs of this park. A glance at the map will show the Kaweah River dividing into the South Fork, which, with its tributaries, runs entirely within the park; the East Fork, which rises in the reserve and flows through the park, near the Mineral King road; the Middle Fork, with its branch; the Marble Fork, running past

Moro rock, and the North Fork, draining part of the reserve and a large part of this park. This park, with the sides of the mountains covered with forest and undergrowth, sloping at a steep grade down to the beds of these rivers a depth of from 3,000 to 5,000 feet, seems destined by nature to be the reservoir to supply the water needed for the valley, and this should never be lost sight of.

WATER POWER.

The water power to be derived from the four rivers of the park—the South, East, Middle, and North forks of the Kaweah—very soon attracts the notice of visitors. The water is used to generate electricity by tapping the river at a high point, then running the water in a ditch along the side of the mountain until a fall of from 1,000 to 1,500 feet is obtained. From this height the water is run through a pipe to the motors which generate electricity. When the power is exhausted the water is returned to the river to flow on its course to the valley. There is now a ditch running from outside the park line on the East Fork to the power house with a capacity for generating 3,000 horsepower of electricity. I understand this power company is building dams to confine the water in lakes on the reserve, so as to have sufficient for power purposes during the year. This park has one interest in this reserve water, and that is the right to have at all times sufficient water running in that part of the East Fork within the park to preserve the fish therein. The residents of the valley have even a greater interest, because, as I understand, undisputed possession of water for five years gives a property right in it. So if this company retains possession of this reserve water for five years those who live in the valley and who need it for irrigation purposes can get no water except they buy it from the power company.

I was informed that the company has been promising, but failing, to sign an agreement with the Tulare County Water Association to turn this reserve water loose when needed for irrigation purposes. It can thus be seen how, under guise of power generation, its advantages to the community, and the necessity for storing water for power purposes, a property right in and a monopoly of nearly all the water which flows in these mountains could cunningly be acquired by a company or corporation to the detriment of the settlers of the valley, for I think that control of the life of the valley depends on control of the mountain water. There is another ditch running up to the park line on the Middle Fork, across which there is a dam. I was informed that at this time of the year, when the water is low, the quantity of water running in the ditch is not sufficient to generate the calculated power and that it is desired to be permitted to encroach on the park to build a dam to store water for power purposes. If this ditch does not meet expectations, the company should bear its disappointment, as it is not the province of the United States to make good the business blunders of companies or corporations or aid in correcting the professional errors of their engineers. No permission to use one foot of the park should be granted.

Should permission to use the park be granted, conflicts in administration would soon arise. So it is natural to suppose that following in the wake of permission to build a ditch or dam would soon come the suggestion to cut off half a township in one or more ranges, so as

to place that ditch and dam outside the park. Control of the North and South forks is all that is then necessary, and the people of Tulare County could only live by the good will and sufferance of the power company. The valley of the Middle and Marble forks would form a natural reservoir 3,000 feet deep. A dam of no great size near the Barnafee flats would control the water from the forests and mountains. There would be no further use for forests to preserve the water—dams would do that—and then would come an attack on the forests and the final destruction of the park. Looking at the park as I do, I would recommend with all available force that no permission or right be granted to anyone in this park which can not be immediately vacated after twenty-four hours' notice from the Department. I am in favor of having every available unit of power generated from the water. I would favor the power companies getting the use of the water, if they are prepared to use it, and then when it is used to be delivered in the river, to proceed free on its natural course. I do not object to the use, but I do object to the injurious ownership.

I would respectfully suggest that the water question in the park be inquired into, and that if the storage of the water is found necessary or beneficial the Government build the dams, and then let the power companies use it as it passes out of the park. Irrigation and power should grow together. Irrigation should not be sacrificed, limited, or governed in order that the profits of the power companies may increase; neither should power be prevented, so long as the right use of the water is not interfered with. They can thrive and aid each other for the general good so long as the Government permits no encroachment on the park and retains control of the water, and by permitting it to run free across the park lines into the rivers of the State in such quantities as may be needed and providing for retaining the surplus water, which may be running to waste, until such time as it can be useful, even justice will be done to the people and to the power company. One foot of water concession within the park lines should never be granted to any person, company, corporation, or private concern.

PATENTED LANDS.

The Giant Forest road is stopped at the patented lands. If the Government acquired ownership of the land, the road should be extended around to the Sherman tree and thence to Alta Peak; as it now stands, the road can not be extended. The present title to patented lands should be extinguished. It is beyond my understanding how much of the land in the Giant Forest known as "swamp and overflow" can be classed as such. If the intention of such a classification is the reclamation of the "swamp and overflow" part, I am of the opinion that no reclamation of this land could at any time be effected and have been unable to see where any effort to reclaim has been made. Those who know more about the matter may offer a satisfactory explanation, but I can not. It looks to me as if the value of the timber on the dry land governs in declaring it "swamp and overflow," because of the existence of a small meadow in the vicinity, and it would appear that the title purchase was made at its value as

"swamp and overflow," and when sale is to be made to the Government the fixing of value is governed by its value as timber land and not by its quality as "swamp and overflow."

The case presents some doubts to my mind. I would therefore recommend an investigation. If, as a result of an investigation, it should be found that a fraud has been perpetrated on the Government and the owners were in any way a party to the fraud, they should be entitled to no consideration and the Government should take the land. If fraud was perpetrated and the owners were not parties to it, they should be paid their purchase price, together with all expenses for taxes, etc., with a reasonable rate of interest on their investment. That would be justice to them, as the Government should not be powerless to correct frauds and should not suffer from the dishonesty of its employees. If the lands are found to be honestly as represented, then the owners should be paid the actual value of the land, and the Government should get possession of the land for the benefit of the park and the protection of the big trees; then the Government and the owners get a full measure of justice. I would like to see the patented lands owned by the Government, for then a source of much annoyance would be removed. I would recommend that the Atwell Mill property be purchased. The large sequoias are nearly all cut off that land, but the young trees are so numerous that for their preservation and growth it would be well to get possession of the land. All this land borders on the Mineral King road, and all the patented lands in that vicinity should belong to the Government.

I would suggest that the State of California cede to the Government the swamp and overflow lands in township 18 south, range 30, known as the "Cahoon meadows," or "Milk ranch." I understand there is litigation going on now between the Cahoon heirs and a Doctor Pettit, of Visalia, for a title to this land. I have directed that no one be permitted to settle on this land, as no one can yet claim ownership, and to enter the land it is necessary to trespass on the park. Cahoon's lawyer has directed him to enter and settle on the land regardless of orders to keep out, and this has been done. As Cahoon could not show title or point out the metes and bounds, I had him put out of the park, but I understand he is about to return (after I depart), acting on the advice of his lawyer. I am of the opinion that there is a speculation at the bottom of this litigation, in expectation that the Government will purchase the lands within the park, and that whoever gets title can get a good price for the land. I am further of the opinion that if the Cahoons get the title, their lawyer, and not they, will profit by the transaction. I was informed that Cahoon was being paid for settlement. Claim to this land has lain dormant for eighteen years. The Cahoon meadows are one of the best game and fishing places in the park, and there is also valuable timber. Whoever gains possession of the meadows can do great damage to game, and it would be necessary to keep a ranger there permanently to keep the owners within proper limits. As I understand the State of California now owns the land, a great deal of trouble could be avoided and a great benefit done to the park by ceding the land to the Government.

BOUNDARY OF THE PARK.

The limits of the park should be extended to include all the country east to the summit of the Kaweah Range and Sawtooth. The tops of these mountains are barren, while farther down toward the park is a good game country on the reserve. Hunters from the reserve can now enter the park, while if the park extended to the barren summit of the mountains the game could be easily protected, and this park would then be in fact a great game preserve, and there could be no excuse for hunters appearing in the game part of the park, while now they are only a short distance away on the reserve. Place these barren mountain sides as a barrier between the game country on one side and the game country on the other and the park game is safe. This extension would also bring the whole watershed of the rivers running through the park within the park limits. It would make the progressive development of the park easier and would make park protection easier.

There are several good reasons why the park should be enlarged, but not one, which would stand the searchlight of analysis, why one foot should be taken from it. I heard it intimated that the park should be transferred to the reserve, and that troops should be kept away from the park and the management left to civil employees. I believe neither of these views should for a moment receive a serious thought, and I am inclined to suspect that he who advances them has, either for himself, for his friends, or acting under a one-sided influence, "an ax to grind." The park should not be transferred, and troops should be sent here for several years to come. The effect would be good, as soldiers are not liable to be influenced by favor or intimidated by the effect of any intimations of the power of local interests or influence. They have no interest in the place or the community, and their only interest is to do impartial justice to the Government and to the individual, and to the best of their ability direct their thoughts and acts to the public interest. The sending of troops here is expensive, but in my judgment the expense is incurred for a good purpose which reaches beyond the immediate present.

Now that there is a good trail along the South Fork much travel through the park will be directed that way. A road should be constructed along this trail to Hockett meadows, but I would recommend no expenditure for that purpose until the county builds a road to the park line. When the county builds this road, then the park road should be pushed through. The question of water power will arise here also. Its reasonings and contentions should be halted at the park line. A road should be built to the Barnafee Flats, the only place within the park where a permanent camp throughout the year could be established for troops, but the road leading to the park line is owned by private concerns. I would not recommend any expenditure until the county declares the road running to the park line a county road. The road should then be constructed. Should a power company succeed in getting into the park on the Middle Fork, and having a part of the park cut off, the Barnafee Flats would be a part of the land then put outside the park limits and the Government would find itself without a place to camp troops if needed here. Camping is now done on private grounds until the melting of the

snow permits the camp in Giant Forest, in June. Let the privilege of camping on private lands be denied, and let the Barnafee Flats be cut out of the park, cunning would have accomplished its purpose, the exclusion of troops would be nearly an accomplished fact, and the park, maintained at public expense, would be in a fair way to become the private watershed and reservoir of a corporation. At the park line commercial contentions should cease, and within there should be equal rights for all. If benefits springing from within the park can be increased, their direction should be by the Government. No favor should be shown within, but a strict neutrality maintained between all interests which conflict on the outside.

RECOMMENDATIONS.

I recommend that another ranger be appointed to guard the south line of the park. That part is difficult for Ranger Blossom to reach, and it should be guarded. I visited the General Grant Park early in the season and was pleased with the work of Ranger Davis. I have intrusted the work in the park to him. He should be encouraged to study and grow Sequoias. He is interested in this work, and good results can be looked for from him.

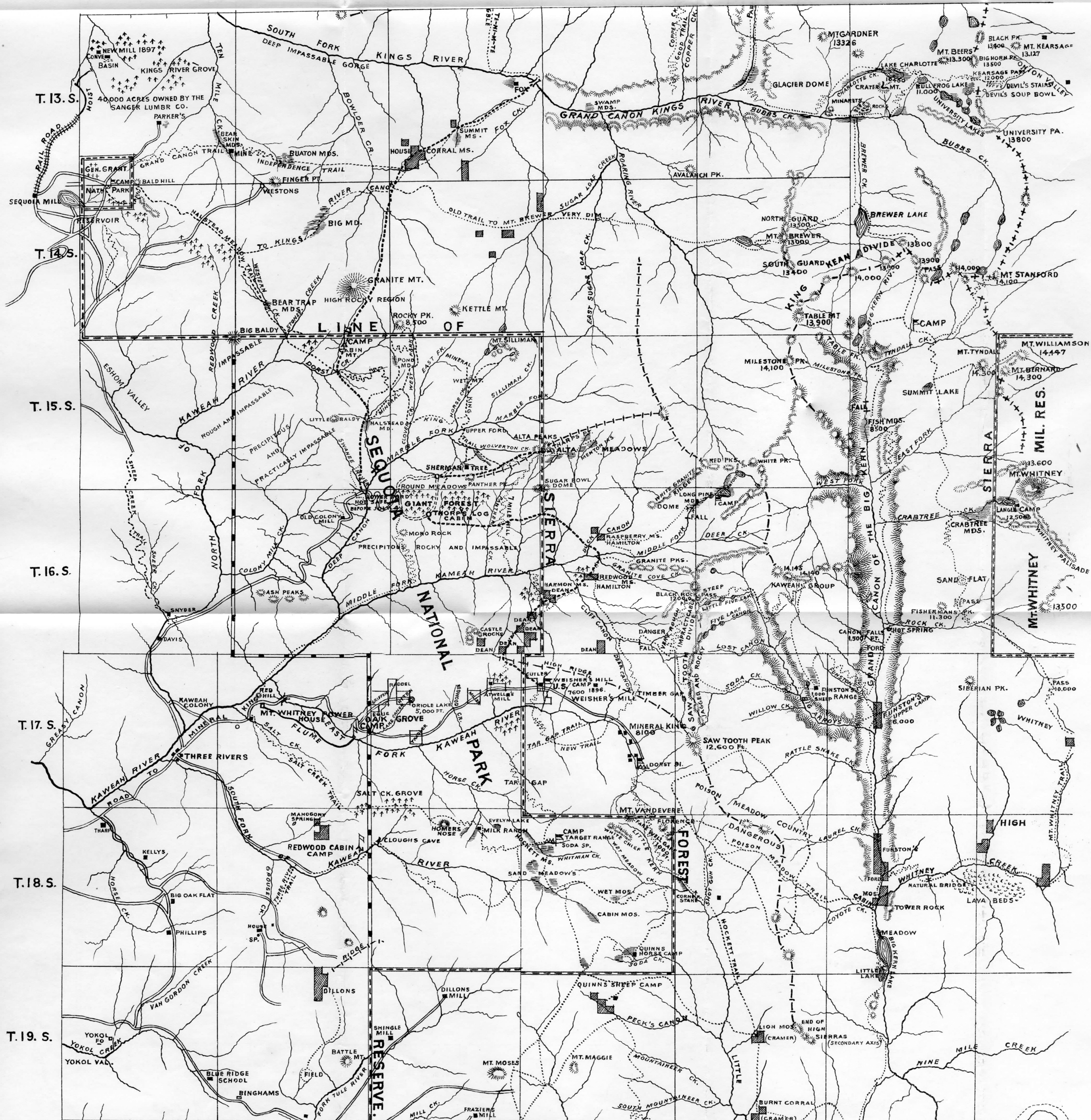
It would be for the interest of the park to have an inspector visit it each year. The great heights, deep caverns, and steep grades of the mountain sides must be seen to be understood, and no description can convey the meaning or the mental picture of the writer. The visit of an inspector who could see conditions, note improvements, and see that results were given for money expended, would be a satisfaction to an acting superintendent and a benefit to the park. His expenses, if paid from the park appropriation, would be money well spent. I think the advantage is clear.

As there are few subjects on which opinions and conclusions agree, it is to be expected that many would differ from the views expressed in this report. They are, however, the result of such careful thoughts as I could give to the interests of the park within the limits of time and opportunity, and as such the report is respectfully submitted.

Very respectfully,

JOHN O'SHEA,
Captain, Fourth Cavalry, Acting Superintendent
Sequoia and General Grant National Parks.

The SECRETARY OF THE INTERIOR,
Washington, D. C.



ROAD TO GIANT FOREST, ...
 EXTENSION AROUND FOREST, ...
 TRAILS, PROPOSED, ...

SKETCH OF THE
 SEQUOIA AND GENERAL GRANT NATIONAL PARKS
 and the
 SIERRA FOREST RESERVE
 In their Immediate Vicinity
 Surveyed and drawn by
 2^d Lieut. M. F. Davis, 4th Cav'y A. E. O.
 1896.