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THE RESTORATION OF PEACE.

DEPARTMENT OF THE INTERIOR,
NATIONAL PARK SERVICE,
Washington, D. C., November 23, 1918.

Sir: With the war brought to a successful conclusion, the welcome announcement of which has come since this second annual report of the National Park Service was prepared, I foresee a great impetus to national-park travel during the coming summer. The travel of this year was within 93 per cent of that of 1917, but was maintained at that remarkable level at the height of the war by the influx of motorists in their own cars. If tourist rates by rail are announced in ample time before the season opens, it can safely be predicted that the combined railroad and automobile travel will insure to the national parks the greatest attendance and the most successful season they have ever enjoyed.

Progress is shown in carrying out the plans I have already laid before you to make one of the most interesting of the parks accessible in a larger way than ever before, and it only needs the United States Railroad Administration's early announcement of low excursion rates for next summer's tourist travel, with a continuation of the hearty cooperation is has already shown us, to make the plan an assured success. A number of projects for which appropriations have already been made will now be energetically pushed to completion by the National Park Service.

I believe, too, that Congress will consider favorably the starting of one or two important road projects which we omitted from the estimates for the next fiscal year on account of war conditions but which I propose to submit for your consideration in supplemental estimates. The people will assuredly turn their eyes longingly toward their great national recreation ground, and it behooves us to make every preparation to welcome them.

Very respectfully,

STEPHEN T. MATHER,
Director.

The SECRETARY OF THE INTERIOR.

ANNUAL REPORT OF THE DIRECTOR OF THE NATIONAL PARK SERVICE.

DEPARTMENT OF THE INTERIOR,
NATIONAL PARK SERVICE,
Washington, October 15, 1918.

Sir: At this writing the situation abroad seems to bring the close of the war within the limits of reasonable conjecture, and encourages me to look forward to the time, next season in all probability, when our interim work on the national parks may do its belated but none the less true and useful bit by furnishing recuperation to thousands who have given themselves ceaselessly and untiringly to the cause of peace by earnest labor for the success of the war.

Whenever this hiatus between the lapse of the war impetus and our resumption of national development may arrive, the parks will be ready with their calm and glorious beauty, their inspiration, and their marvelous recuperative gifts. There the tired war workers may give themselves without stint to the business of restoring minds and bodies in preparation for the great era of peace and reconstruction to follow.

I take pleasure in submitting to you the second annual report of the National Park Service. It covers the fiscal year ended June 30, 1918, in so far as financial matters and certain fiscal tables are concerned, but relates chiefly to the tourist season that has just closed and what has been accomplished since the date of the last report.

While war exigencies have curtailed travel to many of the national parks, and in several directions changed the course of our normal activities, it is gratifying to record that in the past year there have been important achievements in the development of the national park and monument system. Several of these accomplishments are especially notable because they have a very definite relation to the future progress of the great public work in which we are engaged.

THE NATIONAL PARKS POLICY.

Next to the organization of the National Park Service itself last year, the announcement on May 13, 1918, of the administrative policy that is to guide its activities is the most important event in the recent history of national park development. This statement of policy sets forth these three fundamental principles which are to govern all of the activities of the National Park Service: “First, that the national parks must be maintained in absolutely unimpaired..."

1 Printed in full in Appendix G, p. 273.
form for the use of future generations as well as those of our own time; second, that they are set apart for the use, observation, health, and pleasure of the people; and third, that the national interest must dictate all decisions affecting public or private enterprise in the parks."

Proceeding on these basic principles your outline states that there shall be no commercial use of the national parks and monuments except as may be specially authorized by law or incidental to the accommodation and entertainment of visitors. With reference to the specially authorized use of park lands for the grazing of live stock, as provided in the National Park Service act, the stipulation is made that the grazing of cattle may be allowed in isolated regions not frequented by visitors, where there is no possibility of injury resulting to the natural features of the parks. The grazing of sheep is specifically prohibited.

Parks lands leased for the purpose of operating concessions are to be no larger than absolutely necessary for the purposes of these enterprises. Summer homes in the parks are not to be permitted on the ground that all park lands are for the use of all the people and that access to all of the streams, lakes, and other points of interest or places of recreation must not be denied to anyone.

Timber only may be cut where it is needed for the improvement of the park and then only when it can be removed from the forests without injuring the landscape, or where it is necessary to protect the forests themselves from fire or insect depredations.

HARMONY OF BUILDINGS AND LANDSCAPE.

All of the improvements in the parks must be carefully harmonized with the landscape, and to this end engineers trained in landscape architecture or fully appreciative of the necessity for maintaining the parks in their natural state must be employed to supervise and carry out all improvement work. New improvements must be planned carefully and comprehensively in advance of execution.

"The advisability of securing exclusive jurisdiction over all of the national parks is emphasized. With reference to private holdings in all of the national parks, your statement of policy commits both the department and the National Park Service to their acquisition by purchase through congressional appropriation, or by acceptance of donation.

All of the parks and monuments are to be open to vehicles of all kinds, and facilities are to be provided so that tourists may visit and enjoy the parks in any manner they may choose. One of our chief duties is declared to be the encouragement in the national parks of all outdoor sports, except hunting and other activities which may impair the parks or injure their wild life. Recreational use of the parks is to be stimulated by any means possible. From the standpoint of education, classes in science are to be afforded special opportunities to study in the national parks, and museums containing specimens of their flora and fauna are to be established as funds are provided for this purpose.

Concessioners in the parks must render service satisfactory to the department at carefully regulated rates. The general principle is laid down that competitive business should not be authorized when a concession is meeting our requirements. As contemplated by Congress the national parks must yield a revenue to the Federal Government. This revenue is to come principally from concessions and automobile fees. All concession charges are to be reasonable and must take into consideration the volume of business transacted by them and the hazards under which they operate. Automobile fees must be reasonable and not impose a burden upon the motorist.

COOPERATION OF GOVERNMENT BUREAUS.

We are advised to avail ourselves of the assistance of scientific bureaus of the Government in solving questions relating to the public health, the care of wild animals, the propagation and distribution of fish, and in the solution of other problems where scientific aid may be had for the asking.

Cooperation with the railroads, tourist bureaus, automobile and highway associations is authorized, to the end that information about the national parks may be thoroughly disseminated. It is also declared to be the duty of the National Park Service to keep informed of park movements and park progress at home and abroad. Close cooperation with the Dominion Parks Branch of the Canadian Department of the Interior is pledged.

Rules to be observed in passing on new park projects, and propositions involving additions to existing parks, are laid down. In analyzing new park projects we must confine consideration to "scenery of supreme and distinctive quality or some natural feature so extraordinary or unique as to be of national interest and importance," or "distinguished examples of typical forms of world architecture," in order that the dignity and prestige of the system as now established may not be impaired. These are the main subjects covered.

This platform is destined to go down in national park history as one of its most important documents; it is not likely to be modified greatly in the future because the fundamental principles it enunciates govern the future care and use of all of these reservations, as well as the present protection and enjoyment of them.

NATIONAL BUREAU OF RAILROAD SERVICE.

Another event of surpassing importance was the establishment, in Chicago, by the United States Railroad Administration of the Bureau of Service: National Parks and Monuments. This occurred on June 7, 1918. Mr. Howard H. Hays, manager of the touring department of the Union Pacific Railroad and Chicago & North Western Railway, was made manager of the new organization, with power to choose from the personnel of the various railroads tributary to the national parks and monuments a corps of assistants, each of whom would be thoroughly acquainted with at least one national park and all conditions affecting travel thereto.

The bureau was created to serve several purposes. In the first place, it was to preserve the close relationship that had been estab-
lished during the past few years between the railroads and the National Park Service. It was to become the "point of contact between the Railroad Administration and the Bureau of National Parks, the concessionaires, and others interested in the promotion of travel." Another important function was the coordination of all railroad activities looking toward the development of tourist travel. It was also expected to collect, publish, and disseminate information regarding the national parks and monuments and other resorts, and to distribute publications of the National Park Service. Again, it was to conduct a course of instruction in national park and national monument travel for the ticket agents, and especially those attached to large consolidated offices. Lectures were to be given whenever possible, and the motion-picture films and lantern slides collected by the various roads were to be used judiciously in the bureau's work.

On this basis the organization was quickly formed. Special reduced summer fares over the western lines to the national parks and the Pacific coast were announced by the Railroad Administration. The prospects for the usual travel by railroad seemed bright, especially in view of the possibility of these excursion rates being advertised to a considerable extent. War conditions, however, compelled the continuance of the policy, earlier adopted, to discourage traveling for pleasure. It was deemed best, therefore, not to advertise national park tours and although the reduced fares remained effective throughout the summer, they were not brought to the attention of the public, and could only be ascertained upon inquiry of railroad officials.

The new organization was, in view of this policy, considerably circumscribed in its activities. It did, however, distribute a vast quantity of publications already on hand in the passenger departments of the various railroads, and all of the circulars of the National Park Service that could be delivered to its offices. The manager kept constantly in communication with me, and our relations were most cordial and inspiring.

Touring Inquiries.

All requests for information regarding national park tours addressed to this Service, except those submitted by motorists, after receiving attention here, were forwarded to Chicago in order that our replies might be supplemented by definite data regarding train facilities, time schedules, and rates. This course is still pursued in handling correspondence, and is proving very effective.

The Bureau of Service has also accomplished much during the summer in the way of getting information regarding the national parks and monuments into the hands of the ticket agents of the country. Two comprehensive and very interesting circulars were issued to the agents, and, wherever possible, personal conferences were held between them and members of the Bureau of Service staff.

ANALYSIS OF THE SEASON'S TRAVEL.

Travel to the national parks and monuments during the past season does not, according to the total figures for the entire system, indicate an appreciable reduction in the number of people visiting these reservations. Taking the year as a whole, the loss as compared with the high record of the year before is less than 8 per cent.

This surprising development of a year when war restrictions on railroad travel were expected to reduce importantly the public use of the national parks is partly accounted for by an increase in the winter patronage of Hot Springs before the Government actively discouraged railroad travel. Of course, if an object were merely to gauge the real influence of the discouragement of travel by railroad we should consider only such parks as Rocky Mountain, Yellowstone, and Glacier. These great national parks, located at a considerable distance from the center of population and from large cities not immediately tributary to high mountain areas, depend upon railroad facilities for a large percentage of their summer travel. To a certain extent motor traffic varies with railroad advertising. With the elimination of all advertising expenditures and the active discouragement of railroad travel last spring these big parks in the Rocky Mountains suffered also a serious decrease in tourist travel as compared with the year before. It is interesting that in each case the losses bear approximately the same ratio to 1917 travel.1

As regards the Pacific coast parks, there was an increase in automobile travel in Yosemite, Crater Lake, and Mount Rainier, and a decrease in Sequoia and General Grant Parks. The decreased travel was due largely to the fact that certain approach roads were closed to facilitate the progress of reconstruction work. Travel by railroad to all of these parks, however, was considerably reduced, and in the case of Yosemite Park the reduction in railroad patronage was so great that the increase in motor traffic was insufficient to bring the total travel up to that of last year, hence its loss of 1,000 individuals.

OTHER CAUSES OF DECREASED TRAVEL.

It is only fair to note that the decrease in motor travel to the parks in the Rocky Mountains was as much due to labor conditions at home as anywhere else. Business and professional men and farmers in the Middle West who come to these parks in large numbers during normal seasons were kept at home this year on account of the necessity for giving personal attention to their affairs. The closing of the Yellowstone hotels probably discouraged traffic to a certain extent, but this influence was of little importance aside from the assumption that prevailed for a while at the opening of the season that the closing of the hotels was tantamount to closing the park. It was never proposed to close the ample public camps.

Park travel suffered also from the great decrease in organized tour business which was in large part due to the consolidation of ticket offices in the larger cities, and the discontinuance of the sale of tickets by tourist agencies. Opportunities for obtaining accurate information regarding tourist resorts, where full arrangements for tickets and other accommodations could also be made, were removed when these agencies were parted from their railroad connections. This naturally discouraged tours by the class of people that is accustomed to traveling in parties with all expenses paid and no difficulties of any kind to anticipate. Despite the unusual conditions, the tourist

1 See travel statistics in Appendix C, p. 201.
agencies were able to organize and personally conduct some tourist parties. In the case of each party that has come to my attention, the agent was in a marked degree successful.

The personally conducted saddle-horse tours also were patronized less this year than last. Howard Eaton conducted one party of about 60 through Glacier National Park, but his Yellowstone trip had to be abandoned.

PARK ROADS IN GOOD CONDITION.

The roads in the national parks were, generally speaking, in better condition during the 1918 season than last year. While funds have been available to maintain them in this condition, labor has been so difficult to obtain and hold that before the season drew to a close in many parks the highways showed considerable deterioration. They will be restored, however, as soon as the farms release more men for mountain work. In some parks, notably Yellowstone, swollen streams accomplished considerable injury to roads during the spring, thus requiring much expensive reconstruction work to make them passable and thoroughly safe.

In practically all of the parks a marked increase in the number of motorists using their own camping outfits was noted. We have continued to improve camp grounds wherever men could be spared for this work, but not as much was accomplished in this direction as had been planned.

In all of the parks except Hot Springs and Mount Rainier, hotel and camp enterprises were affected detrimentally by travel conditions. Likewise the transportation companies in most parks suffered a considerable loss of business. Even in Mount Rainier National Park, with its large percentage of increase over any previous year’s travel, the very extraordinary increase in private motor camping parties deprived the hotels and permanent camps of an increase of business proportionate to the increase of total park travel. The hotels of Yellowstone Park were not opened during the season, and three of the permanent camps of the Yellowstone Park Camping Co. were not used. In Glacier Park, several chalets were not operated for the first time since their construction. These retrenchments in both Yellowstone and Glacier Parks were absolutely necessary to the protection of the owners of the properties involved. In both parks, however, ample accommodations were afforded the traveling public, and there was exceptionally little criticism of service rendered.

Roads leading to the national parks were generally in good condition, but not up to the standard of last year. Unrepaired damage, caused by the storms of last winter, or failure to do ordinary maintenance work, in other cases, were responsible for these conditions.

PARK-TO-PARK HIGHWAYS.

The important highway associations continued their work during the year. The action of the Lincoln Highway Association in placing in its guidebook definite information regarding travel from the Lincoln Highway to Yosemite Park via the Tioga Road, and explaining, in greater detail, the routes leading to Yellowstone Park from the highway was very gratifying.
of course, may have to be provided in order to make all of the parks and monuments accessible.

It is not unlikely that in the development of this automobile road between the parks, the Federal Government will have to assist in constructing certain links of the chain. Necessarily the road will have to traverse some sparsely settled States, with relatively little taxable property to provide funds for its construction and maintenance, and in such States Federal aid should be forthcoming. An instance in point has recently arisen. Senate bill 4439, by Senator King, proposes to survey a national highway connecting Mesa Verde National Park and the monuments of Southern Utah with the Grand Canyon in Arizona. You reported favorably on this measure on the ground that unless the United States builds a highway between these points there may never be any road constructed. Much of the land belongs to Indians and all scenic areas are in national reservations; furthermore the few settlements in the region could never raise sufficient funds to undertake an enterprise of this magnitude nor could the States involved assume such a burden. 

One of the important afterwar projects deserving the attention of municipalities, counties, and States of the West, as well as the Federal Government, is the park-to-park highway.

IMPORTANT OF RECREATIONAL TRAVEL.

I sincerely trust that it will not be necessary to continue the policy of discouraging recreational travel next year. Whether this policy will be discouraged or not, of course, must depend upon the emergencies of the war. It would seem that as soon as possible tourist travel not only should be sanctioned but heartily encouraged. In the first place, the tremendous strain of war activities should be relieved by periods of rest and recreation, in order that renewed vitality and increased strength may be available for the vigorous continuance of war activities until the end of the struggle is at hand. If these periods of diversion can be afforded by the country and the individual worker himself; it should be the function of this Service and the travel bureau of the Railroad Administration to aid in arranging national park and other tours that will insure the greatest benefit and pleasure in each particular case. Excursion rates to winter resorts for the season that is approaching have been announced by the Railroad Administration and tentative assurances have already been conveyed to us that summer excursion rates to the national parks and monuments will be announced early in 1919 for next year's travel. The principal question that remains to be considered, which, of course, can not be decided at this early date, is whether or not war conditions will permit the active stimulation of passenger travel, by advertising and other means formerly available to the railroads, in the promotion of national park and other tourist traffic.

In the second place, it is highly desirable that, at the earliest practicable date, the ban should be lifted on travel for pleasure in order that the effect of the important work accomplished by this department and by the railroads during the past four years in attracting the attention of America to its great scenic possessions, and informing the people of the country of the ways and means of reaching and enjoying these great national recreational areas, should not be lost. From the economic standpoint this is of preeminent importance.

The national park and monument system is one of America's greatest assets, and it must not be overlooked in planning the development of American industry after the war. Our work in cooperation with the railroads since the season of 1914, when Americans were last privileged to go to Europe, has resulted in bringing thousands of citizens of this country to a complete realization that this Nation possesses natural features unsurpassed anywhere in the world and that the national park system includes scenic areas so wonderful and yet so very distinctive that a tour of the entire earth would not bring opportunities to gaze upon their equal.

NEED OF A NATIONAL TOURING DIVISION.

This work has just begun, however. If it is to be continued after the war, as it certainly should be, funds should be provided for the establishment of a touring division in this Service and authority granted to exploit, not only the recreational and educational advantages of the national parks and monuments, but other natural features of national interest and importance to the end that hundreds of millions of dollars of American wealth may be expended in this country, instead of abroad.

The war has brought a great national awakening. The extent of our resources has amazed us. We have surprised ourselves by our accomplishments. If this tremendous eye-opening could also comprehend the magnificence of America's national parks and their potential economic value, the national conscience would experience other thrills of pride and amazement. Canada long ago measured the economic importance of her superb mountains and promoted her own national parks with such energy and enthusiasm that already the people of the United States know them as well and possibly better than they do their own national parks and monuments, which are, by the gift of nature, vastly larger and more distinctive. France, Italy, and other European countries, even in the dark days of the struggle with the Hun invader, have been looking forward to the coming of the tourist in the bright day of peace. France has a government tourist bureau, which is actively planning for the accommodation and entertainment of future tourist travel. It is accomplishing big and important work. The press is giving it assistance, and La Renaissance, one of the best known journals of the Republic, is now regularly publishing a supplement called "La Renaissance du Tourisme" devoted to travel. (Mention should not be made of this exceedingly interesting supplement without an expression of our appreciation of the series of descriptive articles on our national parks that have been printed in recent numbers of this magazine.) In Italy the question of the establishment of a government tourist bureau has been earnestly advocated by far-seeing public officials and writers.

Spain's national park activities are noted elsewhere in this report.
OUR INFLUENCE FELT ABROAD.

That the Orient is tremendously interested in the development of tourist business is best indicated by the advertising matter issued by the Toyo Kisen Kaisha (Oriental Steamship Company). A pictorial chart of the noteworthy places in Japan is one of the most interesting productions of this company. Here again we find an expression of interest in the national parks and national monuments of this country; the steamship company has included among its publications a chart showing the interesting places of the United States with practically all of the national parks included.

During the year, publications issued for the purpose of stimulating travel in Australia and New Zealand have also come to my attention.

In almost every instance where a foreign country has considered the importance of tourist travel it has laid its plans for developing this business on a very much broader scale than we have been able to do. My plea then is simply this—in reorganizing, developing, and protecting American industry, now and after the war, our Government must not overlook the encouragement and promotion of American travel.

IN TIME OF WAR PREPARE FOR PEACE.

The importance of promoting the early realization of this enormous national asset has had our earnest consideration during the year just past. This realization will follow quickly upon the general education of the people to the travel facts of their own land. This done, peace and the natural working out through business channels of the laws of demand and supply will do the rest.

Already heavy increases in national-park travel have followed upon our educational efforts of the several years preceding the war; and the war has scarcely checked them. But these have been the merest beginnings. The opportunity and demand for information, now at its height, is destined to leap into great dimensions as the close of the war becomes more and more evident; in time of war prepare for peace. To this end we distributed pamphlets and other national park literature covering a territory as wide as the land. "Glimpses of our National Parks," after an enormous circulation in its second illustrated edition, is passing into a third edition, enlarged so as to include all the national parks and the national monuments. The National Parks Portfolio will soon pass into its third edition, this brought up to date and enriched by many additional pages of illustrations.

A supplementary school reader, by a staff member of the National Parks Service, which is intended to make national parks attractive to school children, has been published in New York, and is beginning to find favor among the public schools throughout the country. We believe that if we get the lesson into the minds of the school children, the future of the national parks will be safe.

The enormous war demands upon the Government Printing Office have naturally limited the publication of special pamphlets. Dr. Willis T. Lee’s "Geologic Story of the Rocky Mountain National Park," which is much more interesting and popular than its title indi-ates; Vernon Bailey’s "Wild Animals of Glacier National Park," including an account of the birds by Florence Merriam Bailey; J. S. Diller’s "The Volcanic History of Lassen Peak"; and George B. Dorr’s "Two National Monuments," treating Zion and Sieur de Monts, have been issued, and our first publication devoted strictly to mountaineering will shortly come from the press.

This book is entitled "Mountaineering in the Rocky Mountain National Park," and was compiled by Maj. Roger W. Toll of the Colorado Mountain Club, and edited by Robert Sterling Yard, of this Service. It is a complete guide to the mountains of the park and the adjacent region for novices as well as experienced climbers; for the latter it contains all data necessary to plan and execute the most arduous climbs in these high and rugged mountains. Maj. Toll has been on many climbing expeditions in this region, and he has compiled his data out of the abundance of his own experience, as well as drawing on the exploits of his friends and associates of the Colorado Mountain Club.

This book will be followed, in due course, by similar volumes on the other large parks.

FILMS, SLIDES, AND PHOTOGRAPHS.

In addition to publications, the Service has made as wide a circulation of motion-picture films and lantern slides as its limited supplies and the congested condition of the national express service would permit. It has not been able, however, to distribute as many national park photographs for publication as usual, because of the failure of the supplies; the demand, be it noted, was there.

This failure of supplies was due principally to the inability of the western railroads under wartime restrictions to furnish us photographs. Congress has never specially appropriated money for publicity and educational purposes, but up to this year we have kept fairly abreast of the rapidly growing demand by the distribution of photographs to newspapers and magazines which the railroads gave us for the purpose. It is a great pity to have this wholesome demand die for lack of material. The National Park Service has hundreds of splendid negatives at its disposition and lacks only the modest appropriations which would release these magnificent pictures, many of which have never been published, to the magazines and the press of the country.

A similar condition limited last year the circulation of national park lantern slides, all of which in the past have been furnished by the railroads. The demand, meantime, is scarcely lessened, even by the extensive war propaganda.

Naturally, the year has seen a falling off in the national park lecture field, practically all of the many private lecturers whom we formerly assisted with information and pictures having patriotically entered the national war propaganda. A number of important lecture engagements were, however, filled by members of our staff, and extensive progress was made toward the perfection of a lecture service to be promoted at the close of the war.

Our attempts to interest university extension in the national parks attained some success during the year, the University of the State of New York having definitely entered the field. This is the first result...
of a campaign of more than two years. Several other universities are favorably disposed and may enter the field during the year.

The earnest efforts of the National Park Service, not only to advertise the recreational and inspirational uses of the parks, but especially their educational uses, are very slowly but surely reaching fruition.

TRAVELING EXHIBITS OF NATIONAL PARK PICTURES.

The Service has been unable during the last year to secure any more sets of the framed enlargements of national-park pictures. The set already in its possession, however, 25 framed pictures, 26 by 30 inches, fitted into specially constructed boxes, has been widely circulated. It is now in the possession of the university extension courses of one of the progressive States of our great Middle West for exhibition in the libraries of the State and at such other places as in the judgment of the university may prove instructive and valuable. The university has agreed to keep the collection on constant exhibition.

A manuscript containing a comprehensive description of each picture was prepared in the Service and sent to the university, which issued copies for distribution to those interested. In view of the present transportation situation it is believed the collection will receive a wider circulation in this way than by dealing directly between the Service and the individual organization wishing to exhibit it.

SCHOOLS OF NATURAL SCIENCE.

The National Park Service has continued during the year to give special attention to the educational work undertaken several years ago. A large quantity of publications relating to the national parks have been introduced in the public schools of the larger cities, and wherever possible in smaller communities, for the use of teachers in classes of geography and general science. The demand for our publications, particularly the Portfolio and Glimpses of Our National Parks, by teachers and school children has been enormous. Here is another real opportunity to inculcate patriotism in the growing child. Teach him that here in America the creative forces of nature that are busy building and modifying the earth’s surface are seen to best advantage in the national parks and monuments, and that here nature has accomplished her most sublime works, making abundant use of pictures in these courses, and the child will thrill with pride in his native land. Later, as he reaches maturity he will seek the Nation’s playgrounds to see these wonders for himself. I know of nothing that will give an American such a sense of supreme happiness and satisfaction as the contemplation of a national park wonder with the thought that it belongs in part to him, that it is protected by his Government for his use and enjoyment, and that it will continue to be safeguarded for his children and his children’s children.

This educational work must be continued and extended as fast as practicable. I want to see pictures of American mountains, geysers, glaciers, and canyons in every classroom of geography in the land; I want to see the beautiful pictures of national park scenes placed in the school houses with portraits of national heroes and views of historic places; I want to see text books in certain subjects made more truly American by referring to features in our national park system rather than similar natural objects in foreign lands. Other nations have long ago recognized the value of the American schoolroom as a place to build business for the future, and they have abundantly used their opportunities.

In expressing these aspirations, I should explain that the Federal Government, in my opinion, is not to be expected to assist in this educational work to the extent of furnishing the pictures. Its function is to demonstrate, promote, and advise in matters of this character.

TO EDUCATE NEW AMERICANS.

In a campaign of Americanization of aliens, the literature relating to the national parks and monuments can undoubtedly be used to great advantage. The Commissioner of Education now has under consideration an experiment to determine the extent of its influence. In the parks themselves, the opportunities for field classes of the higher institutions of learning to engage in research work are unsurpassed. Already they have been utilized to some extent by classes in geology, botany, biology, ethnology, and anthropology, with most gratifying results. Renewed encouragement of research activities of this character will be forthcoming as soon as the universities are again on a normal basis.

At present this educational work is not conducted in accordance with any carefully developed plan. There is no money available to undertake this in a big way, nor have we the necessary funds now to properly prepare a broadgauge program for future use.

As soon as the exigencies of the war will admit of taking up this, and the problem relating to the encouragement of travel by the establishment of an official touring division, Congress should be requested to appropriate the modest sums necessary to carry them out on a scale that will bring the full measure of benefit to the country.

ASSOCIATIONS WORKING IN HARMONY.

The National Park Service is fortunate in enjoying a close relationship with all of the important mountaineering clubs and through the Associated Mountaineering Clubs of North America we keep in closest touch with their activities. It is our purpose to work hand in hand with this organization and its member clubs in encouraging the hardy sport of mountain climbing and all forms of outdoor recreation to which they are devoted. To this same end, the Dominion Park administration is also working in Canada. The Associated Mountaineering Clubs is now composed of 22 organizations with a total membership of considerably over 20,000. The names of the clubs and their officers are given in Appendix G. The general secretary of the association is Mr. Le Roy Jeffers, of New York, one of the best known and most experienced mountain climbers of our time.

Another organization of national scope, the birth of which at this time strongly indicates the tendency of public thought, came into existence last June under the name of the National Parks Educational Committee. Its chairman is Charles D. Walcott, Secretary of the Smithsonian Institution; its vice chairman, former Congressman from California, William Kent, who gave the Nation the
RESTORING WILD LIFE IN AMERICA.

The National Park Service holds no one of its several public charges in greater reverence than the care, maintenance, and development of the wild animals which live free and normal lives within its reserves. These animals are an exceedingly important part of what is left of that vast heritage of wild life which the march of civilization and the ruthlessness of former generations have elsewhere destroyed. In the Yellowstone National Park, where a quarter century of protection has largely repaired the ravages in a region which was still heavily stocked when protected, and in the Mount McKinley National Park, in Alaska, established before hunting reduced the great herds of game animals, we still have nature at her best. But in the other national parks, where help did not come until the wild life was nearly destroyed, it will take generations to restore the lost conditions.

Having always in mind the important fact that a national park must overflow with animal life, as Yellowstone and Mount McKinley overflow, before becoming, from the game standpoint, helpful to the neighborhood and Nation, it is our earnest care to avoid mischievous setbacks to the steady progress of natural breeding and healthy development. In this and other respects the year just closed, although the most perilous in the history of wild-life conservation in America, has been highly successful.

In practically every park substantial increases of the important species of wild animals abounding therein have been noted. In the Yellowstone a normal winter made the care of the elk and antelope herds relatively easy to accomplish, and there was only the usual loss through natural causes.

In several of the national parks, the efforts of our superintendents and rangers to develop the wild animal herds, particularly deer, failed to bring the fullest results because the winter ranges lacked protection across their borders. To help us bring these herds back to normal strength, game refuges should be established by the State of California around the west and south boundaries of Yosemite Park; by Oregon, adjacent to Crater Lake Park; and by Washington on the west and south sides, and perhaps other sides, of Mount Rainier Park. As recommended elsewhere, the boundaries of Yellowstone, Crater Lake, and Sequoia National Parks should be extended in certain directions in the interest of wild life protection as well as for the purpose of adding importantly to their scenic features.

In Glacier National Park, increase of predatory animals has made necessary an intensive campaign for their destruction. This is now in progress, under the direction of the superintendent of the park and an expert of the Biological Survey, in accordance with a cooperative plan developed by the Chief of the Survey and myself.

A NEW AND INSIDIOUS PERIL.

In addition to the usual difficulties of maintaining the normal development of our wild-life resources, war brought new perils of a very grave and insidious kind. Proposals were made that the elk and buffalo herds of the Yellowstone should be killed for meat, that organized hunting parties should be permitted to enter the parks at certain times of the year for the purpose of augmenting the food supply, and that the needs of the animals be disregarded and domestic stock be given their range, and so on. Some of these proposals were vigorously promoted, and in almost every case the support of the Food Administration was sought.

At the same time, movements were initiated in various sections of the country which had for their purpose the suspension or modification of the general game laws, including the migratory bird act, in order that game might be killed in abundance for the alleged purpose of increasing the food supply, but for the real purpose of enriching an ambitious profiteering class.

The Food Administration considered these questions and promptly reached a conclusion that the integrity of the game laws should be preserved. In fact, the idea of making them more rigid was impliedly approved. We quote:

The problem of providing for the country a maximum supply of game as food has been carefully considered by the Food Commission. It has reached the conclusion that this maximum supply can best be obtained by constantly increasing the breeding reserve of game under present and even more progressive laws directed toward that end.

This is the beginning of a decision that will ever be a distinguished document in the history of game protection.

FOOD ADMINISTRATION'S FAR-SIGHTED ATTITUDE.

Other vigorous paragraphs follow:

Any effort to weaken the present laws or in any way relax them in one locality would immediately lead to a demand for such relaxation of laws in all other localities, insuring a rapid breakdown of the whole legal structure of present game protection erected after efforts extending over numerous years. Once the perfected laws were relaxed to the point where game could be killed more freely, notwithstanding the fact that numerous gunners have gone to war, the game would be quickly destroyed by largely increased numbers of local gunners using modern methods of transportation, such as automobiles, motor boats, trolley roads, and improved firearms.

The present game supply of the country should be considered in exactly the same way as that of domestic stock and fowls, the breeding reserve of which should be increased to insure increased supplies for food. This is even more necessary for much of the wild game, since once it is destroyed to a certain point it will decrease under natural conditions to extinction and can never, as in the case of domestic stock, be restored.

To advocate the relaxation of State game laws would secure neither uniformity in action or results since State legislatures can not be brought to exactly the same views, and most of the States will not have regular sessions for another year. Since an attempted relaxation of laws would tend toward a rapid destruction of game, no emergency has as yet arisen sufficiently acute to warrant the Food Administration advocating the destruction or impairment of game, which forms a valuable national asset.

So far as the parks were concerned, however, the most menacing of these threatening forces of destruction was the attempt to intro-
duce sheep within their boundaries. This danger, like the sword of Damocles, hung over both the scenic features and wild life of the parks.

**DETERMINED SHEEP RAIDS DEFEATED.**

Determined efforts were made by sheep owners in several western States to secure grazing privileges for their herds in the national parks nearest their places of business. The first attempt to force this issue was made in the State of Washington by an official of the Commonwealth who urged that Mount Rainier National Park should be opened to sheep grazing in order that the supply of wool and mutton might be increased during the war period. The idea was pressed vigorously in the face of our determined opposition to its advancement, and of our announced policy, approved by you, that sheep would not be allowed in any national park. Finally, when it became apparent that time was being utterly wasted by discussing this question with officials of this department, an appeal was taken to Food Administrator Hoover, who promptly considered it with the attempt to secure the adjournment of the game laws of the country during the war, and announced his entire lack of sympathy with all propositions of this kind. Thus ended the attack on the “Wild Flower Park.”

Later, however, sheepmen of California sent a delegation to Washington to urge the granting of permits for grazing of sheep in Yosemite National Park. The men composing this delegation were met with a firm yet courteous refusal to yield to their petitions, and after a full and frank discussion of the policy involved, they accepted the decision and returned home.

In May, Oregon wool growers sought a permit to graze 7,000 head of sheep in Crater Lake Park. Their request was promptly denied. Many years ago, before the creation of this park, the lower slopes of ancient Mount Mazama and the entire area now reserved and dedicated for park purposes were utilized for the grazing of sheep with the result that the flora of the region was practically destroyed. After the lapse of a quarter century flowers are still exceedingly rare, and it will require the expenditure of much time and money to restore even a small portion of its lost species of plant life. Few places accessible to the public today illustrate more forcibly the destructive action of sheep grazing on high mountain lands than does Crater Lake Park.

The last, yet one of the most determined and sustained attempts to gain sheep grazing privileges in the national parks was made in July by Montana wool growers who sought land in the flower-carpeted valleys of Glacier Park. The claim was made that owing to the long continued drought thousands of sheep would die if these valleys could not be secured. It was quickly shown that there were other grazing areas available, although, perhaps, not so easily accessible, and all applications were denied. The have that sheep would have wrought in one season in Glacier Park would have been astounding, and the injury accomplished would have been irreparable.

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1. Food Administration Memorandum of Jan. 9, 1918: “The U. S. Food Administration concurs with the Department of the Interior that the Government’s policy should be to deny absolutely all such requests” (requests for sheep-grazing permits).

2. Map is opposite p. 204.

**MOUNTAIN CLUBS TO THE RESCUE.**

An example of the intense feeling this sheep-grazing problem engendered during the past year is found in the letter of protest, filed by the Mountainers, the great outdoor organization of the Northwest, which stated that rather than have Mount Rainier National Park opened to the pasturage of sheep, its members would sacrifice their lawns and flower gardens for this use.

Strong opposition to any sheep grazing in the national parks was also voiced by the Sierra Club Bulletin, the important sporting and outdoor magazines, and many large newspapers in widely separated parts of the United States; also by the official organ of the General Federation of Women’s Clubs.

I do not doubt that, next year, there will be further efforts to secure sheep-grazing permits in national parks, and the necessities of the present struggle again will be put forward as a barrage to hide the personal and private interests of the applicants. Any argument that the use of the national parks will noticeably increase the production of wool or mutton is ridiculous beyond expression; the map herein showing the relation of the national parks and monuments to the vacant public lands and national forests will visualize the exceedingly small area reserved for park purposes and plainly indicates that under no circumstances could any benefit accrue to the Nation by the use of its parks for sheep range. The statistical tables which this map accompanies are also highly enlightening on this and other subjects.

Cattle grazing was permitted to a reasonable extent in several national parks. In some, such as Yosemite and Glacier, which are in normal years used by tourists to the absolute exclusion of other interests, this grazing has been permitted solely as a war emergency measure, and will be discontinued as soon as peace returns. In others, under your approved policy, the pasturage of cattle will be continued wherever this use will not in any manner impair the scenic or other natural features of the parks, or place any restriction on, or cause inconvenience to, people using them for purposes of pleasure, rest, and recreation. By law Yellowstone National Park is closed to grazing. Were this law not on the statute books this region could not be used for domestic stock range, because almost every acre of it is required for the great numbers of wild animals that roam within its protecting boundaries.

**THE MIGRATORY-BIRD TREATY RATIFIED.**

It is a matter of national congratulation that the migratory bird treaty, concluded in 1916 between the United States and Great Britain, has been ratified by Congress, and that the President’s proclamation of July 31, 1918, regulating the killing of migratory birds is now in full force and effect. Very many of the birds which are the choicest denizens of our national parks during a part of each year stop there in course of passage back and forth between their breeding places in the North and their winter homes in the South.
The gradual but sure lessening in the numbers of these birds during recent years is calamitous, not only from the aesthetic but also from the economic point of view. Many of these birds are our principal insect exterminators, and their preservation is necessary for the protection of the Nation's farming interests. This treaty is progress of the best kind.

INCREASING APPROPRIATIONS.

The sundry civil act of July 1, 1918, carries a total appropriation of $1,012,205, of which $50,000 is to be expended in the construction and improvement of the roads of Crater Lake National Park by the Engineering Corps of the United States Army.

Among the special improvements authorized are the construction of a new administration building and free bathhouse on the Hot Springs Reservation, the construction of a new road to avoid the so-called Gardner Slide in the canyon of the Gardner River in Yellowstone National Park, the continuation of the reconstruction of the El Portal Road, and the building of a new bridge over the Merced River at the Sentinel Bridge site in Yosemite National Park, the building of a new bridge over the Marble Fork River in Sequoia National Park, and a new approach road to the Mesa Verde.

On July 1, 1918, the revenues of all of the national parks with the exception of Hot Springs Reservation reverted to the Treasury of the United States. These receipts are therefore no longer available for expenditure in the maintenance and improvement of the parks from which they arise. In making appropriations for the current fiscal year, however, Congress took into consideration the fact that a building of a new road and the building of a new bridge over the Merced River hereafter would make larger appropriations necessary and acted accordingly. The revenues for the fiscal year ended June 30, 1918, were the largest in the history of national park administration, reaching the grand total of $217,105.55. These figures may be compared with the revenues of the 1917 fiscal year which totaled $180,571.05. The receipts of the parks for the current fiscal year will, of course, be considerably reduced on account of the decrease in travel to several of the largest revenue producing parks. At the present time it is quite impossible to predict what the total of this fund will be, but the indications are that it will exceed $150,000, and it may be in excess of all previous years except the record fiscal year of 1918. Detailed statistics relating to the appropriations and revenues of the national parks and monuments are contained in Appendix C.

By providing ample funds for the administration and maintenance of all of the areas under our jurisdiction Congress has indicated again this year in unmistakable terms its policy to keep them available for the use and enjoyment of the people during the war, and to ensure the protection not only of their natural features but also of their improvements from injury and depreciation during this period.

During the continuance of the war it will be our purpose to recommend the appropriation of sufficient funds for retaining the national parks and monuments in their present condition.
IMPORTANT GIFTS OF PROPERTY.

The following are the more important gifts of property that have been accepted by us for national-park purposes:

1. A gift of the old Tioga Road in Yosemite Park in 1915, at a cost of approximately $15,000. The sundry civil act of March 3, 1915, was our authority for the acceptance of this gift.

The Secretary of the Interior is authorized to accept patented lands or rights of way, whether over patented or other lands in the Yosemite National Park, that may be donated for park purposes.

2. A gift of part of the Giant Forest by the National Geographic Society in 1916, at a cost of $20,000. Authority for the acceptance of this gift was granted in the sundry civil act of July 1, 1916.

The Secretary of the Interior is authorized to accept patented lands or rights of way, whether over patented or other lands in the Yosemite National Park, that may be donated for park purposes.

3. A gift of the administration site across the river from Belton Station, Glacier National Park, was made in 1917. One hundred and sixty acres were included in this gift and it cost approximately $8,000. Authority for the acceptance of this gift was granted in the sundry civil act of July 1, 1916.

The Secretary of the Interior is authorized to accept patented lands or rights of way over patented or other lands in Glacier National Park that may be donated for park purposes.

4. A gift of a tract of land for a warehouse and garage at Glacier Park Station, Glacier National Park, was made in 1917. Authority for the acceptance of this gift was granted in the sundry civil act of June 12, 1917.

The Secretary of the Interior is authorized, in his discretion, to accept buildings, moneys, or other property which may be useful in the betterment of the administration and affairs of the Glacier National Park, under his supervision, and which may be donated for park purposes.

5. A gift of a tract of land at Glacier Park Station for fish hatchery purposes was made in 1918. Authority for the acceptance of this gift is the same as in 4.

6. A gift of a road in Rocky Mountain National Park leading to the free public camp ground in Glacier Basin, which has just been completed and accepted by the Government. Authority for the acceptance of this gift was granted in the sundry civil act of June 12, 1917.

Hereafter the Secretary of the Interior is authorized to accept patented lands or rights of way over patented lands in the Rocky Mountain National Park that may be donated for park purposes.

There are two striking instances of entire national monuments coming into public possession by gift. One of these is the famous Muir Woods, near San Francisco, the gift of former Representative William Kent. The other is the Sieur de Monts National Monument, on Mount Desert Island, Me., the gift of a group of public-spirited summer residents of the neighborhood. The Pacific reservation contains one of the finest stands of California redwood still in existence. The Atlantic reservation incloses a group of mountains which are famous in history and in the scenery of the East.

A WONDERFUL EXAMPLE OF GIVING.

In studying the question of supplementing congressional appropriations wherever possible by the acceptance of property donated by individuals and State governments I have had occasion to analyze the details of the magnificent development of the Palisades Interstate Park in New York and New Jersey, which has been carried on largely through cooperation between private individuals and State activities.

After endeavoring in vain to get the Federal Government to preserve the Palisades of the Hudson, the States of New York and New Jersey, about 1889, created the Palisades Interstate Park Commission and appropriated $15,000 to begin the work of surveying and investigating titles of tracts of land along the Hudson. Most of the money, however, was used to bind an option on a big quarry, which was finally purchased for $132,500, $122,500 being donated by citizens of New York.

After the surveys were completed it was found that approximately 900 acres of land would have to be purchased in order to preserve the palisades, and this land was procured by the States of New York and New Jersey for approximately $500,000. In 1910 New York State appropriated $2,500,000 and added the Bear Mountain Prison site of 500 acres to the Palisades Park. Mrs. E. H. Harriman then donated 10,000 acres of land and $1,000,000. Other parties in turn donated a total of $1,600,000.

In 1916 New York State appropriated $2,500,000 more for the further enlargement of this great park, and a like amount is being supplemented from private sources. Up to the early part of last year there were 30,000 acres of land in the park and nearly $8,000,000 had been expended in its acquisition and improvement. Of this amount, 55 per cent was donated to the Palisades Interstate Park Commission and 45 per cent appropriated by the State legislators.

I believe that if the requisite authority should be granted to the Park Service to pursue the lines of development adopted by the Palisades Commission we will be able to secure in the next few years a great amount of outside assistance in national-park development, both from States and individuals.

GROWTH OF THE NATIONAL-PARK SYSTEM.

When the National Park Service was organized we had 17 national parks and 21 national monuments. We now have 16 national parks and 23 national monuments. The explanation is that one of the national parks of 1916, the Casa Grande Ruin, has been withdrawn from that classification and made a national monument, and two other national monuments have been created. The total area of the national parks is now 9,285,465.45 acres, or 9,773 square miles. The total area of the national monuments is 1,241,265.04 acres, or 1,939 square miles. All these reservations, except the Sieur de Monts National Monument in Maine, lie west of the Mississippi River. One national park is in Alaska and one in Hawaii.

The first national reservation, Hot Springs, was created in 1832. The name national park had not yet been invented, and it was 50...
years before Hot Springs was regarded as a park—not, in fact, until the Yellowstone National Park had become famous under that title. The Yellowstone was made a national park in 1872 and for a long time was popularly known as "the national park" in ignorance of the fact that Hot Springs had enjoyed the same legal status for many years.

Meantime the Casa Grande Ruin had been reserved and became loosely classed with Hot Springs and Yellowstone as a national park, notwithstanding that it possessed none of the accepted qualities of parkhood. This was long before the days of the national monuments. And so it has remained until recently, when it was recognized as essentially a national monument, and so proclaimed by President Wilson. It is really, then, the first national monument, although the Devils Tower was the first to be officially so designated.

**CREATION OF THE KATMAI NATIONAL MONUMENT.**

While the last year has showed no additions to the number of the national parks, the system has been enlarged and enriched by the addition of an interesting and important monument of large area in Alaska. President Wilson created the Katmai National Monument by proclamation of September 24, 1918.

This new monument will have wide popular interest. It is situated on the southern shore of Alaska about midway of a volcanic belt which has shown extraordinary activity during recent years. The eruption of Mount Katmai in June, 1912, was one of excessive violence, ranking in the first order of volcanic explosions. While volcanoes in Japan and Italy have expelled a greater cubic content of material, the fact that Katmai's initial eruption lasted three days sets it in a class by itself.

The crater left by this explosion is large. Its circumference measured along the highest point of the rim is 8.4 miles. The area is 4.6 square miles. "The precipitous abyss," writes Robert F. Griggs, who explored it for the National Geographic Society, "is somewhat shorter, measuring 2.6 miles in length, 7.6 miles in circumference and 4.2 square miles in area. The milky blue lake in the bottom is 1.4 miles long and nine-tenths of a mile wide, with an area of 1.1 square miles. The little crescent-shaped island in the lake measures 400 feet from point to point. The precipice from the lake to the highest point of the rim is 3,700 feet."

For comparison among volcanoes classed as active Mr. Griggs cites the crater of Kilauea in the Hawaii National Park, whose greatest diameter is 2.93 miles, whose circumference is 7.85 miles, and whose area is 4.25 square miles. Katmai's crater is slightly larger, but is exceeded by that of Haleakala, also in the Hawaii National Park, which is 74 miles long and 24 miles wide, with a circumference of 20 miles. Haleakala, though it has not erupted for nearly 200 years, is classed as active by the Hawaiian Volcanic Observatory. It will be recalled that Lassen Peak's long series of eruptions in 1914 and 1915 followed a quiescence of more than 200 years.


Of craters no longer active, only four exceed Katmai's in size. Aso-san, the monster crater of Japan, is 14 miles long by 10 miles wide; Lago di Bolsena, in Italy, is 8½ miles long and 7½ miles wide; Monte Albano, also in Italy, is 8 miles long and 7 miles wide; and Mount Mazama, in which lies Crater Lake, our National Park in Oregon, is, to quote Mr. Griggs's figures, 6 miles long by 4 miles wide.

**FIG. 1.—Map showing boundaries of Katmai National Monument, Alaska.**

"THE VALLEY OF TEN THOUSAND SMOKES."

A fascinating feature of the Katmai National Monument, one that Mr. Griggs describes as "one of the greatest wonders of the world, if not indeed the greatest of all the wonders on the face of the earth," was named by him the "Valley of Ten Thousand Smokes." It lies a few miles west of the volcano just over Katmai Pass at the head of the Naknek Lake watershed. First discovered in

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In 1916, it was explored in June, 1917, by the National Geographic Society's fourth expedition to this region. Imagine a valley several miles in length from whose bottom, and from those of its tributary valleys, emerge many thousands—millions, Mr. Griggs believes—of jets of steam. Some of these jets rise a thousand feet. Hundreds or thousands rise 500 feet. All merge into one titanic cloud.

The exploring party had many thrilling adventures. They cooked their meals anywhere they happened to be over the nearest vent. Their steam-heated tent was much too warm for comfort; a thermometer thrust 6 inches into the dirt floor promptly rose to boiling point. The end of a stick thrust into some of these vents was quickly charred.

The region offered, indeed, an astounding spectacle. The escaping steam (for it is steam, not smoke, that creates the spectacle) was in places strongly impregnated with sulphurous vapors. The ground was in places far too hot to walk upon.

This amazing valley is an example of what the geyser basins of Yellowstone were at the close of the eruptive period of Yellowstone's once great volcanoes. There, as will happen here, geysered did not form until surface temperatures for perhaps thousands of feet of depth declined far below the boiling point. Bunsen's theory of geyser action, which is now generally accepted by science, presupposes a column of spring or surface water filling the geyser vent above the steam which is making in some deep recess of the rocks. With a near-surface temperature above boiling point, as in the "Valley of Ten Thousand Smokes," such a column of water can not exist; it will promptly turn to steam and dissipate.

In course of time, many centuries perhaps, the surface here will cool sufficiently for the vents to retain water. Then geysered form as in the Yellowstone. The addition to our national-park exhibits of this remarkable region thus becomes peculiarly valuable, because it shows, in connection with Yellowstone, the formative as well as the completed phases of geyser action. It is also pleasant to think that, after the inevitable decline of the Yellowstone geyser field many centuries hence, the American national-park system will be coming into possession of possibly even a greater geyser exhibit than now.

The American public owes deep gratitude to the National Geographic Society for the discovery and exploration of this unique exhibit. Four expeditions were sent to the region before the facts and the records were complete.

TO MAKE THE GRAND CANYON A NATIONAL PARK.

In the first year of the world war it was not to be expected that an overworked Congress should devote the time necessary for the careful consideration of new national-park projects. It is unfortunate, however, that so meritorious a proposition as the promotion to parkhood of so world-famous an area as the Grand Canyon of Arizona should have failed to reach a final vote; the bill, however, passed the Senate on May 16, 1918.

To people of other lands, to whom the Grand Canyon has been known for many years as the greatest scenic wonder in the world, it is to be hoped that in the coming session the House will devote the few minutes necessary to confirm the expressed judgment of the Senate on this question.

The House Committee on the Public Lands reported the bill favorably on October 18, 1918.

THE MAMMOTH CAVE A PROMINENT CANDIDATE.

Besides these national-park projects there are others that should have consideration. It seems particularly important that steps should be taken to secure "distinguished examples of typical forms of world architecture," and other areas of distinctly national value that are to be found in the Eastern States. Prominent among these are the Mammoth Cave, in Kentucky, and the Sand Dunes area, in Indiana, that borders the southern shore of Lake Michigan.

Efforts have been made in the past to secure the Mammoth Cave region for the Nation, but for various reasons the project has failed. At one time it was proposed that the Federal Government buy the property outright. A bill was introduced and hearings were held on the measure, the proceedings of which have been printed.

This world-famous cavern is situated in a forest of virgin growth at the head of navigation of the Green River, Ky. It is not many miles from the center of population of the United States. Nature has made it one of the most magnificent of limestone caves. Its chambers and passages, which, so far as explored, aggregate nearly 40 miles, are gorgeously decorated.

Much can be said in favor of acquiring this great scenic property for a national park. The Green River at this point is deep, broad,
and quiet, remarkable for its majestic scenery. The country is typical of the noblest of eastern landscape. Few deciduous forests exist equal to the thousands of surrounding acres. Its accessibility to great populations will constitute a strong argument in its favor.

The discovery of the great Onyx Cave two years ago, has stimulated new interest in this remarkable cavern district of Kentucky. This magnificent cave is not far from Mammoth Cave and should, if possible, be included in a national-park project. The placing of this whole district among the national parks would make possible a development along the lines of the big parks of the West. Camping, boating, and motoring would be the principal recreational advantages of a national park here, while the wonderful formations of the caves would furnish the supreme thrills of delight.

**THE SAND DUNES OF INDIANA.**

The recreational advantages of the Sand Dunes area of Indiana are too well known to require further comment in a report of this character. Located near the center of population of the United States, and within an easy motoring distance of Chicago, as well as accessible from several railroad lines, this region, or a substantial portion thereof, is well worthy of parkhood.

These Indiana sand dunes typify one of nature's most interesting constructive forces. The fact that they are uniquely rich in plant life, and, during part of the year, the habitat of a large variety of birds also entitles them to national preservation for future generations.

**TO PRESERVE THE COAST REDWOODS.**

A strong movement is under way to secure one of the few remaining great stands of California redwood (sequioa sempervirens) as a public exhibit for all times. This famous tree is nearing its extinction; the only examples safe for posterity are the Muir Woods, in Marin County, a small State forest in Santa Cruz County, Cal., and the 800 acres acquired by the Bohemian Club of San Francisco for its annual revels. None of these exhibits the redwood in the glory of its fullest development and greatest sweep of forest. The movement noted has for its object the acquisition of such a forest while there still is opportunity. A stand of great magnificence has also been located in northern California. A strong committee is forming to raise money from private sources, if necessary, to put the project through. At this writing the organization is nearly completed under the title "Save the Redwoods League."

**OTHER PARKS SUGGESTED.**

Legislation which has for its purpose the establishment of the Lafayette National Park embracing the area now reserved as the Sieur de Monts National Monument is pending in Congress. I earnestly trust that it will receive favorable consideration in the present Congress. Other measures designed to accomplish this same purpose, but giving the proposed park the name of Mount Desert National Park are also pending, one bill having already passed the Senate. This park proposition is discussed in another part of the report.1

Two other projects now before Congress which are receiving the earnest attention of this bureau contemplate the establishment of the Denver National Park to include the Rocky Mountain region in the vicinity of Mount Evans directly west of the city of Denver; and the Cliff Cities National Park, to include the remarkable Frijoles Canyon, Pajarito Plateau, and other lands in or near the present Bandelier National Monument in New Mexico, a region rich in relics of a prehistoric race and apparently the logical companion park for the Mesa Verde with its wonderful cliff dwellings and other works of vanished people. Both of these projects are under investigation at the present time, and when thoroughly studied from the national park point of view detailed reports will be submitted for the information of congressional committees.

**SUGGESTED FOR NATIONAL MONUMENTS.**

Several propositions to establish new national monuments are pending at the present time. One has for its object the preservation of the remarkable prehistoric towers of the Hovenweep region on both sides of the boundary line of Utah and Colorado and not far from the Mesa Verde National Park. These towers were examined a year ago by Dr. J. Walter Fewkes, Chief of the Bureau of Ethnology, and by him reported to be among the most interesting and valuable relics of ancient civilization now accessible in the Southwest. They are nearly 70 miles distant from the Dolores, Colo.-Bluff, Utah, road. When protected and opened to the public these towers will be the object of an exceedingly worth-while side trip from Mesa Verde Park.1

Another project contemplates the permanent reservation and development of Scotts Bluff, Nebraska, that imposing old landmark on the North Platte that guided many parties of pioneers in their westward journey across the plains. It has had a place in the history of the West since the days of the "free trappers"; but is best known to those who have read the fascinating stories of the old Oregon Trail.

A third project under consideration suggests a means of saving some of the palms of the species Washingtonia filamentos a which are so near extinction in this country at the present time. Several hundred of these palm trees are growing in a somewhat remote section of southern California. These are in several rather widely separated groves, but it seems feasible to arrange for the preservation of one or two of them at least. They can be reached from Palm Springs. A fine grove of these palms until recently was accessible by a short trip from Indio, Cal., on the Southern Pacific. Its destruction was a real loss to the science of botany.

The Federal Government has never engaged in the purchase of land for park purposes, except in the case of the acquisition of patented lands in existing national parks, when such lands are necessary in the administration and protection of the adjacent or surrounding Federal areas. It is a question whether after the war Congress will adopt a broader policy of appropriating public funds from the National Treasury for the purpose of rounding out and completing

1 See p. 84; also see reports on S. 4509 and S. 4957, pp. 238-241.
the national park system. In all likelihood new areas may have to be acquired in large part by the States or by private subscriptions, tendered to the Federal Government for acceptance and development.

THE ONE SYSTEM SHOULD INCLUDE ALL.

In last year's report attention was called to the fact that all of the national park areas of the country are not under the jurisdiction of the National Park Service, and the suggestion was advanced that the time was at hand when the national park system should be consolidated under one head. Our organization now lacks control of 11 national monuments administered by the Department of Agriculture because they are within the confines of national forests; 3 national monuments with military reservations, 5 national military parks set apart for the purpose of safeguarding famous American battlefields, and 2 other reservations including Lincoln's birthplace which are administered by the War Department. An examination of the diagram herein will show at a glance the complete detachment of these potential parts of the national park system. In the interests of efficiency this fault should be remedied. With very little expansion of this Service all of these park areas, and others likely to be established in the early future, can be effectively cared for.

From the standpoint of travel to the national parks the advisability of immediately putting all of the national monuments under the control of this organization can not be seriously questioned. Many of the national monuments are beginning to loom importantly as scenic meccas, and this tendency is growing rapidly. Increasing numbers of visitors to national parks desire to extend their observations to national monuments in the neighboring national forests. It is exceedingly difficult to explain why some of these great wonders are under the control of the Department of Agriculture, while others of exactly the same type of reservation are within the jurisdiction of this department. The same is also true in the case of park areas under the War Department. All should be placed under the general jurisdiction of the National Park Service to the end that harmony and effectiveness may characterize the administration of the nation's park areas. The consolidation of all of these Federal reservations, as I have recommended, should be considered during the period of the war in order that plans for the future may be developed comprehensively while new improvement work and other activities are suspended or reduced in accordance with war requirements.

OUR EXAMPLE SPREADING ABROAD.

In last year's report mention was made of official action in several foreign countries looking toward the establishment of national parks or reservations similar in character to our parks and national monuments. The Government agencies and enterprises interested in these projects have made considerable progress toward the consummation of their plans during the past year. This is especially true as regards the movements to safeguard scenic areas in Italy and Spain.

As the following summary of the activities of the National Park Service during the past year will indicate, we are keeping the national parks open and available to the enjoyment of those who care to visit them, protecting them from injury and maintaining their improvements to the extent possible under existing conditions, while planning for their larger improvement and use after the war is over. These statements are necessarily brief. The reports of the superintendents of the national parks and the custodians of the larger monuments, found in Appendix B, contain detailed information re-

erazione "Pro Montibus," is likely to be established soon. This park project embraces a wonderful scenic area in the Appennines almost due east of Rome. When dedicated for park purposes it will also become an exceedingly valuable game preserve. Many species of animal life now inhabit the region and with proper protection will rapidly increase. The Federazione pro Montibus has issued two very attractive publications on this park project, both of which are illustrated. They describe, in considerable detail the nature of the park area, the extent of its forest growth, its animal life, and other important features.

It is reported also that the Italian Government has under consideration the establishment of a national monument to include the famous Monte Grappa which has been the scene of so much bitter fighting during the past year.

In Spain, according to press reports, a law has been passed under which national parks may be established. The State is given authority to choose members of the park system which are to include distinctive natural features of Spain—the most beautiful scenic areas, forests, and lakes. Special attention is to be given to the preservation of the flora and fauna of these reserved areas. King Alfonso has taken a personal interest in this work and was the first to suggest a national park in the Sierra de Gredos. The King observed that the fauna of the region were rapidly disappearing and urged that the park be created for the primary purpose of preserving the wild life. It is reported that he personally assumed the expense of safeguarding this area until other arrangements were made to undertake this work.

It is gratifying to note that, in promoting their national park projects foreign countries have made special mention of the national park system of the United States: the policies of this Government in safeguarding its great scenic areas have undoubtedly guided to some extent the planning and development of the park projects abroad. The illustrated articles on our national parks which have appeared during the past two years in the Pan American Bulletin, and particularly those printed in its Spanish, French, and Portuguese editions, have, in my opinion, accomplished as much in telling the world in general about the American national park system as any other agency.

THE YEAR IN THE PARKS.

As the following summary of the activities of the National Park Service during the past year will indicate, we are keeping the national parks open and available to the enjoyment of those who care to visit them, protecting them from injury and maintaining their improvements to the extent possible under existing conditions, while planning for their larger improvement and use after the war is over. These statements are necessarily brief. The reports of the superintendents of the national parks and the custodians of the larger monuments, found in Appendix B, contain detailed information re-

1 Il parco nazionale dell'Abruzzo, per Luigi Parpagliolo, della Direzione generale della Belle Arti, Della Nuova Antologia, 16 Maggio, 1918. Roma, Direzione Della Nuova Antologia, Piazza di Spagna (S. Sebastiano, 5).

YELLOWSTONE NATIONAL PARK.

Just as the year 1917, with its reorganized concession system, stands a distinguished landmark in the administrative history of the Yellowstone National Park, so the past year looms large in the history of its protection and improvement. In fact, in point of protection, it ranks in importance with 1894 when the act was passed to provide for the punishment of violations of the rules and regulations.

By authority of the sundry civil act of July 1, 1918, the National Park Service was placed in complete control of the administration, protection, and improvement of the park, thus relieving the troops from further duty in connection with patrolling the reservation, and withdrawing the road construction and maintenance work from the control of the Engineer Corps of the Army. In other words, Yellowstone National Park was accorded exactly the same type of government and management that all of the other national parks under the jurisdiction of this department, except one, Crater Lake, enjoy. In 1916, acting under authority reposing in your office, you authorized the removal of the military detail from Yellowstone Park, and the establishment of a civilian ranger force to take its place. On October 1, 1916, by arrangement with the War Department, and with its hearty cooperation, Fort Yellowstone was taken over by this department, and the troops on duty there were sent to a station on the Mexican border. A new ranger force was organized, composed partly of scouts long connected with the administration of the park, and partly of certain soldiers who, because of their special qualifications and intense interest in the development of the park, were discharged from the Army to join this service. Throughout the winter of 1916–17, one of the severest on record, and until it became necessary to disband because of adverse legislation, this force gave the wild life of the park a measure of protection which, up to that time, was scarcely considered humanly possible.

Meantime Congress, on the facts then before it, reached the conclusion that Fort Yellowstone ought not to have been abandoned by the War Department, and that it could be better protected by soldiers than by rangers; and thereupon, by making Interior Department funds nonavailable for protective purposes through legislation in the sundry civil bill of June 13, 1917, made necessary the recall of the Cavalry to the park. The ranger force was disbanded on June 30, 1917, and Fort Yellowstone was re-garrisoned.

During the next half year, the National Park Service, aided by officers of the Army, gathered additional data relating to the inadvisability of using troops in the protection of national parks, devoting considerable attention to the cost of maintaining a military force in this isolated post where there was no opportunity for troop drill or other army work. These facts and figures were placed before the Appropriations Committee in the spring of this year, together with the data formerly available, and the result was favorable action upon our recommendation that the troops should again be removed from the park.

AN EFFECTIVE RANGER SYSTEM.

A new ranger force, composed largely of members of the force developed in 1916 and disbanded last year, was organized during the summer just past, and is now engaged in protecting the park. Each one of these men has released four or five soldiers for war service without, in the slightest degree, reducing the patrolled area of the park. The military force necessarily had to maintain a semblance of army organization in the park, hence its outposts were garrisoned with squads of men, only one or two of whom regularly patrolled each district. Under the new organization, rangers are assigned in pairs to districts and each is required to do patrolling work. Thus the cost of protecting the park has been reduced enormously.

The rangers are all hardy men of the mountains, skilled in forestry and woodcraft, accustomed to the hardships of the severe winters, trained in the use of snowshoes and skis, and thoroughly familiar, in most cases, with the entire park area. The soldiers formerly controlling the park were never sent there for a long tour of duty, and, consequently, never became thoroughly acquainted with the park or intensely interested in the performance of their duties. That the park will receive better protection under the new order of things can not be questioned. In fact, the superiority of civilian ranger forces over troops as park guards has been conclusively demonstrated in the cases of Yosemite, Sequoia, and General Grant National Parks, from which the military forces were withdrawn in 1913.

The permanent ranger force will consist of 1 chief ranger, 4 assistant chief rangers, and 25 rangers of the first class. During the tourist season and during the period of greatest danger on account of fire this force will be supplemented by 25 temporary rangers, traffic officers, and automobile checkers.

ECONOMY AND EFFICIENCY OF THE NEW ORGANIZATION.

Not less important than the organization of the new ranger force is the assumption by the National Park Service of control over the work of maintaining and improving Yellowstone National Park. For many years this work had been performed under the direction of the Chief of Engineers of the Army, who was represented in the park by one, and sometimes two, officers of the Engineer Corps. All maintenance, improvement, and construction work was performed in the park without the advice and direction of the Interior Department. The worst features of this divided administration were the entire lack of a comprehensive policy which considered the popular uses of the park and, in late years, the failure to give any degree of permanency to the organization of the engineering force. Engineer officers were detailed to the park for short periods of time, then replaced by others, who often came with different ideas from their predecessors; there was constant altering, modifying, and changing of plans for improvement work and of methods of performing this work.
Then, as the engineer officers were not under the control of the commanding officer in charge of the protection of the park, the reservation had three heads wholly independent of each other—the superintendent of the park, who since 1916 has reported directly to the National Park Service and who has had charge of the administration of the park and the control of concessions, care of wild animals, etc.; the Army officer in command of the troops in charge of the protection of the park, who reported to the commander of the Western Military Department at San Francisco; and the district engineer officer in charge of improvements, who reported to the Chief of Engineers of the Army. It was necessary to maintain three distinct offices, three separate office forces, and separate warehouses for equipment and supplies. In many other respects also there was a duplication and triplication of effort. Under the new organization, in which the administration, protection, and improvement of the park is combined under the direction of this Service, large economies can be effected in several directions. The offices have been combined and the attractive stone structure formerly occupied by the engineers, not far distant from the Mammoth Hotel, has been made the headquarters of the park. Here all of the business relating to the park is and will continue to be transacted.

THE TETONS SHOULD BE ADDED AT ONCE.

The machinery for developing this great playground on a broad scale is complete. The next thing to accomplish is the enlargement of the park to the extent necessary to carry out our plans for its comprehensive improvement. Part of the Jackson Hole region and the headwaters of the Yellowstone River, south and southwest of the park, should be added to it immediately. This extension would include the wonderful serrated peaks of the Teton range, Jackson Lake, all of the rugged scenic lands north of the Buffalo Fork of the Snake River, including the valleys of Pilgrim and Pacific Creeks to Two Ocean Pass; also the canyons, lakes, and forests of the Upper Yellowstone and the Thorofare Basin. Every foot of this area naturally belongs to Yellowstone Park. The map herein will clearly indicate to the reader the fact that the new boundaries proposed are natural lines, except where the Idaho-Wyoming boundary line is used near the southwestern corner of the park.

The addition of this territory will give Yellowstone a stupendous exhibit of a kind of scenery that she lacks at the present time; it will make possible the development of Jackson Lake and the upper Yellowstone as great tourists' resorts; it will make feasible the construction of a road up Pacific Creek over Two Ocean Pass, down Atlantic Creek to the Yellowstone River, thence along the river and the east shore of Yellowstone Lake to a junction with the scenic Cody Road; it will afford permanent protection to all of the summer range and much of the winter range of the southern elk herd, and will give ample opportunity for the moose of the Fall River district to thrive under proper conditions for their protection.

THE "GREATER YELLOWSTONE" BILL.

The bill providing for this extension, H. R. 11661, by Mr. Mondell, is now pending in the House of Representatives and its early passage can not be too strongly urged. The President has withdrawn all of the lands embraced within the proposed new boundaries in aid of this legislation. No homesteads or other private interests can be acquired while this measure is pending.

The pending legislation not only provides that all rights of the settlers in this proposed area are to be fully protected, but it also authorizes the use of park lands for the grazing of such live stock as they are able to maintain in winter through the development of their farms. It is only just and proper that this use should be permitted and it can by no possibility interfere with the enjoyment of the enlarged park because the Secretary of the Interior has full power to designate what grazing lands shall be used. This provision, of course, does not extend to the use of lands within the original boundaries of the park for the grazing of domestic stock. No settlers in this area are engaged in the raising of sheep. At the present time there are 1,910 acres of patented lands, and 3,114 acres embraced in pending entries in the total area of 844,800 acres.

This project was presented to Congress several times many years ago, but did not receive favorable consideration. In the case of several measures proposing to add land lying south and east of the park, the proposal to eliminate from the park all territory lying north of the Yellowstone and Lamar Rivers in order that a railroad might be built in this region was involved. On other occasions it is probable that the project failed either because certain mining properties east of the park were included or because of other features involving private interests to a considerable extent. All of the lands embraced in the present project now lie within a game preserve. There are exceedingly few private interests involved and the legislation now pending provides for their complete protection and for the future development of their properties. No other interests can reasonably be involved except those of the National Government. The land belongs to the United States, all but the few acres of private holdings, and should forever remain the Nation's possession for the pleasure and benefit of all of the people.

EMERGENCY MEASURES FOR A WAR SEASON.

From the standpoint of travel the Yellowstone National Park fared rather worse during the 1918 season than any other large western park. It is situated at a very great distance from large cities and is always dependent to a considerable extent on the railroads to bring visitors to its gates. The withdrawal of railroad advertising and the discouragement of travel by rail indicated early in the year that the number of visitors to the park during the summer season would not approach that of any one of the past three seasons.

As a measure of protection to park concessions, especially the hotels and camps, which involve very large investments, authority was granted in April for the closing of the hotel and the permanent camp at Yellowstone Lake, thus making it necessary for all tourists to spend a longer period of time than usual at the Canyon.

Subsequent study of the situation resulted in our going still farther. With labor extremely hard to get and a growing certainty of light

MAP SHOWING PROPOSED ENLARGEMENT OF YELLOWSTONE NATIONAL PARK AND DEVELOPMENT OF SOUTHERN ENTRANCE.
travel, a heavy loss faced both hotel and park systems, if both were to be operated in competition. To accommodate the greater number at lower charges, we therefore decided to close the hotels and turn all the season's business into the permanent camps. For the further protection of these camps authority was also granted to their management for the closing of the establishments at Riverside, near the western gateway, and at Tower Falls. This left the big camps at Upper Geyser Basin, the Grand Canyon of the Yellowstone, and Mammoth Hot Springs to take care of the season, which they were amply able to do.

The automobile lines of the Yellowstone Park Transportation Co. connected daily with trains at Yellowstone and Gardiner, Mont., and Cody, Wyo. Excursion tickets to the park covering trips into the reservation by one gateway and out by another gateway were sold by the authority of the United States Railroad Administration. Train service to the park was generally good although the decrease in travel required a reduction of Pullman facilities, which made necessary certain layovers which often proved inconvenient to those using other than direct transcontinental lines. The falling off in train travel was considerable. Only 3,926 persons entered the park by rail as against 13,350 persons in 1917. The decrease in automobile travel was relatively small, 4,734 cars carrying 17,317 people having entered the park in 1918 as against 5,703 cars carrying 21,268 people in 1917.

**SPRING FRESHETS DAMAGE THE ROADS.**

Despite the fact that flood waters resulting from the sudden melting of snow in the late spring caused enormous damage to the north and east roads to the park and to some of the roads within the park itself, these were quickly made passable for visiting motorists. An additional appropriation of $25,000 was made to meet this emergency, and, in the course of the summer, that part of the eastern approach from Cody which lies within park boundaries was practically restored to its normal condition. In fact these repairs will, when fully completed, put this highway in better shape, with better protection from high water than it ever had before. As for that part of the road lying outside the park boundaries, repairs were wholly the work of public-spirited citizens of Cody. These men closed the doors of their business houses and, taking tools and supplies in their automobiles, proceeded far up into the mountains and accomplished the enormous labor necessary to make the park accessible to motorists using the entrance highway. The personal sacrifices involved in this enterprise were great, and I want to express here publicly to the Cody people, as I have already expressed it personally, our deep appreciation of their efforts.

On July 1, under legislation already mentioned, the National Park Service assumed control of all of the improvement work in the park, taking over all equipment, supplies, and construction materials from the Engineer Corps of the Army. Many of the civilian personnel were also transferred to this service. Since then special attention has been given to the maintenance of the roads of the park and the highways intrusted to our care. Frequent rains of short duration materially aided the road-maintenance work. It is generally reported that road conditions already reflect the judgment and
A. SENTINEL ROCK ON THE CODY ROAD.
This road is maintained by the National Park Service.

B. FEEDING HAY TO ELK, WINTER OF 1918.
Section of the feeding line below Mount Everts.

YELLOWSTONE NATIONAL PARK.
A. SKY LINE OF THE TETON MOUNTAINS.

The peak on the right is the Grand Teton, elevation 13,747 feet. The proposed new boundary of Yellowstone National Park passes along the crests of the Tetons to the peak on the left, thence down about its center to and including Taggart Lake lying at its base.

B. LAKE AT THE HEAD OF SODA CREEK, A BRANCH OF THE NORTH BUFFALO FORK.

This lake lies about 14 miles directly south of the present southeast corner of the park.

SCENES IN THE PROPOSED ENLARGEMENT, OF YELLOWSTONE NATIONAL PARK.


TYPE OF COTTAGE BEING CONSTRUCTED ON NEW ADMINISTRATIVE SITE NEAR BELTON.

Wisdom of placing all activities in Yellowstone National Park under the control of this bureau.

Swollen streams also caused severe damage to the roads and bridges south of Yellowstone Park. In the Wind River and Hoback regions and in the lower Jackson Hole a change in the channel of the Snake River temporarily cut off the town of Jackson from the railroad terminus at Victor, Idaho. South of the park the loss of the Buffalo Fork bridge cut off the approach from Lander which had been promoted with much energy the year before. It is essential that this bridge be restored at an early date and an estimate is being submitted to Congress, with your approval, for a new structure to span the Buffalo Fork at this point. Should all of the boundaries of Yellowstone Park be extended southward this new bridge will constitute one of the points of access to the park.

NORTHEASTERN AND NORTHEASTERN GATEWAYS.

Another road that is deserving of development is the highway entering the northwestern corner of the park, passing up the Gallatin Canyon, over the divide into the headwaters of the Madison River and down Graveling Creek to the vicinity of the western entrance gateway. This highway is very important from the scenic standpoint. It is destined to be one of the great automobile approach roads to Yellowstone Park. It is estimated that it will cost approximately $150,000 to adequately improve the part of the road lying north of the park and negotiations are in progress looking toward accomplishing this work through cooperation with Gallatin County and the State of Montana under that part of the Federal aid roads act which provides for the improvement of highways in the national forests. Should this cooperative project be approved it is our intention to put that part of the highway which runs through Yellowstone Park into excellent condition. If possible, this road will be continued to a connection with the western approach road. The Gallatin road connects the thriving city of Bozeman with the Yellowstone Park just as the road up the Yellowstone River connects Livingston with the main northern gateway.

Another road of great importance as a highway for motorists is that which connects the Tower Falls with the mining community of Cooke City. This road follows the Lamar River to Soda Butte Creek, thence up the scenic canyon through which this stream flows to the northeast corner of the park. The scenic charm of this part of the park is little known, but it is destined to become one of the most popular resort districts. The mountains are highly colored and wonderfully carved by water erosion. Here alone in the Yellowstone we have the picturesque granite landscape typical of the Rockies, the rest of the park being volcanic. This is the region of the extraordinary Grasshopper Glacier, Lake Abundance, and other magnificent natural features still accessible only to the hiker and horseman. The automobile road, however, leads the visitor to lakes and streams abounding with fish, and wild animals can be seen along the route in large numbers.

NEW MEASURES FOR WILDLIFE PROTECTION.

In the valley of the Lamar lies the big buffalo farm where nearly 400 bison range under conditions approaching those normally ob-
propagation of all of the species of animals now found within its
providing sport for the hunter for years to come under appropriate
borders, but it is also our hope that these animals will so increase that
extend not alone to the protection of game animals on legally estab-
National Park Service is absolutely essential. This cooperation must
lowstone herds that this great park shall provide the place for the
or Jackson Hole elk herd. It seems essential, however, that if this
private holdings. The same course will be necessary in the case
of the northern herd, in which event land now withdrawn in the
summer range and considerable winter grazing land for the Southern
measures have been taken to protect these animals against the
rigors of winter. When the snow becomes too deep, these herds drift
over the boundaries in several directions. Where the adjoining lands
have been grazed by sheep or cattle, there is no forage left for the
park animals.

Unfortunately, in the past there has been considerable grazing on
the natural winter range in the national forests. At the present time,
however, large areas of these feeding grounds have been withdrawn
from use as pasturage for domestic stock, and an investigation is in
progress by the Forest Service to ascertain under what condition the
land should be withdrawn from this use in the interest of game pro-
tection. The extension of the boundaries of the park to the Buffalo
Fork of the Snake River, as now proposed, will reserve all of the
seasons which the close of the war will surely bring.

The problem of protecting several species of animals in winter,
notably the elk and antelope, is one that is constantly calling for the
final solution, and so far this has not been reached, although effective
measures have been taken to protect these animals against the
measures of the National Park Service. An intensive campaign to
destroy predatory animals, such as the wolf, coyote, and mountain
lion, has met with gratifying success.

The work of preparing, plowing, and seeding additional land for
the raising of hay to be used in the event of extraordinarily cold
winters accompanied by unusual snows has gone speedily forward.
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progress by the Forest Service to ascertain under what condition the
land should be withdrawn from this use in the interest of game pro-
tection. The extension of the boundaries of the park to the Buffalo
Fork of the Snake River, as now proposed, will reserve all of the
summer range and considerable winter grazing land for the Southern
or Jackson Hole elk herd. It seems essential, however, that if this
elk herd is to be protected against all adverse conditions of the future
the winter feeding grounds near Jackson, Wyo., should be greatly
enlarged, probably by the purchase of a number of ranches and other
private holdings. The same course will be necessary in the case
of the northern herd, in which event land now withdrawn in the
Canyon of the Yellowstone River between Absaroka and Gallatin
National Forests should be supplemented by the purchase of private
lands north of the park and in this reserved area. At the close of the
winter just beyond the boundaries of the park.

YOSEMITE NATIONAL PARK.

Steady progress in permanent improvement is the keynote of the
year in the Yosemite National Park. The large falling off in travel
by rail was in some part offset by a material increase in the number
of visitors by automobile; at the same time park forces and facilities
were not heavily taxed, and there resulted a margin of time and ef-
fort, which was most usefully applied to preparations for the heavy
seasons which the close of the war will surely bring.

Under the balances of last year's revenues and appropriations and
the appropriation of $325,000 made for the current year, work of
great importance for Yosemite's future has been accomplished. The
most notable achievement was the completion of the new power plant,
which is expected to fill the growing needs of the Yosemite Valley for
a generation to come.

THE NEW POWER PLANT.

This plant, whose total cost of $212,000 was authorized under the
congressional appropriations of July 1, 1916, June 12, 1917, and
March 28, 1918, was continuously under construction from August,
1916, to its first operation on May 28 of the present year. It consists
of a log crib diversion dam across the Merced River about a mile
below the Pohono Bridge, with concrete head works opening into a
64-inch concrete pipe 400 feet long. This gives into a 54-inch red-
wood stave pipe which, in connection with a steel pressure pipe of
the same diameter, delivers the water to the turbines under a head
of 330 feet. The power house is equipped with the highest class of
hydro-electric machinery. Two General Electric dynamos of 1,000
kilowatts each are connected with its two Pelton turbines. From
here the current passes on a three-phase system to the main dis-
tributing point near Yosemite Village.

Your inability to dedicate the new plant upon your return from
Hawaii postponed the ceremony until September 7 last, when a
distinguished little company gathered with me for the addresses
and the unveiling of the medallions. The plant was formally dedi-
cated to the late Henry Floy, the electrical engineer of New York,
whose voluntary study of the problem, whose report, and finally
whose presentation of the proposition before the Appropriations
Committee of the House were the factors which principally brought
about its realization. I dwell upon the installation of this plant be-
cause in a way it symbolizes the new and greater function for which
the Yosemite National Park is preparing, and which it will assume
in the very near future.

The old electric plant in the Merced Valley above the Happy
Isles will be sent, if Congress so wills, to the Sequoia National Park
where it is capable of meeting the needs of the Giant Forest for
many years.
RECONSTRUCTION OF THE EL PORTAL ROAD.

The enormous increase in motor travel to the park having long ago indicated to us the extreme need of bettering the roads in the Valley where all approaches concentrate, I submitted to Congress in 1915 estimates for the reconstruction of that part of the El Portal approach road which lies within the park. Under the substantial appropriations which resulted, four miles of the eight have now been reconstructed. The width has been increased to 20 feet, rock copings have been built wherever necessary, and ditches, culverts, and bridges have been provided for drainage.

Half of this most important work, then, is done, and $50,000 should be appropriated to carry it through the next season. This is the most important of Yosemite's immediate necessities.

NATIONAL HELP NEEDED FOR AN IMPORTANT STATE PROJECT.

In connection with this there is no new road proposition more important to Californian lovers of the Yosemite and to motorists visiting the State than the road outside the park which the California Highway Association projects between Mariposa and El Portal, for which it has allotted and made immediately available the sum of $175,000; this sum is estimated to be about 40 per cent of the total cost. The wide range of choice which this road will offer to motorists is apparent at a glance, and the proposition should receive earnest attention. To make this road a fact the assistance of the United States is necessary, and the California State Automobile Association and other organizations recently asked the Department of Agriculture to make allotments to assist it from the Forest Service allotments for the construction of highways through national forests.

So far the Department of Agriculture has not acted favorably for several reasons, the chief of which seems to be a doubt whether such a road would constitute a proper war-time expenditure.

Some solution favorable to the project must be found very soon or the State will withdraw the allotment for its share of the road in favor of road projects in other parts of the State, and a highway will be lost to the Nation which would have added enormously to the pleasure and benefit of motorists from all parts of the country, besides providing an approach to the Yosemite National Park which will be open the whole year.

IMPRESSING THE VALLEY ROADS.

One of the important accomplishments of the year has been the widening of roads throughout the valley to 20 feet and their resurfacing with from 8 to 6 inches of river gravel. The improvement is notable. This brings up the subject, however, which some day must be squarely faced. This granite gravel disintegrates very rapidly under heavy travel, with resultant deterioration of surface.

Considering that in a war summer 7,621 cars visited the Yosemite last year, that after the war the number of visiting cars will increase very rapidly, and that in the nature of things the overwhelming majority of visiting cars always will make the valley their headquarters, the absolute need of hard, durable valley roads is apparent; the alternative is increasingly great sums spent every year on repairs to the surface. I myself think that eventually we shall have to lay concrete roads in the valley as a measure of economy.

MANY INTERESTING NEW TRAILS PROJECTED.

Three new trails were constructed during the season, two of which open up delightful new country above the valley's rim. One of these cuts out lofty Vogelsang Pass from the trail between Lake Merced and the Tuolumne Meadows by breaking in through Babcock and Emeric Lakes and crossing the divide at Tuolumne Pass. It opens a new and lovelier country which is low enough to be useful after Vogelsang Pass is choked with snow.

Another new trail leaves the Tioga Road at the Yosemite Creek bridge and covers 8 remarkably scenic miles to the Ten Lakes Basin on the south rim of the Tuolumne Canyon, opening an exceedingly beautiful part of the country to trail travelers who come by motor on the Tioga Road.

In connection with this trail, the suggestion made by William E. Colby, president of the Sierra Club, after consultation with Prof. J. N. Le Conte, former president, that this trail, if continued across the Tuolumne Canyon at Pate Valley, will offer a direct trail route from the Yosemite Valley into the magnificently scenic regions in the north of the park seems to me admirable. Doubtless there are living no two men as familiar as these with the incomparable wilderness of the upper levels of the Yosemite; certainly there are no others who hold the Yosemite in greater love and wiser estimation.

Prof. Le Conte, concurring heartily with the plan, expresses a preference for reaching Pate Valley by the old Indian trail from Harden Lake; at Pate Valley he would cross the Tuolumne and pass up a trail to be built through Piute Canyon to connect with the trail to Rogers and Benson Lakes. This plan, which is the result of personal investigation made last summer, has its sound reasons, and doubtless it will also be continued in the near future.

Two trail routes into the great northern wilderness are none too many for this period of its rapidly nearing discovery by the greater public; doubtless the next decade will see this grand country developed by a network of new trails constructed in response to direct demand.

The third trail built during the summer climbs Glacier Point behind Camp Curry. It is called the Ledge Trail for good reason. This work renders safe an exceedingly steep trail against the use of which we have been compelled to issue yearly warnings without avail; many have insisted upon using it in spite of warnings because it cuts the trip between the valley and Glacier Point to less than 2 miles, and there have been distressing accidents. These now will become impossible for those who use the most ordinary care.

THE TIOGA ROAD AND THE LAKE TAHOE LOOP.

Again last summer did the Tioga Road amply justify its purchase and presentation to the park system. Again did it prove the need and popularity of a motor gateway to the upper wilderness, which, probeous to its opening, could be enjoyed only by the camper-out with pack train. Fifty or sixty automobiles a day traveled the Tioga Road last season, which means that, with the rapid increase of trail

...
travelers, the Yosemite north of the valley’s rim is rapidly coming into its own.

Especially popular was the motor loop tour from San Francisco across the Sierra through ‘Placerville or ‘Emigrant Gap to Lake Tahoe, thence by way of Gardinerville to Tioga Pass, over the Pass, across Yosemite National Park on the Tioga Road, and back to San Francisco by way of Stockton or Modesto. It will be noticed that Yosemite National Park as a park, that is, without any special consideration or use of the Yosemite Valley, also seems to be coming into its own. This is a good sign. The concentration in the valley has limits beyond which something vital is lost. The park north, east, and south of the valley rim has room for a million and few equals among scenic wildernesses.

This growth in the popular appreciation of the upper country has resulted in a pleasing increase in the number of camping parties in the Tuolumne Meadows and elsewhere throughout the higher mountain section. I look forward to the day when many motorists here, as in the Yellowstone, will bring camping outfits packed on their cars, and will enjoy this grand wilderness in the only way it can be enjoyed thoroughly. As compared with the Yellowstone, the advantage is all with Yosemite, inasmuch as the practical absence of rain in summer makes cumbersome tents unnecessary for camping out. The Sierra Club’s annual outing was omitted this year for reasons connected with the war, but a large number of club members packed in and camped out individually.

Camping out, by the way, also increased greatly this year in the valley. The colony under the trees by the Merced some day may exceed its limits of cover.

DESTINY OF THE JOHN MUIR TRAIL.

The development of the upper levels of the park naturally calls attention anew to the continuing crest of the Sierra. The practical completion of the John Muir Trail, California’s memorial to the great naturalist, follows it south from Yosemite into the noble country which is called “the Greater Sequoia” because it is proposed to add it to the Sequoia National Park.

This magnificent trail, literally a highway since as nearly as feasible it follows the crest, is a scenic progress of real sublimity all the way to Whitney’s summit. Those who have followed it will realize that my prophecy, after five trips into this region, is founded upon a natural destiny, namely, that the time is not many years distant when these two great Sierra national parks, the Yosemite and the Greater Sequoia, will be made practically one by a natural development of this summit highway in response to popular demand.

Motorcycles were admitted to park roads last summer for the first time. While automobile travel exceeded expectation, the number of motorcycles was not great. It is possible that the grades of some of the approach roads outside the park may have been found stiff for all except the most powerful motorcycles.

UNFORTUNATE WILD-ANIMAL SITUATION.

As soon as peace is restored and cattle grazing is again restricted in Yosemite wild animal development will resume its interrupted pace. Deer retire naturally from companionship with cattle, and when cattle occupy 70 per cent of the available area they begin to suffer severely. Few deer may now be seen in the Yosemite and these are in poor condition, apparently suffering from want of food. While these facts have been noted and reported only about deer, it follows that they are also true about all grazing animals, and, to a less degree, about wild animals of other kinds.

This condition is peculiarly unfortunate because the Yosemite was just beginning to show a favorable reaction from the devastation of the past. Any setback now will set back progress for years. Meantime other conditions favor. The measures taken to keep down mountain lions, coyotes, and other predatory beasts had begun to bear fruit in the increase of the harmless animals upon which they habitually preyed.

EXHIBIT OF MOUNTAIN LION CUBS.

The mountain lion, which is closely related to the panther that used to inhabit our eastern wildernesses a generation ago, is the subject of the greatest curiosity among Yosemite visitors, but as, in spite of his great size, he is the most timid and cowardly of beasts, it has heretofore been impossible to gratify this curiosity. Last summer’s visitors and those of several seasons, at least, to come, will be treated to actual demonstration. Three lion cubs whose mother was killed in the early spring have been on exhibition in a safe inclosure and have been examined by thousands of visitors to the park. At six months of age these kittens are active and powerful beasts who love play and do not at all object to being petted and even held in one’s arms, where, I can assure you from actual experience, one is quite enough at one time.

So far, they have received no raw meat. Raised at first on milk, they took kindly to bread and cereals and cooked meat. It is planned to amply and comfortably cage them before next season when they may be seen, then no doubt lusty adults, by all who enter the valley. A brown bear cub captured this season will be added to this exhibit of Yosemite’s wild life.

Plans are also in the works for a museum in which mounted specimens of all park birds and animals will be displayed not only for the entertainment of visitors, but that visitors may identify here the creatures they may see alive in the wild.

FISH HATCHERY NEXT.

The increasing patronage of the Yosemite in recent years and in particular the extensive invasion of the wildernesses above the rim have created a trout situation which must be met promptly. There has been little fishing left in the valley for many years, and the lakes within a few hours’ drive are showing a falling off in catches. Even lakes in the far north of the park which have fairly swarmed with trout for many years are showing some effects of increased fishing.

With the practical disappearance of good fishing throughout the country generally, but not at all of the love of fishing; visitors look more and more to our national parks for their opportunity to enjoy a little really good fishing. A fishing rod is a part of the equipment
of an increasing number of cars starting westward toward one or other of the parks, and many tourists by rail inquire about fishing as soon as they arrive. This public demand must be generously met.

For some years now Yosemite rangers whenever opportunity offered have transferred trout from native waters to streams or lakes which have been cut off by waterfalls from natural stocking—which has helped a little; and last year the California State Fish and Game Commission furnished 250,000 fry for the depleted valley streams and the waters adjacent to the Tioga Road.

But this is not enough. To restore the Yosemite and keep its waters stocked as Yellowstone's are stocked will require many times that many fish yearly. The answer, then, is a hatchery. To this end I have concluded a contract with the State commission by which it acquires a hatchery site near the Happy Isles. Construction will begin in the very near future.

CONCESSIONS-

The name of the Desmond Park Service Co. has passed with the closing of Mr. Desmond's connection with the management of its park concessions. The new name of the corporation controlling the camp west of Yosemite Falls, the Sentinel Hotel, the Glacier Point Hotel, the camps above the valley's rim, and the park transportation service is the Yosemite National Park Co. Last May the property and contracts belonging to this company were leased to Shaffer Bros., who successfully operated the properties until the close of their contract on September 30. The Yosemite Falls Camp, Camp Ahwahnee, and El Capitan Camp were combined into one with several grades of service under the name of Camp Yosemite.

Meantime Camp Curry, which enjoyed a good season, considerably improved its group of central buildings and acquired the privilege of building canvas bungalows with bath and other facilities to correspond. The misfortune of the burning of the Hotel del Portal at El Portal would have proved a greater misfortune at the beginning of a season of normal railroad travel. A luncheon station was built in good time to care for that part, at least, of the functions of the old hotel. The hotel at Wawona has been enlarged and greatly improved.

The need of an adequate new hotel in the valley is very great indeed.

HETCH HETCHY CONTRACT SATISFACTORY.

Under a contract with the city of San Francisco affecting the building of the reservoir in the Hetch Hetchy Valley, which was executed during the summer, the private land and timber situation is greatly improved. The city owned 320 acres of land, a superb stand of sugar pine, within the park limits which it purposed to clear in part in order to provide the lumber necessary for building operations. To save the most of this timber and acquire title to the land for the park I effected an exchange with the city of the timber now standing on the lands which the Hetch Hetchy reservoir will submerge for its 320 acres of woodland. We permit the city to cut from this woodland what is necessary, up to 4,000,000 board feet, to supplement the cuttings from the Hetch Hetchy floor; and the city also agrees to clean out and remove all trees and brush from the land to be submerged in order that there shall remain no unsightliness in the new reservoir when completed and filled. The profit to the public service in the acquisition of 320 acres of woodland is apparent.

Those who were alarmed last summer by seeing living trees caught in the flooding behind the Lake Eleanor Dam may calm their fears. That flooding was temporary, and the city of San Francisco will duly clean out all trees and bushes before the permanent flooding of this reservoir, which is a part of the Hetch Hetchy project granted by Congress to San Francisco in 1913. This entire construction, a work at best of some years, has been set back somewhat by a war-created scarcity of laborers. We are taking every precaution to insure its completion with the least possible damage to the beauty of the neighborhood, even temporarily.

SEVEN THOUSAND ACRES MORE ACQUIRED.

Important land and timber exchanges which have been projected for several years with the Yosemite Lumber Co. have come to an issue during the last year, and the details of a contract definitely arranged. By its terms the company makes over to the park nearly 7,000 acres of privately owned land within the park boundaries in return for the marketable timber upon some of it and upon other Government land, the timber within park boundaries to be judiciously cut only under strict supervision by park authorities.

These additions to the public domain within the park are extremely valuable, as they insure the continuance of the magnificent virgin forests bordering the Wawona and Glacier Point roads. Those areas which will be lumbered under the contract lie well away from beaten lines of travel; moreover, they will be cut over with such discrimination that another generation will see their present beauty practically renewed.

This leads naturally to the consideration of two privately owned areas outside of park limits whose protection it is a public duty to secure. One borders the Big Oak Flat Road between its western park entrance westward to the crossing over the South Fork of the Tuolumne; the other borders the Tioga Road between its western park entrance westward to the same stream. The magnificent forests of sugar pine and yellow pine which lead so nobly up to these park entrances are bound to fall under the ax unless help is quickly forthcoming. The Department of the Interior can not aid. Unless the Department of Agriculture or the State will acquire these road borders in exchange for timber as valuable elsewhere, they can only be saved by direct purchase authorized by Congress. This is a cause which private patriotism and public spirit may find well worth some effort.

Every wilderness has its early mosquito season and the Yosemite is no exception. It is believed that this can be greatly mitigated in the valley by the application of methods which have proved effective elsewhere. The experiment will be tried next season in the interest of the early visitors.
The discovery of a large limestone cave was the most striking event of the year in the Sequoia National Park, striking because of the cave's immense size, the magnificence of its passages and chambers, and the mystery of its unsuspected existence only a short distance from well-patronized trails. It is remarkable indeed that a gaping entrance 15 feet high and 27 feet wide should never have been seen by mortal eye until two anglers, A. L. Medley and C. M. Webster, accidentally passed it on a late April trouting trip.

The cave became the sensation of the season, and justly so because of the size and richness of its limestone decorations and the fantastic

quality of its formations. It penetrates a mountain of white limestone. Explorers have entered 4,000 feet so far, and it is evident that there is much yet to see after certain openings have been enlarged; in fact, we may find a mountain of caves.

A personal investigation of the cave during the summer determined me to take immediate precautions for its preservation. Arrangements are being made to build a gate which cannot be passed without a Government guide, who shall protect not only the visitors against losing their way in the cave, but also the cave against the memento habit of many visitors. It is our purpose to see that it retains its wonderful pristine beauty to the full.

One of the many wonders is the so-called organ room, which contains formations giving out a full range of resonant notes when struck, so that a musician can easily play a tune after a little selection of the proper stones. Because of the rich quality of its walls, the cavern has been named Crystal Cave.

A beautifully illustrated article from the pen of Assistant Attorney General Huston Thompson, who accompanied me through this cave in September of this year, will appear shortly in the National Geographic Magazine.

**VALUABLE ROAD IMPROVEMENTS.**

The season has left roads considerably improved both without and within the park. Tulare County is to be warmly congratulated on the public spirit and energy which resulted in the building of a new concrete road from Visalia to Three Rivers. This in itself will guarantee a very large increase in travel next season to the Sequoia National Park. From Three Rivers up the road will need considerable improvement, but by a careful handling of the traffic it can be made to answer for the present or until the end of the war gives opportunity to go ahead with the regular road improvement.

Naturally extensive repairs to these approach roads resulted in lessening travel during the summer just past, but the nature of the improvement probably will more than compensate for the loss next summer alone, to say nothing of the many seasons of the long after-life of the concrete surfacing.

Within the park the principal improvement was the extension of the end of the road leading from the Giant Forest to the Marble Fork, a distance of about a mile and three quarters. This enabled us to open up a new automobile camp where good fishing was available, relieving the pressure on the Giant Forest camp. A 16-foot bridge with an 80-foot span was built to carry this road over the Marble Fork.

This road is a section of the proposed highway extension between the Sequoia and General Grant National Parks which, when completed, will penetrate a magnificently scenic part of the High Sierra, passing through exceptional forests, even for this country, and making many camp sites available where excellent fishing may be found. The area lying between the parks, of course, can not be crossed under national parks appropriations. We are depending upon the county to construct this connecting link.

Many miles of existing roads were resurfaced. Nearly every future visitor to the Giant Forest will profit by the wooden stairway which was raised 346 feet to the top of Moro Rock, where a magnificent view is obtainable of the High Sierra on one side, and the Sierra foothills on the other. Hand rails will help the climbing of a summit which was heretofore accessible only by well-accustomed mountaineers. Other improvements included the building of a large stable garage and the fencing of five meadows for the use of trail horses for park visitors.

Time also was found for much clearing up of forests for fire protection, including many acres of heavy sequoia growth in the Giant Forest. The splendid sequoia groups which have come under the ownership of the park by purchase out of congressional appropriations and the gift of the National Geographical Society were specially safeguarded. A hundred miles of trail, including the long
South Fork trail across the park to the eastern boundary, were cleared up and repaired. All this was additional to the insect-control work, under the supervision of the Bureau of Entomology, which obliged us to sacrifice 62 yellow pines and 27 sugar pines in the Middle Fork Valley of the Kaweah River for the better protection of the forest generally. It was, indeed, a busy season.

**Yosemite’s Old Power Plant Needed Here.**

Now that the Sequoia National Park has been discovered by the motorists, its rapid development is to be looked upon as a natural and necessary consequence. Already the need of a new and large administration building is pressing, and must be forced at the close of the war. The Giant Forest camp, too, is entirely inadequate to properly care for the people who now crowd it, to say nothing of the expansion of patronage confidently expected in the next several years.

By way of beginning the new order, the installation of Yosemite’s new power plant offers an excellent opportunity to supply one expensive need to Sequoia at small cost, for the old Yosemite plant, if brought to the Giant Forest, will meet its needs for years to come. This plant is now useless. Congress no doubt will see the advantage of appropriating the necessary funds for its movement and installation.

Possibly some of the surplus power from this plant may be diverted for the lighting of Crystal Cave. A system of indirect lighting by electricity, if properly worked out, will avoid the use of candles and torches, which can in time seriously mar the glorious freshness of the cave’s white beauty.

**The Greater Sequoia.**

During the summer I took occasion for the fifth time to enter the supreme region north and east of the Sequoia National Park which we call “the Greater Sequoia” because nature manifestly intended the two regions to be necessary parts of one whole. My visit this time to the top of Kearsarge Pass, where the scenery is as inspiring as in the world, has enabled me to cover with some completeness the entire region involved.

Let me therefore say right here that every visit has tended to convince me the more thoroughly that this proposed addition is surpassed in nobility and grandeur by the “show scenery” of no other accessible part of the world. Let me say that the more extensive my knowledge of scenery of the sublime quality becomes, the more clearly I see the superlative quality of “the Greater Sequoia.” Let me express the belief that no local consideration whatever should be allowed to prevent the addition of this wonderful area of the Sierra’s climax to the group of the Nation’s greatest spots, for, in addition to the national and international fame it would bring to California as a national park, it would surely bring new business which would quickly amount to very many times the local losses, if local losses should follow.

National interest is growing slowly but surely in this great plan, which some day is bound to be realized. William E. Colby’s testimony before the subcommittee of the Public Lands Committee of the House last June, which will shortly be published, is especially valuable as being the opinion of an accomplished mountaineer who is thoroughly familiar with the Sierra. Mr. Colby, who is a distinguished specialist in mining law, was in charge of the summer tours of the Sierra Club for many years before assuming, a year ago, the presidency of the club.

**General Grant National Park.**

It is impossible to consider any of the Sierra parks without reference to the “Greater Sequoia” project, and so it happens that, before discussing the season’s news from the General Grant National Park, we naturally think first of its probable part in the realization of this great plan. That part is at once evident. With the monster sequoia from which it derives its name and its magnificent surrounding grove it will become the “Greater Sequoia’s” impressive northern entrance as naturally as the Giant Forest is destined for its southern entrance.

To accomplish this it would, of course, be necessary to set aside a strip of territory to connect General Grant Park with the “Greater Sequoia.” This leading at once to the King’s River Canyon, would compete with the Giant Forest entrance in popularity.

It would also be possible, entering there into the King’s River Canyon, to swing southward through the Giant Forest and out by way of Three Rivers and Visalia, an interesting loop indeed for motorists traveling the San Joaquin State Highway who care to vary their progress with a few glimpses by trail of the scenic wonders of the Sierras. The future possibilities of laterals from the main State highway, like these roads to General Grant National Park and the Giant Forest, are very great, as motorists already are beginning to perceive.

The General Grant forests were never more beautiful than last summer. Motorists flocked to them in increasing numbers, and private camps dotted the forest glades everywhere.

The public camp concession was granted this year to the General Grant National Park Company, represented by Mr. Worth Ryder, who also conducts the hotel in the Kings River Canyon known of old to frequenters of Sierra trails as Kanawyer’s. The season was a reasonable success, and many who availed themselves of Mr. Ryder’s triweekly saddle and pack train service up the South Fork of the Kings River became the pioneers of the future northern entrance to the “Greater Sequoia.”

The year’s improvements were on a small scale; the installation of a mile of additional water piping in the tourist camp ground together with drinking hydrants and five shower bath houses was the principal new work. These improvements are meeting the most insistent present demand of the park by providing comfort for the numerous campers who come up from the hot valley to enjoy the cool and glory of these great woods.

The landscape engineer is studying plans for a new entrance gateway. A new administration building, new and larger camp grounds, and the extension of roads and the water system are immediate after-the-war needs.
MOUNT RAINIER NATIONAL PARK.

The tourist season in Mount Rainier National Park has developed some very interesting facts. The proximity of the great Army cantonment, Camp Lewis, gave promise of greatly influencing the volume of travel to the park, and preparations were early made to accommodate the expected hosts. Hardly had the gates of the park opened for travel when the 91st Division, in training at Camp Lewis, was sent to France. New troops began to assemble shortly afterwards, but they were in quarantine for a fortnight after arriving and the opportunities to receive guests were consequently few. Estimates of travel to the park were hastily cut, but visitors continued to come in great numbers regardless of the situation at the cantonment, and at the end of the vacation period we find that the total number of people who enjoyed an outing within its confines is very materially in excess of the travel figures of any previous year.

The season was longer this year in all sections of the park. The opening of the National Park Inn at Longmire Springs was marked by a dinner and ball in honor of the commanding officer at Camp Lewis, and a snow carnival in Paradise Valley was the event that induced an early opening of the beautiful new Paradise Inn for its second season. The winter sports continued about the inn until the melting of the snow caused the devotees of the toboggans, skis, and coasting trousers to move farther back on the mountain to other snow fields and the old reliable Paradise Glacier.

There was little travel by train to Mount Rainier Park this year; practically all visitors making the trip from Tacoma or Seattle by private automobile or by means of the regular motor transportation service.

HOTEL AND CAMP IMPROVEMENTS.

The Rainier National Park Co., the general concessioner that developed the transportation lines of the park and constructed Paradise Inn and the Glacier Camp, bought the National Park Inn at Longmire Springs from the National Park Hotel & Transportation Co. This transaction was completed in April, and the purchaser took possession immediately. The acquisition of the property brought all facilities for housing visitors in the park under a single management except the hotel on the old James Longmire patented placer mining holding, which was constructed and is now being operated by a Tacoma firm.

Visitors were well cared for despite the fact that unprecedented crowds sought accommodations at week ends, and taxed to the limit the capacity of the hotels and the tents utilized in connection with them. Traffic management was greatly facilitated by the through telephone connection between Tacoma and Paradise Valley made possible by the purchase of the line from Ashford to Longmire Springs by the National Park Service, and the subsequent construction of a new line from Longmire to Paradise Valley. The importance of this improvement of the telephone system can scarcely be overestimated.

Many improvements were made in the Paradise Inn prior to the 1918 season, and each has added greatly to the attractiveness of the interior of this structure. Dead trees from the Silver Forest have been freely used in these embellishments. The lobby and dining room of Paradise Inn with their outlook upon Mount Rainier and the serrated Tatoosh Range can not be surpassed by any resort hotel that I have had an opportunity to inspect. The owners of this property will continue to add to its charm, using, wherever possible, native building materials.

In the early future, the concessioner will build a new central building for its Paradise Camp and lunch pavilion, and at the same time it will move its tent equipment to the site of the new camp not far distant from the Inn. This improvement will afford better camping facilities, and will make possible the clearing away of all remains of the old camp on the eminence between Nisqually Glacier and Paradise Valley proper which has so long impaired the sky line of this ridge.

Paradise and Nisqually Glacier Camps with their lunch pavilions and a-la-carte service fill an important need in this park. The Paradise Camp is especially popular because here the tourist is at liberty to live under almost any conditions that he may choose. He can live in one of the tents of the camp, using his own bedding and cooking his own meals, or he can rent bedding at a nominal price and eat at the lunch pavilion; or he may bring his own tent equipment and eat at the lunch pavilion or purchase his supplies there and do his own cooking. Prices in all of these camps are as low as it is possible to make them in the interest of good management. Indian Henry's Camp was operated part of the summer, but was closed early owing to the fact that the horseback trip to this point did not indicate sustained popularity.

NEW FACILITIES FOR CAMPING OUT.

During the past two seasons more attention has been given to the development of free camp grounds in this park than ever before. Approximately $8,000 has been expended in clearing camp sites and installing sewer and water systems and other conveniences of this character. Especially interesting is the development that has been completed at Longmire Springs, where beautiful camp grounds have been laid out in a virgin forest. Excellent camping areas are now available at the Nisqually entrance to the park, at a point approximately a mile east of the gateway, and at Longmire Springs, Van Trump Park, and Paradise Valley.

Camping is what a large percentage of visitors want to undertake. It gives them the complete change in mode of living that many need, and furnishes delightful experiences of numerous varieties to all who take this method of enjoying the out-of-doors.

MANY NEW TRAILS.

The development of horseback trips from Paradise Valley during the season was very gratifying. The new Sky Line Trail leading from Paradise Inn over timberline ridge to Sluiskin Falls, thence over Mazama Ridge to Reflection Lakes, thence to Narada Falls, and return to Paradise Valley, offered the most popular side trip of the season. The new Tatoosh Trail, now under construction, which begins at Narada Falls and ascends the Tatoosh Range by way of Tatoosh Creek and the beautiful alpine park at its head, thence along
the summit of the range to Unicorn Glacier, thence descending to Reflection Lakes, will be equally popular next season. The combined trip over the Tatoosh and Sky Line Trails may be made comfortably in one day, but it is hoped that these and other new trails that will soon be built will result in extending the period of time that visitors will spend in this beautiful part of the park.

Trail trips were under the efficient guidance of trained mountainers, one or two of whom were women. Illustrated lectures on the park, its glacial system, its wild flowers, and trails were given regularly by the chief of the guide service, an able and enthusiastic high school professor possessing a deeply rooted devotion to the mountain. Guides, principally women, were also employed to conduct studies of the wild flowers and other plant life while making short walking trips from the hotel and camps in Paradise Valley. These educational features of business in Mount Rainier Park will become increasingly important, and in time the demand for “nature guides” will require the employment of a large force of these outdoor teachers. Thus, an idea originating in Rocky Mountain National Park is gradually being adopted and put into practice in other members of the system.

The new trail from Crater Lake to the Carbon River by way of Ipsut Pass has been completed, thus shortening the trip between the Nisqually entrance and the Carbon River Ranger Station by approximately 15 miles.

Although the trail system encircling the mountain was early repaired and put in excellent condition for travel, it was rarely used this summer, probably for the reason that few visitors to the park were taking the long vacations necessary to make this wonderful tour comfortably and satisfactorily. The well-constructed shelter cabins along these trails are an important feature of the development of the park in the past few years.

I have traveled around Mount Rainier on this thrilling trail system, and I consider it one of the greatest horseback trips that the national parks offer. The varieties of plant and animal life to be seen, the exquisite beauty of the many alpine parks, and the ever-changing panorama of glaciers and rugged mountain masses afford inexpressible pleasure. During the fiscal year ending June 30, 1918, approximately $15,000 was expended in the improvement of this magnificent trail system.

ROADS GREATLY IMPROVED.

The roads as well as the trails have been in an excellent state of repair. The reconstruction of the Nisqually River Road is now completed. This work has cost in the past five seasons more than $110,000, over $33,000 of which has been expended since July 1, 1917. The recent work included the building of very attractive rustic bridges over Tahoma and Kautz Creeks. The Tahoma Creek bridge is worthy of special mention. It is built of cedar logs and has a span of 60 feet. The entire road is now in a magnificent condition for motoring. The amount of traffic that this highway is required to sustain in the course of the tourist season will make necessary the performance of considerable maintenance work each year. It must be remembered that every mile of this road is used by practically every vehicle entering or leaving this portion of the park. In many of the parks where motor traffic is heavy circle trips are feasible, but until the Nisqually
A. Reinforced concrete power house.

B. Turbine and dynamo assembly.

YOSEMITE POWER PLANT.

YOSEMITE NATIONAL PARK.
Diversion dam nearing completion.

Section of 54-inch wood stave pipe.

YOSEMITE POWER PLANT.

YOSEMITE NATIONAL PARK.
A. LOG CRIB DAM IN THE NISQUALLY RIVER.
Five feet high by 350 long, built in May, 1918, as a measure for flood protection.

B. KAUTZ CREEK BRIDGE.
Forty-foot span of 5-foot cedar logs. Built in May, 1918, and replaces the bridge destroyed by 1917 floods.

MOUNT RAINIER NATIONAL PARK.

DESTRUCTION OF DOUGLAS FIR.

All visitors to the park felt a keen pang of regret that since the close of last season further destruction had been wrought in the beautiful Douglas fir forests along the county road leading to the park from Tacoma. A strip of timber, approximately a mile in length, bordering both sides of the road had been recently cut, and the debris left upon the conclusion of the operation presented a depressing sight. There is still time to save considerable stretches of timber along this road, but the owners of this property may not be expected to hold it intact indefinitely, particularly in view of the fact that nothing has been accomplished in the past in the way of buying timber for the purpose of preserving the sylvan beauty of this road. It is very gratifying to me that the West Coast Lumbermen's Association, meeting in Paradise Valley on July 27, should have unanimously adopted a resolution pledging its support to any plan that would preserve strips of the remaining Douglas firs along this approach road.

In view of the difficulty in collecting funds for the purchase of this timber at the present time it seems that legislation looking toward its exchange for timber of equal value in the national forests presents the only means of accomplishing our purpose in the early future. It would be a national calamity if a portion of this timber can not be preserved for posterity.

The boundaries of Mount Rainier National Park, when established, were carefully limited to include the mountain and its buttresses and no thought was apparently given to making this reservation a sanctuary for wild life. It did, however, result in protecting numerous species of mammals, including the Rocky Mountain goat, bear, and deer. The altitude of the park, however, is so high that the deer are compelled to leave its boundaries to find winter sustenance. Outside of the park these animals are not properly protected, and, as expressed in last year's report, we hold the view that the State of Washington, or the counties adjoining the park, should establish game preserves of reasonable area to which the deer may repair for winter range. The establishment of an adequate game preserve of
this character would soon result in a great increase in deer and would, within a few years, improve the sport of hunting in the neighborhood of the park, as well as give pleasure to park visitors. The matter of establishing a game preserve on the west side of the park is now before the commissioners of Pierce County.

BOUNDARY READJUSTMENTS.

It is evident that some additional territory must be added to this park in the early future. The addition of these lands will come in making a readjustment of the boundary to conform to the topography of the adjacent country. Small parcels of land should be added to the southwestern section of the park, and in the neighborhood of the southeastern corner the Ohanapecoh Hot Springs and other features naturally belonging to the reservation should be included. These adjustments in the boundary are also necessary in order that the park can be better protected and more satisfactory plans made for this development by road and trail. In my next annual report I shall submit specific recommendations regarding this extension, including the description of the suggested changes in the boundary line that I will have to offer after making an investigation of this project on the ground.

The future of Mount Rainier Park is bright. Not only has it an established reputation as a wonderful scenic area, but it has become the object of the patriotic devotion of the entire Northwest. Public-spirited business men of Tacoma and Seattle, successful in many lines of commercial activity, are devoting themselves unselfishly to developing the park in the public interest, increasing the hotel and camp accommodations, improving transportation facilities, inducing travel, and always working hand in hand with the Government to the end that all recreational and educational resources of this playground may be made available to the public. This development is an object lesson that should guide the improvement of many other parks.

CRATER LAKE NATIONAL PARK.

Crater Lake National Park, like Mount Rainier, enjoyed a longer season this year than usual. Automobiles were able to reach the rim of the crater a month earlier than last season. In general, conditions for travel have been good, although there has been little improvement of roads leading to the various gateways of the park. The road system of the park itself was well maintained. Visitors this year exceeded the total travel of the 1917 season, although not by a large margin; practically, the park held its own so far as patronage was concerned.

Daily train service between Klamath Falls and Kirk was main­tained during the summer, and the usual split ticket arrangements permitting travel into the park by way of one gateway and out by way of another were in effect.

Numerous forest fires on lands adjacent to the park, or in its general vicinity, kept the crater hazy on some occasions, but the beauties of Crater Lake and other features of the park were impaired far less this year than last by smoky condition of the atmosphere. Prevailing winds probably constituted the underlying cause of this freedom from haze.

Accommodations for the traveling public were improved by the addition of one new automobile bus on the run between Medford and the park and by certain betterments in the hotel and permanent camp. The development of the enterprises authorized to provide accommodation and entertainment of visitors in this park to the extent desired by me is hardly likely to take place during the war period. Labor conditions and lack of financial support will retard this development, and, perhaps, hold all of the properties in statu quo for the next two years or longer.

ROAD IMPROVEMENTS.

It appeared last year that there was little hope of ultimate improvement of the roads leading from Medford and Klamath Falls to Crater Lake Park unless the Federal Government should cooperate with the State of Oregon in undertaking their realignment and reconstruction. As explained in last year's report, the county governments had accomplished their utmost in road building and maintenance in the direction of the park. Jackson County had reached the limit of its borrowing authority, and Klamath County, with other obligations to meet, was not in a position to advance more funds for the work. Federal assistance was essential to further progress, and altogether desirable because both approach roads to the park traversed national forests, and made them economically accessible; further, the rebuilding of these forests would result in a great increase in deer and would, within a few years, improve the sport of hunting in the neighborhood of the park, as well as give pleasure to park visitors. The matter of establishing a game preserve on the west side of the park is now before the commissioners of Pierce County.

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The public camp grounds on the rim of the crater were greatly improved during the summer season. A large tank and pumping equipment have been purchased and will soon be installed for the purpose of supplying water to campers on the rim grounds which are located a short distance west of the hotel in a beautiful alpine park area commanding a wonderful view of the lake. Heretofore water has been taken from the very inadequate hotel supply. The camp grounds will be equipped with shower baths if the water supply can be developed as expected. In this park, as in all others, special attention is constantly given to maintaining public campgrounds in a thoroughly sanitary condition.

The accessibility of the new Rim Road, and all of the new trails from this camping area on the rim of Crater Lake should make it one of the most popular camping grounds in the national park system, and should attract the pedestrian and horseman as well as the motorist.

**THE NEW TRAILS.**

The splendid new trail from Crater Lake Lodge to the shore of the lake, one of the important improvements of last year, has given pleasure and refreshment to thousands, and, as we expected, elderly people and visitors wholly unaccustomed to climbing availed themselves of the opportunity to make the delightful trip from the lodge to the edge of the lake, thence in motor boats around the lake to Wizard Island and the Phantom Ship, and to other points of interest. The new trails to Garfield Peak and the Watchman were also exceedingly popular during the past season. A trail to the summit of Union Peak is now under construction and will be finished before the park is closed for the winter.

Wild animals are taking refuge in the park in greater numbers, thus adding to the attractiveness of the place for national park visitors who generally expect to see animals and birds flourishing in all of the parks. The park, however, is too small to become a satisfactory game refuge and propagating ground, and it will always be necessary to have State game preserves established around part or all of the park in order that winter range may be provided for the animals when heavy snows drive them down from the higher altitudes.

**THE GREATER CRATER LAKE.**

The project which contemplates the extension of Crater Lake National Park northward to include Diamond Lake, Mount Thielsen, and other scenic features of really national importance, has been shaped definitely during the past year, and Senator McNary, of Oregon, on April 6, 1918, introduced Senate bill 4283, which provides for the transfer of a tract embracing 92,800 acres to the control of the National Park Service as a part of Crater Lake National Park. When the park has been enlarged as proposed by this measure an opportunity will be afforded for developing to a very much greater extent the camping facilities of this region. Diamond Lake will lend itself to development as a fishing resort of great importance and other recreational features will be added that will, in a few years, make this park as great a resort as most of the very big national parks. This is its manifest destiny. Furthermore, the enlargement of the park will make conditions more satisfactory from the point of view of the development of first-class transportation, hotel, and camp accommodations, because the traveling public can be induced to spend more time in the park than ordinarily is the case at the present time. More roads will be built, opening up unusually interesting territory, and providing circle trips that will delight the traveler. A road connecting Crater and Diamond Lakes would be a natural development. The addition will also afford better opportunities to protect the wild life of the park.

Like the proposed extension of the Yellowstone National Park, the addition of the Diamond Lake region to Crater Lake would give to the national park system something that was intended by nature always to be the property of the Nation and to be developed as a recreational area for all the people. I feel that this extension proposition is one that should receive the early consideration of Congress. The earlier the pending bill is enacted into law the sooner, of course, we can begin plans for the development of the enlarged park after the close of the war.

**ROCKY MOUNTAIN NATIONAL PARK.**

Rocky Mountain National Park has again reported a very satisfactory season from the standpoint of travel, the total number of its visitors exceeding 100,000. In view of this showing, we may reasonably assume that in all seasons to follow six figures will be required in writing the total number of visitors to this park.

The popularity which Rocky Mountain Park enjoys is very gratifying to me, particularly because it has won this on its own merit as a magnificent scenic region, easily accessible from the Middle West, as well as from the Rocky Mountain country and the Pacific coast.

**A HUNDRED THOUSAND VISITORS BUT NO IMPROVEMENTS.**

However, it is a matter of deep regret to me that the National Park Service has not been able to proceed with the development of this park. The annual appropriation of $10,000 is so small that we are not even able adequately to protect its great area of 400 square miles. Improvement of the park is impossible, and there is no money available for maintaining the improvements that have been made in the past with other than Federal funds. The trail system is incomplete, the telephone system is hardly begun, there are insufficient quarters for the park force, there is only one public camp ground, and so I might go on enumerating these deficiencies indefinitely. We need large sums of money to properly advance the interests of this park, and I earnestly hope that these funds will soon be forthcoming. We could calmly accept a situation of this kind if the park were being visited by only a few hundred residents of Colorado, but when people are going there by tens of thousands from all over the Nation and finding this wonderful region the object of neglect by the Federal Government, we feel that something should be done to relieve the unhappy situation.

There is a bill in Congress providing for the repeal of that part of the organic act establishing the park which limits the appropriation
MAP SHOWING THE PROPOSED ENLARGEMENT OF THE CRATER LAKE NATIONAL PARK.
of the road on the east side was finished this year by the Rocky Mountain Parks Transportation Co. It is nearly 2 miles in length, and is wide and well graded. The end of the road is now a short distance beyond the old shelter cabin and is at the point where it begins to climb out of the canyon toward the pass at the head of Chapin Creek.

**MAGNIFICENT CIRCLE TRIPS IN PROSPECT.**

When the Fall River Road is completed a magnificent circle trip will be immediately available to all visitors to Rocky Mountain National Park. This may be made in either direction from Denver, and will provide two crossings of the Continental Divide, one in Rocky Mountain Park and the other through Berthoud Pass, slightly northwest of Denver. Besides the magnificent scenery of the park itself, the famous Grand Lake district and the interesting old mining regions in the watershed of Clear Creek will be features of the trip. When one considers the fact that the splendid road system of Denver's Mountain Parks may also be considered a part of this ride, it is difficult to conceive a more thrilling or beautiful trip than the one that would be provided by the completion of this Fall River Road.

The important thing to do now is to complete as quickly as possible the few remaining miles of this road, and to accomplish this work by following the most satisfactory route. Longer delay in this work will not only impair the development of Rocky Mountain National Park, but it will interfere with the proper and logical development of Colorado's roads as a great national touring highway system.

The State of Colorado has continued during the year the construction of its new road along the Cache la Poudre River north of the park, and 80 miles of the highway out of Fort Collins are now completed. It is proposed to vigorously prosecute the continuance of this work and bring the road as soon as possible into the north-west section of Rocky Mountain Park. From the standpoint of the development of the park this road should be joined to the Fall River Road on the Divide at the head of Chapin Creek. This would make possible the circle trip through the park between Estes Park and Fort Collins. The Fall River Road should be completed long before the highway of the Cache la Poudre, but it is not too early to plan the use and development of the two highways after they shall have been connected.

**NO CONNECTION BETWEEN FALL RIVER ROAD AND GENERAL APPROPRIATIONS.**

I would emphasize again the necessity for keeping the Fall River Road project and the legislation regarding the removal of the inhibition on the annual appropriations of Rocky Mountain Park entirely distinct. They have no relation to each other. The State of Colorado promised to build the Fall River Road, and this obligation it has not yet fulfilled. The obligation of the Federal Government to begin other development work is entirely different. The fulfillment of the State's obligation can not under any circumstances be regarded as a condition precedent to Federal action. The existing

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1 See also the report of the House Committee on the Public Lands, p. 241.
2 Rocky Mountain National Park was established by the act of Jan. 26, 1915 (38 Stat., 788).
road system must be greatly improved; new trails must be constructed; shelter cabins and ranger stations are urgently needed; and the patrolling ranger force must be augmented. There are many other things, too, that must be done in the early future if the multitude of visitors who come to the park each year is to fully enjoy its mountains, forests, lakes, and streams.

Lack of funds has prevented the employment of traffic officers on the roads of the park, but the Tourist Bureau of the Denver Civic Association has very generously provided funds to defray the cost of obtaining accurate travel statistics at the Estes Park and Longs Peak gateways. This efficient and public-spirited bureau has in many other directions aided the National Park Service in advancing the interests of Rocky Mountain Park.

**PATROLLED BY PATRIOTIC CITIZENS.**

Under the Colorado law, hunting was permitted in the State during the first four days of October. During this period it was necessary to secure voluntary assistance in protecting Rocky Mountain Park, as unfortunately certain people residing in or near the park declared their intention of hunting both on private and public lands within the park boundaries. They were prevented from doing this, however. The ranger force was augmented by the appointment of citizens of Estes Park and loyal friends of the national park residing within its boundaries, and they carefully patrolled the territory until the need for their services had passed.

**THE SECOND WINTER CARNIVAL.**

In February, 1918, another winter sports carnival was held in the park. The attendance was smaller than last year, due to the fact that war had called many members of the mountaineering organization. However, the carnival was a great success, and arrangements are now being made for the next one, which will be held early next year. The use of Rocky Mountain Park in the winter is one that the National Park Service will continue to promote. The automobile stages of the Rocky Mountain Parks Transportation Co. are operated throughout the winter, thus providing comfortable facilities for reaching the park whenever conditions are right for the sports that only snow and ice can make possible.

**WANTED: CAMPING GROUNDS FOR MOTORISTS.**

One of the problems to be faced in developing Rocky Mountain National Park is the establishment of adequate camping grounds for motorists. So much of the land in the western part of the park is privately owned that there is little opportunity to lay out satisfactory camping sites. Of course, when the money is provided for the construction of more roads, particularly for the building of short branch highways to reach public lands, no difficulty will be experienced in providing camping grounds. In the meantime, however, it is our view that the residents in the national park should arrange to open to the use of motorists small tracts of unused land where this can be done without impairing their property. The private lands opened for this purpose might be placed under the jurisdiction of the superintendent of the park, who would assume the responsibility for the upkeep of the grounds and the observance of the rights of their owners.

During the year the Glacier Basin camp ground was improved and in the tourist season was used by hundreds of visitors. The new road to this area was constructed largely by means of private subscription. Considerable work was done by citizens of the park region and our own administrative force.

**TRAIL TO LAKE NANITA.**

The opening of the beautiful Lake Nanita to tourist travel was probably the principal improvement accomplished by the National Park Service in Rocky Mountain Park during the summer. This lake is one of the loveliest bodies of water in the park, and also furnishes good sport for the angler. There were insufficient funds available to continue this trail to Lake Nokoni, but this sister lake will be made accessible as soon as a few hundred dollars can be spared to undertake this work.

**GLACIER NATIONAL PARK.**

Conditions were ideal for tourist travel in Glacier National Park this year, but visitors were few as compared with the number usually availing themselves of its splendid accommodations. Steadfast in their devotion to the interests of this beautiful park, the concessioners operated their enterprises throughout the season in the face of the certain loss due to decreased travel. All the big hotels and most of the chalets were open as usual except the Sperry Chalet on the Gunsight Pass Trail. The loss to the system of Sperry Chalet made the trip over the Pass somewhat more difficult, but in no other manner affected the use of the park trails, as other points of interest in the vicinity of this chalet were easily accessible from the Glacier Hotel on Lake McDonald.

Train service to the park was entirely adequate, although trains Nos. 3 and 4, the Glacier Park Limited, were not operated this year. The Glacier Park tourist season was shortened this year from four months to three, the opening date being June 15 and the closing date September 15.

The decrease in travel was due to the same conditions that similarly affected Yellowstone National Park, the withdrawal of railroad advertising and governmental discouragement of travel for pleasure. Glacier, like Yellowstone, is still dependent to a great extent on the railroads and publicity bureaus to stimulate travel by automobile as well as by train. Like Yellowstone and other Rocky Mountain parks it is situated at a very considerable distance from thickly-settled regions, and enjoys relatively little local travel.

**GLACIER'S SUMMER RESIDENTS.**

Unlike Yellowstone, Glacier already has a large patronage which comes again and again to explore its trails and enjoy its extraordinary scenery and good hotels. As its roads and trails are extended, and more side trips provided from hotels and chalets, the average
It must begin on the west side of the park and connect the foot of Lake McDonald with the Glacier Hotel at the head of the lake. Then, on the east side of the mountains, Going-to-the-Sun Chalet must be connected with the road between Glacier Park and Lake McDermott. The last section of the highway to be built will cross the Continental Divide and form the connecting link between the road systems of the two sides of the park.

Another and wholly distinct unit of the project now being formulated will embrace the extension of the Cutbank Road to the head of the Cutbank Valley, where a new chalet will be constructed. This unit should be built as soon as possible after the close of the war, and really should be carried forward to completion with the Lake McDonald road on the opposite side of the park.

The Lake McDonald Highway.

In previous reports I have emphasized the vital importance of the highway connecting the hotel at the head of Lake McDonald with the roads at its foot. Each year the necessity for this improvement becomes more apparent. Motorists find no accommodations at the foot of Lake McDonald for their cars, and they naturally dislike to leave them here when they go to the head of the lake, some 9 miles distant. Consequently, they are discouraged from making trips to the west side of the park. It is particularly disheartening to the motorist who sends his car over the mountains by rail to find so few miles of road on which it can be used, and at the end of this road no place in which to house the machine while he proceeds by boat to the hotel.

But, aside from these considerations, the road along Lake McDonald would greatly reduce the cost of operating the hotel and would make the maintenance of trail crews in the mountains easier and cheaper. Furthermore, this road would form a link with a highway north and south through the park from Belton to Waterton Lake as well as an important section of the transmountain highway now being surveyed.

Some progress has been made in the improvement of the existing roads of the park during the current year, but it cannot be said that this progress is comparable with last year's accomplishments. In the first place, no new construction was authorized, and the funds available were necessarily applied to the protection and maintenance of the park, except the allotment reserved for the survey of the road to cross the mountains. In the second place, it was impossible to do ordinary maintenance work under normal conditions on account of the great scarcity of labor.

Important Road Improvements.

There are still many necessary improvements to be made in the existing roads on the east side of the park as well as on the west side road up the North Fork of the Flathead. This has to be largely rebuilt when funds are available for this purpose. The east side system requires considerably more grading and grading, and in the interest of safety to traffic these improvements should be carried on
continuously until completed. They can not be deferred even during the war period without seriously retrograding.

THE CROSSING OF LOGAN PASS.

An important event of the summer was the opening of the trail over Logan Pass, connecting the Granite Park Chalet and the Going-to-the-Sun Chalets, and also making Going-to-the-Sun accessible from the Lake McDonald region by a route alternative to the Gunsight Pass Trail. The trail was begun last year, and completed about August 1, 1918. The Director General of Railroads and Mrs. McAdoo headed the first party to go through Logan Pass over the new trail.

This improvement opens a magnificent region to the touring public. Among its principal scenic features are the Garden Wall, the thin, sheer cliff of the Continental Divide between Swiftcurrent Pass and Logan Pass, Mount Oberlin, Clements Mountain, the Clements Glacier, the superb Hanging Gardens—a veritable paradise of wild flowers—Mount Reynolds, the falls of Reynolds Creek, new and amazing views of Going-to-the-Sun Mountain, and the peaks and lakes of the St. Mary region. A short side trip from the Hanging Gardens reveals one of Glacier Park’s rarest gems—Hidden Lake.

The Park Saddle Horse Co. began at once encouraging the use of this new trail by offering a three day “triangle trip” between Many Glacier Hotel, Granite Park Chalet, and Going-to-the-Sun Chalets, at the rate of $12.50 including guide. This trip covers three of the best trails of the park, and takes the tourist over three of the great passes—Swiftcurrent, Logan, and Piegan. In the course of the trip the Continental Divide is crossed twice.

IMPORTANT NEW TRAILS CONSTRUCTED AND PROJECTED.

Another new trail that has proven to be very attractive to the traveler is that to the Sexton Glacier; it opens up the canyon of Barrying Creek, a marvelous series of waterfalls and the unique overhanging glacier. It was completed last year, and is reached from Going-to-the-Sun Chalets. Ultimately it will be continued over the ridge above the Sexton Glacier, and thence through a flower carpeted vale to a junction with the Piegan Pass Trail.

The trails that are to be constructed next in this park will be a series of footpaths from the various hotels and chalets. These will afford short climbs to near-by mountains, easy walks along lake shores, and little strolls in the forests.

Immediately after the war at least three important new trails must be constructed in the high mountains. One of these trails will connect the Red Eagle country with Going-to-the-Sun Chalets. Another will make the Kintla Lake region accessible by way of Brown Pass, eliminating the long journey by way of Waterton Lake and Canada that now is necessary. The third will make the Hole-in-the-Wall Falls accessible.

Still another trail that should be built soon will open up a scenic route to the Belly River district from Many Glacier Hotel, thus avoiding the long circuitous route by way of the Indian Reservation and Chief Mountain which is now the only means of reaching this region.

There are two reclamation projects which have reservoir facilities in Glacier National Park. To the Milk River Project belongs the Sherburne Lake reservoir. The Lower Two Medicine Lake area belongs to the Indian irrigation system known as the Blackfeet Project. The engineering works of the latter reservoir were completed many years ago, but never used; the Sherburne Dam and other works of the former project are now nearing completion.

In the early future the gates of these dams will be closed, the Sherburne and Lower Two Medicine Lakes will be raised, and hundreds of acres of timberland will be flooded. The destruction of all timber within the flowage areas can not be avoided, and the bleached skeletons of dead trees standing on the lake or floating upon them will impair the scenic beauty of two of Glacier Park’s most celebrated valleys for decades to come. It is extremely important that all of the timber and bush within the areas that are to be flooded should be cut down and destroyed before this is made impossible by the raising of the lakes. In view of the fact that the reservoir sites were secured before the establishment of the park, the cost of this work should undoubtedly be borne by the Federal Government rather than by the water users on the reclamation projects involved.

The impossibility of securing funds for undertaking anything of this kind in these times may postpone action until it becomes too late to remedy the situation. If this proves the case, the injury to Glacier Park will, in a few years, become a national calamity. The impounded water in Sherburne Lake will extend the western shore almost to the foot of Swiftcurrent Falls, and in the case of Lower Two Medicine Lake, the new shore line will not be far from the bridge over the Two Medicine River below Trick Falls.

Before Lower Two Medicine Lake is raised it will also be necessary to rebuild a section of the road that leads up the Two Medicine Valley to the chalet system on Upper Two Medicine Lake. The road now leaves the main highway and crosses the river twice before attaining the high ground on the north side of the lower lake. One crossing is at the outlet of the lake and above the dam. This bridge and part of the road would be inundated by the raising of the lake, hence a new road some four miles in length must be built entirely north of the river, avoiding any crossings after leaving the main road system. An estimate for funds to build this branch road will be submitted as soon as the existing emergency has passed, and labor can be obtained for construction work of this character.

FISH HATCHERY ESTABLISHED.

From the standpoint of the future of Glacier Park, the most notable achievement of the past year has been the establishment of a fish hatchery at Glacier Park Station. This hatchery was built and equipped under a cooperative arrangement between the Bureau of Fisheries and the National Park Service. The building was erected on a tract of land near the Glacier Park Hotel, and will be open to visitors throughout the tourist season. As in Yellowstone Park, the Bureau of Fisheries will give special attention to the educational features of its work in Glacier National Park.
The land upon which the hatchery has been constructed was generously donated to the Government by the Glacier Park Hotel Company and accepted by you under special authority granted by the sundry civil act of June 12, 1917.\(^1\)

Another tract of land near the railroad was also granted to the Government by the hotel company for use as an administrative site. A warehouse, garage, and ranger station will be constructed on this property. The gift of these valuable pieces of property by this corporation indicates eloquently the spirit of cooperation and helpfulness that marks its dealings with this department.

**NEW ADMINISTRATION BUILDINGS AT BELTON.**

The improvement of the new administrative site near Belton, on the west side of the park, where the general headquarters of the reservation are located, has progressed satisfactorily. The cottages, warehouse, barn and water system begun last autumn have been practically completed and will soon be used by the administrative force. Nothing more will be done at this point until after the war. In the meantime the new administration building will be planned and the landscape treatment of the site carefully worked out. There is an opportunity here to develop a very attractive administrative village, and it will be utilized to the full.

In previous reports we have pointed out the fact that the forest along the Belton-Lake McDonald Road is in grave danger of destruction. It is privately owned, and although Congress has authorized the exchange of this timber and land for timber of equal value in other parts of the park, or in the national forests of Montana,\(^2\) no agreement has yet been reached as to the value of this property. A small area of timber along this road has already been cut over, and the havoc wrought here shows what a terrible fate awaits the entire highway between the administrative site on the river and the foot of Lake McDonald if the exchange negotiations should finally fail to accomplish their purpose.

Boating is coming to be one of the important sports of Glacier Park. With the development of the related sport of fishing, the demand for all types of boats will steadily increase. One of the lakes that is best adapted for boating and fishing because of the splendid hotel accommodations on its shore is Lake McDermott in the Swiftcurrent Valley. It is so small, however, that it seems advisable to better connect it with Lake Josephine by installing a dam to enlarge the watercourse between the two lakes.

This work was to have been performed last year, but lack of funds prevented its accomplishment. In all likelihood the project can be carried on next season.

As I have explained in another part of this report, the wild animals of the park are in good condition. A great increase of predatory animals has been noted, and steps are being taken, in cooperation with the Biological Survey, to cope with this menace. The matter of establishing the nucleus of a herd of buffalo in the park is being considered a post-war undertaking. There are several areas that may be used for a buffalo ranch, and, with the expenditure of a relatively small amount of money, it would appear to be feasible to maintain such an enterprise.

**MESZA VERDE NATIONAL PARK.**

The past year has been an epoch maker in the history of Mesa Verde National Park. It has always ranked among the most important parks of the national system, but it has now taken its place as one of the best improved reservations under the control of this bureau. It boasts now of almost every accommodation that any park offers to the traveling public except a hotel. It has a well-equipped permanent camp, excellent transportation facilities from the town of Mancos, well improved roads, and some very fine trails.

An automobile shelter and public camp ground have been made available during the year.

The permanent camp across the canyon from Spruce Tree House has been enlarged and attractively rearranged. The tents have been equipped with more new furniture, and electric lights have been installed. The plant is now a modern camp enterprise, capable of furnishing service of a high order.

**A MUSEUM ESTABLISH.**

A new ranger station has been erected near Spruce Tree Camp, and the large log structure with the broad veranda overlooking the canyon and the great ruin, which formerly was used as headquarters for the ranger force has been converted into a museum and picture gallery. Glass display cases have been installed to preserve and exhibit relics found in the ruins of the Mesa Verde. These will be augmented by others as the collection of relics grows.

Through the generous cooperation of the Denver & Rio Grande Railroad, a remarkable series of pictures of the natural features of the park and its ruins has been placed in the large room of the museum building. This room will be used as a public gathering place, and when archeological investigations are again undertaken there will be lectures here by the scientists in charge of the work of excavating and repairing the ancient buildings of the park.

No excavating has been done in Mesa Verde National Park since the summer of 1916 when Dr. J. Walter Fewkes, the Chief of the Bureau of Ethnology, opened and cleared Far View House in the Mesa Verde group of mounds. No funds have been available for the continuation of these investigations. It is unfortunate that an appropriation cannot be made each year for the advancement of this great scientific work.

**EXCAVATIONS SHOULD BE CONTINUED.**

Much can be accomplished with relatively small appropriations, and I can not recommend too strongly the adoption of a policy at the close of the war which will contemplate the placing of a reasonable sum of money at our disposal each year for the purpose of conducting this highly important and valuable work.
While no new work on the ruins has been undertaken, repairs have been made to several of the large cliff dwellings, including the reinforcement of the foundation of one of the big towers in the Cliff Palace.

The most essential improvement still to be undertaken on the Mesa Verde is the repair and excavation of Square Tower (Peabody) House. This is one of the finest of the cliff dwellings, and is distinguished by a great four-story square tower. There are numerous interesting kivas in the ruin, several of them still covered with their original roofs of cedar poles. Above the ruin in niches of the cliff and on protruding ledges are some remarkable little structures that were probably built as part of the defenses of the big cliff dwelling. While quite inaccessible, and purposely kept so by the National Park Service, visitors will approach it by a perilous descent over the cliffs, and in the course of a season it is examined by a considerable number of people.

The great danger that threatens the ruin, as well as all who visit it, is to be found in the unstable condition of the square tower. It is deteriorating with considerable rapidity. Should it fall, the cliff dwelling would be largely destroyed and it would, of course, lose forever its most distinctive feature. The restoration of Square Tower House is, therefore, a project that requires immediate consideration. It is estimated that $3,000 will be sufficient to put the ruin in a state of repair comparable with Cliff Palace, Spruce Tree House, and the other large cliff dwellings that have already been excavated. In every respect, this ruin is worthy of preservation and development, and it would be a most lamentable thing to neglect it longer.

THE NEW EAST SIDE ROAD.

The new road to ascend the Mesa Verde from the east side of Point Lookout, recommended in last year's report as a vitally necessary improvement, was authorized by Congress in the latest sundry civil act, and construction work is now in progress. When completed, the highway now in use which climbs to the top of the mesa on a steep grade along the western face of Point Lookout, will be abandoned. This road is subject to the peril of sliding dirt and rock in wet weather, and is exceedingly costly to maintain. The new road will possess none of these disadvantages. Other new improvements, undertaken which I have not already mentioned include the installation of a Delco electric-lighting plant at Spruce Tree Camp, the extension and betterment of the water system, the erection of an ice house, and the posting of a large number of new signs.

Travel to Mesa Verde Park this year compares very favorably with that of 1917. Two thousand and fifty-eight visitors registered in the park during the season as against 2,223 last year. Most of the travel was by automobile.

HOVENWEEP AS A NEAR-BY ATTRACTION.

In connection with this discussion of the year's activities in Mesa Verde Park, it is proper to mention the study of the towers and
SQUARE TOWER HOUSE.
MESA VERDE NATIONAL PARK.

LOWER CHICAGO LAKE.

Relative dimensions may be gained by noting figures of men above arrow on the left.

SCENE IN THE PROPOSED NATIONAL PARK TO INCLUDE MOUNT EVANS.
In 1918 a road was completed to the base of this remarkable rock formation.

DEVI S TOWER NATIONAL MONUMENT.

TWIN TOWERS AND OVERHANGING ROCK HOUSE IN RUIN CANYON, UTAH.

SCENE IN THE PROPOSED HOVENWEEP NATIONAL MONUMENT.
other structures of the Hovenweep region near the road between Dolores, Colo., and Bluff, Colo., which Dr. Fewkes made late last year. These ruins are among the most important in the Southwest, and because of their proximity to well-traveled roads, they offer a very interesting trip for all Mesa Verde visitors to take on their way to the park, or, preferably, after they have seen the cliff dwellings and other ruins of the mesa. The trip may be made in one direction by way of Dolores and Yellowjacket Canyon, and return by McElmo Canyon to Cortez.

Dr. Fewkes made a thorough study of these ruins, and has recently presented to the world their features and scientific worth in a series of reports and articles written in his usual clear and entertaining style. He states that there are several types of towers in the Hovenweep country. Some are round, others square, and still others have more than four sides. They are all very large and most of them stand out boldly on the plain. Near them, in several instances, are other prehistoric structures of great scientific importance including some remarkable kivas similar in size and construction to those of Far View House in the Park. From his study of these kivas and other works, Dr. Fewkes concludes that the inhabitants of this region and the Mesa Verde were racially similar. It is proposed to safeguard all of these ancient buildings by including them in a national monument.2

HAWAII NATIONAL PARK.

Substantial progress was made during the past year in reaching a solution of the problem that is immediately confronting us in preparing for the development of Hawaii National Park. This problem relates to the acquisition of private holdings in the three park areas, and the right of way necessary to constitute the fourth area or connecting strip of land between the crater of Mokuaweoweo on the summit of Mauna Loa and the Kilauea park far below it. All the private holdings in the Mokuaweoweo section were donated to the Federal Government since the date of the last report. These were secured by officials of the Territory acting in behalf of the National Park Service. The donors of the property were the Territorial government, the Bishop estate trustees, and A. W. Carter, trustee of the Parker estate.

On the occasion of your trip to Hawaii in the month of June, 1918, you conducted negotiations with the trustees of the Bishop estate, which owns a large part of the Kilauea park tract, including approximately half of the famous crater of Halemaumau and other very important features of this region, with a view to securing title to these important lands. The results of these negotiations were most gratifying, and it is believed that the principles suggested to govern the transfer of part or all of this property to the United States may ultimately be used to clear up all private holdings in the Kilauea and Haleakala tracts. Briefly, an exchange was proposed whereby the Bishop estate is to convey all of its holdings in and about the crater of Halemaumau to the Government in return for Territorial land of

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1 See 1918 Circular of Information Regarding Mesa Verde National Park.
2 See pp. 35 and 97.
equal value. As soon as the exchange can be arranged, Congress will be requested for a grant of authority to consummate the various transactions involved.

In the organic act establishing this national park, it is provided that appropriations for its development may not be made until Congress is advised that private holdings and rights of way necessary for the proper protection and improvement of the reservation have been acquired by the United States. In view of this inhibition, it is essential that this property should be acquired at the earliest practicable date. To aid in this work, an appropriation of $750 was included in the last sundry civil act, and a request is now being presented for an appropriation of $1,000 to continue the work in the fiscal year ending June 30, 1920. These funds will cover cost of examining titles to lands, surveying, traveling, and communication expenses, etc.

HAWAII'S GREAT INTEREST IN HER NATIONAL PARK.

The Hawaii National Park has the greatest interest for visitors touring this charming island territory, but no individual or institution gives more attention to these wonderful volcanic areas than the citizens of Hawaii themselves. All of the prominent business and professional men and officials of the Territory are intimately acquainted with the park lands. Many of them are members of organizations that have promoted these areas for years, spending money freely in making them accessible and in stimulating travel to them. Furthermore, they have contributed liberally to institutions, such as the Hawaiian Volcano Research Association, which have proved valuable to science by investigating the phenomena of volcanism.

It was the Hawaiian Volcano Research Association that took the lead in urging upon Congress the necessity for conserving the three great craters of the islands in a national park in order to adequately protect and develop them for the American people. The president of the association, Mr. L. A. Thurston, of Honolulu, spent some time in the Eastern States early in the present year, and on several occasions I was able to consult with him in regard to the future improvement of the park. Other citizens of Hawaii who have visited Washington since its creation and left valuable hints and suggestions I was able to consult with him in regard to the future improvement of the park. Other citizens of Hawaii who have visited Washington since its creation and left valuable hints and suggestions about its development are Gov. Charles J. McCarthy, Mr. B. G. Rivenburgh, commissioner of public lands of the Territory, and Mr. W. R. Castle.

1 Excerpt from speech made by Secretary Lane at inauguration of Gov. Charles J. McCarthy, of Hawaii, June 22, 1918:

"Congress has taken an increasing interest in these later years in the preservation to the people of the states of beauty and grandeur, and two years ago extended this policy to the Hawaiian Islands by the creation of a national park, partly upon the Island of Hawaii and the Island of Maui. To this park it gave whatever public lands it had control over. That feature in this park which is of crowning interest—and I may say, understands that it is the most suggestive of all the islands that illustrates one method of the world's making—is the Volcano of Kilauea. Through the mouth of its lake runs the Bishop estate line. And for the protection of property poling this park, and more surely reserving it for the public, I have taken up with the trustees of this estate the matter of securing a transfer to the government of all the lands which they own in and around this crater. The suggestion made by us has met with prompt and very agreeable response. The estate feels itself unencumbered in transferring the property without consideration, because all of its property is held in trust for elementary purposes. But the trustees will consent to the transfer in exchange for other property of equal value out of the Territorial public lands. Warrant should be had for this from the Federal Government and the Territory, and, with honest appraisers there should be little difficulty in securing the full title to all the lands within the park boundaries. I am sure that the Federal Government will cooperate with the Territory in putting beyond all question the future of this park."

The Hawaii National Park is important in much more than the ordinary way. Its three volcanoes are individually and collectively remarkable in a world sense. Mauna Loa is largest in the world, both as an active volcano and as a mountain mass. Haleakala's crater is unequaled in size among active volcanoes. "At sunrise," writes T. A. Jagger, director of the observatory, "it is the grandest volcanic spectacle on earth." And Kilauea's crater, its bubbling seething lake of molten lava, its "house of everlasting fire," has been world celebrated for many years.

These features alone would class Hawaii in the first rank of national parks. In addition, its location on an island group widely famous for tropical beauty, and the fact that a visit to it involves also a romantic invasion of the tropical seas in their most fascinating expression, put it in a class altogether by itself; its entrance into the park system completes the gemut, so to speak, of the national park range from the arctic, as expressed in ice-clad McKinley, to the equatorial here. Indirectly, the spectacle of the development of American genius in the tropics is another fascinating experience of any visit to the park.

Besides the rich luxuriance of tropical verdure found at and near Hawaiian sea levels, the park areas themselves exhibit gorgeous jungles, mahogany groves, tangles of giant tree ferns 30 and 40 feet high, and splendid growths of fragrant sandalwood, elsewhere extinct.

LASSEN VOLCANIC NATIONAL PARK.

Congress again failed to appropriate funds for the administration and protection of Lassen Volcanic National Park; hence we have not been in a position to do anything to further the interests of this reservation. No member of the National Park Service has visited the Lassen Peak region, nor have any publications been prepared describing its scenic features or giving information as to its accessibility and accommodations. Nevertheless there appears to have been considerable travel to the park both by saddle horse and automobile. Interesting accounts of trips by motorists, profusely illustrated, have appeared in the California newspapers.

An ambitious development of a private holding on the shores of the Juniper Lake has been undertaken by an Oakland, Cal., firm and it is probable that the opening of this new resort will result in an increase of travel to this wonderful region next year.

A new road has been opened from Chester, Plumas County, to the shore of Juniper Lake. The road is 13 miles long, and was constructed by the owners of the patented holdings on the lake. This road was made passable for travel this summer, but it is not in a condition to sustain heavy traffic. The grade does not exceed 10 per cent at any point despite the fact that it ascends 3,000 feet between Chester and Juniper Lake. This road, although constructed by private capital, is available for the use of all motorists without restrictions of any kind. The section of the road lying in the park was constructed under permit from the National Park Service.

I feel a keen sense of disappointment that Congress has not permitted us to assume control of this area which it clearly intended us
to take over when the park was created. It would seem that no object was accomplished in creating this park if it were not to be administered as such. Furthermore, since this area is a park in name only we are constantly required to explain why it is not being managed as a part of the park system. The park has many wonderful objects of scientific interest and also offers extraordinary opportunities for fishing, camping, and enjoying scenery of a high order.

The fact that it is already attracting tourist travel makes it all the more necessary that funds be provided for its care and protection. There are large areas of magnificent forests that are subject to the fire hazard, and these should be diligently guarded. The wild animals of the region should also have proper protection. There is considerable hunting in the adjacent forests and, in view of the fact that the park boundary has not been surveyed or marked in any satisfactory manner, abundant opportunity is offered for unconscious trespass by zealous hunters. I sincerely recommend the early appropriation of sufficient funds to make possible the employment of a superintendent and the necessary assistants, as well as a small amount for general administrative purposes.

There have been no eruptions from Mount Lassen during the year, and the volcano has shown few signs of activity of any kind.

MOUNT MCKINLEY NATIONAL PARK.

Owing to the fact that Congress again declined to provide funds for the administration and protection of the Mount McKinley National Park, we have not been able to assume control of this area; consequently there is little to report. Estimates have twice been submitted covering the funds necessary to establish a ranger force and give it proper quarters and equipment, but it appears that Congress believes the Alaskan government competent to care for the wild animals that abound in the park at the present time, despite the fact that the park was created as an emergency measure especially to prevent the slaughter of game which the authorities of the Territory were powerless to control at that time. Another estimate, in amount $10,000, is being submitted to Congress with a request for an appropriation for purely protective and administrative purposes, and it is sincerely hoped that it may receive favorable attention when the next sundry civil bill is prepared.

The Territory of Alaska is not financially able at the present time to provide wardens to adequately patrol the park area. Its game-protection funds are too small, and any wardens that are now assigned to the park must be taken from other sections of Alaska where they are badly needed.

A LITTLE TEMPORARY HELP FROM GOV. RIGGS.

However, Alaska realizes the importance of rendering all possible aid to the National Park Service under existing conditions, and will do everything possible to assist in the Mount McKinley region until this bureau secures an appropriation. The present governor of the Territory, Hon. Thomas Riggs, jr., while a member of the Alaskan Engineering Commission, was one of the men who participated in the presentation of the merits of the Mount McKinley Park project to the committees of Congress having it under consideration prior to its appearance in the House and the Senate. His interest in the region has always been keen, and, now that he is the executive head of the Territorial government, he is indicating the strength of his faith in the park and its potential economic value to Alaska and her people by doing everything that he can consistently do to protect the area pending the assumption of control by the National Park Service. I have mentioned his limits already. He has not funds enough to provide wardens to fully protect the wild animals, and just now these constitute the principal natural feature of the park and the one constantly in danger.

DANGER FROM MARKET HUNTERS.

Mount McKinley National Park ranks with Yellowstone as a wild-animal sanctuary. Within its boundaries roam enormous bands of caribou and mountain sheep, together with the other species of a region which the hunter has just begun to invade.

All of these must be safeguarded constantly. Each year increases the danger from market hunters, the near approach of the new Government railroad creating new and greater demand for meat. Naturally the hunter will go where the game is thriving best in order that he take the fullest advantage of his opportunity to serve good markets. There is bound to be a serious invasion of the park sooner or later, and I am anxious to establish a permanent force of guards at an early date in order that the great herds of this preserve may receive the protection that Congress intended in creating the park.

When this is accomplished we may not seriously concern ourselves with further development measures for this park until the Alaskan Railroad is completed and the time arrives for providing facilities for tourist travel to this wonderful region.

HOT SPRINGS RESERVATION.

The year just concluded was principally notable for the vision it brought us of the National Spa of the future. I refer to the plans prepared under the appropriation of 1917 for the larger development of Hot Springs, including landscape improvement and a new Government bathhouse. They were brought here by Mr. Geo. R. Mann, of Mann & Stern, architects, of Little Rock, Ark., and exhibited for some time in one of the committee rooms of the Senate Office Building.

THE GREAT AMERICAN SPA.

If Congress adopts the present suggestions the visitor of the future will enter Hot Springs from the railroad by a dignified central avenue lined upon the east by a series of bathhouses which, while highly individual, possesses a note of common feeling. Several are distinctly Spanish. Others, including the administration building, are inspired by Italian Renaissance. Yet all, treated freely, fall into a tasteful whole which is the more pleasing for its variety. At the end of the row is the Arlington Hotel.

Behind this rich architectural row rise abruptly low densely wooded rolling hills. These are reached by stairways through three street entrances between bathhouses, all leading to a park driveway.
behind and above the bath houses, from which walks carry into the hillside forest.

The first of these entrances rises to a richly paved and planted formal garden supported by a high wall on the east and bounded by a wall on the west, both to be covered by shrubbery and by vines dropping from above. This feature is really an elaborate camouflage of the unsightliest of the present premises, but so cunningly is it designed that the fact never will be suspected. The second is the formal entrance, broad and dignified, leading to a garden and a monumental conservatory which towers high above the red-tiled roofs of the bathhouses below. The third is a broad concert garden, flanked by rest houses and culminating in a bandstand and plaza, a meeting and resting place to sit at ease and drink the healing waters. Next comes the great hotel with its broad porches.

THE LANDSCAPE BACKGROUND.

Back of these architectural creations, the hills, heavily forested, brilliant with flowering shrubs, clift by winding canyons through which flow brooks, flanked by picturesque cliffs, the foothills of the Ozark Mountains, will be made accessible by walks, horse trails, and automobile roads.

One can find circuits of picturesque woodland walks to occupy an hour or several hours or a half day, with rest houses at convenient intervals. Or one can find a wide variety of horseback rides leading through deep glens and attaining eminences affording broad views. Or one can motor for hours over an elaborate system of roadways planned to develop the beauties of the neighboring mountain scenery. A motor trip of 60 miles over a highway now building by the State will land one in the stirring city of Little Rock.

Hot Springs, in short, is destined to become celebrated at home and perhaps abroad as the great American Spa. The American public is beginning to discover that these remarkable radioactive waters, besides their curative properties in the case of various ailments, are an amazing elixir of recuperation for those who have no ills except the wear and tear of active business and social life. Increasing thousands are combining the recuperative baths with the pleasures of the Ozark foothills.

THE FREE BATHHOUSE.

An apparently happy solution of a long- vexed question is that of the location of the free bathhouse. It is to be removed from its present unsightly location, which will become the site of one of the most attractive landscape features. The new plans place it on the corner of Central and Reserve Avenues, under the same roof as the administrative rooms on the street front. This part was planned to be carried out as soon as practicable, $190,000 having been appropriated for it, of which $50,000 came out of the revenues of the reservation.

Whether or not this location holds, it is hoped that the entire plan of development may be accepted by Congress, and worked out during the next few years. The architects estimate the cost of the whole, exclusive the administrative building and public bathhouse, at $2,000,000.

A PROSPEROUS SEASON.

The year just past was one of the best in the history of the reservation. More than 140,000 persons visited the springs, an increase of 5,000 over the record year preceding. Always a favorite convention center, Hot Springs was favored last year by four gatherings of unusual interest, the General Federation of Women's Clubs, the executive council of the American Bankers' Association, the National Editorial Association, and the Southern Baptists.

Naturally, with so large an increase in attendance all activities substantially increased. Paid baths increased by 65,564; bathhouse receipts, $30,386.06; profits, $11,588.78. The year is also notable in the practical discontinuance of the obnoxious practice of drumming for hotel and bathhouse business.

PLATT NATIONAL PARK.

Again this year the number of visitors to Platt National Park substantially increased. Most of them came by motor. During the year 1,265 persons camped out in the park for three days or more. Visitors carried out with them 66,987 gallons of the medicinal waters for which the park is celebrated.

The year was signalized by the stopping of two of the park's best known springs, the Antelope and Buffalo, which constitute the source of Travertine Creek. The Antelope Springs lost half their volume last December and stopped in January, while the Buffalo ran at half capacity from the middle of January and stopped altogether in March. This stoppage is not considered alarming, because it has happened twice before; in both instances full flow resumed later on. So far the reasons for this peculiarity have not been discovered.

A great many minor improvements have been made in the park, including the building of many causeways at creek crossings and the enlargement of the swimming pool.

WIND CAVE NATIONAL PARK.

Unusually heavy rains affected the season at Wind Cave in two ways; they decreased the number of visitors, washed out road crossings, exposed rocks, and in many other ways made the roads to the reservation wretched. This has naturally increased the cost of road maintenance to the limit, without, however, bringing the roads back to anything like their normal excellence.

Food conditions were responsible for a change in the grazing situation this year. Horses were excluded, for one thing, as a measure to increase the meat production of the area materially. A limitation having been placed upon the number of cattle allowed to graze, an appreciable increase in the weight of beef was secured.

The game preserve in the northwestern corner of the park, maintained by the Biological Survey, includes about 4,160 acres, inclosed by a substantial woven-wire fence 88 inches in height. This was stocked in 1913 with a nucleus herd of 14 buffalo presented by the American Bison Society and the New York Zoological Society. Two bulls and four cows were transferred from the Yellowstone Park in 1916, and the herd now numbers 42 head. Losses by death have
been only six. Twenty-one elk brought from Jackson Hole, Wyoming, in 1914, and 25 brought from the Yellowstone Park in 1916, have increased to nearly 90 head.

A small herd of antelope, the gift of the Boone and Crockett Club in 1914, now numbers 16 head, one-third of which are fawns born during the present year. These antelope merit special attention as they are present the only animals of this species in any national park outside of the Yellowstone. This herd is now becoming acclimated and bids fair to increase more rapidly in the near future.

During the past year 18 animals were lost chiefly through attacks from coyotes. Systematic efforts have been made to destroy predatory animals and since the preserve was stocked with big game, 34 coyotes have been killed in or near the park. This work will be continued as long as these or other predatory animals continue to be a menace to the game.

These animals living under perfectly natural conditions may be seen at any time by visitors to the cave, less than a mile distant away, and arrangements have been made whereby the trip to the cave shall include a visit to the headquarters of the game preserve. That this feature of the park is appreciated by the public is shown by the constantly increasing number of visitors and the fact that tourist travel to the park has multiplied several times since the game preserve was established.

**SULLYS HILL NATIONAL PARK.**

The wild-animal preserve maintained here by the Biological Survey since 1915 is the principal attraction of this small reservation. It is stocked with 14 elk, transferred from the Yellowstone National Park, and 6 deer obtained from the North Dakota Agricultural Experiment Station at Fargo. Arrangements are now making for a small herd of buffalo. The addition of a few antelope will make the collection of big game fairly representative of the more important species of the northern plains region, and afford an opportunity of seeing under natural conditions big game which heretofore have been accessible in only one or two of the larger parks.

**SIEUR DE MONTS, THE FIRST IN THE EAST.**

The Sieur de Monts National Monument seems now well started on its way to national parkhood. There, among the Nation’s parks—places of use and enjoyment for the people—is where it rightfully belongs, in spite of the historic interest and geological and other natural features which introduced it first among the national monuments. It is, indeed, a singularly admirable exponent of our aim ultimately to include within our system all national types of beautiful and inspiring scenery.

No better contrast to the great western parks with their magnificent mountain landscapes could have been devised than this park beside the sea, with the limitless possibilities it offers of life upon the water and the great plane of ocean it looks down upon. Without it, the national park system of the future could not have been complete.

The park, moreover, is remarkably diversified in its land area, exhibiting wonderfully within a limited and easily traversed space the whole biological and physiographic character of its northern ice-eroded region, while the coast it borders—rocky, islanded and broken—is of a type that has always in history profoundly influenced the peoples dwelling upon it, Greek or Norse, shaping their very thought and poetry.

**PLANNING FOR HOUSE BOATS.**

In his plan for developing as a recreational asset in connection with the park the equally nationally owned, landedock ocean waters that surround it on all sides but one, which faces the open sea, Mr. Dorr, the custodian, has a great conception. There is no other portion of our coast, east or west, unless in Puget Sound or the lagoons of Florida, where an extensive house-boat system of a simple, inexpensive sort could be employed so well, and few where it could be employed at all. Nor could any greater boon be found for work-weary business or professional men and women, escaping from the city, than such an opportunity to get out upon cool, refreshing, northern waters, island sheltered, and move about from place to place upon them as the spirit wills, drawing largely from the sea itself their food.

These and all other plans of a constructive sort must wait until the war shall end, but now that end no longer seems so doubtful and far away that plans may not be wisely entertained which look beyond it. Such plans the National Park Service is forming in regard to all the recreational areas that it controls, both west and east, but none among them offers greater promise of extended usefulness when the war is over than this new seacoast park on our eastern shore, lying so readily within the reach of multitudes of city-dwelling people who need what it can give.

The park is growing steadily by important gifts which better its approaches and bring it down in wider contact with the sea. Deer are returning to it, guardianship by the Government having been established, and moose are on their way, one having stopped a motor on the high road to it but a few months back, attracted to the evening by its powerful headlight. As a living museum of the native life, bird, plant, and animal, the park will be unique, for there probably is no other single area in the East of less than great extent which offers conditions so diverse and favorable. And this should in time become not only a delightful feature of it but a most valuable one in respect to wild-life conservation. It is, at the present time, the only nationally protected bird and wild-life refuge in the Eastern States, and lies directly on the northward bird-migration route to which signed the recent treaty with Canada for the protection of bird life has given fresh importance.

**A WAR MEMORIAL.**

Historically, too, the interest of the monument as a corner of old France—discovered by its most famous mariner and explorer, Champlain, the feudal possession of Cadillac, the founder of Detroit, and the site of France’s earliest missionary colony on this side of the Atlantic—has been brought out in various publications which are now widely sought. And this, combined with the superbly monumental character of these granite mountains, rising from the ocean front and visible to all who sail the sea from far beyond our Nation's
boundary, has given singular fitness to the park's use—warmly approved and forwarded by you—for the establishment of a national war memorial to France, Mount Desert Island's earliest possessor among the European peoples, and to our Nation's sons who nobly fall across the seas in her defense and for the cause of freedom. Such a memorial, on ground so placed and owned and rich in old historical associations, cannot fail to be a lasting source of interest and inspiration to the multitudes of visitors who will annually seek this park in years to come. It is proposed to crystallize this idea in the title Lafayette National Park in the event of the region assuming park status.

BILLS TO MAKE IT A NATIONAL PARK

Two bills providing for the elevation of the Sieur de Monts National Monument to the national park class under the name of the Mount Desert National Park are now pending in the Public Lands Committee of the House of Representatives. S. 4569, by Senator Hale, of Maine, passed the Senate on June 29, 1918; H. R. 11095, by Mr. Peters, of Maine, introduced on May 4, 1818, was favorably considered at a hearing held on May 30 by a specially appointed subcommittee of the Public Lands Committee of the House, the proceedings of which have been printed. Your strong indorsement of this legislation in your report to Congress, and again in your statement of the policy that shall guide the approval or disapproval of new park projects, have materially accelerated its progress in the national legislature. Another bill, S. 4957, by Senator Hale, identical in language with S. 4569 as it passed the Senate, but providing for the creation of the Lafayette National Park instead of the Mount Desert National Park, was introduced on September 24, and passed the Senate on October 3, 1918.

THE FIRST APPROPRIATION.

The appropriation of $10,000 in the last sundry civil act for the maintenance and protection of this park area gave it its first legislative recognition, a most important event in its public-life history. This fund is being devoted to the park land's administration; to the guardianship of its wild life—bird, animal, and plant; to the maintenance of old trails and existing improvements; and to surveys and planning for its future development. Constructive work and all improvements calling for it will be deferred until the close of the war, as I have already stated.

Travel to Bar Harbor and the monument in 1918 was lessened, as elsewhere, by war conditions and may be fairly indicated by a figure representing four-fifths of that of the previous season. The eastern press has taken no little interest during the past year in this first eastern representative of our national parks. Many articles upon it have appeared in the papers and other current publications, and warm appreciation has been shown, but it more than justifies all in its unique beauty and recreational opportunities.

As on incentive elsewhere, the value of this example of generous public spirit preserving a great landscape to the people for a national possession and heritage forever is beyond estimation. Enterprise of such a character carried out in other portions of the country would save to beauty and freedom under national protection other masterpieces of nature vitally important to the public and essential to the completion of the land's exhibit—in its full natural range, from east to west and north to south, the finest under heaven.

CASA GRANDE NATIONAL MONUMENT.

Reference has been made to the change of status of this famous prehistoric building to that of a national monument. It was the third reservation which Congress made and it had been roughly classified as a monument park. As a matter of fact President Wilson's proclamation of August 3, 1918, declaring it a national monument, does little more than confirm one of the several opinions.

Preceding this settlement of the question of status, Mr. Frank Pinkley was appointed custodian in place of Mr. James P. Bates. This was effective April 1, 1918. Mr. Pinkley has put in an exceedingly active summer in the improvement of the ruin and its surroundings. The Casa Grande is from 500 to 800 years old. It is a part of a walled village, several of the other buildings of which exist in considerable dilapidation in the neighborhood; the "great house" itself is in extraordinary condition for one of its age. The inhabitants of this and neighboring villages seem to have lived in a true stone age. They farmed extensively; their irrigation systems are shown, by their remains, to have been large and effective.

The last appropriations for the repair and upkeep of Casa Grande were secured in 1908 and soon exhausted. Since then, very little repair has been possible. No funds at all were available during the year ending June 30, 1918.

Since the change in custodianship plans have been made for bettering of conditions. At least there will be some cleaning up, a little necessary grading and a few inexpensive repairs. The new custodian also expects to get up signs on the desert approaches, and to fit up a simple rest house for the convenience and comfort of visitors.

Plans for later development include a fence for the reservation and a water supply for a proposed parking scheme. Properly repaired and equipped, this noble relic of the earliest American civilization will attract a large number of pilgrims.

ZION NATIONAL MONUMENT.

The first complete season since the establishment of the camp for the entertainment of visitors in Zion Canyon was successful notwithstanding the limitations imposed by war. The inability of the Los Angeles and Salt Lake Railroad, under Government instructions, to place any of the extensive advertising it had planned for the season was reflected, not only in a slender patronage by rail but in fewer visiting motors than were expected. The condition of the new approach road between the Arrowhead Trail and the Gates of Zion, a distance of 30 miles, did not help the situation. The roadbed will settle with age and increase the efficacy of the repairs which must be made as soon as practicable. The new road within the monument held its condition admirably.

Owing to the mild winter climate more than a hundred cars visited the monument between the closing of the Wylie Camp on October 28, 1917, and its reopening for the new season on June 8, 1918, a fact
which suggests the adaptability of Zion for an all-the-year-round resort. This, of course, is an idea for the distant future, as it would require a large and steady patronage to make it profitable to keep an open camp out of the regular tourist season. Zion is so new as a spectacle that it will take several years for such news as its magnificence to spread widely.

On March 18, 1918, the President issued a proclamation changing the name of this monument from Mukuntuweap to Zion, and enlarging its area from 15,840 acres to 76,800 acres.

The first custodian of the monument, Walter Ruesch, assumed his duties August 12 last. The unwonted protection afforded the reservation showed itself promptly. The cattle which heretofore had been driven up river to graze on the fine meadows of the canyon having been excluded by a woven wire fence at the entrance, a marked improvement was manifest to all in the richness of the splendid canyon's appearance. The grass, ferns, and wild flowers grew high. The stockmen yielded to the new order with cheerful willingness. In fact, the Mormon residents of this whole country have given the National Park Service a hearty welcome, and are doing all they can for the comfort and pleasure of the many visitors who suddenly have descended upon this remote country from every quarter of the land. Even those, who, for years, have used some of the valley lands for farming, have yielded without complaint to the orders excluding them from the commercialization of the park area.

**DEER BECOMING NUMEROUS.**

The restoration of the valley floor to nature is doubtless responsible for the frequent appearance of deer in the canyon during the summer just past. They grazed upon the rich pasture and added greatly to the charm of the glowing landscape. Firearms are now rigidly excluded, and it is hoped to encourage the coming of the deer in large numbers. The conditions seem to prevail to make the canyon a natural winter range and refuge for them.

The public camp season, notwithstanding the small attendance, was successful. The service was excellent, and doubtless seemed the more so because of one's natural surprise in finding real comfort in surroundings so extraordinarily wild and unusual. Notwithstanding the first exciting quality of the scenery, a quality found perhaps nowhere else in the world in higher degree than here, the valley presently exerts a calming, restful influence upon the visitor. It seems to be peculiarly adapted for recuperation. It is hoped that the large patronage which is confidently expected with the close of the war will develop individual camping out. The country is so big and full of amazing spectacles that those who bring in camping equipment with their motors may spend some time here exploring with great pleasure.

Though I have not yet personally seen this new and startling addition to our national park system, I have the liveliest anticipations of its wide popularity. All who have visited it have returned filled with enthusiastic admiration of its remarkable color contrasts and with wonder over its unique conformation.

**WITHIN THE GORGEOUS GATES.**

Recently while examining a volume of some old geological writings on this subject, I found line drawings of the East and West Temples of the Virgin which had been made on the spot many years ago by Mr. William H. Holmes, head curator of the National Museum, who was then a young geologist. These two splendid structures constitute the so-called Gates of Zion. Both rise 4,200 feet and more above the valley. Both are red sandstone two-thirds the way up, with the upper third a gleaming white. Each has a thin red cap above the while. Nothing more extraordinary and yet more thrillingly beautiful can be found in nature. It was this view that Powell saw when he returned across the desert from the exploration of the southwest in 1861, laying his course, in fact, for 60 miles by the glistening towers of the East Temple.
And these gateways, superlative as they are, are but typical after all of the great city of gigantic painted temples that lies within. Zion Canyon is about the size of the Yosemite Valley; that is, 8 or 9 miles long by a couple of miles in its widest spot—usually by half a mile or less. And every mile, yes every rod, of it is sensational with its gorgeous walls and towers. It is truly the "desert Yosemite," but it is infinitely more besides. At its head the canyon narrows until, standing in the stream, one can literally touch both sides at once, and yet its walls rise 2,500 feet or more to a waving, interrupted thread of sky. Few spend the long, weary, toilsome hours necessary to reach these narrow beginnings, but it seems to me worth the effort.

I shall take an early opportunity to visit and study this wonderland of the Painted Desert.

EL MORRO NATIONAL MONUMENT, N. MEX.

Through the efforts of the custodian, Mr. Evon Z. Vogt, funds were secured for the improvement of the roads leading to the El Morro National Monument. During the year a number of improvements were made in the reservation, including the construction of a comfortable log building for the use of the traveling public, and of several needed foot bridges, as well as the fencing in of the area added to the monument last year. Signs bearing translations of the plain and more important inscriptions made on El Morro, or Inscription Rock, by the ancient Spanish explorers were placed under the original inscriptions. The building of the new hotel, El Navajo, at Gallup and the establishment of better transportation service out of this city are bound to stimulate travel to El Morro and the famous pueblo of Zuni, which is not far distant. Improved roads in this wonderful section of the Southwest will also prove an incentive to travel.

MUir WOODS NATIONAL MONUMENT, CAL.

The condition of the Muir Woods National Monument, the grove of redwood trees donated to the Government by Hon. William Kent and Mrs. Kent in 1908, was greatly improved. Four foot bridges of native redwood were built, and over 30 signs set up for the guidance of visitors. An attractive gateway was constructed where the Mill Valley automobile highway enters the monument. Some repair work on the roads inside the monument was done, and funds are now available for further improvement work on them, which will be undertaken in the spring. A number of deer and other animals have been observed feeding in the woods.

As this monument is not far from San Francisco, it naturally attracts many tourists, most of whom make the combination trip to Muir Woods and Mt. Tamalpais. The authorities of Marin County have under consideration a project, to be undertaken immediately at the close of the war, for the improvement of the road from Mill Valley and Sausalito to Bolinas Bay.

MONTEZUMA CASTLE NATIONAL MONUMENT, ARIZ.

A great deal of improvement work was done in the Montezuma Castle National Monument, under contract with Mr. Alston D. Morse. The walls of the castle were strengthened and scrubbed, the floors supported by posts, and the debris removed from the floors of the castle, which is now in excellent condition. It was hoped to accomplish a little more work, but the shortage of labor, combined with the fact that Mr. Morse joined the Army, stopped the improvements temporarily. At the present time the most urgent improvement needed is the repair of the road and trail to the castle, and it is hoped that this work can be undertaken in the near future, as this cliff dwelling is remarkably interesting and should be made readily accessible to the public.

TUMACACORI NATIONAL MONUMENT, ARIZ.

The land on which stands the Tumacacori Mission, which was founded by Father Kino in the seventeenth century, was donated to the Government during the past year. When the national monument was established the Government claimed ownership of this land. The title was disputed, however, and the Supreme Court of the United States sustained the adverse claim in 1914. The mission remained in private ownership until a few months ago, when the owners of the tract donated to the Government the 10 acres on which the mission stands.

The public-spirited action of the former owners in transferring this ancient ruin to the Government deserves the appreciation of the Service and of the country at large, as the opportunity is thus given to preserve one of the most interesting relics of the early Spanish exploration and settlement.

The donors of this property were James E. Bouldin, Jennie N. Bouldin, Helen Lee Bouldin, and Weldon M. Bailey. The preliminary work of preservation will begin as soon as practicable under the direction of Mr. Frank Pinkley, custodian of the Casa Grande National Monument.

DEVILS TOWER NATIONAL MONUMENT, WYO.

The road within the Devils Tower National Monument was repaired and greatly improved within the past year. The county commissioners of Crook County cooperated in this work to the extent of furnishing the necessary tools free of cost and supervising the performance of the work. The road is graded to a width of 20 feet or more. The average grade is 5 per cent, and it is less than 9 per cent in the steepest places. The road leading to the monument was also improved, the county bearing one-half the cost of the work performed outside of the monument. It is now very easy to go by automobile or carriage to the foot of the tower, that immense mass of rock which was used as a landmark by the Indians and early explorers. In fact, the new road is considered one of the best in the county.

PETRIFIED FOREST NATIONAL MONUMENT, ARIZ.

Mr. William Nelson, the custodian of the Petrified Forest National Monument, reports that the roads to and through this reservation are badly in need of repairs, those within the monument being barely passable. Mr. Nelson was appointed custodian on December 29, 1917, upon the resignation of Mr. Chester A. Campbell.
It is difficult for tourists to cross the beds of the streams during the dry season, owing to the amount of shifting sand that impedes their progress, and in flood times the Rio Puerco is impassable. A bridge across this river is an important improvement that is urgently needed. An estimate for road work was made last year, but no appropriation was granted. Despite the condition of the roads, the monument was visited by many tourists at all times of the year, so great was the public interest in the petrified trees.

LEWIS AND CLARK CAVERN NATIONAL MONUMENT, MONT.

It was hoped that a road to the main cavern of the Lewis and Clark Monument could be constructed during the past year, but this was found impracticable. Investigations of the approaches to the monument, however, and of the great limestone caverns, with their wonderful stalactite and stalagmite formations, were made preparatory to improving the reservation at the earliest opportunity. Mr. Oscar Rohn, of Butte, Mont., was appointed custodian of the reservation on December 14, 1917. Mr. Rohn reports that the ladders and steps leading to the various caverns are in excellent condition and that the entrances are well protected.

The country in the vicinity of the monument is very picturesque, and it is believed that when the roads are constructed and the caverns properly improved the reservation will attract many visitors.

SHOSHONE CAVERN NATIONAL MONUMENT, WYO.

The Shoshone Cavern National Monument, set aside to preserve the remarkable cavern known as "Ned Frost's Cave," is destined to become one of the attractions of the wonderful Cody route to Yellowstone National Park. This cave is in Cedar Mountain, which rises above the granite gorge of the Shoshone. A trail easy of ascent will soon be completed to the mouth of the cavern, and when the new road is constructed along the east side of the Shoshone to a point where the main gorge begins, this delightful side trip will be available to all Yellowstone visitors.

Even before the new road is completed it will be possible to make the trip by saddle horse, taking in many interesting points about Cody on the way to and from the cavern. It will be the purpose of the National Park Service, as well as the citizens of Cody, to make this monument one of the show places of the great eastern approach to Yellowstone Park.

SITKA NATIONAL MONUMENT, ALASKA.

The work of repairing the totem poles in the Sitka National Monument is to be commenced under an allotment of $1,900 made for this purpose. Mr. E. W. Merrill, of Sitka, was appointed custodian of the monument on August 12, 1918, and the repair work will be done under his direction. There are eighteen of these interesting totem poles in the reservation, the largest of which is considered the most wonderful in all Alaska.

COLORADO NATIONAL MONUMENT, COLO.

Upon the completion of the township surveys in this region it was shown that the Colorado National Monument did not cover all the lofty monoliths intended by the original proclamation, and in order to have these included within the monument limits it is proposed to add about 3,500 acres. Most of this land lies adjacent to the present south and west boundaries of the reservation. A proclamation covering the new area has been prepared and will shortly be submitted to the President. Mr. John Otto, the custodian of the monument, has continued the repair and improvement of trails and such other work as he was able to accomplish through the cooperation of communities situated near the reservation.

CHACO CANYON NATIONAL MONUMENT, N. MEX.

An after-war project now under consideration by the Bureau of Ethnology is the excavation of the ruins in the Chaco Canyon National Monument and the restoration of their ancient irrigation systems. This project is receiving the personal attention of Dr. J. Walter Fewkes, chief of the bureau, and comprehensive plans are being made for this archeological work. The National Park Service will cooperate in every feasible way with the Smithsonian Institution and other museums and societies that may participate in executing this important scientific and historic work.

VERENDRYE NATIONAL MONUMENT, N. DAK.

During the year Mr. W. F. Thompson, the postmaster at Sanish, was appointed custodian of the Verendrye National Monument. Mr. Thompson, who is one of the pioneer settlers of the region, has always evinced keen interest in the reservation, and as custodian will be able to prevent trespassing and violations of the regulations of the National Park Service. It was from Crowhigh Mountain, the prominent butte in this monument, that Verendrye, the French explorer of the Northwest and the first white man to enter what is now North Dakota, made his observations before going farther west, and its historical associations draw many visitors to the reservation during the summer months.

There is nothing of importance to report with reference to the administration, protection, or improvement of the Gran Quivira, Dinosaur, Natural Bridges, Rainbow Bridge, Papago Saguaro, Pinnacles, Capulin Mountain, and Navajo National Monuments.

SOME MATTERS OF PERSONNEL.

During the year the employees of the National Park Service have responded generously to the various war funds and in the purchase of Liberty bonds their record has been nearly 100 per cent perfect. In the second, third, and fourth Liberty loan campaigns every member of the Washington force purchased bonds to the limit of his financial ability and the record of the field service approached this very closely.

In the purchase of war savings stamps the record of the employees of this bureau is also worthy of the highest commendation. In the sale of war savings stamps in the department the record of the employees of the National Park Service in Washington is $85.22 per capita. This places it at the head of the bureaus of the department and next to the Alaskan Engineering Commission, which heads the list at the present writing.
Aside from one resignation to volunteer in the Army, there have been no changes in the personnel of the Washington office of the bureau during the past year. In the field, however, there have been many resignations submitted by employees desiring to enter the military service voluntarily, or called thereto under the selective service law. A list of these men, as complete as it has been possible to make it, will be found in Appendix G. This is the honor roll of the National Park Service. Frank M. O'Brien, of Glacier Park, among the first to go, has already been listed among the wounded on the field of battle.

SUPERINTENDENTS NOW, NOT SUPERVISORS.

The designation of the park executives was changed on November 1, 1917, from supervisor to superintendent. Officers in charge of monuments are still called custodians. Chief Ranger L. C. Way, of Rocky Mountain National Park, was promoted to the superintendency of this park on November 1, 1917. The following entered the Service as custodians during the year: William Nelson, of Adama, Petrified Forest National Monument, January 16, 1918, vice Chester Campbell, resigned; Oscar Rohn, of Butte, Mont., Lewis and Clark Cavern National Monument, February 16, 1918; William F. Thompson, of Sanish, N. Dak., Verendrye National Monument, March 1, 1918; Frank Pinkley, of Blackwater, Ariz., Casa Grande National Monument, April 1, 1918, vice James P. Bates, resigned; Walter Ruesch, of Springdale, Utah, Zion National Monument, August 12, 1918; E. W. Merritt, of Sitka, Alaska, Sitka National Monument, August 12, 1918.

Ernest P. Leavitt, chief clerk of the Yosemite National Park, was made assistant superintendent and special disbursing agent on July 1, 1918.

Charles P. Punchard, jr., of Denver, Colo., formerly landscape architect in the District of Columbia, was appointed landscape engineer of the National Park Service on August 1, 1918. He is attached to the field engineering division.

The work devolving upon the Washington office of the Service is increasing by leaps and bounds and has already reached a volume that can be handled only by fast and continuous work and some extension of the hours of labor. If this burden continues to increase, overtime activities will necessarily become the usual requirement. The force should be increased by four or five clerks, with entrance salaries not less than $1,050. The clerks now receiving $900 per annum should be increased to $1,200. They are performing service of a high order, and have remained here at a low rate of pay engaged in a labor of love when they could easily have commanded salaries considerably higher in other bureaus. Likewise, other members of the Service are underpaid when the responsible nature of their duties is considered with the loyal, efficient, conscientious work they perform.

A SOUND BUSINESS BASIS.

I venture the assertion that no bureau in Washington transacts as much business per individual employee as does the National Park Service. It is on a business basis, and I want to keep it there, but its growth must keep pace with the business required to transact. Merit, too, must be recognized and rewarded.

All appointments to places in the National Park Service are made after examination and proper certification in accordance with the civil service laws and regulations, except in the grades of superintendent, custodian, and ranger, which under Schedule A are excepted from examination. I expect to submit to you in the early future a plan of classification of the personnel of this bureau and with it a plan for making all appointments to the field force upon certification of eligibles by the Civil Service Commission, these eligibles to be secured by the commission in the regular way by examination. In other words, the time is nearly at hand, when, in the interest of good administration, all excepted places in the National Park Service can be made subject to all the rules of the classified civil service as to examination, certification, appointment, and dismissal of Government employees.

PROHIBITION IN ALL NATIONAL PARKS.

Hereafter no intoxicating liquor may be sold in any of the national parks and monuments under the jurisdiction of this Service. It has been our practice to regulate the sale of liquor in these reservations in accordance with the laws of the States and counties in which they are located, but we have not permitted the operation of saloons and barrooms in any of them. In the interest of safety to traffic in Yellowstone and Yosemite Parks, however, it was deemed advisable to prohibit the sale or open use of liquor, and an order to this effect was issued with your approval prior to the tourist season just past.

As Montana enters the list of dry States in January, 1919, intoxicating liquor may no longer be sold in Glacier National Park. In "bone-dry" States, the law is strictly enforced in the national parks and monuments located within their limits.

LEGISLATION.

During the past year, the only legislation relating to national parks and monuments that has been enacted into law has formed part of appropriation acts. The sundry civil act of July 1, 1918, carries appropriations in the total amount of $1,012,205, $962,205 to be expended by the National Park Service and $50,000 to be expended by the War Department in the construction and improvement of roads in Crater Lake National Park. This act also authorizes the Department of the Interior to undertake the protection and improvement of Yellowstone National Park in accordance with the recommendations made in the annual report for 1917. Authority is also granted for beginning the development of Sieur de Monts National Monument in Maine. The law furthermore raises the limit in expenditure for buildings in the national parks from $1,000 to $1,500.

The urgent deficiency act of March 28, 1918, granted authority for using $3,500 of the revenues of Yosemite Park to complete the new hydroelectric power plant.

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1 See Appendix D for text of laws, proclamations, and committee reports.
2 Public No. 381, 65th Congress.
3 See detailed statements of appropriations in Appendix C, p. 209.
4 Public No. 109, 65th Congress.
they interfered with the use of these playgrounds. If the new measures, favorably considered by the Public Lands Committee of the Senate, has been finally acted upon by Congress and sent to the President, the future as the old laws have been administered in the past, there will be no change being in the name. This bill was reported favorably by the Committee on the Public Lands on October 18.

BILLS PASSED BY ONE HOUSE AND AWAITING THE OTHER'S ACTION.

No legislation relating solely to national parks or national monuments has been finally acted upon by Congress and sent to the White House for approval during the past year. The following measures, favorably considered by the Public Lands Committee of one or both branches of Congress, or passed by one House, are now awaiting further action.

S. 390. "A bill to establish the Grand Canyon National Park," was introduced by Senator Ashurst on April 4, 1917. It was reported favorably by the Committee on Public Lands on March 21, 1918, and on May 16, was passed in the Senate by unanimous consent.

S. 1555, "A bill to repeal the last proviso of section four of an act to establish the Rocky Mountain National Park, in the State of Colorado, and for other purposes, approved January twenty-sixth, nineteen hundred and fifteen," was introduced April 10, 1917, by Senator Shafter. The Public Lands Committee submitted a favorable report on the bill October 5, 1917, and on February 5, 1918, the bill passed the Senate. H. R. 171, a bill identical with this measure, was introduced in the House by Mr. Timberlake on April 2, 1917, and was reported favorably by the Committee on the Public Lands on March 13, 1918. It was placed on the calendar for unanimous consent, but on two occasions, March 23 and June 3, when reached in calling this calendar, objection was made to its passage. When this bill is taken up for final consideration, S. 1555 will, of course, be substituted for it under the rules of the House. There seems to be every reason for believing this meritous bill will pass in the early future.

S. 4569, "A bill to establish the Mount Desert National Park in the State of Maine," was introduced on May 21, 1918, by Senator Hale, of Maine. The bill proposes to elevate the Sieur de Monts National Monument to the national park status. It was reported from the Committee on Public Lands on June 12, and passed the Senate on July 1. On May 4, 1918, Mr. Peters, of Maine, introduced in the House, H. R. 11935, a bill to create the Mount Desert Park. A hearing on this bill was held by a subcommittee of the Committee on the Public Lands on May 30, and the proceedings were subsequently printed. The full committee now has before it the Senate act and the report of the subcommittee. Another bill, S. 4957, "A bill to establish the Lafayette National Park in the State of Maine," was introduced by Senator Hale on September 24, 1918. The provisions of this bill are the same as those of S. 4569, the only change being in the name. This bill was reported by the Committee on Public Lands on October 3, and passed the Senate on the same day.

S. 41, "A bill to authorize the sale of certain lands at or near Yellowstone, Montana, for hotel and other purposes," was introduced on April 4, 1917, by Senator Walsh, of Montana. This legislation contemplates the sale of a tract of land near the western gateway of the Yellowstone National Park to the Oregon Short Line Railroad, a part of the Union Pacific system. The land will be used for hotel and station purposes when acquired by the railroad company. The bill was reported favorably from the committee on February 7, 1918, and passed the Senate on March 15. On April 6 it was favorably considered by the House Public Lands Committee and is now on the calendar of the House awaiting final action.
S. 4439, "A bill to provide for the survey of a national highway connecting certain national monuments in the States of Utah, Arizona, and New Mexico," was introduced on April 23, 1918, by Senator Poindexter, of Washington. The bill provides for a road to connect the Mesa Verde National Park and the following national monuments: Zion, Grand Canyon, Rainbow Bridge, and Natural Bridges. Twenty thousand dollars is to be appropriated for the purpose. The bill was reported favorably to the Senate on June 13.

S. 4472, "A bill providing for the sale of public lands for the purpose of using the proceeds arising therefrom in the construction of roads and other improvements in national parks," was introduced on May 2, 1918, by Senator Shafrroth, of Colorado. This bill provides that the Secretary of the Interior be authorized to reserve and sell at public auction in each of the States in which national parks are located, unappropriated, unreserved, nonmineral public lands in amount equal to the total area of the national parks within such State, and use the proceeds in improving the parks and the approaches thereto. The bill was favorably reported to the Senate on October 7, 1918.

Reports on all of the above bills quote strong indorsements by this Department.

Other national park measures likely to receive early consideration by Congress follow:

H. R. 10929, "A bill to add certain lands to Sequoia National Park," was introduced on March 21, 1918, by Mr. Elston, of California. On March 26 a hearing was held on this measure by a subcommittee of the Public Lands Committee of the House, on which occasion William E. Colby, president of the Sierra Club, and Lieut. Commander Alexander G. McAdie, of Harvard University, spoke in behalf of this project. A similar bill, S. 2652, introduced on April 21, 1917, by Senator Phelan, of California, is pending in the Senate.

H. R. 11061, "A bill to add certain lands to the Yellowstone National Park," introduced on April 24, 1918, by Congressman Mondell, of Wyoming.


S. 2291, "A bill creating the National Park of the Cliff Cities," introduced on May 11, 1917, by Senator Jones of New Mexico, and a similar measure, H. R. 3215, introduced on April 16, 1917, by Mr. Walton, of New Mexico. These bills propose to establish a national park to include the Bandelier National Monument and other lands in New Mexico upon which valuable relics of prehistoric peoples are located.


REPORT DIRECTOR NATIONAL PARK SERVICE.

NEEDS OF THE NATIONAL PARK SERVICE.

The urgent needs of the National Park Service may be stated briefly as follows:

1. The bill providing for the repeal of the inhibition on the appropriation of Federal funds for the improvement of Rocky Mountain National Park should be enacted into law, in order that the broad-gauge development of this big park may be undertaken immediately after the war.

2. The Grand Canyon should be added to the national park system.

3. The Sieur de Monts National Monument should be made a national park.

4. The Sequoia National Park should be enlarged to include the high Sierra region adjoining it on the north and east, as proposed in pending legislation.

5. The Yellowstone National Park should be enlarged to include the Teton Mountains, Jackson Lake, and all of the scenic region lying north of the Buffalo Fork of the Snake River, and the entire basin at the headwaters of the Yellowstone River.

6. Authority should be granted for the establishment of a touring division in the Washington office of the Service, and sufficient funds provided for the development of comprehensive plans looking toward

Few changes in the monument system by Executive proclamation were made during the year. On March 18, 1918, the Mukuntuweap National Monument in southeastern Utah was enlarged and the name of the reservation was changed to Zion National Monument. The scope of this proclamation has been referred to in another part of this report.

On August 3, 1918, the Casa Grande Ruin in Arizona, set apart by Executive orders of June 22, 1892, and December 10, 1909, under the act of March 2, 1889, and heretofore placed in the category of national parks for the sake of convenience and to avoid confusion, was declared to be a national monument by President Wilson.

On September 24, 1918, the President established the Katmai National Monument in Alaska, to protect from depredation and unauthorized explorations the great volcanic area embracing the Mount Katmai region and the Valley of the Ten Thousand Smokes. This new reservation is mentioned elsewhere in the report.

Summarizing previous statements, the national monument proposals pending at the present time are:

1. The Hovenweep project, which has for its purpose the protecting of the wonderful prehistoric towers near the Colorado-Utah boundary line in the Mesa Verde country.

2. The Scotts Bluff project, which contemplates the preservation of historic and scenic Scotts Bluff, Nebr.

3. The Palm Canyon, Cal., project, the object of which is to safeguard from extinction the species of palm known as "Washingtonia filamentos."
PROPOSED NATIONAL PARK TO INCLUDE MOUNT EVANS, COLO.

See S. 3567 mentioned on page 96, see also page 35.
the encouragement of travel in America after the war. Also the work of the educational division should be continued on a broader scale, which only a reasonable appropriation can make possible.

7. Game preserves should be established adjacent to several national parks in order that game may be better protected in the winter season. This important requirement is discussed on page 22.

8. Timber along scenic highways in or approaching several national parks, notably Yosemite, Mount Rainier, and Glacier, should be acquired from private owners, and its preservation for all time made certain.

9. Sufficient funds are required to maintain and protect all of the national parks during the war period in order that their improvements and natural features may suffer no deterioration or impairment.

10. Initial appropriations should be made at once in order that the National Park Service may assume jurisdiction of Mount McKinley and Lassen Volcanic National Parks.

IN CONCLUSION.

In conclusion, let me say that it has not been easy to labor for peace in time of war. The call of our country in her hour of need has sounded loud in very willing ears; we all of us have earnestly longed for some part in winning the war. The duty, however, which has kept us laboring at more than our wonted speed, because of the promise of the parks' greatly increased usefulness at war's end, has had its compensations. Our national parks afforded relief, inspiration, and restoration to hundreds of thousands of war-weary Americans. The first season of war brought an increase of 37 per cent of visitors over the best record of peace, a fact which speaks for itself; and the season just closing, the second of the war, started bravely for still a higher record. It scored a large winter increase of travel at Hot Springs, Ark., but dropped a little back of last year's when, in the late spring, war exigencies compelled the Government to discourage unnecessary passenger travel.

I feel that the national parks have fully qualified for an important place among the agencies which have kept this Nation fit for war, and I look forward with confidence to their realization, after the coming of peace, of a broad and important destiny.

Very respectfully,

STEPHEN T. MATHER,

Director.

The SECRETARY OF THE INTERIOR.
SIXTEEN NATIONAL PARKS, CONTAINING 9,773 SQUARE MILES OR 6,254,465.45 ACRES, AND TWENTY-FOUR NATIONAL MONUMENTS, CONTAINING 1,939 SQUARE MILES OR 1,241,265.04 ACRES, ADMINISTERED BY THE NATIONAL PARK SERVICE, DEPARTMENT OF THE INTERIOR. KATMAI NATIONAL MONUMENT, ALASKA, CREATED SEPTEMBER 24, 1918, NOT SHOWN ON THIS MAP.
<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>When established</th>
<th>Statute reference</th>
<th>Area (square miles)</th>
<th>Area (acres)</th>
<th>Visitor (1918)</th>
<th>Private lands (acres)</th>
<th>Special characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Springs Reservation</td>
<td>Middle Arkansas, Wyoming, Montana, and</td>
<td>Apr. 20, 1832</td>
<td>(31 Stat., 315)</td>
<td>11</td>
<td>911.65</td>
<td>None.</td>
<td>None</td>
<td>(46) hot springs possessing curative properties—Nearly 400 baths under public control.</td>
</tr>
<tr>
<td>Yellowstone</td>
<td>Wyoming, Montana, and Idaho</td>
<td>Mar. 1872</td>
<td>17 Stat., 32, 33, 1,345</td>
<td>3,142,720</td>
<td>None</td>
<td>None.</td>
<td>None</td>
<td>(More geysers than in all rest of world together—Healing springs—Bathhouses—Many hotels and boarding houses—Large lakes—WATERFALLS—Wilderness inhabited by deer, elk, bison, moose, antelope, bear, mountain sheep.)—Greatest wild bird and animal preserve in world.</td>
</tr>
<tr>
<td>Sequoia</td>
<td>Middle eastern California</td>
<td>Sept. 25, 1890</td>
<td>26 Stat., 418,650</td>
<td>262</td>
<td>161,597</td>
<td>3,049.81</td>
<td>15,001</td>
<td>The Big Tree National Park—15,000 sequoia trees over 16 feet in diameter, some 25 to 35 feet in diameter—Largest area of snowy peaks.</td>
</tr>
<tr>
<td>Yosemite</td>
<td>(yé-a-men't'ch)</td>
<td>Oct. 1, 1890</td>
<td>26 Stat., 650</td>
<td>1,125</td>
<td>719,032.4</td>
<td>17,800</td>
<td>33,277</td>
<td>Valley of world-class beauty—Lomiy cliffs—Romantic views—WATERFALLS of extraordinary height—Many groves of big trees. Largest area of snowy peaks.</td>
</tr>
<tr>
<td>General Grant</td>
<td></td>
<td></td>
<td>(34 Stat., 301)</td>
<td>1</td>
<td>2,536</td>
<td>160</td>
<td>15,406</td>
<td>Largest accessible single peak glacier system—28 glaciers, some of large size—48 square miles of glacier, 60 to 200 feet thick. Wonderful sub-alpine wildflower fields.</td>
</tr>
<tr>
<td>Crater Lake</td>
<td>Southern Oregon</td>
<td>May 22, 1900</td>
<td>32 Stat., 202</td>
<td>249</td>
<td>199,300</td>
<td>None.</td>
<td>None</td>
<td>Greatly resembles General Grant. Tree, 35 feet in diameter—6 miles from Sequoia National Park.</td>
</tr>
<tr>
<td>Wind Cave</td>
<td>South Dakota</td>
<td>Jan. 9, 1903</td>
<td>32 Stat., 705</td>
<td>17</td>
<td>10,890.22</td>
<td>None.</td>
<td>None</td>
<td>Greatly resembles General Grant. Tree, 35 feet in diameter—6 miles from Sequoia National Park.</td>
</tr>
<tr>
<td>Platt</td>
<td>Southern Oklahoma</td>
<td>July 1, 1904</td>
<td>33 Stat., 641,655</td>
<td>11</td>
<td>848.22</td>
<td>None.</td>
<td>None</td>
<td>Greatly resembles General Grant. Tree, 35 feet in diameter—6 miles from Sequoia National Park.</td>
</tr>
<tr>
<td>Sullys Hill</td>
<td>North Dakota</td>
<td>Apr. 27, 1904</td>
<td>33 Stat., 222,235</td>
<td>14</td>
<td>780</td>
<td>None.</td>
<td>4,188</td>
<td>Small park with woods, streams, and a lake—Rich in all-weather preserves.</td>
</tr>
<tr>
<td>Mesa Verde</td>
<td>Southwestern Colorado</td>
<td>June 29, 1900</td>
<td>34 Stat., 416</td>
<td>17</td>
<td>42,375</td>
<td>2,083</td>
<td>19,900</td>
<td>Most notable and best preserved prehistoric cliff dwellings in United States, if not in the world.</td>
</tr>
<tr>
<td>Rocky Mountain</td>
<td>North middle Colorado</td>
<td>Jan. 25, 1915</td>
<td>38 Stat., 798</td>
<td>333</td>
<td>220,062</td>
<td>191,497</td>
<td>20,693</td>
<td>Snow ranges 11,000 to 14,200 feet altitude.</td>
</tr>
<tr>
<td>Hawail (há-wě')</td>
<td>Hawaiian Islands</td>
<td>Aug. 1, 1915</td>
<td>39 Stat., 422</td>
<td>118</td>
<td>75,295</td>
<td>39,000.36</td>
<td>19,900</td>
<td>Snow ranges 11,000 to 14,200 feet altitude.</td>
</tr>
</tbody>
</table>

1 In Wyoming, 3,114 square miles; in Montana, 198 square miles; in Idaho, 36 square miles.
2 Estimated.
3 No record kept.
4 By recent transaction, not yet formally completed, the private holdings have been reduced to approximately 10,800 acres.
### The National Military and Other Parks

**ADMINISTERED BY THE WAR DEPARTMENT.**

(Number, 7; total area, 22 square miles; chronologically in order of creation.)

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>When established</th>
<th>Statute reference</th>
<th>Area (acres)</th>
<th>Special characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chickamauga and Chattanooga National Military Park</td>
<td>Georgia and Tennessee</td>
<td>Aug. 9, 1890</td>
<td>34 Stat., 3265</td>
<td>6,543</td>
<td>Beautiful natural park—Embraces battle fields of Chickamauga and Missionary Ridge and scenes of other conflicts of the Civil War fought in the vicinity of Chattanooga during 1863.</td>
</tr>
<tr>
<td>Antietam National Battlefield</td>
<td>Maryland</td>
<td>Aug. 9, 1890</td>
<td>34 Stat., 3265</td>
<td>50</td>
<td>Site of one of the greatest battles of the Civil War.</td>
</tr>
<tr>
<td>Vicksburg National Military Park</td>
<td>Mississippi</td>
<td>Nov. 30, 1890</td>
<td>34 Stat., 3265</td>
<td>1,333</td>
<td>Beautiful natural park—Scene of Civil War combat—Probably better marked than any other battlefield in the world.</td>
</tr>
<tr>
<td>Lincoln's birthplace</td>
<td>Kentucky</td>
<td>July 17, 1910</td>
<td>34 Stat., 3265</td>
<td>125</td>
<td>Contains the log cabin and part of the farm where Abraham Lincoln was born.</td>
</tr>
</tbody>
</table>

### The National Monuments

**ADMINISTERED BY THE NATIONAL PARK SERVICE, DEPARTMENT OF THE INTERIOR.**

(Number, 24; total area, 1,909 square miles; chronologically in order of creation.)

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Date of creation</th>
<th>Statute reference of proclamation</th>
<th>Area (acres)</th>
<th>Special characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montezuma Castle</td>
<td>Arizona</td>
<td>Dec. 8, 1906</td>
<td>34 Stat., 3265</td>
<td>240</td>
<td>Numerous sandstone rock eroded in form of a castle, upon which inscriptions have been placed by early Spanish explorers. Contains cliff-dweller ruins. Of great historic, scenic, and ethnological interest.</td>
</tr>
<tr>
<td>El Morro</td>
<td>New Mexico</td>
<td>June 18, 1917</td>
<td>34 Stat., 3265</td>
<td>25,625</td>
<td>Ruins of petrified forest, one of which forms a small natural bridge. Is of great scientific interest.</td>
</tr>
<tr>
<td>Petrified Forest</td>
<td>Arizona</td>
<td>July 31, 1911</td>
<td>34 Stat., 3265</td>
<td>25,625</td>
<td>Ruins of petrified forest, one of which forms a small natural bridge. Is of great scientific interest.</td>
</tr>
</tbody>
</table>

1 Donated in whole or in part to the United States.
### THE NATIONAL MONUMENTS.
ADMINISTERED BY THE DEPARTMENT OF AGRICULTURE.

[Number, 11; total area, 1,769 square miles; chronologically in order of creation.]

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Date of creation</th>
<th>Statute reference of proclamation</th>
<th>Area (acres)</th>
<th>Special characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gila Cliff Dwellings (hé'lä)</td>
<td>New Mexico</td>
<td>Nov. 16, 1907</td>
<td>35 Stat., 2162</td>
<td>160</td>
<td>Numerous cliff-dweller ruins of much interest and in good preservation.</td>
</tr>
<tr>
<td>Tonto</td>
<td>Arizona</td>
<td>Dec. 19, 1907</td>
<td>35 Stat., 2168</td>
<td>1,640</td>
<td>Includes the most wonderful portion of the Grand Canyon of the Colorado.</td>
</tr>
<tr>
<td>Grand Canyon</td>
<td>New Mexico</td>
<td>Jan. 11, 1908</td>
<td>35 Stat., 2175</td>
<td>1,806,400</td>
<td>Limestone cavern of much beauty and considerable extent, limits of which are as yet unknown.</td>
</tr>
<tr>
<td>Jewel Cave</td>
<td>South Dakota</td>
<td>Feb. 7, 1908</td>
<td>35 Stat., 2180</td>
<td>1,250</td>
<td>Of much interest from geological standpoint as example of eccentric erosion and extinct volcanic action. Of much scenic beauty.</td>
</tr>
<tr>
<td>Wheeler</td>
<td>Colorado</td>
<td>Dec. 7, 1908</td>
<td>35 Stat., 2214</td>
<td>300</td>
<td>Contains many objects of great and unusual scientific interest, including many glaciers. Is summer range and breeding ground of the Olympic elk.</td>
</tr>
<tr>
<td>Oregon Caves</td>
<td>Oregon</td>
<td>July 12, 1909</td>
<td>36 Stat., 2247</td>
<td>299,370</td>
<td>Spectacular mass of hexagonal basaltic columns, like an immense pile of posts. Said to rank with famous Giant’s Causeway in Ireland.</td>
</tr>
<tr>
<td>Devil Postpile</td>
<td>California</td>
<td>July 6, 1911</td>
<td>37 Stat., 2171</td>
<td>800</td>
<td>Contains cliff dwellings of much scientific and popular interest.</td>
</tr>
<tr>
<td>Walnut Canyon</td>
<td>Arizona</td>
<td>Nov. 30, 1915</td>
<td>39 Stat., 1781</td>
<td>960</td>
<td>Abandoned Indian village in which there are numerous remarkable totem poles and other objects of historical interest.</td>
</tr>
<tr>
<td>Bandelier (Bán-de-ler’)</td>
<td>New Mexico</td>
<td>Nov. 30, 1915</td>
<td>39 Stat., 1784</td>
<td>22,075</td>
<td>Value of cliff-dweller ruins, with artificial caves, stone sculpture, and other relics of prehistoric life.</td>
</tr>
<tr>
<td>Old Kasaan (kā-sān’)</td>
<td>Alaska</td>
<td>Oct. 25, 1916</td>
<td>39 Stat., 1812</td>
<td>38.3</td>
<td>Vast number of cliff-dweller ruins, with artificial caves, stone sculpture, and other relics of prehistoric life.</td>
</tr>
</tbody>
</table>

1 Estimated.

### THE NATIONAL MONUMENTS.
ADMINISTERED BY THE WAR DEPARTMENT.

[Number, 2; total area, 6 acres; chronologically in order of creation.]

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Date of creation</th>
<th>Statute reference of proclamation</th>
<th>Area (acres)</th>
<th>Special characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Hole Battle Field 1</td>
<td>Montana</td>
<td>June 23, 1910</td>
<td></td>
<td>5</td>
<td>Site of battlefield on which battle was fought Aug. 9, 1877, between a small force of United States troops and a much larger force of Nez Perce Indians, resulting in rout for the Indians.</td>
</tr>
<tr>
<td>Cabrillo (kā-brēl’yō)</td>
<td>California</td>
<td>Oct. 14, 1913</td>
<td>38 Stat., 1965</td>
<td>1</td>
<td>Of historic interest because of discovery of the territory now partly embraced in the State of California by Juan Rodriguez Cabrillo, who at this point first sighted land on Sept. 28, 1542.</td>
</tr>
</tbody>
</table>

1 Set aside by Executive order.
REPORT DIRECTOR NATIONAL PARK SERVICE. 105

ORGANIZATION OF THE NATIONAL PARK SERVICE. WASHINGTON OFFICE.

Stephen T. Mather, director.
Horace M. Albright, assistant director.
F. W. Griffith, chief clerk.
Robert Sterling Yard, chief, educational division.

FIELD SERVICE.

ENGINEERING DIVISION.

George E. Goodwin, civil engineer.
Charles P. Punchard, jr., landscape engineer.

ACCOUNTING DIVISION.

C. G. Smith, examiner of accounts.

THE NATIONAL PARKS.

Crater Lake, Alex Sparrow, superintendent.
Glacier, W. W. Payne, superintendent.
Hot Springs, Dr. Wm. P. Parks, superintendent.
Mesa Verde, Thomas Rickner, superintendent.
Mount Rainier, D. L. Reaburn, superintendent.
Platt, R. A. Sneed, superintendent.
Rocky Mountain, L. C. Way, superintendent.
Sequoia, Walter Fry, superintendent.
General Grant, Walter Fry, acting superintendent.
Sullys Hill, S. A. M. Young, acting superintendent.
Wind cave, T. W. Brazell, superintendent.
Yellowstone, Chester A. Lindsley, acting superintendent.
Yosemite, W. B. Lewis, superintendent.

THE NATIONAL MONUMENTS.

Capulin Mountain, Mrs. W. H. Jack, custodian.
Casa Grande, Frank Pinkley, custodian.
Colorado, John Otto, custodian.
Lewis and Clark Cavern, Oscar Rohn, custodian.
Montezuma Castle, O. F. Hicks, custodian.
Muir Woods, Andrew Lind, custodian.
Navajo, John Wetherill, custodian.
Petrified Forest, Wm. Nelson, custodian.
Sieur de Monts, George B. Dorr, custodian.
Sitka, E. W. Merrill, custodian.
Verendrye, W. F. Thompson, custodian.
Zion, Walter Ruesch, custodian.

No superintendents or custodians have been appointed for the Hawaii, Lassen Volcanic, or Mount McKinley National Parks, or for the Chaco Canyon, Devils Tower, Dinosaur, Gran Quivira, Katmai, Natural Bridges, Papago Saguaro, Pinnacles, Rainbow Bridge, Shoshone Cavern, or Tumacacori National Monuments.
<table>
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<tr>
<th>REPORTS OF OFFICERS IN CHARGE OF THE NATIONAL PARKS AND MONUMENTS.</th>
</tr>
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<td>Casa Grande National Monument</td>
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<td>Crater Lake National Park</td>
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<td>Boating and fishing</td>
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<td>Description</td>
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<td>Game</td>
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<td>General statement</td>
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<td>Recommendations</td>
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<td>Roads</td>
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<td>Telephone system</td>
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<td>Travel</td>
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<tr>
<td>Travel for the year ending Oct. 12, 1918</td>
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<td>Means of transportation</td>
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<td>El Morro National Monument</td>
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<td>Fish</td>
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<td>Conclusion</td>
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<td>Effects of the baths on body temperature</td>
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<td>Effects of the baths on the blood picture</td>
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<tr>
<td>Effects of the baths on the polymolecular cells of the blood</td>
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<tr>
<td>Effects of the baths on the phagocytic power of the blood</td>
</tr>
<tr>
<td>General statement</td>
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<tr>
<td>Government free bathhouse</td>
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<td>Improvements and maintenance</td>
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<td>Legendary history</td>
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<td>Pay bathhouses</td>
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<tr>
<td>Business of the bathhouses for the fiscal year ended June 30, 1918</td>
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<tr>
<td>Fees received by bath attendants in the bathhouses for the fiscal year ended June 30, 1918</td>
</tr>
<tr>
<td>Hot-water and ground leases</td>
</tr>
<tr>
<td>Total receipts, less redemptions, of bathhouses, by months, for the fiscal year ended June 30, 1918</td>
</tr>
<tr>
<td>Receipts and disbursements</td>
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<tr>
<td>Proceeds, sale of lots, special fund</td>
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<tr>
<td>Protection and Improvement Hot Springs Reservation, indefinite (revenue fund)</td>
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<td>Recommendations</td>
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<td>Summary of costs</td>
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<td>Reservation</td>
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<td>Mesa Verde National Park</td>
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<td>Construction work</td>
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<tr>
<td>Custodianship</td>
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<tr>
<td>General statement</td>
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<tr>
<td>Recommendations</td>
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<td>Roads</td>
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<td>Ruins</td>
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<tr>
<td>Scenery</td>
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<td>Spruce tree camp</td>
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<td>Trails</td>
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<td>Travel</td>
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<td>Wild animals</td>
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</table>
This is my fourth annual report since assuming charge of the affairs of the Hot Springs Reservation, and it is gratifying to report a substantial increase in the business of the bathhouses and the number of visits to this resort as compared with last year.

During the present fiscal year 1,011,775 paid baths were sold in the different pay bath­ houses, as compared with 982,774 paid baths sold in the same period last year, an increase of 29,000, or 2.96%, making an increase for the present fiscal year of 29,000, or 2.96%, as compared with last year, an increase of 29,000, or 2.96%. The net profits reported by these bathhouses this year were $127,911.74, and the net profits for the present fiscal year was $133,161.12, an increase of $5,250.38 over last year. It is estimated that 140,000 persons visited Hot Springs during the past fiscal year.

It is believed that the earliest white settlement was made about the year 1800. Dun­ bar and Hunter, who visited the place in December, 1804, found an open log cabin and a few huts built of split boards which had been erected by persons resorting to the springs in search of health. Manuel Prudhomme built a cabin there in 1807 and was joined in the same year by John Perciful and Isaac Cates.

The city is now operated under a commission form of government, which consists of a mayor and four commissioners, elected by the people, and a city manager, elected by the commission. The mayor has entire charge of the government, which has been in vogue for the past year, and it is believed it will prove satisfactory.

Unfortunately, the revenues of the city have been insufficient to make any extensive improvements, but it is believed that this obstacle will be overcome in the near future, as an occupation tax is now being considered which, if put into effect, will solve the problem of revenues. The commission is composed of substantial, progressive business men who are zealous in the interests of the city and who work closely with the city officials at all times in harmony with this office in matters pertaining to the protection of the visiting public.

The policy of strict enforcement of the rules and regulations governing the Hot Springs Reservation has been continued this year, with the result that there are now very few violations. In this matter I have had the hearty cooperation of all employees on the reservation. They have rendered efficient and conscientious service.

The system of records kept in the superintendent's office requires much work, in view of the fact that there is received daily a report from all bathhouses of the day's business. These reports are accompanied by the physicians' bathing directions and bath permits filed at each bathhouse, all of which are recorded and filed alphabetically.
DRUMMING.

It is indeed gratifying to compare conditions as they exist now and as they existed two years ago. The work done last year has resulted in practically eliminating this nefarious and obnoxious practice. It is believed that constant vigil is kept, and the drummers who never work, and whose only income was the commission they received as remuneration, all of whom were appointed from Arkansas' under civil-service rules.

At the end of the fiscal year there were 28 employees, 2 less than the regular quota, engaged in the administration, maintenance, and protection of the Hot Springs Reservation, all of whom were appointed from Arkansas under civil-service rules. The annual report of Richard L. Lawrence, manager of the free bathhouses, and John W. St. Clair, train inspector, have both received commissions in the first officers' training camp at Fort Logan H. Roots and are now in the National Army. James W. Walker, clerk stenographer, J. H. Denby, head attendant at the free bathhouse, and A. H. Bump, Bishop H. Burrows, Hiram Watters, and Abraham Loomis, have been appointed.

The salary of all employees, receiving less than $1,500 per annum was increased 10 per cent and the salaries of all employees receiving more than $1,200 and less than $1,800 were increased 5 per cent, effective July 16, 1917.

EMPLOYEES.

At the end of the fiscal year there were 28 employees, 2 less than the regular quota, engaged in the administration, maintenance, and protection of the Hot Springs Reservation, all of whom were appointed from Arkansas under civil-service rules. The annual report of Richard L. Lawrence, manager of the free bathhouses, and John W. St. Clair, train inspector, have both received commissions in the first officers' training camp at Fort Logan H. Roots and are now in the National Army. James W. Walker, clerk stenographer, J. H. Denby, head attendant at the free bathhouse, and A. H. Bump, Bishop H. Burrows, Hiram Watters, and Abraham Loomis, have been appointed.

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RECEIPTS AND DISBURSEMENTS.

The receipts and disbursements on account of Hot Springs Reservation for the fiscal year ended June 30, 1918, were as follows:

Proceeds, sale of lots, special fund...
July 1, 1918, balance remaining to credit of fund of $85,518 derived from sale of Government lots...

Protection and improvement Hot Springs Reservation, indefinite (revenue fund).
July 1, 1917, balance to credit of revenue fund...

Receipts from July 1, 1917, to June 30, 1918, inclusive:

White males...
White females...
Colored males...
Colored females...

Total receipts...
Total available...

Disbursements:
Salaries of superintendent and reservation employees...

Issuance of repairs, incidental, and miscellaneous supplies...

Paid by superintendent on pay rolls...

Vouchers approved by superintendent and forwarded to the department for payment...

Expended by superintendent...

Employment of landscape engineer and other expenses...

for the preparation of a practical and comprehensive plan, together with an accurate estimate of the cost thereof, for improving the Hot Springs Reservation...

Additional expended by the department...

Total disbursements...

Available balance July 1, 1918...

No ground rent was collected from the Arlington Hotel.

REPORT DIRECTOR NATIONAL PARK SERVICE.

Improvements and Maintenance.

No extensive improvements have been attempted during the year, as it was deemed best to concentrate all effort on the new plans being prepared by the architects for the improvement and beautification of the reservation on an extensive scale. These plans have been fully completed, together with estimates of cost approximating $2,000,000, and submitted to the National Park Service.

During the year a great deal of work has been done in maintaining the mountains roads and driveways on the reservation, on which 673 yards of gravel have been used, and distributed. The work of maintenance and repairs, which includes the cultivation and maintenance of lawns, has occupied much of the time of the regular force of laborers.

A large number of persons visiting Hot Springs call at the superintendent's office for information, and it requires the greater part of the time of one person to attend to the requirements of the public in this respect.

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White males...
White females...
Colored males...
Colored females...

Total receipts...
Total available...

Disbursements:
Salaries of superintendent and reservation employees...

Issuance of repairs, incidental, and miscellaneous supplies...

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Expended by superintendent...

Employment of landscape engineer and other expenses...

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Additional expended by the department...

Total disbursements...

Available balance July 1, 1918...

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The new bathhouse and clinic will be substantial, modern, and complete in every detail, thus affording the indigent sick and afflicted who come seeking health baths and medical treatment with the best of facilities.

FREE CLINIC.

Notwithstanding the disadvantages and inconveniences of account inadequate quarters and laboratory facilities, the clinic was operated in the rooms over the government post office building. A fee has been charged during the fiscal period ending June 30, 1918. The physicians engaged in this work are registered and given a part of their time between the hours of 9 a.m. and 5 p.m., each day except Sundays and legal holidays. The only persons treated here are the indigent free bathers who are unable to secure funds with which to pay for treatment.

The Wassermann and differential tests were made in connection with these cases. A report from the G. U. clinic states that in all there were treated 258 cases, with the following results:

No results, due to insufficient treatment... 58
Slight improvement... 47
Much improvement... 61
Cured... 52

The daily average in the various months was from 10 to 26.; mean average, 18. The average number of treatments given to the indigent free bathers who were treated here is 19. The following chart gives the number of patients treated in the G. U. clinic who were treated here are the indigent free bathers who are unable to secure funds with which to pay for treatment. Some of these patients were treated with such tests as were required were made in the laboratories of the physicians in charge. There were treated in this clinic 115 cases. These cases were treated for the following diseases:

Acne; bacteremia; asthma; cystitis; epigastric; furuncle; Hashimoto's thyroiditis; hayfever; hysterectomy; juvenile arthritis; laryngitis; lumbago; mastoiditis; meningitis; myositis; nephritis; neuralgia; psoriasis; rheumatism; scabies; scoliosis; syphilis; tuberculosis; typhoid fever; urticaria; urticaria; urethral stricture; prostatic hypertrophy; varicose veins; wound infection.

1. Effects of the baths on body temperature.-The observations of the Hot Springs baths show that after a 15-minute immersion in the bath, the water temperature is decreased by 1° to 2° before entering the bath. Increasing the temperature to 100° does not materially increase the body temperature. Nor do the hot packs serve any useful purpose. The greatest increase in the body temperature was noted after the vapor bath. The body temperature is increased by a person remaining in the bath while the vapor as it is liberated from the hot water. After remaining in this cabinet from three to five minutes the thermometer is usually normal which is normal. When the body temperature is increased experience has shown that the body temperature has been increased from 3° to 5° F. This is a very important point, for the reason that it demonstrates that a temporary fever, which is a conservation mechanism on the part of the body, is not affected by the bath. This temporary fever in all instances has been observed to have been increased from 3° to 5° F. It is very important to note that it is manifested as a result of the bath. The effect on the body temperature is noted after the vapor bath. The body temperature is a person remaining in the cabinet while the vapor is being liberated from the hot water. After remaining in this cabinet from three to five minutes the body temperature is usually normal which is normal. When the body temperature is increased experience has shown that the body temperature has been increased from 3° to 5° F. This is a very important point, for the reason that it demonstrates that a temporary fever, which is a conservation mechanism on the part of the body, is not affected by the bath. This temporary fever in all instances has been observed to have been increased from 3° to 5° F. It is very important to note that it is manifested as a result of the bath.

2. Effect of the baths on the blood picture.-The blood in most infectious diseases shows an increase in one of its elements, the leucocytes, whose function, as it is believed, is to protect the body from infection and poisons. Blood examinations made before and after the baths showed a marked increase in these cells as a result of the bath. There were treated in this clinic 115 cases. These cases were treated for the following diseases:

Acne; bacteremia; asthma; cystitis; epigastric; furuncle; Hashimoto's thyroiditis; hayfever; hysterectomy; juvenile arthritis; laryngitis; lumbago; mastoiditis; meningitis; myositis; nephritis; neuralgia; psoriasis; rheumatism; scabies; scoliosis; syphilis; tuberculosis; typhoid fever; urticaria; urticaria; urethral stricture; prostatic hypertrophy; varicose veins; wound infection.

3. Effect of the baths on the phagocytic power of the blood.-The power which the blood possesses for destroying bacteria is termed the phagocytic power, and the cells which engulf the bacteria are called phagocytes. The phagocytic power of the blood may be determined by feeding a person fresh blood from a recognized culture of bacilli, and after injecting the mixture for a certain time the blood is examined for the number of bacteria taken up by each phagocyte. It is found by making investigation of this kind before and after the baths that the number of bacteria taken up by each phagocyte is increased when the phagocytic power of the blood is increased. From the above facts, which are based on the study of a great many cases, we arrive at the conclusion that the benefits which seem to accrue from the use of the baths are greatest when the phagocytic power of the blood is increased. The baths of the Hot Springs are due in all probability to their action on metabolism and elimination, and the medical conditions most benefited are those in which the disturbance is due to a disease, either of bacterial or metabolic origin. The physiologic findings of the hot water are as well equipped to prescribe the water for the use of such ailments as are benefited by hot water as a prescription for a drug whose physiologic action and therapeutic value are known to him. These waters are useful in many acute and chronic diseases, and the following chart gives the number of patients treated in the G. U. clinic who were treated here are the indigent free bathers who are unable to secure funds with which to pay for treatment. Some of these patients were treated with such tests as were required were made in the laboratories of the physicians in charge. There were treated in this clinic 115 cases. These cases were treated for the following diseases:

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Pay Bathhouses.

There are at the present time 19 pay bathhouses in Hot Springs, receiving hot water from the Hot Springs Reservation, with the following rates for baths, fixed in each instance by the Secretary of the Interior, in effect therein:

<table>
<thead>
<tr>
<th>Name of bathhouse, etc.</th>
<th>Lease.</th>
<th>Tubs.</th>
<th>Date of lease.</th>
<th>Expiration.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alhambra</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arlington</td>
<td>$0.60</td>
<td>27</td>
<td>Mar. 1, 1916</td>
<td>Feb. 28, 1919</td>
</tr>
<tr>
<td>Arlington Hotel Co.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buckstaff</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buckstaff Bathhouse Co.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fordyce</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hale</td>
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<td></td>
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<tr>
<td>Imperial</td>
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<td>Imperial</td>
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<td>Imperial</td>
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<td></td>
</tr>
<tr>
<td>Imperial</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Majestic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In addition to the above there is a uniform attendant's fee, also fixed by the Secretary of the Interior, of 15 cents for a single bath, or $3 for course of 21 baths, which is collected by the bathhouses and properly accounted for to the attendant. On October 7, 1918, these rates were charged by the department to 20 cents and 84 cents, respectively. The business of the bathhouses has been excellent, and shows a material increase over the past five years. In some cases the amount was increased, and the number of baths increased. The business of the bathhouses is maintained by reason of frequent inspection, each bathhouse receiving water from the Hot Springs Reservation being inspected at least once in three months. The business of the bathhouses has been excellent, and shows a material increase over the past five years. In some cases the amount was increased, and the number of baths increased. The business of the bathhouses is maintained by reason of frequent inspection, each bathhouse receiving water from the Hot Springs Reservation being inspected at least once in three months.
Superior Majestic
41,235
Ozark Sanitorium
Maurice 2,876 1,603 1,042 2,416 84,052 9,125 74,927
Imperial
Arlington
Alhambra
Rockafellow 1,373 1,128 1,387 41,500 3,414 38.0S6
Rector 481 336 188 750 15,151 1,818 13,333
Pythian (colored): 793 748 255 1,505 26,913 2,080 24,833
Hale 1,784 1,389 2,428 53,782 6,287 47,495
Fordyce 2,192 1,337 966 4,071 68,303 10,766 57,537
Buckstaff Ozark , 2,465 1,768 1,004 2,809 77,274 12,969 64,305
Eastman I 451 813 2,766 20,367 2,787 17,580
St. Joseph's Infirmary.

REPORT DIRECTOR NATIONAL PARK SERVICE.

Business of the bathhouses for the fiscal year ended June 30, 1918—Continued.

<table>
<thead>
<tr>
<th>Bathhouse</th>
<th>Complimentary baths</th>
<th>Paid for redemptions</th>
<th>Total bath receipts</th>
<th>Receipts from massage, etc.</th>
<th>Total receipts</th>
<th>Total bath income</th>
<th>Net profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alhambra</td>
<td>$1,992.30</td>
<td>$516.60</td>
<td>$2,508.90</td>
<td></td>
<td></td>
<td></td>
<td>$1,189.00</td>
</tr>
<tr>
<td>Arlington</td>
<td>7,163.10</td>
<td>1,122.70</td>
<td>8,285.80</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Buckstaff</td>
<td>2,826.50</td>
<td>2,016.90</td>
<td>4,843.40</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Eastman</td>
<td>1,783.10</td>
<td>1,122.70</td>
<td>2,905.80</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Majestic</td>
<td>4,942.50</td>
<td>4,872.50</td>
<td>9,815.00</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Moody</td>
<td>5,178.30</td>
<td>4,872.50</td>
<td>9,950.80</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Rockafellow</td>
<td>3,108.30</td>
<td>2,826.50</td>
<td>5,934.80</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Rector</td>
<td>2,987.40</td>
<td>2,016.90</td>
<td>4,904.30</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Pythian (colored)</td>
<td>3,918.00</td>
<td>2,016.90</td>
<td>5,934.90</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
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<td>2,016.90</td>
<td>4,904.30</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Rockafellow</td>
<td>3,108.30</td>
<td>2,826.50</td>
<td>5,934.80</td>
<td></td>
<td></td>
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<td>0.00</td>
</tr>
<tr>
<td>Rector</td>
<td>2,987.40</td>
<td>2,016.90</td>
<td>4,904.30</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
</tbody>
</table>

RECOMMENDATIONS.

As the result of a provision of $10,000 from the revenues of the reservation, authorized by Congress in the sundry civil act approved June 12, 1917, and the employment under this act of Majn & Mench, architects, the new plans for the development, improvement, and beautification of the reservation have been completed and submitted to the National Park Service. These plans were shipped to Hot Springs and were on exhibit in the main parlor of the Eastman Hotel during the meeting of the General Federation of Women's Clubs, which was held here April 30 to May 8, 1918, and remained there during the sessions of the Southern Baptist Convention and the executive council of the American Baptist Convention. Shortly afterwards they were returned to Washington. These plans have been the subject of much favorable comment.

This office cooperated with the architects while the plans were being developed, and all improvements hereof recommended by me have been included in them, namely:

The construction of a roadway, at least 30 feet wide and 21 miles in length, through the "Gorge," at the east end of Hot Springs and North Mountains; the paving of Fountain Street from Central Avenue to boundary monument No. 2, and Reserve Avenue from Central Avenue to boundary monument No. 28, this work to be done in such a manner as to provide that the property owners on the opposite side of these streets from the reservation bear their just share of the expense; the construction of a new free bathhouse; the construction of a storm sewer and surface drainage system in Hot
The numbers in this list refer to the numbers on the map:
1. Superintendent's office.
2. Lamar bathhouse.
4. Ozark bathhouse.
5. Magnesia bathhouse.
7. Fordyce bathhouse.
8. Main entrance to reservation.
9. Maurice bathhouse.
11. Superior bathhouse.
13. Superintendent's residence (old).
14. Rockafellow Hotel and baths.
15. Majestic Hotel and baths.
17. Whittington Lake Park.
18. Keeper's residence.
19. First Presbyterian Church.
20. Catholic Church.
22. Milwaukee Hotel.
23. Pullman Hotel.
26. First Baptist Church.
27. Leo N. Levi Memorial Hospital and bathhouse.
29. Alhambra bathhouse.
30. Moody Hotel and baths.
31. Court House.
32. Como Hotel.
33. Central Methodist Church.
34. High School Building.
35. Ozark sanitarium bathhouse.
36. Missouri-Pacific Depot.
37. Rock Island Depot.
38. City Hall and Auditorium Theatre.
40. Post Office.
41. Great Northern Hotel.
42. Citizens' National Bank.
43. Marquette Hotel.
44. Arkansas Trust Company.
46. Eastman Hotel and baths.
47. Elks Club.
48. Episcopal Church.
49. Superintendent's residence (new).
50. Imperial bathhouse.
51. Pump house (pumps water to drinking fountains at summit of Hot Springs Mountain).
52. Tower.
53. Iron Spring (old).
54. Dugan-Stuart Building.
55. Thompson Building.
North, West, and Hot Springs Mountains and Whittington Lake Park form the permanent Hot Springs Reservation, owned and operated by the Government.
Springs to care for the drainage from the reservation, and the construction of a sanitary sewer system in Hot Springs to care for the sewerage from the reservation; the construction of a new multi-car bridge at Hot Springs Reservation from the程序员 '_s_ in front of Bathhouse Row in keeping with other contemplated improvements on an elaborate and extensive scale, in connection with a band pavilion of architectural design to correspond. To provide band music as a permanent feature of entertainment, and a drinking parlour close by, of modern design and construction, as a permanent feature of this resort; also modern comfort stations located at such points on the reservation as may be desired by the public, and the construction of a band pavilion and concert room.

After careful study and consideration of the situation by the architects, it was deemed advisable to plan an administration building and for comfort stations in this, to be located at the same point at Central and Reserve Avenues, on the spot now occupied by the Government formation. In addition to this point it has been necessary to reduce the frontage of the plans, the width of a 15 feet on the south side in the south side, to 8,434.63 square feet.

In the plans the党和政府 the government buildings on Central Avenue, the remaining 100 feet in the free bathhouse will be on Reserve Avenue. I am gratified to report that an appropriation of $100,000, 000 of which came from the revenues of the reservation, has been made by Congress for the construction of this building, and work will be commenced thereon as soon as practicable.

I strongly recommend that as soon as practicable estimates be submitted to Congress by the Secretary of the Interior for the construction of a new bridge road, which is a part of the plans for Louisiana. For the year 1921, the United States Government will have available for use of those desiring to travel on horseback.

From my experience and close observation during the past four years, I am firmly convinced that Hot Springs is destined to continue to grow in popularity as a health-pleasure resort and eventually stand out ahead of all others in popularity with the public, as these national parks have grown in number and popularity to such an extent as to warrant the establishment by Congress of a regular bureau in Washington for their administration and management under modern business methods, and this bureau has been recognized as the natural and proper medium through which all park activities are to be prosecuted by the act of Congress approved July 1, 1918 (sundry civil bill), which provides the total sum of $334,920 for administration, protection, maintenance, and improvements in Yellowstone National Park. Under this act the Corps of Engineers of the Army was, on July 1, relieved of the duties of building and maintaining roads, bridges, and other improvements. The responsibility of the protection of the park has been taken over from the commanding officer of troops, the stations in the park have been garrisoned by civilian rangers, and regular officers of the United States Army, and under the Department of the War Department for important work elsewhere.

In many instances the employees were selected for political reasons without reference to their adaptability for the duties required. By act of Congress approved March 3, 1883, the Department of War was authorized to employ a sufficient number of officers and other officers of the United States Army, authorized to appoint these officers of the United States Army to the park, and 106.5 miles of main road to maintain in the forest reserves adjoining the park on the south and east. Nearly 400 miles of fairly well marked trails are also available for use of those desiring to travel on horseback.

Before the opening of the tourist season, much doubt existed as to the probable effect of the war conditions on tourist travel to the national parks, and many, more especially the national parks which are needed by the War Department for important work elsewhere. It was announced through the press that the Yellowstone Park tourist season would extend from June 17 to August 31, 1918, and all other national parks were current to the effect that the park would not open due to war conditions, and these statements were often interpreted to mean that the park was closed, and doubts resulted in travel being discouraged to a considerable extent. The publicity of this announcement resulted to some extent in hardship to other concessioners, but the capping companies were not affected, as it is all travel except those providing their own camping facilities, instead of dividing it with the hotels. This enabled the concessioners to show from a reasonable point of view that the hotels had also been opened, both would have operated at a loss.

In the early June the weather was warmer than usual, and in June 29.7 inches of rainfall was recorded, which was about one-third more than the normal for June. These conditions, taken in connection with the above estimates, was that the hotels would not open, and this information going out through the press and in other methods was often interpreted to mean that the park was closed, and doubts resulted in travel being discouraged to a considerable extent. The publicity of this announcement resulted to some extent in hardship to other concessioners, but the capping companies were not affected, as it is all travel except those providing their own camping facilities, instead of dividing it with the hotels. This enabled the concessioners to show from a reasonable point of view that the hotels had also been opened, both would have operated at a loss.

During the first 14 years of its existence as a national park the Yellowstone was administered by civilian superintendents appointed by the Secretary of the Interior, assisted, when funds were available for salaries, by a few civilian scouts. At that time the country was new and wild and filled with savages. This method of administration was found to be unsatisfactory, for the reason that funds were insufficient to engage competent superintendents, and that in some instances the employees were selected for political reasons without reference to their fitness for the work required. By act of Congress approved July 1, 1918, the Secretary of the Interior was authorized to call upon the Secretary of War to make the necessary arrangements, so that the park was not opened as late as possible. By act of Congress approved July 1, 1918, the Secretary of the Interior was authorized to call upon the Secretary of the Interior to make the necessary arrangements, so that the park was not opened as late as possible. By act of Congress approved July 1, 1918, the Secretary of the Interior was authorized to call upon the Secretary of the Interior to make the necessary arrangements, so that the park was not opened as late as possible. By act of Congress approved July 1, 1918, the Secretary of the Interior was authorized to call upon the Secretary of the Interior to make the necessary arrangements, so that the park was not opened as late as possible. By act of Congress approved July 1, 1918, the Secretary of the Interior was authorized to call upon the Secretary of the Interior to make the necessary arrangements, so that the park was not opened as late as possible.

Within the reservation, the Yellowstone National Park will result in great benefit to Hot Springs. The roads to Norris and the west side of the park were open at the end of May.
On the day of opening for tourist travel, the roads on the regular park tour were open for travel except from the eastern entrance to the lake line and between Canyon and Tower Falls through Dunraven Pass. The regular route was used through Dunraven Pass beginning July 8, but on a few occasions during the season, when heavy storms have occurred, this road was not considered safe, and the regular cars came in via Norris. The road between the eastern entrance and Cody was very badly damaged by the June floods, and for a time the chances for travel from that direction looked slim. But the citizens of Cody did much temporary repair work at their own expense, and succeeded in getting a special appropriation of $25,000, in addition to the regular appropriation, for repairing the unusual damage between the Lake Hotel and Cody. A few private automobiles came in from the Cody entrance on July 2, but they had to be dragged with ropes across two huge snowbanks in Sylvan Pass, and it was not until July 13 that the road was considered safe for regular travel and the Yellowstone Park Transportation Co. established its regular daily schedule to trains at Cody.

The transportation company maintained a regular twice-a-week service to Jackson Hole, beginning July 15, but it was not patronized to any great extent.

The aggregate number of persons visiting the park during the year ended October 12, 1918, was as follows:

<table>
<thead>
<tr>
<th>Yellowstone Park Transportation Co.:</th>
<th>1,537</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entering via the northern entrance</td>
<td>1,537</td>
</tr>
<tr>
<td>Entering via the western entrance</td>
<td>1,193</td>
</tr>
<tr>
<td>Entering via the eastern entrance</td>
<td>326</td>
</tr>
</tbody>
</table>

Making park trips by private transportation:

<table>
<thead>
<tr>
<th>With automobiles, paid and complimentary</th>
<th>18,119</th>
</tr>
</thead>
<tbody>
<tr>
<td>With motorcycles</td>
<td>480</td>
</tr>
<tr>
<td>With bicycles</td>
<td>476</td>
</tr>
<tr>
<td>With other transportation as &quot;private camping parties&quot;</td>
<td>17,919</td>
</tr>
</tbody>
</table>

Miscellaneous short trips:

| Total | 30,256 |

Grand total: 21,275

As a matter of economy, the National Park Service required the camping company to open three separate camp entrances, namely, Mammoth, Lake Hotel, and Canyon, thus saving the expense of running the Lake Camp, the camp at Lost Creek, near the western end of the park, a station near the western end of the park, and a station near the eastern end of the park. It required much less overhead expense, gave better assurance of a paying business at the beginning of the season, and encouraged but very limited usage on the part of the tourists. Instead of staying one night at Lake Camp, the distance from Upper Basin to Canyon in one afternoons trip, leaving an extra day for viewing the more interesting phenomena at Upper Basin and Canyon. The camping company reports that 68,267 meals and 26,407 lodgings were furnished at the camps during the season:

Travel by different entrances:

<table>
<thead>
<tr>
<th>From the north, via Gardiner, Mont.</th>
<th>7,504</th>
</tr>
</thead>
<tbody>
<tr>
<td>From the west, via Yellowstone, Mont.</td>
<td>4,401</td>
</tr>
<tr>
<td>From the south, via Jackson, Wyo.</td>
<td>562</td>
</tr>
<tr>
<td>From the northeast, via Cody, Mont.</td>
<td>56</td>
</tr>
</tbody>
</table>

Total: 21,275

Private automobile travel:

<table>
<thead>
<tr>
<th>Automobiles</th>
<th>Tourists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entering via the northern entrance</td>
<td>1,286</td>
</tr>
<tr>
<td>Entering via the western entrance</td>
<td>8,702</td>
</tr>
<tr>
<td>Entering via the eastern entrance</td>
<td>3,026</td>
</tr>
<tr>
<td>Entering via the southern entrance</td>
<td>4,784</td>
</tr>
</tbody>
</table>

Total: 21,275

A fee of $7.50 was charged for automobile tickets of passage and $2.50 for motorcycle tickets of passage, which were good for the entire season. Complimentary tickets were issued to officials of adjoining States or counties and to officials of the Federal Government visiting the park officially.

AUTOMOBILE TRAVEL BY STATES:

A statement showing the automobile travel, by States, in Yellowstone National Park for the season of 1918 follows:

<table>
<thead>
<tr>
<th>State</th>
<th>North entrance</th>
<th>West entrance</th>
<th>East entrance</th>
<th>South entrance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>3</td>
<td>3</td>
<td>15</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Arkansas</td>
<td>9</td>
<td>12</td>
<td>22</td>
<td>9</td>
<td>62</td>
</tr>
<tr>
<td>California</td>
<td>95</td>
<td>266</td>
<td>84</td>
<td>11</td>
<td>455</td>
</tr>
<tr>
<td>Colorado</td>
<td>66</td>
<td>120</td>
<td>208</td>
<td>10</td>
<td>392</td>
</tr>
<tr>
<td>Connecticut</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Florida</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Idaho</td>
<td>60</td>
<td>2,300</td>
<td>120</td>
<td>2</td>
<td>2,502</td>
</tr>
<tr>
<td>Illinois</td>
<td>64</td>
<td>41</td>
<td>47</td>
<td>2</td>
<td>152</td>
</tr>
<tr>
<td>Indiana</td>
<td>91</td>
<td>32</td>
<td>73</td>
<td>9</td>
<td>145</td>
</tr>
<tr>
<td>Iowa</td>
<td>119</td>
<td>58</td>
<td>55</td>
<td>2</td>
<td>236</td>
</tr>
<tr>
<td>Kansas</td>
<td>44</td>
<td>12</td>
<td>4</td>
<td>2</td>
<td>60</td>
</tr>
<tr>
<td>Kentucky</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Louisiana</td>
<td>11</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Michigan</td>
<td>31</td>
<td>39</td>
<td>20</td>
<td>17</td>
<td>107</td>
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<tr>
<td>Minnesota</td>
<td>165</td>
<td>17</td>
<td>30</td>
<td>17</td>
<td>229</td>
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<tr>
<td>Mississippi</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Missouri</td>
<td>12,407</td>
<td>10</td>
<td>58</td>
<td>3</td>
<td>677</td>
</tr>
<tr>
<td>Montana</td>
<td>3,071</td>
<td>1,605</td>
<td>380</td>
<td>4</td>
<td>5,079</td>
</tr>
<tr>
<td>Nebraska</td>
<td>272</td>
<td>85</td>
<td>305</td>
<td>9</td>
<td>687</td>
</tr>
<tr>
<td>Nevada</td>
<td>5</td>
<td>54</td>
<td>9</td>
<td>3</td>
<td>71</td>
</tr>
<tr>
<td>New Jersey</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>29</td>
<td>41</td>
</tr>
<tr>
<td>New Mexico</td>
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<td>10</td>
<td>9</td>
<td>25</td>
<td>48</td>
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<tr>
<td>New York</td>
<td>72</td>
<td>12</td>
<td>32</td>
<td>9</td>
<td>209</td>
</tr>
<tr>
<td>North Dakota</td>
<td>276</td>
<td>34</td>
<td>31</td>
<td>34</td>
<td>345</td>
</tr>
<tr>
<td>Ohio</td>
<td>31</td>
<td>33</td>
<td>35</td>
<td>30</td>
<td>129</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>14</td>
<td>15</td>
<td>70</td>
<td>17</td>
<td>146</td>
</tr>
<tr>
<td>Oregon</td>
<td>109</td>
<td>15</td>
<td>21</td>
<td>28</td>
<td>234</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>17</td>
<td>3</td>
<td>3</td>
<td>28</td>
<td>47</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>South Carolina</td>
<td>17</td>
<td>9</td>
<td>5</td>
<td>4</td>
<td>296</td>
</tr>
<tr>
<td>Tennessee</td>
<td>15</td>
<td>16</td>
<td>5</td>
<td>11</td>
<td>33</td>
</tr>
<tr>
<td>Texas</td>
<td>18</td>
<td>3</td>
<td>8</td>
<td>11</td>
<td>38</td>
</tr>
<tr>
<td>Utah</td>
<td>68</td>
<td>1,037</td>
<td>35</td>
<td>184</td>
<td>1,534</td>
</tr>
<tr>
<td>Vermont</td>
<td>197</td>
<td>28</td>
<td>17</td>
<td>2</td>
<td>240</td>
</tr>
<tr>
<td>Washington</td>
<td>309</td>
<td>167</td>
<td>62</td>
<td>648</td>
<td></td>
</tr>
<tr>
<td>West Virginia</td>
<td>163</td>
<td>27</td>
<td>1,686</td>
<td>95</td>
<td>1,246</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>180</td>
<td>47</td>
<td>1,686</td>
<td>95</td>
<td>1,246</td>
</tr>
<tr>
<td>Wyoming</td>
<td>180</td>
<td>147</td>
<td>1,686</td>
<td>95</td>
<td>1,246</td>
</tr>
<tr>
<td>Canada</td>
<td>26</td>
<td>69</td>
<td>62</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>5,288</td>
<td>7,104</td>
<td>3,900</td>
<td>519</td>
<td>17,101</td>
</tr>
<tr>
<td>Unclassified</td>
<td>276</td>
<td>409</td>
<td>359</td>
<td>14</td>
<td>879</td>
</tr>
<tr>
<td>Yellowstone Park Transportation Co.</td>
<td>1,567</td>
<td>1,136</td>
<td>353</td>
<td>2,056</td>
<td></td>
</tr>
</tbody>
</table>

Total: 21,275

All but a very small percentage of tourists visiting the park traveled by motor transportation, but the total travel, as compared with that of the past three years, was small, but it was better than many anticipated at the beginning of the season, although the majority of this small rail was relatively fast, and only actual necessary expenditure for maintenance is encouraged. For the reasons many improvements under consideration by concessioners were not made.

CONCESSIONS:

All concessioners operating in the park showed their usual fine spirit of cooperation, and complaints from the public resulting from any friction between different interests were practically unknown during the summer.

As in every line of work, due to unusual war conditions, all kinds of labor and supplies are scarce, and economy under all conditions is a virtue. Consequently additions to plant, improvement of buildings, and similar work that can be postponed is discouraged, and only actual necessary expenditures for maintenance is encouraged. For these reasons many improvements under consideration by concessioners were not made.

REPORT DIRECTOR NATIONAL PARK SERVICE.
The Yellowstone Park Hotel Co. did not open any of its hotels in the park, and only a few rooms were available in the Mammoth, Upper Basin, and Canyon Camps, operated by the Yellowstone Park Camping Co. The fact that the hotels did not open made business fairly good for the camping company, even though travel was not heavy. As a rule, the accommodations at Mammoth Camp were good, although the rooms were not large enough to accommodate the tourists. The Mammoth hotel room, and while it is not satisfactory from an architectural standpoint, it serves its purpose very well and adds much to the comfort and pleasure of the public. Also, the taking care of private automobiles was also built at Mammoth. At Upper Basin Camp but a few of the motor cars were driven by the clerks. As a matter of fact, no garages were constructed. An extension to the log building, commenced late last fall, is still unfinished. That which was originally needed Mr. C. A. Hamilton decided to build at Grand Canyon was a rough log building erected for use as a laundry and a large warehouse. A garage is under construction.

The transportation Co. operated the only transportation line in the park, and handled all travel from the trains at Gardiner, Yellowstone, and Cody. As a result of the full development of a small part of the extensive plan of this company, it was in use during the season. The service was improved over the 1917 season; drivers were improved, and the crews as a whole from passenger service, and are steamed by the Yellowstone Park Boat Co. at Lake Lahonton, as follows:

| Service | Miles | 1917 | 1918
|---------|-------|------|------
| Amazing | 2,029 | 2,029 | 2,029 |
| White | 26 | 26 | 26 |

Mr. George Whittaker had his post-office store at Mammoth Hot Springs open throughout the season. Mr. J. E. Haynes, the general store at Grand Canyon, continued his contract with the National Park Service, having been extended for a term of years to cover this additional business. The hotel company's extensive vegetable garden, located near the head of Gardiner Canyon, and planted as usual last spring for use of hotels, was light. As a rule, the accommodations were excellent, and complaints were few. A small frame building, formerly belonging to the Yellowstone-Western Stage Co., had been sold to Mr. J. E. Haynes, who used it as a storehouse. It served the purpose well and adds much to the comfort and pleasure of the public. A garage for some surveying for his right of way.

Mr. C. A. Hamilton did a fairly good business at his general store at Upper Basin, and all the supplies for the station were purchased from him. Mr. J. E. Haynes kept his shops at Mammoth and Upper Basin open throughout the season, and kept three permanent employees on his staff. The shop picture and information bureau at Tower Falls open during the most of the season. The delinquent accounts of the company were formerly belonging to the Yellowstone Park Co., which was, with permission of the National Park Service, moved to the rear of the Mammoth Hotel and put to use as a storehouse.

The barchouse at Upper Geyser Basin was operated under the concession to Frances F. Brothers from the U.S. Department of Agriculture. A total of 2,980 persons used these baths, of whom 1,480 were tourists.

Business was fairly good at the ice-cream parlor and carbo shop operated by Medadus Pronger at Upper Basin. The permit for the operation of this shop was kept open throughout the season. The entire park was in good condition. The Garden of the Gods was closed off from the tourists in the spring of the season. The slide near the north side of the park was repaired, and the necessary materials for its installation at the Madison River station were purchased from survey engineers as during July, 1917, by the transportation and camping companies. A special meter, with summaries of current meter measurements and discharge data for each, will be furnished free of charge to the Ranger personnel.

Mr. J. E. Haynes did a fairly good business at his general store at Upper Basin, and also had his shop open throughout the season. He had business done by the Yellowstone Park Boat Co. during the summer, as there was no opportunity to patronize the boats, due to the lack of accommodations for the night at the Lake Outlet. A few of the motor and other boats were in operation, and the service was improved over the 1917 season. The Steamboat Inspection Board inspected the Steamboat in use for the season at Mammoth, and while it is not satisfactory from an architectural standpoint, it serves its purpose well and adds much to the comfort and pleasure of the public. A garage for some surveying for his right of way.

Mr. C. A. Hamilton did a fairly good business at his general store at Upper Basin, and all the supplies for the station were purchased from him.

Mr. J. E. Haynes kept his shops at Mammoth and Upper Basin open throughout the season, and kept three permanent employees on his staff. The shop picture and information bureau at Tower Falls open during the most of the season. The delinquent accounts of the company were formerly belonging to the Yellowstone Park Co., which was, with permission of the National Park Service, moved to the rear of the Mammoth Hotel and put to use as a storehouse.

STATEMENT OF REVENUES RECEIVED

Revenues were collected from concessionaires, sale of automobile and motorcycle tickets, etc., as follows:

- Sale of automobile permits: $320.80
- Collections from concessionaires: 26, 657.81
- Campsites sold: 1, 220.61
- Sale of electric current: 784.35
- Sale of water: 16, 78.69

Total: $68,292.46

STREAM GAUGING

The following memorandum of work done in the park under this head is furnished by Mr. C. A. Hamilton, superintendent of the Yellowstone Park Hotel Co., under whose direction it was carried out:

Summary of hydrometric work, October 1, 1917, to September 30, 1918.

- Records were obtained at the following gauging stations which were established during the season at Yellowstone, Mont.; Yellowstone River, above Upper Falls, in Yellowstone Park; Snake River, at south boundary of Yellowstone National Park.

- The personnel in charge of the gauging work was considerably increased during the winter months. Two series of actual current meter measurements were obtained at these stations during the 6 months ending September 30, 1918. This work was done during the season, and as the weather permitted. Warm weather in the spring of 1918 melted the snow rapidly, and the necessary materials for its installation at the Madison River station were purchased from survey engineers as during July, 1917, by the transportation and camping companies.

- The service was improved over the 1917 season; drivers were improved, and the crews as a whole from passenger service, and are steamed by the Yellowstone Park Boat Co. at Lake Lahonton, as follows:

<table>
<thead>
<tr>
<th>Service</th>
<th>Miles</th>
<th>1917</th>
<th>1918</th>
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<tbody>
<tr>
<td>Amazing</td>
<td>2,029</td>
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<tr>
<td>White</td>
<td>26</td>
<td>26</td>
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</tbody>
</table>

- A special meter, with summaries of current meter measurements and discharge data for each, will be furnished free of charge to the Ranger personnel.

- The Yellowstone Park Transportation Co. operated the only transportation line in the park, and handled all travel from the trains at Gardiner, Yellowstone, and Cody. As a result of the full development of a small part of the extensive plan of this company, it was in use during the season. The service was improved over the 1917 season; drivers were improved, and the crews as a whole from passenger service, and are steamed by the Yellowstone Park Boat Co. at Lake Lahonton, as follows:

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East approach (in the forest reserve).

General maintenance work was continued until the end of the season throughout the 26 miles of road through the park. Following the heaviest rains of the season, the roads were again opened on the 17th of September, and the remaining 10,000 feet of the road were completed by the end of the season.

Hotel to the eastern border, all within Yellowstone National Park, to make such roads serviceable for all types of vehicles. The hotel near Mammoth Hot Springs was built in 1909, at a cost of $15,400, and is suitable and safe for both motor- and horse-drawn vehicles.

and improvement, including not to exceed $7,500 for maintenance of the load In the forest

harmony with the general plan of roads and improvements to be approved by the Secre­

vided, That not exceeding $2,000 may be expended for the construction of temporary roads, as in the ease of the northern entrance, or by making the necessary repairs to the damaged roads.

One reinforced concrete culvert 4 feet by 2 feet 3 inches by 18 feet long, Yancey Creek.

One double-reinforced concrete culvert, each opening 6 feet by 2 feet 3 inches by 18 feet long, on Swan Lake flats, 5 miles south of Mammoth Hot Springs.

The bridge was strengthened and other­

the entire roadway, undermined the east abutment of the Pahaska bridge and the west abutment of the North Fork bridge, as well as taking out the west approach of the North Fork bridge. The road was impassable until the middle of October, and it was not possible to complete the work of repair until then.

Although the damage to the roads was great, most of the repair work was completed by the end of the season. The remaining estimated cost of repair was $3,000.

On theSnake River Road, or southern entrance, several small structures were washed out, as were the approaches of the Pilgrim Creek bridge, and one of the abutments of the new steel bridge across the Snake River was badly undermined.

through the park as planned. Great credit is due the public-spirited citizens of Cody for their energetic and timely efforts in this work.

The extreme shortage of labor made it necessary to confine the work to the most important structures. The temporary log bridge across the Lamar River, which was built by the mining interests of the region, was not sufficiently strong to relieve the structure erected the previous year, and was strengthened and otherwise improved to accommodate truck hauling.

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The hatchery, located on the shore of Yellowstone Lake near its outlet, was operated during the summer as usual by the United States Fish Commission, under the direction of Mr. Goodwin, civil engineer, National Park Service.

1 I regret that I am obliged to state that the season of 1918 was the most unsuc­

cessful we have experienced in years, due to the exceptionally high water of the last of May and the first of June, which ran off the snow on the mountains and in the timber, creating havoc at the bridges and culverts and damaging the roads in the Park. The flood did less damage in the south than in the north, but did considerable damage to the roads in the south.

Under the provisions of this bill the improvement and maintenance work has been carried on with the work of administration and protection of the park under this office, the maintenance and improvement work being under the direct charge of Mr. George E.

Goodwin, civil engineer, National Park Service.

125 443

449

REPORT DIRECTOR NATIONAL PARK SERVICE.

Can be done. High water during June, 1918, took several piles out of the beds under the Yellowstone River bridge, but its use is not impaired. The small bridge near Pelican Creek was washed out, but can be crossed.

the maintenance and improvement work being under the direct charge of Mr. George E. Goodwin, civil engineer, National Park Service.

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it will avoid the so-called Gardiner slide, which has given so much trouble during

in the forest reserve.

Due to the fact that it was seemingly impossible for the department to deliver to headquarters and served all purposes. The total cost of the lake, including develop­

ment, timbering, and hauling, was $9.27 per ton.

In the spring of 1918 general repairs were made and two log bridges were built on this road, making it safe for vehicular traffic.

The Corps of Engineers, United States Army, made such repairs to the roads as were needed and minor repairs and to delay the heavy reconstruction work until the park is open to the tourists.

Poorly grader crews and wardens worked throughout the season. An early spring allowed flying grader crews to get out in May. Frequent rains made the roads a mud hole, and, so sparse were the crews, the repair work was slow.

Work was continued on the fire-hole realignment until October 23, 1917, at which time 5,200 feet of the road was completed, and another 1,000 feet long was about 50 per cent complete, and the remaining 10,000 feet had not been started.

Under the provisions of this bill the maintenance and improvement work has been carried on with the work of administration and protection of the park under this office, the maintenance and improvement work being under the direct charge of Mr. George E. Goodwin, civil engineer, National Park Service.

and improvement, including not to exceed $7,500 for maintenance of the load in the forest reserve, was authorized from the east boundary, and the road was completed to the east abutment of the North Fork bridge. The west abutment of the North Fork bridge, as well as taking out the west approach of the North Fork bridge. The road was impassable until the middle of October, and it was not possible to complete the work of repair until then.

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MAP OF YELLOWSTONE NATIONAL PARK

© Denotes Ranger Station  — Direction of Travel

Distances given are between main points by road.
shallow waters enabled them to capture a large proportion of the fish which attempted to ascend the streams and scree away many others.

After the fish of last year's hatch, which were very likely a part of the large number we planted from the lake hatchery last fall.

After many discouragements, managed to get to Soda Butte Lake, but owing to the absence of the Lamar Bridge it was impossible to ship eggs. In the railroad camps at Citrus, a good fish from a catch of 200,000 eggs which he planted around the lake in a smaller lake near by.

Natural Bridge: 30,000-600,000 eggs, which he planted around the lake and in a smaller lake near by.

Pelican Creek: 80,000

Cub Creek: 45,000

ClearColor: 45,000

Thump Creek: 30,000

From the remaining eggs we gathered and shipped 2,728,000 to various Federal Fisheries Stations at Leadville, Colo.; Spearfish, S. Dak.; Saratoga, Wyo.; Birdsviade, Wash., Clackamas, Oreg. In addition shipments of 200,000 eggs were made from our hatchery at Glacier Park, where the result of young fry were planted in water.

One small shipment each was sent to the United States Fisheries exhibit at the Illinois State Fair Grounds at Springfield and the other to the Detroit Aquarium, for exhibition.

It is hoped and believed that the next season will show a substantial increase in the number of spawning fish and the resulting egg harvest due to the plants of recent years.

Work completed August 26.

Fish fry of other varieties were not shipped in for planting in park waters last spring, as usual, on account of the unusual difficulties attending their transportation.

It was excellent throughout the summer, and many fine catches were made by tourists and employees. No violations of the law were reported. Exception was made as to the number to be taken in one day in favor of the Canning Co., so as to provide the tables at the camps with trout, which are a great treat for tourists.

WILD ANIMALS.

The fall of 1917 was beautiful and warm, and winter did not come until late. The road to Fort Yellowstone opened until October 26, to Cooke River until November 9, and as late as November 23 the going was as good on the west side of the park as in previous years. The weather was 5.9° warmer than normal, so the summer season was a splendid one.

The last of October, the last part of the elk became concentrated in the warm weather again in March, which was 8.4° warmer than normal, and uncovered considerable grass on the foothills, making in all a rather short and favorable winter for elk, deer, antelope, mountain sheep, and the loss among them was slight.

In November, December, and January, was a disadvantage to hunters, for the elk and deer did not come down where they were easily shot, and but for the gentle hunting in the adjoining reservations given to the care of these animals by the four schools employed, they were unable to be secured. The park herd is almost entirely dependent upon the hard work of our most experienced men, the men on the CBC, and the elk and deer remaining scattered throughout the park, to whom this work was intrusted, were mostly unacquainted with the rules of the various schools, and, during the winter 18, by express, 1 individual who did not take this system as seriously as those of the past part of the protection of the park was sadly neglected, and it was fortunately that the weather kept most of the wild animals up in their summer range in the mountains beyond their reach.

From January 3 nearly every day to March 19 hay was fed in the vicinity of Gardiner and West Yellowstone in an attempt to raise a Mammoth Hot Springs to replace 1 shipped earlier, to the city of Aurora, 111., Feb. 18, by express, 200, and about 5,000 elk that came in for it. About 350 tons of hay was fed, of which 200 was the park's own field near Gardiner and the balance of hay was very good.

Especially the antelope, by supplying them with hay when most needed during the severe winter, when the elk, which are much more numerous, can be cared for outside of the park by saving winter range and raising or buying hay for them in the adjoining forest reserves, but it is too few to risk their loss in any way. Special care was given to the care of these animals by our most experienced men, and the antelope were hired for this purpose during the past winter.

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Troopers who patrolled the park stations were inexperienced in this line of work. Number of antelope wild again left the park and went down the Yellowstone Valley for several miles, apparently not so much in this case because of the necessity for finding forage, the natural food in the park was plentiful and easy to get at all times, and they preserve the precede from the freezing weather, and that of the commanding officer, who lived in the adjoining house. Cases of poaching which occurred were reported to the proper authorities, but not one was reported for this violation of law.

From February 6 and beyond were made by the forest rangers and the accused turned over to the State game wardens for trial. Most of these elk returned to the park in April and May.

Antelope.—The antelope wintered in excellent condition, most of them just inside the north, but got among them and frightened them badly, and while probably none of them was killed it was several weeks before they recovered from their fright and returned to the alfalfa field and vicinity. A few were killed by coyotes during the winter, but aside from this the loss was very slight. Antelope were the largest antelope herd present in the park as in previous winters. No special pains were taken to make a complete count of the herd. The antelope did not become many of them and became accustomed to the presence of elk on the feeding grounds and mingled quite freely with them.

About the usual number of deer were killed during the winter, with 100 that were marked in white-tailed varieties. Slightly more than a hundred of them, mostly black-tailed, came in for hay, and most of them were killed along the ranges of the north west, and were taken in November and December. Buffalos were killed in the vicinity of soldier stations. A black-tailed deer was butchered on the night of October 20 on the west side of Capitol Hill in plain sight of my front door, and that of the commanding officer, who lived in the adjoining house. Cases of poaching which occurred were reported to the proper authorities, but not one was reported for this violation of law.

Elk killed by poachers in the national forest north of the park 15

Elk killed by poachers in the national forest north of the park 80

Elk killed by poachers in the national forest north of the park 20

Wallows, wild herd.

—This herd was located in March on Lamar River and in Pelion Valley, but not counted. Four calves present with that of the herd seen, indicated a fair increase. They appeared to have wintered well.
REPORT DIRECTOR NATIONAL PARK SERVICE.

Tame herd.—The tame herd, located on Lamar River, is increasing rapidly and is in excellent condition. There are now a total of 385 animals, namely, 176 cows and 149 females, from 2 to 12 years old, and 69 calves born during the past summer, sex undetermined. There are 201 bulls and 91 cows in the herd. One-year-old bull was killed and had to be killed on February 29, and its carcass was disposed of at Bozeman College, Niles, and at Helena. Among the young killed in the pasture and was drowned on March 8. A bull calf was hooked to death on April 15, and a bull calf was found dead on Specimen Ridge, Mount Morris, on May 22. A cow found dead near the ranch on July 1, on both cases cause unknown. The 197 cows and 149 calves (20 of the male calves) on Specimen Ridge, Mount Morris, in the spring, were vaccinated against pneumonia, bactervia abortus, and rive last fall, to be cut this fall for hay, and have been feeding out quite well. The tame buffalo calves were grazed most of the summer on Specimen Ridge, Mount Morris, ir vicinity.

Bears.—A few grizzly bears were seen during the summer. A large one was caught in a trap on October 25, to be shipped to the city of Butte, Mont., but broke away and escaped. Bears, which were very plentiful, and seen from everywhere by everyone, are one of the greatest attractions of the park. Naturally shy and inoffensive, the bears in the park are seen so often and fed by so many people that they lose all fear, and as they get older and larger they often become domineering and have to be killed to protect human life. Only complaints of the destruction of crops, hayfields, and gardens, have been received from the people about bears. The tame herd, however, is not quite so numerous and the damage done by them is not nearly so great. A half-mile of main irrigation ditch was built in connection with this cultivated land, but it is not yet completed. The 200 acres of meadow land was kept irrigated and cut for hay. The tame buffalo were grazed most of the summer on Specimen Ridge, Mount Morris, and vicinity.

BIRDS.

Nearly 200 varieties of birds have been noted in the park as summer residents and as winter tourists, producing about 500,000 eggs and stacking the same in nests. More than a few of these remain during the winter. Canada geese, ducks, and other waterfowl on the lakes and rivers are very tame and of much interest to tourists.

DISEASES OF ANIMALS.


diseases of animals.

Arrangements were made to capture and dip for scab the small band of mountain sheep that winters on Mount Everts and in Gardiner Canyon, but the work was postponed. Two cases of smallpox were discovered; one in buffalo calves, which was vaccinated last fall against hemorrhagic septicemia, and the other in buffalo calves, which was not vaccinated last fall against hemorrhagic septicemia. The disease in the latter case proved fatal. The calves from the tame herd, which were known to have been infected from the standing herd, were also vaccinated last fall against hemorrhagic septicemia. On November 13 by Dr. C. W. Swayne, a veterinarian of the Department of Agriculture. The scab disease of the standing herd, which were known to have been infected from the standing herd, were also vaccinated last fall against hemorrhagic septicemia. On November 13 by Dr. C. W. Swayne, a veterinarian of the Department of Agriculture. Unusual outbreaks of pneumonia, bactervia abortus, and rive last fall, to be cut this fall for hay, and have been feeding out quite well. The tame buffalo calves were grazed most of the summer on Specimen Ridge, Mount Morris, ir vicinity.

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ing company took immediate action and boiled all drinking water until they could make a connection with the reservoir of the hotel company, where the water was found to be especially good.

During June a new ranger station was built at the northwest corner of the park, to replace the Gallatin Soldier Station, ... was also constructed in connection with the house. «

Two men with saddle and pack animals have been employed during August and September in going over the trails and cutting out the fallen timber and making other repairs necessary. Two hundred and seventy-five miles were covered.

The extensive work of constructing and rebuilding fire lanes was continued to early in November, when it became necessary to stop on account of bad weather. The total work of fire lanes during the last fiscal year, most of which is listed in my annual report for 1917, concluded up to December 31, 1917, in constructing 1114 miles at an average cost of $41.52, rebuilding 79 miles at an average cost of $40.98 per mile and repairing 176 miles at an average cost of $14.89 per mile. During May and June of this year a new fire lane was constructed from a point on Wyoming road at the 200 miles above Gardiner, along the base of the mountains to the west-southwest Slough Creek; a total distance of about 20 miles, at a cost of $80.69 per mile. While this was a small job, the fact that about 2 miles of the line was in a bad state of repair should be rebuilt as soon as labor can be procured to do the work. The material is in hand and the work will be done this fall, for on account of the winter, being located where but little snow falls, but makes the winter habitat easier of access.

The addition to the Yellowstone Park of a large tract of land south of and adjoining the park, to include Jackson Lake ... public benefit. This proposed addition includes mountain scenery which is comparable to the finest in the world.

ACCIDENTS.

No serious accidents to regular transportation cars were recorded, in few cases to private automobiles.

On June 10 an employee of the transportation company ran his private automobile—a new Dodge car—over the precipice into the road from the Black Growler last season showed no activity during the summer. The usual overflow from the large spring at the foot of the Firehole was active near the crest of the summer, but has recently died out again, which is a common occurrence with this terrace.

In the first week in July, while the overflow from the large spring at the foot of the Firehole was active near the crest of the summer, but has recently died out again, which is a common occurrence with this terrace. On July 13 Sergt. Arthur S. Brewer and Pvt. Victor Morterfield, both of Troop G, Eleventh Cavalry, stationed in the park, were killed in the accident, near the road, at the turn of the road south from Mammoth Hot Springs.

On September 6 a Cadillac car was overturned at Cub Creek, on the Cody entrance road, injuring one lady in the party quite seriously. Luckily two other cars arrived on the scene within two or three minutes afterwards and took the occupants into the Lake Hotel, from there they were cared for by the army. The armory surgeon from Fort Yellowstone went out with one of the ambulance party, assisted the other driver, but neither of the car drivers knew they could go elsewhere and get employment at a high rate of pay whenever they wanted to.

No forest fires of any consequence occurred during the year, the past season was so unusually wet that there were but few days when there was any danger of a fire spreading at any great extent had it started.

The Yosemite National Park, when created by the act of October 1, 1890 (26 Stat., 650), was situated in Tuolumne, Mariposa, and Madera Counties, and contained 316,867 acres, but its area has since been increased by about 120,000 acres, which have been added by purchase to the lands in the Sierra Forest Reserve, but the title to the land is still held by the United States. There are 1,082.74 square miles, the park being situated in Tuolumne, Mariposa, and Madera Counties. The general statement of the condition and operations for the year ending June 30, and the resolutions accepting the title of the Yosemite Valley grant and the Mariposa Big Tree Grove, and including the same, together with fractional sections 5 and 6, township 5 south, range 22 east, Mount
Dialo meridian, California, within the meters and bounds of the Yosemite National Park, and changing the boundaries thereof: there were added to the park the Yosemite Mariposa Grove, 4,400 square miles; Mariposa Big Grove, 4 square miles; and a strip lying between the latter and the park proper, 2,184 square miles; and deducted from the change in the southwestern boundary, 12,06 square miles, making a net addition to the area of 41.67 square miles. The present area of the park is 1,124.41 square miles.

With the marked increase in motor travel to the park, resulting from the appreciation of the part of the country, and the interest with which it is being found by all who have been able to consider it as our main problem of operation, and have, without exception, constituted the greatest item of expenditure incurred against the park appropriation.

The Government now owns and controls approximately 138 miles of roads in the park, which are divided as follows: roads within the Yosemite Valley, 25 miles; road from Tioga Pass to the Tuolumne, 20 miles; road from Pohono Bridge, at the lower end of the valley, to the western park boundary near El Portal, 14 miles; road from the floor of the Yosemite Valley to the western park boundary near the Tuolumne, Big Grove of Big Trees, 14 miles; the Tioga road from the western park boundary near the Tuolumne, Big Grove of Big Trees, to the eastern park boundary near the Wawona, 14 miles; roads on the floor of the valley from Pohono Bridge to Happy Isles, 14 miles; road from Chinquapin to Yosemite, 20 miles; road from El Portal through Crane Flat to Sentinel Dome, 8 miles; roads in the Mariposa Grove of Big Trees, 10 miles; Wawona road from the park boundary near the Tuolumne, Big Grove of Big Trees, to the junction with the Mariposa road near the Tuolumne, 14 miles; Glacier Point road from its junction with the Wawona road at Chinquapin to Glacier Point, 14 miles.

Of these two roads 30 miles, namely, the Chinquapin road from Chinquapin to Glacier Point, 14 miles, and that part of the Wawona road between Fort Monroe, on the north side of the river, and the southern park boundary near Wawona, 16 miles, were previously in the ownership of the Yosemite Stage & Turnpike Co. During the past year, however, in connection with the revision of the concession contract of the Company and as a condition of granting an extension of its privileges, these roads were acquired by the Government and have been maintained by the Government since then. With the acquisition of these roads the Government now has the ownership of all of the roads in the park, with the following exceptions:

1. The Coulterville road from the floor of the Merced Valley at a point one-half mile below Crane Flat to the western park boundary near the Mariposa Grove of Big Trees, 44.60 square miles; Mariposa Big Grove of Big Trees, 4 square miles; and a strip lying between the latter and the park proper, 2,184 square miles; and a strip lying between the latter and the park proper, 2,184 square miles; and deducted from the change in the southwestern boundary, 12,06 square miles, making a net addition to the area of 41.67 square miles. The present area of the park is 1,124.41 square miles.

TRAILS.

Aside from the construction of three trails hereafter mentioned, on the more than 600 miles of trails in the park, comparatively little attention to roads has been paid or is being paid. The roads have been built and maintained by the park authorities, and the improvement of the trails, of the necessity for which has been indicated by the National Park Service, has been considered as justifiable for immediate expenditure, but one which should be kept in mind as a necessary after-war project.

The journey was always hazardous, and fatal accidents have occurred, in spite of which however, the trip continued to be an annual event. This trail, 8 miles in length, has been constructed, is now safe and easily passable, and is less than 2 miles in length.
AUTOMOBILE MAP OF THE YOSEMITE NATIONAL PARK
BRIDGES.

As has been noted in previous reports all of the eight bridges over the Merced River and its tributaries in Yosemite Valley with the exception of the Pohono and El Capitan bridges at the lower end of the valley are antiquated structures which no longer meet the requirements of modern transportation. Congress has authorized the construction of reinforced concrete bridges at the cost of nearly $300,000, which will make the construction of reinforced concrete bridges possible for the first time in Yosemite Valley. The construction of these bridges is now in progress, and it is expected that they will be completed during the fiscal year 1919. The construction of these bridges will relieve the situation immediately, as the bulk of the heavy loads could not naturally cross the river at this point, and long detours, which has been necessary hitherto to make, will be eliminated. The construction of these bridges has been made possible by the location of the Stoneman bridge site to replace the present wooden truss which has been in existence for over a century. During the past year, it has been necessary to support the bridge beams by temporary props. This relief would have been possible any way but temporarily, but it has been particularly so in this case, since during the high water period, the bridge which supported the supporting piles would have been washed away, leaving the bridge in a such a weakened condition as to make it necessary to support it with heavy timbers. The大概是 for which estimates have been made prior to Congress with the exception of, of course, an estimate for the installation of the El Portal railroad crossing, which is under construction, and the building of the El Portal road, where grading of the roadway is in progress, is the feeling that it is an essential piece of construction work which should be provided for in the best interests of the administration of the park.

BUILDINGS.

Aside from the construction of three cottages for the housing of operators at the new power plant and the erection of a building to be equipped and used as a machine shop near the site of the Government shops and barns, no new buildings were constructed. The structures above mentioned are simple affairs, but substantially built in a structurally sound way, and will serve the purposes for which they were erected for many years to come.

ELECTRICAL SYSTEM.

The most important item in connection with the operation of the park electrical system and in fact, strictly speaking, probably the most important project herefore undertaken in the park, has been the completion in the past year of the new 2,000 kilowatt power plant, which is located on the Merced River about a mile upstream from the Pohono bridge. The plant consists of a log crib powerhouse, with a concrete headworks opening into a 64-inch concrete pipe 400 feet long, which turns 14-inch redwood pipe 800 feet by the Merced, 6000 feet along the floor of the valley, and 14 miles along the transverse line. The plant was completed under the direction of the General Electric Company, and with a current on a 3-phase system over an iron-wire line extending from the powerhouse at the outlet of the ladder in the Pohono Valley to the power station at the Sequoia National Park. The power plant was completed under three congressional appropriations of July 1, 1916, June 12, 1917, and May 17, 1918. The total cost of the plant was $212,000, and it was under construction continuously from August 1, 1917, to May 17, 1918. The plant was first brought into operation on July 1, 1918, and has been in almost continuous operation since that date with excellent results. It is a modern up-to-date plant, and is the highest class of hydroelectric machinery, and should fill the needs of the Yosemite Valley for a generation. On September 7, 1918, the plant had been in operation for some time, it was officially reported to the late Henry Floy, electrical engineer of New York City, whose earlier studies and reports and recommendations in connection with the appropriations Committee were contributing factors toward securing the initial appropriation for the construction of the plant.

With the opening of the new plant in May, the old Happy Isles plant, which had supplied the electrical needs of the valley since 1902, was brought into use, by the adoption of the new long-distance wire, as the greater increased electrical demand during the past 11 months and the increased demand of the hotel for the removal of one or both units of the Happy Isles plant to the Sequoia National Park for installation and operation at the Glacier Point.

TELEPHONE SYSTEM.

Notable extensions and improvements of the telephone system have been made during the present year. The installation of a new 100-line switchboard, together with the old 50-line switchboard, gives the system a capacity of 150 lines, about 75 of which have been in use during the past season. The additional 75 lines leaves an opportunity for the extension of the service as necessary demands.

The installation of a new telephone line in connection with the employment of a five-car train at the Glacier Point gave an opportunity for the extension of the service as necessary demands.

The extension of the service has been made possible by the Pacific Telephone & Telegraph Co., by which the Government acquired title to the long-distance and telephone lines between Yosemite Valley and El Portal. These lines were constructed under the conditions prevailing in the park. During the winter months, the maintenance of the telephone service is handled by the long-distance wire. The winter months, however, when business conditions are generally low, the telephone service is handled by the long-distance wire. The winter months, however, when business conditions are generally low, the telephone service is handled by the local line. The telephone service has been maintained in good condition and without interruption.

The telephone system now consists of a 100-line switchboard, 75 lines of which are in use, and approximately 200 miles of telephone line, approximately 100 miles of which are metallic circuits of No. 9 wire, the remaining being ground circuits of No. 9, No. 12, or No. 14 iron wire.

WATER SUPPLY.

The springs situated near Happy Isles have for several years failed to contribute a sufficient water supply for park uses during the months of low water. With view to partially rectifying this condition, an auxiliary water supply was installed in the autumn of 1917. The reservoir is constructed of asbestos concrete and is located about 50 feet in elevation below the present springs, and which collects water which has heretofore been wasted through filtering out through the talus slope below the springs. At this reservoir there is installed a 34-inch centrifugal pump connected to an electric motor by means of which water is pumped from the collecting tank back into the main reservoir. By means of this pump the water is then delivered to the springs, thereby making procedure of the pumping of water from the collecting tank to the springs automatic. The water which is delivered in the spring automatically throws the switch which starts the motor and the pump begins to operate. When the job is completed, the pump is automatically stopped. Similarly the float switch in the collecting tank is so arranged that should the water level in the collecting tank drop below a certain level, the pump is automatically thrown and the pump stopped. In addition to this installation a pressure valve was also installed near the old power house which automatically adds water to the auxiliary supply, is insufficient to meet the demand renewing the water supply. The water system is in the best interests of the operation of the park.

SANITATION.

The method of handling the sanitary situation in Yosemite has not been changed from that applied in former years. Each of the camps and hotels have their own individual sewage systems, some of which are fairly satisfactory, some of which are wholly inadequate and consist of practically nothing more than cesspools, and none of which are or can be entirely adequate. The disposal of sewage from the village and the Government-owned buildings is, unfortunately, handled in a no less unsatisfactory manner than that of the camps and hotels operated by the concessioners. In spite of improvements made during the past year in the water system, this condition will continue to persist until such time as funds are made available for the installation of a complete sewage system to meet the demands of the entire valley. When the construction and operation of a complete sewage system, in order to comply with the terms of the charter of the Yosemite Valley may be disposed of once and for all, the question of the installation of an incinerator for the burning of garbage and other refuse should be given consideration and included in the new system.

MEDICAL SERVICE.

The Yosemite medical service continued in operation under the concession granted to Dr. R. F. B. Hanf, of San Francisco. During the past year, 1917-18, 3 deaths, 118 accidents, 65 hospital cases, 1,968 office calls, and 1,413 house calls were reported.

Of the accidents reported nearly all were of a minor nature, and were suffered principally by employees of the service and concessioners in the exercise of their duties.

The reported in the park during the year occurred as follows:


August 30, 1918, M. Lee, age 33 years, employed as laborer on power-plant construction. Death caused by accidental falling into Merced River.

December 30, 1917, Caroline Paul Fiske, age 63 years, wife of George Fiske, pioneer photographer of Yosemite Valley. Death due to cancer.

FORESTRY.

In spite of the fact that the past year was an exceedingly dry one and although a total of 34 fires were reported during the year, burning over an area of some 1,000 acres, the amount of damage actually caused by forest fires was comparatively small. I believe this small amount of damage is due to the greater effectiveness of the new fire-fighting organization of the forest rangers and the efficiency of the fire fighting equipment used by the same. The number of forest fires was reported on the first of January, 1918, was of the total number of fires reported gained any headway at all, and these were more controlled than the past year, for the most part, from spreading fires. The result that in most cases nothing but underbrush was burned. It is of interest to note that of the reported fires of any consequence, 83 per cent of them were started by lightning, but a few cases could their origin be attributed to carelessness of individuals. The new organization mechanism and increased fire-fighting equipment used by the forest service in preventing forest fires has been quite effective, and it is proposed to continue the same in the coming year.

While there have been no forest fires of any consequence on the floor of the Yosemite Valley for many years, it is due to the fact that the fire department is in good working order, and the elimination of these threats is in itself a notable project, but an item that should be given consideration with view to protecting the existing and clearing of the thickets and the spreading of underbrush from year to year seems to indicate will be the case when normal conditions will have again been restored.
INSECT CONTROL.

The control of insect depredations on the park forests, which has been carried on quite extensively during the past four seasons, has now become a part of our regular park operations. Although the past year labor conditions were as favorable as any in recent years, the possibility of extensive work along this line, such work as was feasible was carried on under the able supervision of Mr. J. E. Patterson, entomological ranger, who was assigned to Yosemite National Park by the Bureau of Entomology for this purpose.

In the higher altitudes, however, in the lodge-pole pine belts, particularly in Cathedral and Tenaya Creek Basins, the readiness response which park administrators in other areas have shown to Mr. Patterson's suggestions and recommendations, has been in evidence. The Sugar pine and yellow pine areas, the most exposed to previous control work to such an extent that during the past year it was necessary and feasible to carry on, are now or were made more or less secure against the sugar pine bark beetle and yellow pine beetles. In these areas treatments are now being done and have been done in a manner which is believed to result in the continued elimination of these pests. The great bulk of the work that has been done in the past year has been on the sugar pine and yellow pine areas. The Sugar pine and yellow pine belts in these areas stand exceptionally clean and free from insect injury in comparison with the more wooded areas farther down the valley.

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MOSQUITO CONTROL.

The sluggish streams of Yosemite Valley, bordered as they are by irregular banks and subject as the valley is to flooding, with the accompanying pest of mosquitoes, ideal conditions exist each spring for the propagation of mosquitoes. This period of propagation covers generally about three weeks, which period, unfortunately, usually at the beginning of the height of the travel season. The tourist travel each year shows a decided falling off at the beginning of the mosquito period and the loss in travel as a result of the pests can scarcely be estimated as the publicity distributed by outgoing visitors during that period has an effect on travel which extends very far beyond the mosquito season. In this respect, the spring of 1919 was particularly bad as the pests seem to have bred in far greater numbers than ever before and their activities were more general throughout the valley than in previous years. That the mosquito nuisance is subject to control goes without saying as effective measures have been taken against the pests in other locations throughout the country. Practically nesting nowhere else in the country, mosquitoes have very properly proven the necessity for a campaign against the mosquitoes and plans are under way for undertaking control measures during the coming year. The two remedies which have been adopted elsewhere in controlling the nuisance and reducing the application of all, will be used, and it is believed that if these measures are taken as early in the season as possible, and not allowed to be overlooked, the damage noted during the past season can and will be avoided.

TIMBER OPERATIONS.

Timber operations on both private and Government-owned lands in the park were continued throughout the year by the city and county of San Francisco in the development of their Hetch Hetchy and Lake Eleanor projects and by the Yosemite Lumber Company, operating in the southern portion of the park.

In connection with the construction of the Lake Eleanor Dam the city operated a sawmill on their lands at the dam site. Practically all slashings and debris resulting from the cutting during the past season have been cleaned up and burned. In connection with the construction of the Lake Eleanor Dam the city also operated a sawmill at the dam site. In this operation they felled about 750,000 feet of lumber, of which amount 3,054,989 feet b. m. was cut from Government lands located in the so-called Dulany district, mentioned in my last year's report, and located in sections 31 and 32, township 1 north, range 20 east, Mount Diablo meridian, southeast quarter, section 32, township 1 north, range 20 east, Mount Diablo meridian, west half of section 31, township 1 north, range 20 east, Mount Diablo meridian. In connection with this work a total cut to date of 2,010,052 feet b. m. of lumber of the 4,000,000 feet which the city was required by the Government to cut for the 3,000,000 feet required for their organization, has been completed. In connection with the Dulany district, practically all slashings and debris resulting from the cutting during the past season have been cleaned up and burned. In connection with the construction of the Lake Eleanor Dam the city also operated a sawmill at the dam site. In this operation they felled about 750,000 feet of lumber, of which amount 3,054,989 feet b. m. was cut from Government lands located in the so-called Dulany district, mentioned in my last year's report, and located in sections 31 and 32, township 1 north, range 20 east, Mount Diablo meridian, southeast quarter, section 32, township 1 north, range 20 east, Mount Diablo meridian, west half of section 31, township 1 north, range 20 east, Mount Diablo meridian. In connection with this work a total cut to date of 2,010,052 feet b. m. of lumber of the 4,000,000 feet which the city was required by the Government to cut for the 3,000,000 feet required for their organization, has been completed. In connection with the Dulany district, practically all slashings and debris resulting from the cutting during the past season have been cleaned up and burned.

INFORMATION BUREAU.

The bureau of information was operated as in past years at the superintendent's office, at which place campers were given information and directions about the facilities provided in the park and about the various attractions. It is to be noted that in spite of the fact that large numbers of campers are entering the park at that time, were acquired by the Government. During the past year the Government was able to keep all the summer camps in the park in operation, as a result of the careful supervision of the personnel and the funds allocated to the various camps. The Government was also able to acquire and operate the camps in the park.
to realize that information received at this bureau is trustworthy and reliable and have accordingly made the greatest use of it.

In addition to the Park Information bureau, and operated in conjunction with it, the California State Automobile Association was given permission to establish a Yosemite branch office here. During the months of heavy tourist travel they kept a representative, whose duty it was to distribute the association’s road maps and to distribute pamphlets, brochures, and other items as applying to road conditions throughout the State. This information was given gratuitously to all, irrespective of whether those receiving the same were members of the association or not. This addition to our information bureau has worked, I believe, to the advantage of the park, of the motoring public, and of the California State Automobile Association as well.

TRAVEL.

At the beginning of the 1918 season, with the very notable concentration of effort throughout the country on war work, conditions did not appear conducive to having the same thing appear as a normal travel to the park. Increased passenger rates on the railroads and other forms of transportation made it appear not only uneconomical, but highly probable, that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that we have been able to record a very substantial gain in automobile travel and a no greater decrease in railroad travel than was to be expected is amply indicative of the feeling of the public as regards its interest in Yosemite as a place to spend their recreational periods, which periods are considered as essentially as ever as a factor in building up mind and body for the tasks which confront all persons in assisting in the winning of the war.

When the opening of the Wawona Road in the month of May automobile travel started and showed an increase for each month throughout the season over that of the corresponding months for any previous year.

Motorcycles were admitted to the park for the first time, but the number reporting was distinctly less than had been anticipated. It will be recalled that during previous years a very considerable portion was given to the question of allowing motorcycles on the park roads, and demands were general for motorcycle organizations throughout the State to be permitted to enter. While it had been contended by the Park Service officials that motorcycles would have considerable difficulty in negotiating the roads entering the park, this claim was refuted by motorcycle enthusiasm. That the service was right in its contention, however, I believe has been proven by the fact that so few motorcycles have reported since permission was given them to enter, as it is unquestionable that the majority of the motorcycles have unsuccessfully attempted to reach Yosemite, and it has only been those of high power and particularly substantial construction which have been able to negotiate the roads and report to us.

However, that no difficulty has been encountered by the park organization in handling motorcycles in the park initiated during the past year should not be continued. The fact that no motorcycle situation to date, and no reason exists why the experiment of permitting motorcycles to report as was distinctly less than had been anticipated. It will be recalled that during previous years a very considerable portion was given to the question of allowing motorcycles on the park roads, and demands were general for motorcycle organizations throughout the State to be permitted to enter. While it had been contended by the Park Service officials that motorcycles would have considerable difficulty in negotiating the roads entering the park, this claim was refuted by motorcycle enthusiasm. That the service was right in its contention, however, I believe has been proven by the fact that so few motorcycles have reported since permission was given them to enter, as it is unquestionable that the majority of the motorcycles have unsuccessfully attempted to reach Yosemite, and it has only been those of high power and particularly substantial construction which have been able to negotiate the roads and report to us. However, no difficulty has been encountered by the park organization in handling motorcycles in the park initiated during the past year should not be continued.

The following tables show the total travel to the park for the year ending October 12, 1918, as compared with that recorded for the previous year:

<table>
<thead>
<tr>
<th>AUTOMOBILES AND MOTORCYCLES</th>
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<tbody>
<tr>
<td><strong>Entrance</strong></td>
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<tr>
<td><strong>1917</strong></td>
</tr>
<tr>
<td>Alder Creek (Wawona)</td>
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<tr>
<td>Merced Grove (Conteeville)</td>
</tr>
<tr>
<td>Aspen Valley</td>
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<tr>
<td>Ebb City (Porcupine)</td>
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<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

FISHERY.

Good fishing grounds are becoming more and more a requisite of mountain recreation places. In the early months of the season it was feared that the fishing would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season. The fact that the park would suffer a very substantial decrease in the number of visitors during the 1918 season.
privileges had been authorized only as a war measure, there should be some guarantee, in the case of further extension of such privileges, that the cattle interests would in no way consider the rights granted during the war as extending beyond that period and that they would recognize the park for park purposes only after the emergency had passed, thereby leaving the Service free to fix its after-war grazing policy without interference by them.

Accordingly after several conferences with representatives of the Food Administration and the cattlemen’s association, additional grazing areas, bringing the total up to about 7.250 acres, were opened to the cattlemen for approximately 4,000 additional head of cattle were granted at the rate of 60 cents per head, thereby bringing the total number of cattle for which permits were issued up to about 9,000 head. The cattlemen were authorized to select the permits which were to be made available and no permits were to be granted except upon the sanction of that organization. This action was taken on the strength of an authorization given in a resolution passed by the California Cattlemen’s Association in their meeting held at Davis, Cal., on June 28, 1918, which is quoted herewith:

Whereas in order that those cattlemen most needing it may have access to the grazing privileges, the Association has thereby been placed in the hands of the California Cattlemen’s Association, which in turn is securing the information through the local live-stock associations; therefore be it

Resolved, That the various live-stock associations of California, through their delegates in convention assembled, hereby recognize that all permits herebefore issued, or to be issued by grazing in Yosemite Valley and Sequoia National Park hereafter have been granted as a result of war conditions only; and that no claim be made for extension after the war of any privileges so granted; and

And further, That when the war emergency shall no longer exist, it is agreed that our influence and aid will be lent in preventing a continuation of grazing in the Yosemite and Sequoia National Parks on other than privately owned lands, and that the uses of the parks will be considered as for park purposes only.

This is a true copy.

(Signed.) L. A. Names, Chairman.

This seems to place the grazing problem, as it applies to Yosemite National Park, on a more solid footing than ever before, and the Service by granting extension of grazing privileges under these conditions is rendering a notable service to the country, and is at the same time fortifying itself against encroachment upon park interests when in the future conditions will have reverted to normal.

WAR-FUND DONATIONS AND SUBSCRIPTIONS.

While immediately concerned with the operation of the park as the work in hand, the Superintendent overlooked their duty to the Government in its momentous struggle, and stamps subscriptions totaling $7,400; subscriptions to the American Red Cross in the sum of $10,000; he also contributed considerable donations to the local Red Cross branches, the Y. M. C. A. of Columbus, Salvation Army, and other similar war-relief organizations.

Not only have they met the full amount of the quota assigned in these various donations, but they have doubled and even quadrupled the amount.

I am, indeed, glad on behalf of the park organization to be able to report this generous and enthusiastic response to our country’s appeal.

The following is a list of concessions operating in the park during the season of 1918:

<table>
<thead>
<tr>
<th>Name of concessioner and privilege granted</th>
<th>Period of concession</th>
<th>Location of concession</th>
<th>Compensation exacted</th>
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<tbody>
<tr>
<td>E. N. Baxter</td>
<td>Perpetual</td>
<td>Yosemite National Park</td>
<td>1,200</td>
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<tr>
<td>George Fiske</td>
<td>Annual</td>
<td>Yosemite National Park</td>
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<td>Mrs. John Degnan</td>
<td>Annual</td>
<td>Yosemite National Park</td>
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<td>D. J. Foley</td>
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<td>Yosemite National Park</td>
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<tr>
<td>Big Trees Auto Loan Co.</td>
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<td>Yosemite Stage &amp; Tie Co.</td>
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<td>Yosemite Stage &amp; Tie Co.</td>
<td>Annual</td>
<td>Yosemite National Park</td>
<td>100.00</td>
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<tr>
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</tbody>
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1 Per annum, on demand of Secretary of the Interior.
2 Per annum, on demand of Secretary of the Interior.
3 Per annum, on demand of Secretary of the Interior.
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48 Per annum, on demand of Secretary of the Interior.
49 Per annum, on demand of Secretary of the Interior.
50 Per annum, on demand of Secretary of the Interior.
Fig. 4.—Automobile Guide Map Showing Roads in the Yosemite Valley, Yosemite National Park.
United States all roads and trails built under the provisions hereof; and further, after the expiration of five years from the date of the passage of this act the grantee shall pay to the United States the sum of $15,000 annually for a period of 10 years, beginning with the expiration of the five-year period before mentioned, and for the next 10 years following 5% of the net annual income on the area of land remaining in the grant of 480 acres under the term of the grant. If in the discretion of Congress the annual charge shall be increased or diminished, pay the sum of $30,000 annually, said sums to be paid on the 1st day of July of each year. Until otherwise provided for, such sums shall be kept in escrow by the United States, to be applied to the building and maintenance of roads and trails and other improvements in Yosemite National Park and other national parks in the State of California. The Secretary of the Interior shall designate the uses to be made of sums paid under the provisions of this act under the conditions specified herein.

Section 4 of the act provides that no timber shall be taken, cut, or destroyed within Yosemite Park or Stanislaus Forest, except as such may be actually necessary to construct, repair, and operate its reservoirs, dams, power plants, water power, and electric works, and other structures mentioned in the act, but that no timber shall be cut or removed from lands outside of the right of way until designated by Secretary of the Interior. The grantee shall defend the right of way, dig, and wood cut, injured, or destroyed on or adjacent to any of the rights of way and lands, as required by either of said officers: Provided, That no timber shall be cut by the grantee in Yosemite Park except from land to be submerged or which constitutes an actual obstruction to the right or rights of way to any road or trail provided for in the act.

The rules and regulations promulgated and applied to the operation of Yosemite National Park during the past year have, on the whole, been entirely adaptable to the conditions existing in the Park. I believe that the rules have satisfactorily controlled the activities of the Park. The number of arrests to the more than 30,000 people entering the park during the year would indicate the very little tendency on the part of visitors to violate the park rules. The bulk of the arrests were for violations of the regulations on the skiing regulations enacted on the floor of the Yosemite Valley, which brings up the question of whether the proper limit has been defined for travel on these roads. With the exception of the short stretch of road leading to Mirror Lake and 2 miles of the Tunnel Trail, the roads are just as safe for travel as any interstate highways, and I can see no logical reason why the same speed limits should not apply, namely, 30 miles per hour, and I would recommend that this change be made another year. Aside from this, I would suggest no alteration in the regulations as they now exist.

**SEQUOIA AND GENERAL GRANT NATIONAL PARKS.**

**WALTER FRY, Superintendent, Three Rivers, Cal.**

**GENERAL STATEMENT.**

The Sequoia National Park, set aside by act of September 25, 1890 (26 Stat., 478), and act of October 1, 1890 (26 Stat., 650), is located in Tulare County, Cal. It has an area of 1,367,507 acres and ranges in altitude from 1,100 to 11,900 feet. The General Grant National Park, set aside by act of October 1, 1890 (26 Stat., 650), is located one-half in Tulare County and one-half in Fresno County, Cal. It has an area of 2,536 acres and ranges in altitude from 2,250 to 7,031 feet. The Sequoia National Park derives its name and much of its interest from the presence of many large groves of “big trees” (Sequoia washingtoniana), and the General Grant National Park was thus named by reason of the widely known fact that so many of these groves of these parks are situated in the southern portion of California, about midway between the cities of San Francisco and Los Angeles, on the western slope of the Sierra Nevada, and contain some of the most magnificent mountains found on the continent. The magnificent forests within their borders contain the greatest groves of the oldest and largest trees in the world.

Park headquarters are located at Giant Forest in Sequoia National Park, 10 miles from the main entrance on the east side of the park; 19 miles outside the park line from the west entrance, during the summer season, and at a point 2 miles east of Three Rivers, 4 miles outside the park line from the south entrance, during remainder of the year. A telephone system connects both these headquarters with General Grant Park, long distance service at Three Rivers, and the various outpost stations throughout the reservations. A civilian force of 11 men as park rangers was employed in Sequoia Park and of 2 men in General Grant Park during the season of heavy traffic. Ten of these men were assigned to various outposts throughout the parks, and three men made it their special duty to care for the welfare of the traveling public and to see that sanitary measures and grazing regulations were properly enforced. The distance from Giant Forest headquarters to General Grant Park by road is 85 miles and by trail 82 miles, and from the Three Rivers headquarters by road 65 miles and by trail 34 miles. Lemon Cove, nearest railroad station from Giant Forest headquarters, is 40 miles, and from Three Rivers headquarters 10 miles.

The winter weather of 1917-18 was characterized by an unusual number of bright sunny days, defective rainfall, and temperature which averaged far above the normal; 11.91 inches of rain being recorded for the season over the lower elevations of the park, as against 18 inches for the normal. This is the lowest record for seasonal precipitation in the entire record of the parks. Snowfall in the higher elevations was also very light and practically all had melted away by July 15, other than that along the northern slopes of Silliman, Alta, and Vernaly Mountains, where snow remained in vast quantities throughout the year, thus maintaining the reputation of Sequoia National Park as containing a given area that is at all times covered with ice and snow. By reason of the light snowfall in the higher mountains, the water run off in all the park waters was lower during the summer season of 1918 than at any time before, in fact, about one-half lower than the lowest previously noted since park records have been kept.

**TRAVEL.**

Travel is permitted in the parks the year around, but on account of extreme depth of snow it is difficult to reach the higher scenic portions of the parks prior to the months
of May or June of each year, and for this reason the 1918 open-park season was fixed from May 15 to October 10, on the former of which dates all park concessioners commenced operations.

On the 20th of May following the date of the park opening the Tulare County author-

ities closed to vehicle travel a certain section of the Lemon Cove-Three Rivers county road in the vicinity of Three Rivers, just west of the Sequoia Park, for the purpose of applying a concrete pavement to the road. As the result of closing the road, vehicle traffic to the park was entirely shut off, as this road is the only highway over which travel enters the park from the valley below. This condition continued from June to the 15th of June, and no fee was exacted for passage on the Mineral King road during this period. About one month ago Tulare County started in on the construction of a concrete-paved highway in the vicinity of the parks. These roads in the vicinity of the parks were torn up and in bad condition for travel during the open-park season of 1918. All the roads remaining open to travel by means of a detour, and park visitors commenced to come in gratifying numbers.

The aggregate number of persons making trips to the parks during the season of 1918 was as follows:

**Sequoia National Park.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making park trips with private transportation:</td>
<td></td>
</tr>
<tr>
<td>With automobiles and complimentary:</td>
<td>9,060</td>
</tr>
<tr>
<td>With other private transportation, as wagon, horse, and foot:</td>
<td>4,179</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td>13,239</td>
</tr>
</tbody>
</table>

**Travel by different entrances.**

<table>
<thead>
<tr>
<th>Entrance</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giant Forest Road</td>
<td>5,640</td>
</tr>
<tr>
<td>Elk Park Road</td>
<td>9,580</td>
</tr>
<tr>
<td>Mineral King Road</td>
<td>1,762</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15,001</td>
</tr>
</tbody>
</table>

**Private automobile travel.**

<table>
<thead>
<tr>
<th>Entrance</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entering via Giant Forest Road</td>
<td>5,398</td>
</tr>
<tr>
<td>Entering via Elk Park Road</td>
<td>14,340</td>
</tr>
<tr>
<td>Entering via Mineral King Road</td>
<td>1,084</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16,822</td>
</tr>
</tbody>
</table>

A fee of 25 cts. was charged for tickets of passage on the Giant Forest road, which was closed to travel for the entire season, but no fee was exacted for passage on the Mineral King road or the Elk Park road, which were completed and opened for travel by means of a detour, and no fee is exacted for passage on these roads.

**General Grant National Park.**

<table>
<thead>
<tr>
<th>Name of park</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mrs. Walter E. Kenney operates a hotel with tent sleeping accommodations in Giant Forest under concession from the department, at which place 7,706 meals and 2,019 lodgings were furnished.</td>
<td></td>
</tr>
<tr>
<td>Mr. Chester Wright conducted the park and saddle transportation service in the park. Mr. Wright was also granted the store privilege in Giant Forest.</td>
<td></td>
</tr>
<tr>
<td>General Grant National Park Hotel Co. was granted the store privilege in Giant Forest and were in fact in camp near FBI - A 16,496</td>
<td></td>
</tr>
</tbody>
</table>

**Camps and camp sites.**

The parks were well equipped this season for the joy and pleasure of mountain living. Hotel concessioners had renovated their buildings and equipment and thoroughly policed their property prior to opening the parks, and the parks were in perfect condition for travel by means of a detour. About one year ago Tulare County started on the construction of a concrete-paved highway in the vicinity of the parks. These roads in the vicinity of the parks were torn up and in bad condition for travel during the open-park season of 1918. All the roads remaining open to travel by means of a detour, and park visitors commenced to come in gratifying numbers.

**Concessions.**

The aggregate number of persons making trips to General Grant National Park during the season of 1918 was as follows:

**Sequoia National Park.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making park trips with private transportation:</td>
<td></td>
</tr>
<tr>
<td>With automobiles, paid and complimentary:</td>
<td>10,160</td>
</tr>
<tr>
<td>With automobiles, second trip:</td>
<td>2,462</td>
</tr>
<tr>
<td>With other transportation, as wagon, horse, and foot:</td>
<td>1,438</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td>13,496</td>
</tr>
</tbody>
</table>

**Travel by different entrances.**

<table>
<thead>
<tr>
<th>Entrance</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kings River Stage &amp; Transportation Co.</td>
<td>4,056</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8,506</td>
</tr>
</tbody>
</table>

**Private automobile travel.**

<table>
<thead>
<tr>
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</tr>
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<td>Entering via Giant Forest Road</td>
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**Improvements.**

Improvement work accomplished in the Sequoia and General Grant National Parks during the fiscal year 1918 was as follows:

**Sequoia National Park.**

A new road 9,412 feet in length, with minimum width of 16 feet and maximum width of 20 feet, including one bridge of 80-foot span and 16-foot wide approaches, was constructed between Willow Meadow and the park. This road forms a portion of the Sequoia-General Grant Park highway extension which when completed will furnish a route for travel through both parks and over the more scenic portions of the high Sierras, through magnificent forests, beautiful mountain meadows, and along the alpine lakes and mountain streams. This road is ideal for camping and fishing, and is a branch of the transcontinental highway. New by-roads to the extent of 4,224 feet in length, with minimum width of 12 feet and maximum width of 20 feet, have been constructed around and through the Marble Fork section of the park. These roads, in addition to those heretofore fenced at Clingent Camp, Hockett Meadow, and Quinns, on account of their favorable locations should be quite sufficient to produce forage for the stock of park visitors for several years to come.

**General Grant National Park.**

Five touristic horse pastures have been fenced, all with American fence woven wire and metal lattice posts. One pasture at Golden Meadow 46 acres, at Willow Meadow 46 acres, and 45 acres, one at Inlette Meadow 25 acres, one at cabin Meadow, 40 acres, one at Willow Meadow, 26 acres, one at Mehrten Meadow, 40 acres, and 25 acres, and one at Willow Meadow, 40 acres. These pastures, in addition to those heretofore fenced at Clingent Camp, Hockett Meadow, and Quinns, on account of their favorable locations should be quite sufficient to produce forage for the stock of park visitors for several years to come.

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Three storage vaults, containers for explosives, have been constructed at convenient intervals along the Giant Forest road. These buildings are all stone and concrete structures, and range in size from 7 to 8 feet, approximately.

One hundred and eighty-sight road and trail signs, manufactured from clear redwood, painted, all bearing appropriate legends, were placed along roads and trails for the information and guidance of the traveling public.

A traverse line survey 8 miles in length has been completed on the Sequoia- General Grant Park road extension, with the view of obtaining the more feasible route for location of this road. The work was under the supervision of Mr. John M. Miller, assistant forest entomologist.

Approximately 100 acres of heavy sequoia timber forest land in Giant Forest have been cleared of objectionable brush, such as down and dead timber, stumps, brush, etc., as the means of lessening the danger to the forest by fire.

Roads have been improved and repaired as follows:
- Giant Forest road from west boundary to Giant Forest, 20 miles, surfaced and six passing grades, for vehicles constructed by blasting out mountain sides, thus widening the road from 10 to 20 feet, with approximate length of 300 feet.
- Moro Rock road from Giant Forest to Moro Rock, 2 miles, surfaced and fallen logs cleared from right of way.
- Sequoia-General Grant Park road from Giant Forest to near Marble Fork River, 6 miles, falls cleared from right of way and surfaced.
- Camp Circuit road around outer border Grant Park, 1 mile, surfaced and chuck holes filled in.
- Lobby Mill trail, between Giant Forest road and Middle Fork Kaweah River, 8 miles, graded and brush cleared from right of way.
- Main River trail, between Moro Creek and Buck Canyon, 9 miles, surfaced and washouts filled in.
- Hospital trail, from Hospital Rock to Giant Forest road, 6 miles, widened and washouts filled in.
- Colony Mill trail, between Giant Forest road and Middle Fork Kaweah River, 8 miles, graded and brush cleared from right of way.
- South Fork trail and intersecting trails, from west to east park boundary, 64 miles, logs and landslide removed and new retaining walls constructed, overhanging brush cut, and washed-off hillside.
- Colby Mill trail, between Giant Forest road and South Fork, 3 miles, repaired and brush cleared from right of way.
- Cold Spring trail, between Cold Spring and Clough Cave, 13 miles, widened, graded, and brush cleared from right of way.
- Seven Mile hill trail, between east and Seven Mile hills, 8 miles, logs cleared and new retaining walls built.
- Telephone lines have been repaired and improved as follows:
  - South Fork telephone line, from Three Rivers to Qulin, 32 miles, 4 miles new aerial line built and 22 miles brackets applied.
  - Millwood telephone line, from Three Rivers to east boundary, 28 miles, repaired and objectionable brush cleared away.
  - Giant Forest telephone line, from Three Rivers to Giant Forest, 32 miles, repaired and brush cleared from right of way.
- Buildings have been repaired as follows:
  - Colony Mill ranger’s cabin at Colony Mill, new floor, ceiling, and underpinning applied.
- Giant Forest post-office building, shelving, underpinning, and siding applied.
- Giant Forest telephone pole-1,000 feet added, system in tourist camp ground, including 36 drinking hydrants, 5 shower-bath houses, and their equipment.
- Constructed one cement-concrete storage vault for explosives, size 6’ by 5 by 6 feet.
- Cleared 25 acres sequoia grove of logs, brush, debris, and litter.
- Repairs and improvements were as follows:
  - Millwood road, from west entrance to headquarters camp, 34 miles, surfaced, logs and rocks cleared from right of way.
  - Stephens Grade-North Park road, from south to north boundaries, 5 miles, widened from 12 to 14 feet and graded.

**INSECT CONTROL**

A limited entomological survey of the Sequoia National Park which was made during the summer of 1917 developed the fact that considerable damage was resulting from insect attacks in the pine timber, most noticeable near the lower timber line in the Middle Fork of the Kaweah River and the Marble Park Basin. It was found that the western pine beetle (Dendroctonus brevicomis) were killing the mature yellow pine, and were destroying the larvae of the young beetles while in the wood.

In order to destroy the infestation prior to its further spreading, a cooperative work program was agreed upon during the spring of 1918, between the officials of the National Park Service and the Bureau of Entomology and Forest Service of the Department of Agriculture whereby it was decided to cut and burn the trees that were infested, thus destroying the larvae of the young beetles while in the wood.

The control work was under supervision of Mr. John G. Miller, assistant forest entomologist.

The following is a report covering the insect-control work accomplished in Sequoia National Park during the season of 1918:

The control work accomplished during the spring of 1918 covered approximately the period of May 6th to June 10th. The work was started in the Middle Fork Kaweah River (unit 10) as a cooperative project with the Forest Service, which controls about one-third of the timber in this basin. This project seemed feasible with an expenditure of $880.32 within lands belonging to the Sequoia National Park, and the Marble Fork of Kaweah River (unit 11). Mr. Albert Wacker, of the Bureau of Entomology, and supervision of the field work on this latter project. The following are the expenditures and the trees cut on each project:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Number of trees</th>
<th>Volume b. m.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Yellow pine</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Sugar pine</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Cost</td>
<td>$484.50</td>
</tr>
<tr>
<td></td>
<td>Transportation</td>
<td>110.00</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>594.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit</th>
<th>Number of trees</th>
<th>Volume b. m.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Yellow pine</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Sugar pine</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>Cost</td>
<td>$484.50</td>
</tr>
<tr>
<td></td>
<td>Transportation</td>
<td>110.00</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>594.50</td>
</tr>
</tbody>
</table>

In view of the seriousness of the shortage of forage for stock in California, occasioned by drought, the like of which has not occurred within the past 30 years, and the probable loss that the stockmen would sustain by reason of such, it was decided by the National Park Service to open to grazing practically all areas within the Sequoia National Park in isolated regions not frequented by visitors, and where no injury to the natural features of the park would result. The grazing proposition was a task difficult to adjust as hundreds of applications were received by the California Cattlemen's Association and the administration, a satisfactory decision was reached whereby 2,502 head of cattle and horses were allotted for grazing during the 1918 season, as against 1,500 for the 1917 season.

The grazing proposition was a task difficult to adjust as hundreds of applications calling for thousands of head of stock in excess of the carrying capacity of the range were received, but after several meetings and conference between members of the California Cattlemen's Association and the administration, a satisfactory decision was reached whereby 2,502 head of cattle and horses were allotted for grazing during the 1918 season, as against 1,500 for the 1917 season.

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In view of the seriousness of the shortage of forage for stock in California, occasioned by drought, the like of which has not occurred within the past 30 years, and the probable loss that the stockmen would sustain by reason of such, it was decided that the use of the grazing lands would be allowed as a temporary measure until such time as the range can be made available for stockmen. In the meantime, the grazing areas of the park are to be used only for the purpose of providing forage for stockmen, and that any use of the grazing areas by stockmen shall be subject to such restrictions as may be necessary to prevent overgrazing.
Six forest fires were set by lightning during the 1918 season in various localities throughout Sequoia National Park, but all were discovered and extinguished before damage of consequence was done.

On account of the unusual low waters in all of the park streams, fishing as a general rule was not successful during the previous years, but many of the streams are fed by springs, and this year the stream levels were much higher than usual. Ferocious fish are to be found in the river, but the amount of fishing requires that they be stocked from time to time, which can only be accomplished in a meager way without the assistance of a fish hatchery, which, by all means, should be established in the very near future.

Three hundred and eighty-five thousand trout fry of the rainbow, steelhead, and black- spotted varieties were obtained this year through the cooperation of the State board of Fish Commissioners of California and distributed in the park waters as follows:

- In Kaweah River, 225,000 rainbow; in Kaweah Fork, 30,000; in Wolverton Creek, 55,000 steelhead; in headwaters Marbles Fork River, 150,000, three varieties; in headwaters Stonewall Creek, 2,500 black spotted; in headwaters Sugar-loaf Creek, 5,000 black spotted; in Marble Fork River, 40,000; in headwater Buck Canyon Creek, 2,500 rainbow.

Predatory wild animals as well as food-bearing animals inhabit the parks at all times, but the former being a more or less solitary, predatory nature, do not affect the numbers of the various species within the bounds of the parks during certain periods, and as this consequence more lions and wolves came into the Sequoia Park last winter than at any time previous in recent years. As the observation of the lions was discovered for its destruction was organized during the month of February in which 2 large lions, 5 coyotes, 3 lynx, and 6 foxes were killed. These species of animals being of a very wary nature when finding they were being pursued soon left the park for other regions before damage of consequence was done.

Two—But few elk have been seen during the season. One herd of 16 was counted in Washburn Creek on March 14, 1918, and a few head have been reported from other neighboring localities.

Deer.—Deer are quite plentiful and seem to be about holding their own. No mountain sheep have been seen in the Sequoia Park since the year 1910, but their fresh signs are visible on the northern spur of Mount Stimson, which furnishes a considerable supply. That the sheep remain in effect since that time are that they still inhabit the region and are not exterminated.

Ferrets—Both black and brown bear are very abundant in the parks and seem to be on the increase.

Wild turkeys.—The only place that wild turkeys have been seen during the season is at the junction of the Marble Fork and Middle Fork of the Kaweah River.

Quail.—Both mountain and valley quail are very abundant in the parks.

There is unusual heavy crop of seed on all the coniferous forests in the parks this season, thus a bountiful crop of seedlings of all species of the conifer family may be expected next year.

New Appointments.

Mr. Guy Hopping, of Three Rivers, Calif., was appointed a first-class park ranger in Sequoia National Park, effective January 12, 1918, to fill the vacancy caused by the resignation of Mr. Amos F. Hall, who enlisted in the United States Army.

The following recommendations are made:

1. That Congress be requested to provide, for Sequoia National Park, a quantity of homesteads, which would be secured by the red-felt control of the State of California Biological Survey, and work of putting out the isolated trees was started in 1915. This work is being continued ever since. This work is being continued ever since. This work is being continued ever since. This work is being continued ever since.

2. That the State of California be requested to cede to the United States Government the entire jurisdiction over the Sequoia and General Grant National Parks.

3. That pending legislation providing for the extension of the boundaries of Sequoia National Park to include the Kings and Kern River Canyons and the crest of Sierra Nevada Range receive the early consideration of Congress.
The park is divided into three sections: the west entrance, the east entrance, and the south entrance. At the west entrance, there is a 30-foot wooden bridge over the Nisqually River, and a 20-foot road bridge over the Tatoosh River. The east entrance has a 20-foot bridge over the Carbon River, and a 30-foot bridge over the Nisqually River. The south entrance has a 30-foot bridge over the Tatoosh River, and a 20-foot road bridge over the Carbon River.

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REPORT DIRECTOR NATIONAL PARK SERVICE.

On May 12, 1918, Miss Ruth Dury, of Portland, Oreg., met with an automobile accident near Park entrance which resulted in her death. The following are the circumstances under this accident:

Miss Dury occurred at 4 p.m. Miss Dury was taken to the entrance, where she was attended by Dr. L. H. Krabshwend, surgeon at Eatonville. Miss Dury's body was removed from the hospital at Eatonville.

The body was found lying in the front seat of the car, her head partially crushed by the steering wheel. Miss Dury was employed by the park service as a clerical stenographer. She was on her way to Portland when she met with the accident.

The cause of death is believed to be asphyxiation from the broken jaw and head injuries. Miss Dury was employed by the park service as a clerical stenographer.

VIOLATIONS OF LAW.

There have been few violations of laws, only a few cases having been handled by the Park Commissioner during the year. Two of these cases were violations of the automobile regulations, one against some Tukwila Indians for hunting in the park, and one violation of the general rules and regulations which prohibit private operations.

There were numerous fires outside the park in the national forests, a number of which were located and reported by the Forest Service from the Aukil Rock Fire lookout station.

RANGER SERVICE.

The ranger force consists of 10 rangers from June to November and 4 rangers during the winter months. One ranger was located at the Carbon River ranger station, Carbon River, White River, Naches River, Longmire Springs, Nisqually Glacier, and Narada Falls. Two rangers are on duty at both the Park entrance and Paradise Ranger station.

The rangers located at the Ohanapecosh River and Carbon River stations supervised all activities in the district and their duties included the protection of the park resources.

During the 1918 season the rangers detailed to checking automobiles along the Nisqually River handled the traffic very efficiently and with much credit to themselves.

FISH AND WILD ANIMALS.

In September, 1915, Mr. Iras D. Light, Pierce County fish and game warden, planted additional quantities of trout in the waters of the Carbon River and Carbon River tributaries. The planting was done in the Ranger Creek, Ipsut Creek, Crater Lake, Chenuis Lakes, Chenuis River, Capley Lake, and Canada Creek, since which time fishing has been prohibited in these waters. On the recommendation of Mr. Light the time limit for fishing in these waters was extended to April 1. No reports from the ranger, however, are now to be seen in large numbers, particularly in Crater Lake. During 1918, fish were released in the park in a great number of waters, distributed in the park, with comparatively little loss. Mr. Light expects to continue the work by stocking other streams and lakes next year.

This work was continued by Mr. Light in July, 1917, when he transplanted 25,000 eastern brook trout in the park waters, distributed as follows:

- Reflection Lakes: 3,500
- Lake Louise: 2,500
- Fish Creek: 7,500
- Lake George: 3,500
- Golden Lakes: 5,000
- Total: 25,000

These waters are not allowed to be fished during the winter season. They are to be fished during this period, and this experience has demonstrated that fish can be carried to any waters in the park with considerably little loss. Mr. Light expects to continue the work by stocking other streams and lakes next year.

With the exception of these parties visiting the outlying districts, practically no fishing has been done by park visitors.

As to the future of this work, the entire waters of the park and even more in water bodies in the park are very abundant. The future of this work is very promising. There is little doubt of the success of this work in the future years.

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No wild animal is more abundant than the bear. Snowshoe rabbits and other small animals are not common in the park. The birds are very plentiful, and the wild animals are not uncommon. The deer are very abundant, and the elk are not uncommon. The wildcat is more abundant than the cougar. Snowshoe rabbits and other small animals are not common in the park.

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The black bear is one of the common wild animals of the park. After the huckleberry crop has been harvested he often makes raids on the camps for bacon, etc. He hibernates in the upper regions of the park in ravines which become filled with snow. In the forest he selects a large hollow cedar for his winter quarters.

The brown bear has been seen many times in the vicinity of Reflection Lake.

The raccoon is a common prowler about Longmire Springs in the winter nights.

The beavers are industrious animals, and their homes and their dams are visited by many tourists. On the Tahoma Creek trail, about 2 miles up from the automobile road, the beaver dam which formed a reservoir and flooded a small meadow that will eventually become a meadow by the summer. 60 feet is a common height for a beaver dam. The beaver dam is destroyed early in the season by the trail crew, but it has since been reconstructed by the beaver, and it may now be necessary to relocate the trail around the beaver dam.

The mountain beaver is not at all rare. The work of this nocturnal animal is common along the railroad.

The rock rabbit, cony or pico, lives in piles of rock and talus slopes. He puts up little wood holes for day-time rest and little snow holes for night-time rest. The mountain goat is found in the higher altitudes nearly all around the mountain. They are seldom seen by the east side than anywhere else. They are seldom seen by tourists. They are very shy.

Firearms have been reported from the park. Their horns have been already ice in several different localities. No authentic report has been made on elk in recent years.

Wood rats and the common rat and mouse follow the line of travel.

On account of dense shady forest condition in the lower altitudes of the park birds live in great abundance. In these shady areas, one would not have to sit long quietly on a log before the birds would begin to make their appearance. No attempt has been made by us to list the birds of the park; neither has there been anything written on the birds of the park; although other features have been exploited more or less by the newspapers, magazines, and special monographs. No attempt is here made to make a complete list. The common birds which are here present are the flickers, wood-peckers, sparrow, blue jay, gray jay, or camp robber, the pine siskens, juncos, wrens, chickadees, water oxens, Clark's crows, blue grouse, ptarmigan, and leucistic.

The marmots of the western rookery, erared through the long grass, mountains in bluebird, western gold-crowned kinglet, humming birds, flickers, swallows, pigeon, quail, and western golden-crowned kinglet, humming birds, flickers, swallows, pigeon, quail, and
determined by the Service for the 1918 season. H. H. Snively, Jr., is grazing 325 head of cattle on the Ohanapecosh Divide.

The brown bear has been seen many times in the vicinity of Reflection Lake. The snowshoe hare is grazing 325 head of cattle on the Ohanapecosh Divide.

...
Number entering in private automobile: 39,425
Number entry by sand station: 676
Number entering by train: 1,985
Number entering by cars not operated by Rainier National Park Co.: 1,099
Number entering by horse-drawn vehicle: 1,125
Number entering by feet: 411

Total: 43,901

It is estimated that 9,882 people came into the park for camping purposes during the year ended December 10, 1917, 7,602 automobile entrances and 144 motorcycle permits were issued.

A comparison of the above figures for the 1918 season with those of the past few seasons shows an increase of travel by private automobile, and a corresponding decrease in number of visitors from points outside the State of Washington.

In 1917 the season was small. A large percentage of tourists have been the latter part of the season entered in private automobiles. No record was kept from which to compile a list of cars from various States. Oregon was first in the list of out-of-State cars, which was followed by Montana, Idaho, and California. The five States were represented, including the States of Washington, Maine, Massachusetts, New York, and Florida. Hawaii and British Columbia contributed quite a number of visits.

TRANSPORTATION SERVICE TO AND WITHIN THE PARK.

The Rainier National Park Co. operated throughout the season on a regular daily schedule, standard 7-passenger touring cars from Seattle, Tacoma, and Camp Lewis to the park. Twelve-passenger auto buses from Ashford to the park, and both passenger and 12-passenger cars from point to point within the park. This company also furnished standard 7-passenger touring cars for the exclusive use of private parties from points within the park.

HOTEL AND CAMP ACCOMMODATIONS.

Rainier National Park Co., in March, 1916, to operate hotel, camp, and transportation service in the park, has completed its third season.

The following hotels and camps were operated during the 1918 season by this company:

National Park Inn at Longmire Springs.—This hotel was purchased by this company from Mr. James Hughes, under whose management it has been operated for the past seven years, and put into commission under the new management on June 1, 1918, and closed on September 18, 1918. The building is two and a half stories high, 125 feet long, and 80 feet wide, and accommodates 66 guest rooms in the main building. The use of tents 250 guests may be accommodated.

There is an addition to the main hotel square building, of pine logs, which is used for dancing and other forms of amusement. Water is taken from the Van Trump power plant. The hotel is supplied with electricity, and the Van Trump power plant, which supplies electric light to all Government buildings at Longmire Springs.

The hotel is located at Longmire Springs, one mile from the terminus of the Nisqually Glacier, which is in the Nisqually National Forest. The building is a very attractive log and shingle structure, which is used as a lunch pavilion. A number of bungalow tents were in operation in connection with the hotel. A large assortment of electric-light and gas fixtures were in use at this hotel, which also supplies electric light to all Government buildings at Longmire Springs.

Paradise Inn in Paradise Valley.—This hotel was built in 1916 and opened July 1, 1917. The hotel is a modern log structure, and is situated at the terminus of the 11,000 foot elevation and is supplied with electric light to all Government buildings at Longmire Springs.

The hotel is located at Longmire Springs, one mile from the terminus of the Nisqually Glacier, which is in the Nisqually National Forest. The building is a very attractive log and shingle structure, which is used as a lunch pavilion. A number of bungalow tents were in operation in connection with the hotel. A large assortment of electric-light and gas fixtures were in use at this hotel, which also supplies electric light to all Government buildings at Longmire Springs.

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Crater Lake National Park was created by act of Congress approved May 22, 1902. (32 Stat. 262.)

It is located in Klamath County, about 18 miles east and west and 18 miles north and south of the county seat of Medford, and about 60 miles from the California line. The nearest railway points are Medford, on the main line of the Southern Pacific, 81 miles distant, and Klamath Falls, 62 miles distant, both on the main line of the Oregon Southern Pacific leaving the main line at Weed, Cal. This branch of the railroad has been extended northward from Klamath Falls, and the regular stage service is maintained, with special trips from Klamath Falls as required.

Crater Lake is one of the most interesting of great natural wonders. It is remarkable not only for its size and beauty but for the water covering it, its depths, the great depth, the majesty of its encircling cliffs, and its wonderful geologic history.

The lake is 7 miles in diameter and about 200 feet deep at its greatest depth. It is surrounded by a 14-mile rim of steep cliffs, rising higher than any other lake in the United States.

The temperature varies little, being uniformly about 58°. The water is a clear, limpid, and pure mineralfree water. The lake is remarkably free from the slightest tinge of green and contains in its waters no motion-producing organisms. The lake is very well supplied with fish, including salmon, trout, and sunfishes. The fish are not numerous, but there are in the lake a number of very large specimens, and there is no limit on the number of days in which the catch may be made. The fishing season is from May 1 to October 15.

The lake is surrounded by a fine forest of evergreens, which extends for miles around the lake. The forest is rich and dense, and the trees are of great size. The lake is very beautiful in every respect, and the scenery around it is of the finest kind. The lake is also a very fine place for boating and swimming, and there are many lovely places for picnic parties. The lake is also a fine place for fishing, and the fishing is excellent. The lake is also a fine place for camping, and there are many lovely places for camping parties. The lake is also a fine place for hunting, and there are many lovely places for hunting parties. The lake is also a fine place for riding, and there are many lovely places for riding parties. The lake is also a fine place for sailing, and there are many lovely places for sailing parties. The lake is also a fine place for boating, and there are many lovely places for boating parties. The lake is also a fine place for fishing, and the fishing is excellent. The lake is also a fine place for swimming, and there are many lovely places for swimming parties. The lake is also a fine place for picnicking, and there are many lovely places for picnicking parties. The lake is also a fine place for camping, and there are many lovely places for camping parties. The lake is also a fine place for hunting, and there are many lovely places for hunting parties. The lake is also a fine place for riding, and there are many lovely places for riding parties. The lake is also a fine place for sailing, and there are many lovely places for sailing parties.
Map of Crater Lake National Park

- Crater Lake Lodge
- Anna Springs Camp
- S.S. Medford Road
- Union Pk
- S. S.医ford Creek

Scale: 1 1/2 2 3 MILES

Checking Station (West Entrance)
Checking Station (East Entrance)
Checking Station (Lost Creek Shelter Cabin)

Described and printed by the U.S. Geological Survey

Engraved and printed by the U.S. Geological Survey.
Medford Road 1, 533
Castle Creek, respectively. A 200-pound pressure pump connected with a two-horsepower Pinnacles Road, 267
160
and it is doubtful if the pump will be received in time to be installed before winter.

On foot 27
horsepower gasoline engine as an auxiliary, to a 3,000-gallon tank near the lodge. It is lower than the lodge. The water is pumped by a hydraulic ram, with a pump and 4-
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Funds are now available for a water system to supply public camps at the rim of the lake. Equipment and material was ordered as early as possible, but delivery is slow, and it is expected the pump will be received in time to be installed before winter. However, it will be ready for the 1919 season.

Crater Lake Lodge is supplied from a spring about 2,500 feet south and 400 feet above the lodge. The water is pumped by a hydraulic ram, with a pump and a two-horsepower gasoline engine as an auxiliary, to a 3,000-gallon tank near the lodge. It is very clear, and has been found by scientists to be exceptionally pure.

The Ranger force consists of seven temporary rangers; one is employed throughout the year at headquarters, three on mounted patrol, and three dismounted at checking stations.

One temporary clerk-stenographer is employed during the working season.

WATER SUPPLY.

Park headquarters is supplied with water from Anna Spring. A hydraulic ram pumps the water into a 5,000-gallon tank 40 feet higher than the buildings, which receive their supply by gravity. The east and west entrances are supplied from Sand Creek and Castle Creek, respectively. A 200-pound pressure pump connected with a two-horsepower gasoline engine and a 1,000-gallon tank is installed at each place. The lift at Sand Creek is 280 feet and at Castle Creek 220 feet. At the south entrance the ranger carries water one-fourth mile from a spring in the forest reserve. This is the first season that the spring has been known to go dry, necessitating the making of a trail down to Anna Spring, over which the ranger now carries water. There should be installed at this place a waterway as similar to the ones at the east and west entrances, but it would be unwise to-purchase equipment at this time, for when the road construction is finished there will be所需要设备。At this time, it is suggested that a water system be installed with the surplus equipment that may be available at that time.

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The Burlington and the Chicago & North Western have regular service, with east and west trains west of the cave are 4,700 feet high.

In the semimountainous region, on the southern slope of the Black Hills, in the southwestern corner of South Dakota, about 30 miles from the southern boundary and 24 miles from the park and about 11 miles north of Hot Springs, the most accessible railroad point.

When this act was passed there were several tracts of patented lands that the part open to the public is a very small fraction of that part which has been explored, but not surveyed. Beyond this, the wildest guesses are admissible.

Every State in the Union has been represented by visitors, and many of the foreign countries also—thousands, many of these are great tracts of virgin timber, near-by States, as far as they can not go in the cave except at the regular hours of 9 a. m. and 2 p. m., and varied scenery.

As a war measure, the time being propitious, a policy of excluding horses from grazing on the park lands was adopted and is being rigidly enforced.

There is a running stream which skirts the northern boundary, meandering and off the park. This is generously stocked with trout.

The number of visitors to the park has increased annually until this year, when a falling off is noticed, due largely to frequent and excessive rains, which have kept the roads in a poor condition, and partly to war activities, which, no doubt, detoured many from coming to the park.

The main road through the park, comprising 6 miles, constitutes a portion of the Denver-Deadwood highway, the Black Hills portion of which is famed for its beautiful terrain, and gets some use.

From headquarters south to park line the road is at present in first-class condition, much of the grading being done the past year. A large portion of the road between the park line and headquarters is rocky, the soil throughout the park being interspersed with ledge rock and cobbles. Maintenance of the road this season has been very heavy, owing to the frequency of very heavy rains, which caused washouts at crossings and exposure of rocks by erosion on large portions of the road, making it difficult to repair, the only feasible method on a large part of it being to haul dirt and cover the rocks.

The only feasible method on a large part of it being to haul dirt and cover the rocks.

Some buildings were repainted on the outside, except the auto shelter, which was only recently removed. The auto shelter was replaced by a permanent earth fill with a masonry arched culvert for spillway, and quantities of rock have been hauled in. The effect is particularly improving other crossings. Much of the road has been raised and widened, so that the permanent earth fill with a masonry arched culvert for spillway, and quantities of rock have been hauled in. The effect is particularly improving other crossings. Much of the road has been raised and widened, so that the

The cave has been made accessible to the public by the working out of passageways to establish times of entrance are 9 a. m. and 2 p. m. daily, except in the off season (Oct. 1 to Apr. 30), when but one trip each day is made—the afternoon trip.

Signs have been provided at various conspicuous points on the popular highways leading to the park, and in from other parts.

In the poplar region the wolverine, mink, and coyote are a menace to bird life, though the magpie's best use, from a bird-lover's point of view, would be the adornment of women's hats, and the laws should be amended to permit such practice.

A cement cover was built on the supply spring, a roomy corral was built, a supply pipe from spring to storage reservoir was taken up, inspected, and replaced. A cement cover was built on the supply spring, a roomy corral was built, a supply pipe from spring to storage reservoir was taken up, inspected, and replaced. A cement cover was built on the supply spring, a roomy corral was built, a supply pipe from spring to storage reservoir was taken up, inspected, and replaced. A cement cover was built on the supply spring, a roomy corral was built, a supply pipe from spring to storage reservoir was taken up, inspected, and replaced. A cement cover was built on the supply spring, a roomy corral was built, a supply pipe from spring to storage reservoir was taken up, inspected, and replaced.
The game enclosure comprises nearly 4,000 acres and is in the northeastern corner of the park, which is the timbered portion, and contains bisons, elk, and antelope numbering at any given time, as reported by Mr. A. P. Chambers, the Game Preserve, and is under control of the Biological Survey, Department of Agriculture.

DAMAGE TO PARK.

In July, 1917, lightning started a fire in the timbered area within the game pasture, causing a loss of over 50 acres before it could be extinguished. In the city of Sulphur and across Travertine Creek at intersection with Travertine Road, the first crossing on the road, the causeway was subject to overflow by Rock Creek, and after every rise in the creek the waters of this pool and enjoyed it to the utmost. During the season just past private pools at artesian wells in the city have provided visitors with swimming advantages.

BUILDINGS IN THE PARK.

In 1917, I had very little work done to the park roads during the last year because of the peculiar weather conditions. During the winter we had so much freezing weather that it was not possible to keep up the roads, and during the spring months the roads were frequently washed out by heavy rains. The roads in the extremely dry weather because the kind of road material we have in this park is such that during the fall months it is not possible to repair them.

ROADS.

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during the fiscal year just ended I had cement causeways constructed at every creek crossing on Travertine Road, the sizes and locations being as follows:

At the second crossing going east in the park, below Panther Falls and the park swimming pool, there has been constructed a causeway 85 feet wide and 14 feet thick.

At the Sycamore Falls crossing the causeway constructed is 48 feet by 14 feet by 3 feet.

At the crossing east of Lake Placid, which is the first crossing on the creek below the Anadarko, the causeway is 42 feet long by 14 feet by 2 feet.

The dimensions of the causeway on creek crossing on the south side of the loop on Travertine Creek at intersection with Travertine Creek, the last crossing on the road, the causeway was 42 feet long by 14 feet by 3 feet.

These causeways have greatly increased the popularity of this road for automobile travel. They do away with the necessity of changing gear so often along this short drive, and I estimate that there has been an increase of 20 per cent in the number of visitors passing through.

In my last annual report I had begun the construction of a dam across Travertine Creek at Sylvan Cove, just below Panther Falls, for the purpose of enlarging the swimming pool at this location, the dam being 67 feet long by 6 feet high and 4 feet wide at the bottom, sloping to a 3-foot width at the top. The allotment for this work having been made from the park revenues, I was able to carry this work over into the next season and during the early part of June a small dam was constructed, after which the bromide water was broken from freezing, and there had never been a jar for the bromide and the sodium-chloride waters. During the cold weather last winter the jar for these two waters was broken from freezing, and there had never been a jar for the bromide and the sodium-chloride waters. Because of the fact that all the waters carried into this reservoir have to be pumped from the springs into containers, and because of the medicinal qualities of these waters, which rapidly eat through a metal vessel, it is necessary to have these earthenware jars; otherwise, the corroding metal containers might have some effect on the properties of the waters.

Theprincipal groups of these springs are the Bromide, Medicine, and Sodium-Chloride Springs, in the extreme western portion of the park; the Beach, Pavilion, and Hillside Springs in the north-central portion of the park; and the Sulphur-Bromide, Black Sulphur, and Wilson Springs in the south-central section of the park. Sulphur springs predominate.

The Anadarko and Buffalo Springs, nonmineral in character, are situated at the extreme northeastern end of the park, with an elevation of 1,080 feet above sea level at Panther Falls. There are approximately 3 miles from northeast to southwest along Travertine Creek, including a portion of Rock Creek, into which Travertine empties, and it has a circuit of 8 miles.

There are within the park a number of known mineral and three nonmineral springs. The principal groups of these springs are the Bromide, Medicine, and Sodium-Chloride Springs, in the extreme western portion of the park; the Beach, Pavilion, and Hillside Springs in the north-central portion of the park; and the Sulphur-Bromide, Black Sulphur, and Wilson Springs in the south-central section of the park. Sulphur springs predominate.

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ANTELOPE AND BUFFALO SPRINGS.

Under date of July 25, 1918, I advised the Service that both the Antelope and Buffalo Springs, which constitute the source of Travertine Creek, had ceased to flow, and that the entire creek bed had become dry with the exception of a distance between Bear Falls and the point on the park map indicated by bench mark 963. This section of the creek is supplied by cold springs in the bed of the creek near the Bear Falls.

The Antelope Springs lost half of their volume in December last and ceased to flow entirely in January of the present year, and while the Buffalo Springs continued to flow at about their usual capacity from January until the month of March, at that time they also failed entirely.

From my knowledge during the past 27 years that these springs have failed to flow; the first time in 1911, when the Antelope stopped running in March of that year; the continued flowing of Travertine Creek until April 7 and 28, respectively, of the year 1913, flowing only at a very limited rate; and they continued to flow until the 18th of September of that year, when they stopped again and the creek was dry as at the present time (with the exception of the short distance marked above, below Bear Falls) until the latter part of November, 1916.

From the last-named date until January of the present year these springs continued to flow within the small limits of my knowledge, but no disposition to flow again. The old settlers around here tell me when I first came to this locality 27 years ago, that these springs had failed once before, as I remember it, in the year 1891.

Inspector M. L. Dorr, of the Interior Department, was here in the early fall of 1913 and recommended the drilling of a reservoir well at the Antelope Springs, going down deep enough so as to reach a sufficient supply of water to avoid having the Travertine Creek dry at any time. It has never been ascertained exactly what causes these springs to cease flowing at times, but I feel sure that the water-courses has not yet been exhausted and that the springs will come back after each season of inactivity, but if it is possible to find a way to prevent this at any time I think it would be to the interest of the park to provide it, and I am making recommendation hereafter in accordance with that made by Mr. Dorr.

PATRICIO CHAUTAUQUA.

Upon authority from your office, I granted the Redpath-Horner Chautauqua Co., permission to give their annual chautauqua in West Central Park during the first five days of July, and people came here from all over the country to hear the patriotic lectures preached, and to enjoy the other features of entertainment provided by this company and to enjoy the other features of entertainment on the program. Each program was made up of patriotic numbers, and I felt that this chautauqua was a great benefit to this community in this time of war.

RED CROSS PICNIC.

With the approval of your office, I granted the local Red Cross chapter the privilege of holding a big picnic in the park as a benefit for the Red Cross on the Fourth of July. The local chapter advertised this over the entire county, secured donations of dressed chicken, kids, pork, and young beehives, and sold the produce and the bees, and the people held action sales of commodities sold ice cream and soft drinks, and, besides the proceeds derived from the picnic, the Red Cross made a net profit out of it amounting to $597.44.

FIRE IN PARK.

In spite of the dry weather we have experienced during the season just past there has been but one fire in the park, the first one having taken place within the small limits of the park on the 13th of May, 1918, near the road to the Antelope Springs, and the other fire was in the vicinity of Travertine Creek, and the other fire was near the Antelope Springs, and the other fire was near the Antelope Springs.

ANIMALS IN PARK.

In the spring of 1917 the city of Oklahoma in this State presented to this park the burros which they had on hand. There was one young buck and two does. They are the small white-tailed deer. Recently twin fawns were born in the park, and you will find them quite tame. They were born in one of the small white-tailed deer and young beehives, and sold the produce and the bees, and the people held action sales of commodities sold ice cream and soft drinks, and, besides the proceeds derived from the picnic, the Red Cross made a net profit out of it amounting to $597.44.

The visitors also take many pictures of the blue jays and squirrels in the park. The squirrels are an attractive species, and are the only animal other than the deer in the park of interest to visitors, and these have increased greatly in numbers. They also eat from the hands of visitors, but will not allow themselves to be touched; and they are almost as little afraid of people. Being quicker than the squirrels, they never hesitate to help themselves first.

WILD FLOWERS.

During the spring and fall months especially there are a great variety of wild flowers in the park, which many people have ever seen. Botanists who have studied and held for study here during normal years. These wild flowers are a great pleasure to visitors.

RECOMMENDATIONS.

I recommend the drilling of an artesian well approximately 400 feet deep near the Antelope Spring to provide water for Travertine Creek at times when the Antelope and Buffalo Springs fail. This well would probably cost upon an average of $2.50 per lineal foot and sink iron casing of 6-inch diameter. The casing would probably cost about $3.50 per length, but it would not be necessary to sink casing beyond the rock strata, which, according to other wells drilled here, is about 150 feet below the surface.
Concessions.

There is but one concession for hotel in this park, and the camp maintained under this has proved to be large enough to accommodate all visitors.

Two concessions for the transportation of passengers into the park have been granted, one for travel from Mancos and one for travel from Durango. The former handles all tourists coming in by rail as well as local visitors. The latter carries passengers only from Durango and immediate vicinity.

Grading permits have been granted to three parties to graze cattle on those portions of the park remote from the ruins and camp.

Spruce Tree Camp.

On the western side of Spruce Canyon, directly across from the big ruin, Spruce Tree House, is located Spruce Tree Camp. Here is the hotel building, containing lounge and dining room. Near by, on the brink of the canyon, is a picturesque lookout with broad plaza overlooking the canyon and the old ruin, and giving a magnificent view to the south. This building contains a rest room, with ample stone fireplace and a room devoted to the display of relics. These relics, collected and exhibited in the ruins in Mesa Verde Park.

Three rows of pitched tents, on terraces, one above the other, are provided for the accommodation of tourists. The tents are equipped with all the comforts and are very ample, and are situated in such a manner that in case of rain the visitor has no need for a tent. A stone walk leads to the tents, and a stone bridge across the canyon is maintained, where parties can pitch their tents and enjoy the pleasures of camping out.

Ruins.

Among the best-known ruins and those easiest of access are: Spruce Tree House, in Spruce Canyon, directly across from the camp; Cliff Temple, on the mesa, about 23 miles from camp; Balcony House, in Oak Creek Canyon, about 2 miles from camp; and Far View House, on Chapin Mesa, the only one left of the four ruins at the head of the canyon. This ruin is situated on a point overlooking the entire park and the surrounding country.

The beautiful drive into Mesa Verde Park from Mancos is not the least of the pleasures one derives from a visit to the cliff dwellers' country. The scenery is varied and unexcelled. Heading north, it is wide and level, and when this portion of the road ends, the drive becomes more difficult, and the road will be wider and will be constructed in such a manner as to make it pleasant and easy for the automobile.

The Rock Spring section has a large number of interesting ruins of various types, some of which are accessible to the automobile, and when this portion of the road it will be a valuable addition to the pleasures of a sojourner here.

The Ruins of the Salinas Group, Balcony House, Balcony Tree House, Oak tree House, Sun Temple, and Far View House all have been restored, and all parts are accessible to the tourist. In the restoration of these buildings no attempt has been made to reconstruct the buildings. As the original appearance by constructing the buildings in their original appearance. The rocks have been cleaned of all fallen stone and rubbish and the unsafe walls strengthened. No attempt has been made to restore the buildings in their ruined condition. The rock walls are left as they are, except that a little clear-out has been done so that the visitor can walk about them and in his mind reconstruct their former condition.

These ancient buildings show the wonderful achievement of a race of people who have left us a monument in stone that can accurately estimate the achievements of man. Each one must produce his own theory of this race, and he can judge of them only by the work of their hands which remain to us to-day after the lapse of ages. No records of the race exist, and the visitor can only form his own opinions of these ancient people. What were their lives, their aims, and ambitions can only be guessed at, and this park, which is owned by the Government, is one of the best places in which a man can accurately estimate the achievements of the race that dwelt in the Southwest.

No one can visit this park and not feel the mystery and romance of it all. It appears so real and imaginative, and one visit to these old cities only stimulates a desire to see them again.

Scenery.

The beautiful drive into Mesa Verde Park from Mancos is not the least of the pleasures one derives from a visit to the cliff dwellers' country. The scenery is varied and unexcelled. Heading north, it is wide and level, and when this portion of the road it is very hilly, and the road will be wider and will be constructed in such a manner as to make it pleasant and easy for the automobile.

In the ruins near by, on the brink of the canyon, is a picturesque lookout with broad plaza overlooking the canyon and the old ruin, and giving a magnificent view to the south. This building contains a rest room, with ample stone fireplace and a room devoted to the display of relics. These relics, collected and exhibited in the ruins in Mesa Verde Park.

The road from Spruce Tree Camp to the different ruins have been widened and in many places resurfaced.

Trails.

By work of the rangers the trails in the park have been kept in good condition. The trail to Spring House and the natural bridge has been worked, and the damage caused by rain and melting snow repaired. A trail from Cliff Palace to Community House has been constructed, and the work of building this trail has been completed. Several trails in the park have been made for several places, where the old ones were becoming weak and unsafe.

Wild Animals.

Several small herds of black-tail deer make their home in the park, and these beautiful animals give a ring of life to the ruins. The mountain lions have been exterminated, and their menace of overhanging rock, which has always been so much feared, will be removed. The old road is one of heavy grades, is very narrow, and its many turns and windings under the cliffs have made it unsafe for the automobile. This old road is one of heavy grades, is very narrow, and its many turns and windings under the cliffs have made it unsafe for the automobile.

Coyotes are numerous, but do little damage, living chiefly on the rabbits, of which there are great numbers. Bobcats are occasionally seen in the timbered portion of the park, and foxes and badgers are found in numbers in all parts of the park. The park is free from all animals hunted out, and the animals which are found in the park are a large and varied collection of wild animals. The park is free from all animals hunted out, and the animals which are found in the park are a large and varied collection of wild animals.

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Construction.

During the year there has been constructed at Spruce Tree Camp a new ranger cottage of four rooms, at a cost of $903.20. This cottage is situated on the rising ground to the north of the hotel, and overlooks the entire camp and grounds.

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TRAVEL-GUIDE MAP
OF THE
MESA VERDE NATIONAL PARK
MONTESA COUNTY, COLORADO

SCALE OF MILES
1 4 8

After Topographical Sheet of Administration Map of Mesa Verde National Park by U.S. Geological Survey

1918
LEGEND
Cliff Dwellings
Pueblo Type

NATIONAL PARK SERVICE.
There are many undertakings for the improvement of the park that could be suggested. Indeed, the possibilities of improvement are almost limitless, but as these improvements can only be gained by working them out one by one, the more pressing needs will only be mentioned. Ultimately it is hoped that this park will not alone be noted for its archeological wonders, but also be made of interest to the naturalist. Nature has in Montana a reserve for a big game preserve, and the preservation of the last remnant of the red stag will see it the home of herds of the big game species of America.

The present road at Stations 04 and 327, would eliminate some 6 miles of travel for the visitor going to the ruins, do away with the longest grade on the road, and add much to the scenic value of the trip. This road should be made during the coming season.

One of the immediate needs of the park is the preservation of Square Tower House, a fine example of prehistoric architecture. The square tower, from which the ruin takes its name, will soon fall if not strengthened. Here were found the only kivas with the original coverings, or roofs, in place. This ruin is only 2 miles from the camp and many tourists now leave their cars, walk the short distance to the summit, and no one should leave the park without having seen the view from this point.

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GLACIER NATIONAL PARK.

W. W. PAYNE, Superintendent, Belton, Mont.

GENERAL STATEMENT.

The Glacier National Park was established by the act of Congress approved May 11, 1910 (36 Stat. 354), and is located in northwestern Montana, near the western end of the Blackfeet Indian Reservation. The Blackfeet Reservation, which is about 6 miles wide, is the eastern boundary, is formed by the Flathead River. The Park is in the northwestern-southeastern axis and is 60 miles long, with a maximum width of 40 miles. Its western boundary is formed by the Continental Divide, and the northwestern boundary is formed by the Flathead River. The Park is 1,534 square miles in area. It is located in northwestern Montana, near the western end of the Blackfeet Indian Reservation, and is about 6 miles wide.

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on account of the need of repairs and in the small hotels of the park, were not opened. A few, however, were able to get meals at Sperry Chalet while on route from Going-to-the-Sun Camp to Lake McDonald. From the caretaker, who was stationed there a portion of the summer. In addition to the hotels and chalets, the Glacier Park Hotel Co. operates the passenger boats on St. Mary's Lake between St. Mary's Chalets and Going-to-the-Sun Camp.

All of the automobile transportation in the park is carried on by the Glacier Park Transportation Co., which operates about thirteen-ten passenger-auto buses and several larger combination cars which make daily trips between Glacier Park, St. Mary's and Many Glacier, as well as Two Medicine and Cut Bank, on the east side of the park, and along the Foot of Lake McDonald. The Park Saddle Horse Co., which has the concession for furnishing saddle and pack horses, provides daily round trips to the various points through the park, from the foot of Lake McDonald to the Glacier Hotel, on Lake McDonald, as well as non-scheduled trips for those desiring just the riding in the camping trips.

The concession for transportation on Lake McDonald was given to Messrs. Many Glacier, Inc. During the 1918 season the 75-foot gasoline powered stern paddle launch "Emaline" were kept in regular condition and operated on regular scheduled trips, the trip not justifying the operation of the other two launches.

A permit authorizing the collection of fishing parties for trips on McDonald Creek and the Flathead River just below the mouth of the Flathead River was issued to George E. Snyder, who owns and operates a 75-foot air-propelled launch and a 20-foot air-propelled launch, both suitable for river trips one mile from the road. However, while justifying the collection of fishing parties on the Flathead River, the following restriction was in effect, this permit only permits the collection and return of parties from points on Lake McDonald for fishing trips on the aforementioned streams.

Mr. H. H. Hanson was granted Mr. H. H. Hanson, who operates a tourist supply store and camp and to provide sleeping accommodations to tourists at the south end of Lake McDonald; also operate another passenger boat service on the lake. A small log building was used for the store and several tents were erected for the accommodation of tourists visiting this point. In view of the fact that over 1,500 tourists registered at this point during the season it is hoped that better accommodations can be provided to take care of those visiting this part of the park in the future.

A permit for operating a non-scheduled livery business on the west side of the park was granted Mr. John Wright, who owns a livery barn at Belton. This concession, however, was not for scheduled trips, as the auto busses make the regular scheduled trips between Belton and the foot of Lake McDonald.

ROADS.

There are 130 miles of roads in Glacier National Park and in the Blackfoot Indian Reservation on the east side of the park. The road on the east side of the park is divided into the road on that side of the reservation which is under the supervision of the park superintendent. Of this number about 95 miles are suitable for automobile travel and the remainder, owing to their unimproved condition, are used only by horse-drawn vehicles. The only dirt road in the park is part of the Cut Bank River road, which extends from the North Fork road to Glacier Park Station, a distance of about 8 miles.

Other roads in the park which are maintained by the park are the Lake McDonald and Cut Bank River road, a distance of about 16 miles, and the Cut Bank River road, a distance of about 8 miles. The Cut Bank River road is maintained by the park and is used by the park for its own purposes, such as top dressing, still remains to be done here. About 3 miles of the road has been graded, graveled, and raked. The remainder, about 800 feet of new corduroy was completed on this road. Grad­

West side.—Betten-Fish Creek Road.—The bridge across the Middle Fork of the Flat­

road was knocked down by a windstorm and the bridge and the new administration site and the road were dragged when the weather was very rainy.

North Fork Road.—About 500 feet of new corduroy was completed on this road. Grend­

The temporary warehouse at Glacier Park Station was demolished by a windstorm and in time make this park a wonderful mecca for the angler.

FISH.

Excellent fishing has been reported during the past season in nearly all of the lakes and streams in the park in which fish are found. Good fishing is, of course, always to be found in Avalanche Lake and Creek, Lakes McDonald, St. Mary's, and McDermott, on the east side of the divide, as well as Bowman, Trout, and Snyder lakes on the west side, have been reported as furnishing better sport of this kind than in previous years.

Fish hatchery.—The National Park Service, in cooperation with the Bureau of Fisheries, has erected a fish hatchery a short distance west of the Glacier Park Hotel at Glacier Park Station. The building is 49 by 34 feet and 11 stories high, with shingled roof and rusting sides. It is equipped with 32 troughs 16 feet by 17 inches, each trough containing 9 compartments which hold 600 fish on top of each other. The capacity of the hatchery is about 5,000,000 fish to be handled. An unlimited water supply is furnished by Mule Creek, which passes within a short distance of the hatchery. These consist of four residences, each 28 by 28 feet and having a kitchen, living room, bedrooms, bathrooms, and a separate system.

Buildings.

The buildings of the new administration quarters at the Belton entrance which were started last fall were completed this summer and are now ready for occupancy. These consist of four residences, each 28 by 28 feet and having a kitchen, living room, bedrooms, bathrooms, and a separate system.

The roof of the shelter cabin at Piegan Pass, constructed last season, was blown off during the winter and a new roof was erected on it.

The temporary warehouse at Glacier Park Station was demolished by a windstorm and in time make this park a wonderful mecca for the angler.

Wild Animals.

The protection afforded the many species of wild animals found in the park is beginning to be appreciated by the public. There are numerous species of wild animals in the park, the most of the bad places have been filled with gravel. Even on the newly graveled sections it was impossible to get a hard, packed bed, even with the use of the roller, without the proper amount of moisture. During the latter part of the season, however, those sections that were being made into shape, and in the spring these new sections should open up in excellent condition.

TRAILS.

Of the 225 miles of trails within the park about 150 miles were maintained during the 1918 season. The two principal passes, Gunsight and Swiftcurrent, were opened when the snows melted and were in use about July 1. Gunsight Pass was opened on June 15, but about July 3 the Pass was again shut down by the weather. In the spring these new sections should open up in excellent condition.

Gunsight Pass trail.—That part of the trail left unfinished last fall was completed and the entire trail from the foot of Lake McDonald to the Glacier Hotel cleared of fallen timber, logs, and rocks and renewing the old road. The trail as completed is 8 feet wide and follows the old road survey line.
July 17, a fire was reported on Howe Ridge, west of Lake McDonald, being started by lightning. It was extinguished by July 20 by trail crews after burning over an area of about 40 acres of a fair growth of pine and highbush timber.

July 18, a small fire one-half mile west of Fielding was extinguished by the park ranger there, working with a section crew. About 1 acre of dead timber was burned over.

July 19, a fire started by lightning, was reported as at Cineo Peak, near the Canadian boundary. This fire must have originated out of the park boundary, for a few acres, however, were killed in the deep snow by coyotes, enough of these would have drifted in to inflict serious losses and little would be gained by the brief period of fall work. In the establishment of the urgent need of game interests is not necessarily based on the actual number of predatory animals killed, but in removing the individuals responsible for losses. That there is urgent need of game activities is well known. Scleral places in Idaho reported considerable 10 to 25 coyotes may be caught during a month.

Hills and plains. But throughout the West there is often a scattering of these animals not usually plentiful in heavily timbered sections, as the animal prefers the open foot-timbered sections. As this is a central point for the area where coyotes are most abundant and trapping most feasible. Another hunter was assigned the territory from Logging anaconda Creek, as this is a central point for the area where coyotes are most abundant and trapping most feasible.

Due to the careful handling of the tourists, there were no serious accidents in the park during the entire tourist season.

The following is a summary of fires during the 1918 season:  

**RECOMMENDATIONS.**

The old wooden bridge across the Middle Fork of the Flathead River at the Belton entrance is no longer safe, and a new short-span steel bridge should be erected at or near the old bridge site. At the same time the road from the bridge to the new headquarters should be raised so that it will not be flooded during the high-water periods.

With the increase traffic on the west side of the park the need is becoming urgent for the improvement of the North Fork Road. Only a comparatively small portion of this road, which reaches to the Canadian boundary, is suitable for automobile travel. This road should be improved by grading and draining.

The following table shows the actual count:

**ACCIDENTS.**

Travel was exceptionally heavy and to about June 12 this year, at which time a cold rain swept the country, with heavy rains almost daily, and travel fell off greatly, increasing again after August 1 and continuing through August and into September.
Transportation companies:

Rocky Mountain Park Transportation Co.......................... 3,158
Denver-Estes Park Transportation Co.............................. 1,928
Boulder Transportation Co........................................ 16

Total............................................................................. 5,000

Estimated: 3,211

Grand Lake entrance, missed by checkers: 21,000

Yampa River entrance, missed by checkers: 6,000

Whooping Basin region, on foot or horseback: 400

Mummy Pass region, on foot or horseback: 600

Total............................................................................. 9,211

REPORT DIRECTOR NATIONAL PARK SERVICE.
The Beaver Creek Road begins at a point on the east line of sec. 24 T. 5 N., R. 74 W., sixth principal meridian, and extends thence northwesterly a distance of 1½ miles, to a point in section 14, same township and range. This road is used only as a logging road for the removal of burned timber and is in bad condition.

The Mill Creek Road begins at a point in sec. 6, T. 4 N., R. 73 N., west sixth principal meridian, and extends thence westerly to Mill Creek Ranger Station; total length, 1½ miles. The road is now in such condition that it cannot be used for vehicles, but is extensively used by parties going over Flattop trail to Grand Lake and for side trips from said trail. Timber and wood from old burns are hauled over this road by using the two elevators of the wagon and dragging wood one end of the load. This road should be placed in first-class condition, and if this is done it will be extensively used to get out dead timber and wood.

TRAILS.

Furnishing as they do the only means of access to the principal points of beauty and interest, it is regrettable that, due to the small amount of money available for this national park, we are unable to make permanent improvements of trails, but must confine our work to the most necessary spring repair work, clearing out fallen timber, and corrugating old wheels. Work of this nature has been done on the following trails this fiscal year. Total amount available for this purpose, $493.

<table>
<thead>
<tr>
<th>Name of trail.</th>
<th>Miles.</th>
<th>Points connected.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flattop</td>
<td>18</td>
<td>Mill Creek road and Grand Lake.</td>
</tr>
<tr>
<td>Hallett Glacier</td>
<td>35</td>
<td>66 Fall River road, Long Lake, and Hallett Glacier.</td>
</tr>
<tr>
<td>Ypsilon</td>
<td>21</td>
<td>Hallett Glacier and Ypsilon Lake.</td>
</tr>
<tr>
<td>Glacier Basin and Longs Peak Inn</td>
<td>24</td>
<td>Glacier Basin and Longs Peak Inn.</td>
</tr>
<tr>
<td>Wind River</td>
<td>2</td>
<td>Long's Peak road and Wind River road.</td>
</tr>
<tr>
<td>Bear Lake No. 1</td>
<td>2</td>
<td>Bear Lake and Bear Lake No. 1.</td>
</tr>
<tr>
<td>Bear Lake No. 2</td>
<td>1</td>
<td>Bear Lake and Bear Lake No. 2.</td>
</tr>
<tr>
<td>Loch Vale</td>
<td>2</td>
<td>Bear Lake trail and Loch Vale.</td>
</tr>
<tr>
<td>Fern Lake</td>
<td>3</td>
<td>Fern Lake and Fern Lake.</td>
</tr>
<tr>
<td>Fern Moraine</td>
<td>4</td>
<td>Moraine Park road and Fern Lake.</td>
</tr>
<tr>
<td>Deep Mountain</td>
<td>2</td>
<td>Pool and Mill Creek Ranger Station.</td>
</tr>
<tr>
<td>Odessa Lake</td>
<td>11</td>
<td>Odessa Lake and Odessa Roads.</td>
</tr>
<tr>
<td>Deer Mountain</td>
<td>2</td>
<td>Fall River road and Deer Mountain.</td>
</tr>
<tr>
<td>Mill Creek No. 1</td>
<td>1</td>
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</tr>
<tr>
<td>Mill Creek No. 2</td>
<td>1</td>
<td>Miller Pass.</td>
</tr>
<tr>
<td>Mill Creek No. 3</td>
<td>9</td>
<td>15 Mill Creek road and Grand River road.</td>
</tr>
<tr>
<td>Longs Peak</td>
<td>15</td>
<td>18 Longs Peak Inn and summit Longs Peak.</td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td></td>
</tr>
</tbody>
</table>

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**CONSTRUCTIONS.**

No concessions have yet been granted in the Rocky Mountain National Park. There are 4 different companies operating automobiles, and 12 different saddle-horse outfits, operating in this park this season, not under Government permit, the official status of these individuals and companies being the same as that of private parties entering the park for pleasure and not for profit.

Permits to operate hotels, lodges, and camps have been issued as follows:

<table>
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<tr>
<th>Name.</th>
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<tr>
<td>Sprague’s Hotel</td>
<td>A. E. Sprague</td>
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<tr>
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All other hotels within the boundaries of the national park, of which there are nine, are located on private property, and are not under the jurisdiction of the National Park Service except in so far as its police regulations apply to this property.

---

**Concessions.**

Eighty-three camps have been counted on this ground in one day. Ten cement camp-fire stoves have been installed, and 10 garbage pits dug, two sanitary comfort stations installed, and wood provided.

---

**Construction of buildings.**

Superintendent’s residence.—Main building, 24 by 30 feet, gable roof, frame construction; 2 bedrooms, 10 by 12 feet, 6-foot walls; 1 bathroom, 6 by 10 feet, 8-foot walls. Addition, kitchen, 10 by 12 feet, 8-foot walls, sloping roof. Addition, root cellar, 8 by 10 feet, 8-foot walls, gable roof.

Fire tower building.—Single room, 8 by 12 feet, 6-foot walls, gable roof, log construction. Location, Grand Lake. Complete equipment for 25 men, including fire tools and water bucket.

Water-system construction.—Superintendent’s residence.—Water obtained from spring above house, connecting lavatory, shower bath, closet, sink, hot-water tank, and cesspool.

Pasture-fence construction.—Eighty rods woven wire, 20 rods barbed wire.

Repairs, buildings.

Two miles of metallic-circuit telephone line were constructed, connecting the superintendent’s residence with the Mountain States Telephone & Telegraph Co.’s exchange, in Estes Park Village.

Maintenance and repair, telephone lines.—Maintenance and repair of telephone lines has required a great deal of work this year, due to high winds, falling trees across lines during winter months, snow and sleet storms, electric storms during summer months, and the snow lines being improperly located when taken over by us. This latter fault is being rectified as rapidly as possible by ranger labor, but work necessarily progresses slowly, due to small amount of money available and the requirement to maintain existing lines.

During this year we constructed the following lines and lines have been reconstructed:

<table>
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</tr>
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<td>Poudre Lakes shelter cabin</td>
<td>Log... Do.</td>
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**Construction, telephone lines.**

The necessary and important telephone wire lines have been greatly extended and improved during the current season. Two miles of metallic-circuit telephone line were constructed, connecting the superintendent’s residence with the Mountain States Telephone & Telegraph Co.’s exchange, in Estes Park Village.

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**Camping grounds.**

Camping grounds have been established in Glacier Basin, sufficient ground having been prepared for 100 camps. Ten cement camp-fire stoves have been installed, four garbage pits dug, two sanitary comfort stations installed, and wood provided.

Eighty-three camps have been counted on this ground in one day.

**Wild animals.**

According to old-time residents of this section, elk, deer, mountain sheep, bear, beaver, and other small animals have not been as plentiful in 20 years in the country within the national park boundaries. Certainly, they have increased rapidly within the past three years, and, being unmolested, they show little or no fear of human beings. In one hour’s drive along the High Drive road, on Deer Mountain, 53 deer, 41 mountain sheep, and 27 elk were counted. Since this section is fairly heavily wooded, it is safe to say that not over 50 per cent of the animals in the section at the time were seen. At Sheep Lake, from another pass along the road, 30 deer, 18 elk, 80 white-tailed deer, 20 mule deer, and 4 beaver were counted. This season has required a great deal of work this year, due to high winds, falling trees across lines, snow and sleet storms, electric storms during summer months, and the snow lines being improperly located when taken over by us. This latter fault is being rectified as rapidly as possible by ranger labor, but work necessarily progresses slowly, due to small amount of money available and the requirement to maintain existing lines.

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during the winter and as late as July 1, when the greater part go to higher altitudes. A census has been taken to determine the number of large game animals within the adjacent to the national park, and will cooperate with us in preventing hunting. No raining 17 lambs, showed no fear of automobiles nor of persons on foot. The band was September, especially at Sheep Lake, in Horseshoe Park, and hundreds of pictures of the increase must have been large. There have been no reports this year of deer in the west of Deer Mountain numbering 27. The three remaining herds winter from 6 to 15 miles from the village, taking to the high altitudes about June 15. There are perhaps 60 mountain goats, and increasing rapidly. Since normally there is very little snow in the foothills, and feed is abundant, it has not been necessary to feed. A herd numbering so numerous that I feel like saying that the largest herd in the United States, Hands of from 50 to 75 are common along the valley roads during the winter and as late as July 1, when the greater part go to higher altitudes. Bands of from 7 to 50 can be approached to within 50 feet during July, August, and September, especially at Sheep Lake, in Horseshoe Park, and hundreds of pictures of mountain sheep have been secured there this season, and a wonderful opportunity afforded to study these interesting animals in their native haunts. The real thrill, however, comes when one turns to the heart of the mountains where one can see the sheep among the wild, rough country, jumping from crag to crag. The record of increase shows 80 per cent this season, and, with few exceptions, rams, ewes, and lambs are in first-class condition.

Decr.—This beautiful and graceful animal is now more plentiful in the park than any other large game animal. It is number five in the parks of the United States, numbering from 10 to 160, and we have 20 persons on foot with dogs. The frolicking lambs are especially interesting to travelers and convince the great majority that the sheep furnish more real and lasting pleasure in game hunting than the gun. It is regrettable that Colorado has passed a law permitting the killing of deer this season, for while hunting or the carrying of firearms is not permitted within the national park, much of our game strays from the park boundaries, and if not killed will again learn to fear human beings, and we will lose the confidence of the wild creatures we have worked with in the past few years. However, to the local people, almost to a person, will prohibit hunting on land owned by them within and adjacent to the national park, and will cooperate with us in preventing hunting. No hunting! No raining! 17 lambs, showed no fear of automobiles nor of persons on foot. The band was September, especially at Sheep Lake, in Horseshoe Park, and hundreds of pictures of mountain sheep have been secured there this season, and a wonderful opportunity afforded to study these interesting animals in their native haunts. The real thrill, however, comes when one turns to the heart of the mountains where one can see the sheep among the wild, rough country, jumping from crag to crag. The record of increase shows 80 per cent this season, and, with few exceptions, rams, ewes, and lambs are in first-class condition.

Beaver.—Calories are very numerous, and on the increase, in the national park. Their workings line the streams and can be seen in many places within 20 feet of the road, affording an opportunity to study these interesting animals. In several cases of colonies on private lands they are so numerous that the owners have found it necessary to secure permits from State officials to trap them, to prevent destruction of land, and loss of crops. Trapping on public lands within the park is now prohibited, and very little damage is done to park lands by beaver. Since they are not molested on park lands, it is now possible in certain localities to see beaver working in daylight; also to secure pictures.

Raccoon.—While native in this section, are seldom seen. Three silver tips, two brown, and five black bears have been reported this year, one silver tip, one brown with cub, and ten black bears seen in the last year, within the national park. The following predatory animals have been killed by park officers: Coyote, 2; bobcat, 1; fisher, 1; pine marten, 1; weasel, 1; wolverine, 1; and mink, 1.

Birds, Flowers, Shrubs, and Trees.

Because of the steadily increasing interest in nature study displayed by adults and children in the park, lists of birds and plants have been prepared to enable the layman to recognize at sight the birds and plants of the park. The data have been gathered by Park Ranger Brauch. The birds listed are based on his recorded observations of the last 10 years, mainly on the eastern slope of the range, but occasionally on the western slopes, and is believed to be complete. New species are appearing in this region, and old ones in some cases extending their range. Scientific names have purposely been omitted. The list of plants is based on explorations and collections made in various sections of the park in August, 1918. This collection will be on file in the park office for reference and use by the public. It has not been possible or indeed, desirable to identify completely all the plants collected or observed, and no doubt many species, and even genera, will be added upon further study in the field, and the working out of some of the large and complex groups. However, the list as it stands should give a general idea of the flora of the park. The separation of shrubs from herbs and trees is somewhat arbitrary, but was made for convenience and interest. This work will be extended to cover the entire year, the ultimate goal being a complete list, together with mounted specimens. These lists will be found at the end of this report.

Ranger Force.

The ranger force is entirely inadequate. It is impossible for three rangers to satisfactorily patrol the 400 square miles of territory embraced in this park, comprising, as it does, some of the wildest, roughest country in the United States. They cannot even adequately protect the park from fires resulting from natural causes. Add to this the hundreds of campers in the wild sections of the park, many of them careless with their camp fires, and the situation is appalling. For police protection alone there should be at least seven permanent rangers throughout the year, and five temporary rangers from May 15 to October 1 to protect from accidents the thousands of travelers using this park, by regulating the speed limit of automobiles, by stopping and raising enough game fish, and general field-administration work. Three rangers have been called in the draft, making it necessary to appoint experienced men in their places.

Fish.

Fishing conditions during July and August, 1918, were normal, good catches being the rule. Spring and early summer fishing, 1917, not good, due to abnormal rains, causing high water in streams and lakes. Through cooperation with the Colorado State hatcheries, in the national park, the following streams were stocked:

<table>
<thead>
<tr>
<th>Name</th>
<th>Number</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cabin Creek</td>
<td>100</td>
<td>Eastern brook trout</td>
</tr>
<tr>
<td>Cow Creek</td>
<td>60</td>
<td>Cutthroat trout</td>
</tr>
<tr>
<td>Fall River</td>
<td>10</td>
<td>Brook trout</td>
</tr>
<tr>
<td>Grants Creek</td>
<td>20</td>
<td>Brown trout</td>
</tr>
<tr>
<td>Mill Creek</td>
<td>20</td>
<td>Brown trout</td>
</tr>
<tr>
<td>Big Thompson</td>
<td>10</td>
<td>Whitefish</td>
</tr>
<tr>
<td>Wind River</td>
<td>30</td>
<td>Black-spotted trout</td>
</tr>
<tr>
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<td>50</td>
<td>Cutthroat trout</td>
</tr>
<tr>
<td>Grand River</td>
<td>100</td>
<td>Brown trout</td>
</tr>
<tr>
<td>Powder River</td>
<td>50</td>
<td>Cutthroat trout</td>
</tr>
</tbody>
</table>

Total: 1,300

Plans are being perfected to establish breeding ponds along streams and lakes within the park, this method being necessary to get the best results from the planting of fry, for this year as last, but was a great success, nevertheless. Over 40 countries of the Colorado Mountain Club came up in February, bringing many friends. They found many improvements over last year, far more comfortable quarters, and ski and toboggan runs greatly improved. Three minor accidents occurred, none serious, and no fires were caused by their catches, from 50 to 100 friends and acquaintances, and have their picnics near the shores or aprons along one of the many streams within the boundaries of the national park.

Forest Fires.

Forest fires are an ever-increasing menace to national-park lands. About 10 per cent of fires this summer were caused by lightning, the rest by carelessness of campers and picnickers. The ranger force has answered to 11 fire calls this year. We received the hearty cooperation from the Rocky Mountain Park Transportation Co. This cooperation, in men and machines, has prevented disastrous fires. The largest area burned by any one fire being 7 acres, others not exceeding 400 square feet.

Winter Sports.

Due largely to war conditions, the winter-sports carnival was not as largely attended this year as last. In spite of the great success, nevertheless, over 40 countries of the Colorado Mountain Club came up in February, bringing many friends. They found many improvements over last year, far more comfortable quarters, and ski and toboggan runs greatly improved. Three minor accidents occurred, none serious, and no fires were caused by their catches, from 50 to 100 friends and acquaintances, and have their picnics near the shores or aprons along one of the many streams within the boundaries of the park. No accidents of a serious nature occurred within the boundaries of the park this year. Numerous collisions occurred between automobiles and automobiles and saddle horses, none of which resulted in more than slight damage.

Accidents.

No accidents of a serious nature occurred within the boundaries of the park this year.
LAND BIRDS.

Quail family, 1 species.

Bob white.—Occasionally reported during the last few years by reliable observers; is probably a rare resident at lower altitudes.

Grouse family, 2 species.

Dusky grouse.—Permanent resident of the subalpine forest and frequently seen in late summer in open areas down to 8,000 feet.

White-tailed ptarmigan.—Common in summer in the alpine meadows, breeding up to 9,000 feet; in winter, at timber line or irregularly down to the montane zone, 9,000 feet.

Pheasant family, 1 species.

Chinese ring-neck.—An introduced species, which seems to be becoming established at the eastern edge of the park, at 7,000 feet; once seen at 9,000 feet.

Pigeon family, 2 species.

Band-tailed pigeon.—Summer resident or visitor; not common and rather irregular; occurs mostly below 8,000 feet, in open woods.

 Mourning dove.—Summer resident; often around barns and ranches; common at the lower altitudes; occasionally up to 9,000 feet.

Hawk family, 12 species.

Marsh hawk.—Transient; common in autumn (about Aug. 15 to Sept. 15); usually seen flying low over wet meadows; occasionally along high ridges, at timber line, or above.

Hawk-shaft hawk.—Rare transient visitor in autumn.

Cooper's hawk.—Rare summer resident, breeding in the subalpine woods and perhaps lower.

Goshawk.—Autumn and winter visitor and sometimes a rare winter resident (October to March).

Western long-tailed hawk.—Summer resident, at lower and middle altitudes, May to October; the commonest of the large soaring hawks; occasionally wandering to timber line and above.

Swainson's hawk.—Apparently only a rare summer visitor.

Rough-legged hawk.—Winter visitor; infrequent.

Ferruginous hawk.—Summer resident, at low altitudes; not common.

Golden eagle.—This magnificent bird, though not common, is still frequently seen among the high peaks of the ranges, above timber line where it is a permanent resident. It seems to breed in varying numbers; at least, is becoming less wary.

Bald eagle.—Once observed in late autumn; a very rare migrant.

Prairie falcon.—Known only as an infrequent summer visitor; possibly a rare summer resident.

Sparrow hawk.—Summer resident, April to September, in open woods and fields throughout the park; nests up to 9,000-10,000 feet; the commonest small hawk.

Owl family, 3 species.

Snowy owl.—Resident; probably permanent; not common.

Soooch owl.—Frequently heard in the evening.

Western horned owl.—Rare but regular permanent resident.

Woodpecker family, 8 species.

Rocky Mountain hairy woodpecker.—Permanent resident, in open coniferous forests, most frequently in the montane zone.

Bachelder's woodpecker.—Rare permanent resident; breeding chiefly below 8,000 feet, but occasionally wandering to higher altitudes in winter; the Rocky Mountain "downy woodpecker."

Alpine three-toed woodpecker.—Rare permanent resident, in the subalpine forest; observed as yet only on the western slope of the range, but probably occurs on the eastern slope also.

Red-naped sapsucker.—Summer resident; common and conspicuous; nesting chiefly in aspen groves up to 9,000 feet.

Williamson's sapsucker.—Summer resident, at lower altitudes; rarely up to 9,000 feet, in open woods.

Red-headed woodpecker.—Summer resident, at the lower edge of the park; not common.

Lewis's woodpecker.—Resident in the foothill zone; an infrequent visitor, or rare summer resident, in the park, below 8,000 feet.

Grosbeaker family, 2 species.

Barn swallow.—Summen resident; occasionally in winter at the lowest altitudes.

Poor-will.—Occasionally reported as a rare summer resident, at 7,500 feet.

Western nighthawk.—Summer resident, June to August; common almost everywhere; breeding up to 10,000 feet; very conspicuous in flight.

Kingfisher family, 1 species.

Woodpecker family, 8 species.

Cliff swallow.—Summer resident; common locally, mostly at the lower altitudes.

Barn swallow.—Summer resident; occasionally up to 8,000 feet.

Humming-bird family, 1 species.

Broad-tailed humming bird.—Summer resident; common and widely distributed, from June to early August.

Flycatcher family, 6 species.

Kingbird.—Summer resident, below 8,000 feet; not common.

Arkansas kingbird.—Summer visitor; observed several times recently; may occasionally breed at the lower altitudes.

Olive-sided flycatcher.—Summer resident, June to August, in the forest region; not very common, but generally distributed up to 8,000 feet.

Western wood pewee.—Common summer resident in the yellow-pine zone, but rare above 8,500 feet.

Western flycatcher.—Summer resident at the lower altitudes.

Wright's flycatcher.—Summer resident at the middle altitudes.

Lark family, 1 species.

Desert horned lark.—Noted as yet only as an occasional winter visitor at the eastern edge of the park.

Crow family, 7 species.

Maggie.—Permanent resident; common, but rather erratic; up to 8,500 or 9,000 feet.

Long-tailed jaay (blue jaay).—Resident; common and conspicuous at all seasons throughout the park, at middle and lower altitudes.

Rocky Mountain jaay (camp bird).—Resident in the coniferous forests; 9,000 to 11,000 feet; a common and familiar bird; very tame and frequently seen around camps and houses within its range both winter and summer.

Raven.—A rare and infrequent visitor; only two records.

Western crow.—Rare and irregular visitor, spring or autumn.

Clark's nutcracker.—Permanent resident throughout the park, chiefly in limber-pine forests; irregular; sometimes quite common.

Pine jaay.—Reported by reliable observers as an infrequent visitor in winter or spring.

Blackbird family, 3 species.

Red-winged blackbird.—Summer resident, March to early August, in marshes, up to 9,000 feet.

Western meadow lark.—Common summer resident, on meadows, below 8,000 feet.

Brewer's blackbird.—Summer resident; common around barns and ranches up to 9,000 feet.

Finch family, 11 species.

Rocky Mountain pine grosbeak.—Resident in the high forests; breeds in the subalpine spruce region (Wild Basin and elsewhere); in autumn and winter, irregularly, down to the montane parts.

Cassin's purple finch.—Resident up the Big Thompson Valley, in summer, to timber line in the Flat top region; in winter, it winters in the coniferous forests; not yet noted elsewhere; in winter, irregularly, lower.

Crossbill.—Visitor, or sometimes resident, in the coniferous forests; infrequent and erratic.

White-winged crossbill.—Rare winter visitor in the subalpine forests.

Rocky Mountain jaay.—Three species; one, the brown cap, is common in summer in the high alpine zone, nesting up to 10,000 feet; in winter, in large flocks, at lower altitudes.

The graycrown and hepburns migrate from the north.

Brewer's blackbird.—Resident, October to March; common throughout the park in bushy places near streams or swamps to a little above timber line.

Western meadow lark.—Summer resident, June to August, in the forest region; no nesting in the subalpine woods.

Western chipping sparrow.—Winter resident, October to March; common through the yellow-pine zone.

Western pipit.—Summer resident, frequently near habitations, at middle and lower altitudes.

Yellow-breasted sparrow.—Migrant and probably a rare summer resident; shy and inconspicuous.

Townsend's jumco.—Winter resident at lower altitudes.

Shepherd's jaay.—Winter resident.

Pink-sided jaay.—Common winter resident, October to May, occurring in flocks with the two preceding species in the yellow pine.

Grey-headed jaay.—Resident; in summer abundant throughout the park, especially in dry, open montane forests; a few occasionally winter at the lower altitudes.

Mountain song sparrow.—Summer resident near streams or swamps up to 8,500 feet.

Brewer's sparrow.—Summer resident, May to September; common throughout the park in bushy places near streams or swamps to a little above timber line.

Western tree sparrow.—Winter resident, October to March; common through the yellow-pine zone.

Western pipit.—Summer resident, frequently near habitations, at middle and lower altitudes.

Chin-capped sparrow.—Migrant and probably a rare summer resident; shy and inconspicuous.

White-winged jaay.—Winter resident at lower altitudes.

Barrow's jaay.—Winter resident.

Pink-sided jaay.—Common winter resident, October to May, occurring in flocks with the two preceding species in the yellow pine.

Green-tailed towhee.—Common summer resident up to 9,000 feet, especially in sagebrush country at lower altitudes.

Black-headed grosbeak.—Rare summer resident at the eastern edge of the park at lower altitudes.

Tanager family, 1 species.

Western tanager.—Summer resident, mostly along streams, up to 8,000 feet; not common.

Swallow family, 8 species.

Cliff swallow.—Summer resident; common locally, mostly at the lower altitudes.

Barn swallow.—Summer resident; occasionally up to 8,000 feet.
Summary of birds.

<table>
<thead>
<tr>
<th>Species</th>
<th>Occurring only in winter</th>
<th>Occurring only in summer</th>
<th>Transient, occurring regularly in spring and fall</th>
<th>Rare or irregular</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident in the park at all seasons</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
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<tr>
<td>Total</td>
<td>114</td>
<td>114</td>
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Total species to be found in summer, about 75 or 80.
Total species to be found in winter, about 55 or 40.
Bird families represented, 34.

PLANTS OF THE ROCKY MOUNTAIN NATIONAL PARK.

A. FLOWERS.

Lily family, 8 species.

White sand lily (Leucojum aestivum): Moist meadows and swales throughout the park up to 11,000 feet.

Lily-of-the-valley family, 2 species.

Twisted stalk (Spartopisma amplexicaulis): Along stream banks at middle altitudes.

Iris family, 2 species.

Blue flag; fleur-de-lis (Iris missouriensis): Wet, grassy places at middle elevations.

Orchid family, 6 species.

Coral root (Corallorhiza maculata): In middle and high elevations, in the spruce forests.

Ladys’ slipper (Calypso bulbosa): In montane forests; rare.

Bog orchid (Lemonchys borealis): In swamps, at middle and high elevations, in the spruce forests.

Buckbean family, 6 species.

Salpiglossis flower; mountain dock (Epipogon): Three species, in open meadows up to 9,000 feet.

Ivy family, 2 species.

Gooseneck flower (Chamaecrista): On clearings in meadows and streams.

Blackberry family, 2 species.

Wild onion (Allium): Three species, in open meadows up to 9,000 feet.

Sage family, 7 species.

False or poison camas (Zygadenus elegans): In moist meadows and swales throughout the park up to 11,000 feet.

Lilac family, 4 species.

Pacific willow (Salix lasioptera): In meadows and swales.

Ivy family, 2 species.

Goosefoot family, 1 species.


Brooklime family, 1 species.

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Goosefoot family, 1 species.

Young pond lily (Nymphaea polysepala): On Chickadee Pond, Wild Basin, and perhaps other shallow, subalpine lakes.
Buckwheat family, 24 species.

Marsh marigold (Caltha palustris): In wet meadows, up to 12,000 feet.

Globe flower (Trollius albilobus): Swamps and stream banks, alpine and lower.

Columbine (Aquilegia coerules): In woods and copses, at middle elevations, in early summer, and later, on moist slopes, above timber line.

Dwarf columbine (Aquilegia saximontana): Rocky slopes and mountain tops, 9,000 feet, and above; not common.

Laurel spurge (Delphinium): Three species, subalpine, and lower.

Monotropa (Monotropa): Three species, in moist dels, up to timber line.

Wind flower (Anemone): Three species, montane and subalpine.

Rock cress (Beracleum lanatum): Two species, in thickets, at lower altitudes.

Yellow stonecrop (Sedum stenopetalum): Common, on rocky slopes.

King's crown (Sedum integrifolium): Alpine stream banks; 11,000 to 12,000 feet.

Red orpine (Sedum rhodanthum): Marshes, 8,000 to 12,000 feet.

Buckwheat family, 8 species.

Grass of parnassus (Parnassia fimbriate): Wet subalpine deltas; collected as yet only in the north end of the park.

Alumroot (Heuchera): One or two species; crevices, in rocky cliffs.

Eriogonum (Hemlock ciliata): Wet places, in subalpine forests.

Saxifrage family, 5 species.

Yellow stonecrop (Sedum stenopetalum): Common, on rocky slopes.

Field gentians (Gentiana romanzoffii): Alpine stream banks; as yet only from Chickadee Pond. Wild Basin; 10,000 feet.

Meadows at middle elevations.

Field gentians (Gentiana): Three species; dry meadows.

Wintergreen family, 9 species.

A large and difficult group, not as yet worked out in the park. One tall, stout species, Heuchera longipes, is common along streams. Other genera represented are Lithospermum, Epilobium, Pseudocyperus, and others. Six species have been collected, and doubtless many more will be found by further exploration and study.

Wintergreen family, 5 species.

Wintertree (Gayophyllum): Two species (Chlorantha and Secunda), in the heavy, coniferous forests, 9,000 to 10,000 feet.

Purple wintergreen (Gayophyllum molossinum): In bogs, in the higher forests.

One-flowered wintergreen (Monoceros uniflora): Subalpine forests.

Gayophyllum: One or perhaps two species, at lowest altitudes in the park.

Yellow evening primrose (Onagra stricta): Fields and roadsides; occasionally up to 9,000 feet.

Fragrant primrose (Pulsatilla sp.): Roadsides at low altitudes.

Parsnip family, 6 species.

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Wintergreen family, 5 species.

Buckwheat family, 24 species.

Meadows up to 12,000 feet: 4 species identified.

Loco (Linum lewissii): Several species, 3 of which are common and easily recognized; mostly alpine and subalpine.

Bole (Linum moltuinii): Moist montane meadows. This and the following species are found in the same habitat and are difficult to separate.

Primrose family, 5 species.

Alpine primrose (Primula angustifolia): Dry, alpine meadows.

Blue primrose (Primula parryi): Along cold streams and on wet clifs, 10,500 to 13,000 feet.

Field gentians (Gentiana): Three species; dry meadows.

Wintergreen family, 9 species.

White gentian (Poteriopterus fontanes): Moist montane meadows. This and the following members of this family bloom in the late summer and autumn.

Fringed gentians (Gentiana): Two species (Elegans and Barbella), in west meadows and thickets; 8,000 to 9,000 feet.

Field gentians (Gentiana): Three species; dry meadows.

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Field gentians (Gentiana): Three species; dry meadows.
Mint family, 5 species.

Skullcap (Scutellaria brittonii): Hillside, up to 9,000 feet.

Honeysuckle (Lonicera japonica): Dry places, at lower altitudes.

Woundwort (Stachys palustris): Wet places, at middle elevations.

Figwort family, 2 species.

Blue-eyed Mary (Collinsia parviflora): Hillside, middle and lower altitudes.

Coneflower (Rudbeckia): Two species, open woods, in early summer; six species collected to date, but probably several more occur.

Bedstraw (Galium). Common, on the alpine meadows.

Speedwell (Veronica): Three species identified; one alpine, the other two subalpine and low in wet places.

Monkshood (Erythronium): Two species, in the north end of the park.

Pedicularis: Three species, of diverse aspect, in forests, 9,000 to 11,000 feet.

Little red elephant (Pedicularis groenlandica): Open swampy areas, alpine and lower.

Campion (Silene): At least seven species are readily distinguished.

Orchidaceae (Montana meadows). Madder family, 2 species.

Bedstraw (Galium): Two species, one (G. boreale) very common, at middle elevations.

Bluebell family, 1 species.

Twin flower (Lilium americana): In coniferous forests, subalpine or lower.

Honeysuckle family, 1 species.

Harebell (Campanula): Three species, common, and occurring throughout the park at all altitudes.

Valerian family, 1 species.

Valeriana acutiloba: Subalpine forest bogs, along the main range.

Composite family, 20 species.

Golden aster (Chrysopsis): Two or more species, in late summer.

Tanacetum pycnanthus: In the alpine meadows.

Goldenrod (Solidago): Several species (4 collected) -- generally distributed.

Yarrow (Achillea) and Leontodon: Many species (4 collected), mostly with blue or purple ray flowers.

Dogwood (Cornus, Rhododendron, etc.): A very large group, not yet worked out for the park; occur almost everywhere except in dense forests; 8 species have been noted, 6 of which are not common.

Testaceae (Lutheae) and other genera: Four species or more, in dry meadows or open woods.

Cone flower: black-eyed Susan (Rudbeckia): Up to 9,000 feet.

Sunnower (Helianthus): At lower altitudes.

"Sunnower" (Rudbeckia graminifolia): Meadows, above timber line, and grassy slopes, up to 13,000 feet.

Boletus edulis: Very common at middle elevations.

Yarrow (Achillea millefolia): Abundant throughout the park, except in heavy forests.

Sage (Artemisia): Four or five species, one alpine, other low.

Arctostaphylos: Three species.

Hawthorn (Crataegus): Common at all altitudes; many species (5 collected).

Haw's Beard Crepis: Three species not noted.

False dandelion (Tussilago): Two species, common, in meadows, in late summer.

Dandelion (Taraxacum): One or more species.

b. FLOWERING SHRUBS, 15 SPECIES.

Gooseberry (Ribes): At least 2 species; occasional, up to timber line.

Vaccinium (Blueberry): Three species noted.

Raspberry (Rubus): Dry slopes, often on burnt land, at all altitudes, up to timber line.

Coneflower (Rudbeckia): "sage rose" (Diasiphora fruticosa): Common in the montane zone, blooming throughout the summer.

Wild rose (Rosa): One or more species, in open woods, on dry hill slopes, and road-side.

Service berry (Amelanchier); apple family: One species reported, from the lowest altitude.

Mountain ash (Sorbus scopulina): Occasional, up to 10,000 feet.

Vaccinium (Blueberry): (Prunus melanocarpa); plum family: Rocky slopes and canyon sides, below 9,000 feet.

Mountain holly (Ilex montana): Edge of woods, middle elevations.

Buffalo berry (Shepherdia canadensis): In woods, middle elevations.

Elder (Sambucus): Occasional, at middle elevations.

Honeysuckle (Lonicera involucrata): In woods, to 9,000 or 10,000 feet.

SULLYS HILL NATIONAL PARK.

S. A. M. Young, Acting Superintendent, Fort Totten, N. Dak.

GENERAL STATEMENT.

Sullys Hill National Park is a beauty spot in a locality where rolling prairies and grain fields are more common than attractive scenery. Hugging the south side of Devil's Lake, this park is surrounded with a luxuriant growth of timber, affording an ideal home for the elk and deer recently placed in the park, while Sweetwater Lake, within the park, and the shaded picnic grounds near by present an attractive resting place for a day or two. Leading from the picnic grounds are numerous paths through sections of great beauty, where the nature lover may listen to the songs and observe the habits of every bird known to North Dakota, in the picnic grounds. How much enjoyment can be played out by practically unmindful of visitors. For those who are fond of boating, Sweetwater Lake offers an inviting opportunity. On account of the sheltered location, the waters are generally without a ripple, and so are clear that the luxuriant growth of aquatic plants at the bottom may be easily studied. Sullys Hill beach at the north side of the park is an ideal bathing place, where many sets of bathing spend a pleasant Sunday afternoon. Not only is the park surrounded with historic interest, but there are traces of prehistoric times very inviting to the archeologist.

HOW TO REACH THE PARK.

The park can most conveniently be reached from Devil's Lake, on the Great Northern Railroad, the distance being about 15 miles. Parties should provide camping outfits if it is desired to spend more than one day at the park, since no hotel accommodations are available.

INCREASED NUMBER OF VISITORS.

As the attractions to be found at Sully's Hill Park become more widely known, the number of visitors increases. During 1919 there were 84 visitors in April, 116 in May, 1,382 in June, 1,116 in July, 694 in August, and 325 in September, a total of 4,138 for the season, against only 2,207 last season. Thus far there has been little tourist travel, but this is largely because the park is, as yet, little known. During the summer a number of picnic parties, notably a Red Cross picnic and a party from the Indian School, have enjoyed the use of the picnic grounds.
WILD ANIMALS.

The elk and deer placed in the park last season are doing well and their numbers are increasing. On account of the dense foliage and opportunities for hiding, the number of young can not be accurately determined. The wild animals have done well during the winter, with very little feeding. Arrangements are now being considered to add a number of bisons to the attractions of the park.

RECOMMENDATIONS.

The roads in the park, especially the one leading to Sully's Hill Beach, should be improved, inexpensive bathing houses should be constructed at Sully's Hill Beach for the comfort of the visitors. The park needs three additional rowboats for the use of visitors, and a backwater is so poorly drained that a shed should be constructed on the grounds to shelter visitors in case of rainstorms. The present rule which prohibits the entrance of automobiles into the park should be abandoned. Persons not planning to walk from the gate to the picnic grounds would not find it burdensome, not to speak of the matter of carrying lunch from the gate to the grounds, the distance being about a quarter of a mile.

THE SIEUR DE MONTS NATIONAL MONUMENT.

GEORGE B. Dorr, Custodian, Bar Harbor, Me.

THE FOUNDING OF THE SIEUR DE MONTS NATIONAL MONUMENT.

The Sieur de Monts National Monument had its origin in the active desire of two men—President Emeritus Eliot, of Harvard, and George B. Dorr, of Boston, both for many years summer visitors and residents upon Mount Desert Island—to save to public freedom and the people's use that all that might prove possible of the magnificent coastal scenery of the island. And to that end the board was organized, through which purpose was formed, of which Dr. Eliot became president and Mr. Dorr vice president and executive officer. The stated object of the corporation was, as a result of a special act of the Maine Legislature passed in 1885 giving it relief from taxes, "to receive, hold, and improve for public use lands in Hancock County, Me., which by reason of historic interest, scenic beauty, or other cause" were suited for such purpose.

The corporation received its first gift of land, the Bowl and Beehive tract on Champlain Mountain, generously given by an early summer resident who lived upon the shore below and owned the land.

That same fall, Mr. Dorr, encouraged by this gift, entered actively upon the work which was to result in the establishment of the Sieur de Monts National Monument.

The next step was to secure the summit of the island, which has now passed into the Nation's keeping as the highest point upon our eastern coast. This, the summit of a bold and massive peak, the mountains rising from the ocean cliffs and looking seaward far beyond our country's bounds, became the nucleus around which, year by year, the reservation grew, until in the spring of 1918 it had reached proportions that, joined to the picturesque character and historic interest, would make it suitable for a national monument. In the fall of 1914, Mr. Dorr came to Washington and made the formal application to the Secretary of the interior, the Hon. Franklin K. Lane, who encouraged him to go on with it.

After two further years spent on consolidation of the tract and the removal of imperfections in its title by purchase, suits in equity, and other means, Mr. Dorr returned to Washington with the arrangements matured and laid before the Secretary of the Interior, the Hon. Franklin K. Lane, who encouraged him to offer the park to the Nation, in the following letter addressed to Secretary Lane:

May 3, 1916.

Hon. Franklin K. Lane,
Secretary of the Interior, Washington, D. C.

Sir: On behalf of the Hancock County Trustees of Public Reservations, State of Maine, I have the honor to offer in free gift to the United States a unique tract of land of eastern seacoast for the establishment of a national monument.

The tract offered is in historic association, in scientific interest, and in landscape beauty. It contains itself the only heights which our troops are traversing. They are now nationally owned. And they will endure for ages.

The tract offered includes an open sea with mountainous character upon our eastern coast.

The open sea with mountainous character is a peculiar feature of the New England coast, and will make the island an outstanding feature of interest in the monument.

Following out this thought, the Secretary of the Interior and the National Park Service department of the government have concluded, with its island's massive summit, with its splendid eastward outlook, and its open sea with mountainous character upon our eastern coast, the monument for the establishment of a national monument.

The monument act is an act passed in 1906, during President Roosevelt's administration, which gives the Secretary of the Interior power to recommend for presidential proclamation any of the national-park system, under the title of national monument. The lands belonging to the Government, or freely offered to it from a private source, whose historic interest or scientific features make such preservation desirable in the public interest.

A WAR MEMORIAL.

Another interesting development that is planned, inspired alike by the historical and the national park associations, by the intense feeling that the war has aroused, and the willingness and human sacrifice raised, is the utilization of the splendid memorial characteristics of the large granite mountains to represent overseas, to the people of the nation, France a nobly suitable memorial of the contest overseas. These mountains, discovered, named and claimed by Champlain and held for over a century by France, look out toward her with a majesty and dignity so wonderful a work of man could erect, over the great ocean highway, which our troops are traversing. They are now nationally owned. And they will endure for ages.

Names recalling the old French association of the island and this intended war-time memorial are the December 1604, with the Indians as his guides, September, 1604, with the Indians as his guides, ascending the Penobscot River finally to the summit of the main mountain, which eight years later was to result in the establishment of the Sieur de Monts National Monument.

It was not until five years later, however, in the summer of 1908, that the corporation received its first gift of land, the Bowl and Beehive tract on Champlain Mountain, generously given by an early summer resident who lived upon the shore below and owned the land.

The papers I inclose herewith explain in detail the thought and purpose of the offered land.

I remain, sir, with respect,

Sincerely yours,

George Bucknam Dorr

Secretary of the Interior

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The Sieur de Monts National Monument has advanced rapidly during the past year already designed by the National Park Service, is the Sieur de Monts National Monument, develop it as a national monument, representing in its finest form New England's splendid contribution to the national refreshment in its embayed and rock-bound, many-faces across the sea from almost equal height, a memorial to the Air Service of France a nobly suitable memorial of the contest overseas. These mountains, discovered, named and claimed by Champlain and held for over a century by France, look out toward her with a majesty and dignity so wonderful a work of man could erect, over the great ocean highway, which our troops are traversing. They are now nationally owned. And they will endure for ages.

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All the mountain peaks lying to the west of this fiord or sound, none of which were included in the original acceptance of the island, are being made to prepare them for the Government's acceptance, already agreed upon with the Secretary of the Interior.

RECOGNITION BY CONGRESS.

A great step forward has been taken also during the past year in the recognition given to the monument by Congress, who in the Act of April 29, 1878, authorized Mr. St. George M. Burns, then Secretary of the Interior, to use the services of Captain Judd, a surveyor of the U. S. Army, and of Mr. Francis B. Houghton, a New York engineer, to make a topographical survey of the island with a view to the preparation of a map of Mount Desert Island with the best points of natural beauty indicated on it, so that Congress might, upon the recommendation of the President, favorably recommend in the House a bill to convert it accordingly from a national monument to a national park.

This creation is in line with the intention of the National Park Service to extend into central and eastern regions of the country its benefits and works, a policy destined to increase enormously its public usefulness.

PLANNING FOR THE FUTURE.

Constructive work in the park, unless in urgent matters of detail to maintain and complete the usefulness of what now exists, must wait for lack of labor and because of the desire to withdraw none from war-essential purposes until the war is over. But plans for the future must be worked out to give the park a new lease upon life, a chance to become the recreative opportunity for the people. And its interest as an historic record and a great nature monument is being steadily extended by possessions placed in its name that are already sought, for educative and other purposes, by people dwelling as remote from it as Colorado, Arizona, Utah, and the Pacific coast.

WILD LIFE AND WOODLAND PROTECTION.

The park is now, since July 1, being protected under its congressional appropriation. Deer are returning, and will soon grow tame; birds are finding a safe home and nesting place within its bounds; work is being done upon the old-time trails to restore or maintain their usefulness; and necessary guardianship of its woods has been established, together with such repair of damages as the amount of the appropriation renders possible.

IMPROVEMENT OF APPROACH.

An important advance made during the past 18 months in the development of the approaches to the park is the replacement, by order of the National Government, of the old and insecurely constructed wooden bridge and draw connecting Mount Desert with the mainland by a steel and concrete one modern type designed by Government engineers and constructed by joint action of the town and State. The bridge makes the isolation of Mount Desert from the mainland a thing of the past, and opens up the splendid opportunities for scenic enjoyment which the island affords. Its construction is a noteworthy step in the development of the island, by which the national park is variously reached, to meet without a break the National System of the mainland, and gives the park approach by motor full advantage of the latter.

INFLUENCES UPON THE PEOPLE.

Such a park, so chosen for landscape and historic interest, so rich in varied wild-life and scenery, so widely visited and accessible, and so related to the Nation in the great possession of a hundred and odd miles of island-sheltered watersways along the ocean front, can in its development and improvement have the most important influence upon the development among the people of a sane and wholesome love of nature and an outdoor life and a deepened consciousness of national existence.

MOUNT DESERT ISLAND AND THE LAND TITLES IN THE PARK.

Mount Desert Island lies off the old French-Acadian coast of Maine, midway between the mouth of the Kennebec and that of the Penobscot, where our national boundary now takes its start at the site of a fort of Francis I and of the first colony of the United States and the only spot upon it where mountains come down to meet the sea. It was discovered by Champlain on September 3, 1604, on the journey of that coast as he and De Monts explored it, and it is probable that the first contact of the white man was with a native who on the second of August had been adopted by the English, who Anglicized its form but left the accent, where it still remains in local usage, on the final syllable of the word Desert.

Granted in 1688, by Louis XIV, to Antoine de la Mothe Cadillac, the later founder of Detroit and governor of Louisiana, Mount Desert was afterward by the State of Michigan, and after various owners, by the State of Maine, and finally by it consecrated to the Union, when by the Act of Congress of March 3, 1878, the island was dedicated, by a phrase in the words, "To be held by the United States as a public park orpleasure ground for the benefit and enjoyment of the people." The name "Mount Desert" has remained, after the State name, "Mount Desert Island," on the Seal of Maine, and the island is designated in the United States Government records as Mount Desert Island, by which the national park is variously reached, to meet without a break the National System of the mainland, and gives the park approach by motor full advantage of the latter.

When the ocean flooded this great valley by coastal subsidence, the mountain range itself is scarce above a dozen miles in length and seems, as geologists now read its story, to have once formed a part of the great submarine range beneath the ice sheet which made the Ice Age; but the ancient primary forms which the ice sheet plowed over them, the mountains they left, the valleys made, the ice sheet pushed back, the 100-mile-long Pocket Pond, the 200-mile-long sandy bottom of Long Lake, the 50-mile-long sandy bottom of Bass Harbor, the shoals that now lie in the North Bay, are there above the sea to reveal the story of the world we know, and of the world that was before the world we know. For the ancient rock structures, not only the 12,000-foot-high monolith of Cadillac Mountain, but the President Range, the Katahdin, the Tripp Range, the Blue Hill Range, the St. Mary's, the Jericho, the Sargent, the Grafton, the Porcupine, the Kennebec, the Ablocks, the Bowl, the Sacandaga, have a history back of them, a history of the world we know and the world that was.

And horses probably, remains of one having been found upon Marthas Vineyard Island, part of the mainland then and close to the valley's southern edge.

Mount Desert Island, with its magnificently resistant range of granite mountains thrown down rightward by the ice sheet's seaward course and scored on its seaward side by the ice sheet's glacial rivers, is so varied in its forms of the bedrock, from the rock of island, the granite of the main island, to the granite of the lesser island, that it forms a point of land where it is unique in the world, and the most interesting and instructive part of the United States.

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ENVIRONMENT AND PHYSICAL RELATIONS.

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That this area, with its early, intimate associations with the sea and the extraordinary opportunity it offers for future house-boat life upon it, should become, as the National Park Service plans, the representative New England national park, giving the ocean to the Nation's people for recreative purposes, is simply fitting. For the ocean is owned by all the people, and the United States, owning the coastline, has a trust responsibility for the public welfare. The same idea must animate the consideration of the establishment of a National Park on the site of Rye, New Hampshire, and the Long Island Sound. Rye is the land of Anna Haskell, the great American artist, the sculptor and author of so many fine works of art. The country is rich in history, and it is the place in which to commemorate the memory of its most illustrious citizen, Joseph Haskell, the first president of the United States. The park would be a fitting memorial to him and to the other great men who have contributed so much to the development of the country.

EL MORRO NATIONAL MONUMENT.

EVAN Z. VOOGT, Custospond, Ramah, N. Mex.

El Morro is a sheer cliff about 300 feet high and looks from a distance like a huge fortress, hence its name. On both sides of its smooth gray walls are many interesting pictographs of prehistoric Indians. The paintings cover the rock from the base to the top, and there are hundreds of pictures of deer, snakes, bears, wild sheep, moons and crescents, signs of lightning, and the swastika, human hands, and other strange symbols. They are executed in red, orange, and black cinnabar, and the carvings can be seen from the top of the rock as well as from the base. The symbols are carved into the rock in serial, seemingly telling a story no modern man has been able to translate.

No doubt the existence of these prehistoric glyphs and the fine spring at the cliff's edge led the early Spanish conquistadores to stop and make camp here in the primitive days of exploration. The cliffs are of Orthoconic quartzite, and the base is made of Zuni, while an interesting time can be spent in seeing this famous terraced city of the Zuni Pueblos.

At Gallup a new Fred Harvey hotel, known as El Navajo, offers accommodations and cuisine of the premier class to the traveling public. Automobiles with guides can be rented for visits to El Morro, and there are some 20 inscriptions dating back to the seventeenth and eighteenth centuries, which throw an historical importance around the monument which is bringing many travelers every year.

During the past year El Morro National Monument has been made more easily accessible to the traveling public.

The automobile road leading south from Gallup to El Morro or Inscription Rock, as it is most generally known, has been much improved, so that the trip can be made nicely in three to four hours by the way of Ramah, or in six hours by the way of Zuni, while an interesting time can be spent in seeing this famous terraced city of the Zuni Pueblos.

Translations of the most important inscriptions have been placed below the writings. Some are accompanied by short sketches giving the historical identity of the author.

The reservation was set aside by Executive order dated June 22, 1892, under the act approved June 30, 1891 (25 Stat. 661). The boundary of the reservation was changed, without notice to the area, by presidential proclamation of December 10, 1906. On April 30, 1915, the president of the United States proclaimed the monument as a national monument under authority of the act of Congress approved June 30, 1906 (34 Stat. 225), and the National Park Service created by the act of Congress approved August 25, 1916 (39 Stat. 353). A resident custodian was appointed for the first time in the latter part of 1901.

The Grant road offers perhaps the most scenic entrance to the country. Grant lies on the north side of the river, miles east of Gallup, and is also on the transcontinental highway for auto traffic. This road is signed from Santa Fe to Los Angeles, Cal. At Gallup a new Fred Harvey hotel, known as El Navajo, offers accommodations and cuisine of the premier class to the traveling public. Automobiles with guides can be rented for visits to El Morro, and there are some 20 inscriptions dating back to the seventeenth and eighteenth centuries, which throw an historical importance around the monument which is bringing many travelers every year.

One of the finest trips imaginable can be made by starting from Grant, going through the arroyo, and then passing around to the camp house, and also connects up the new road which has been improved and signed from Grant, N. Mex.

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The civilization which built the ruins throughout the Gila River and Salt River valleys, of which the Casa Grande is the only remaining example, is not known. Conservation estimates place about 400 miles of the Casa Grande, or Grand House, at from 6 to 800 years. This particular building to which most of the historic interest attaches, as the site of a fine hotel furnished accommodations. Auto traffic in the monument is steadily increasing. After the improvement of roads is effected the Petrified Forests of Arizona will be among the easiest accessible points of interest in the Southwest, and their scenic and geologic wonders justify an ever-increasing attendance of visitors.

CASA GRANDE NATIONAL MONUMENT.

FRANK PINKLEY, Custodian, Blackwater, Ariz.

The Casa Grande Ruin Reservation consists of 480 acres of land lying in the south-central part of Arizona at an altitude of 1,422 feet and is a typical spot of desert scenery, being level ground covered with a growth of mesquite, crotose bush, and salt bushes. The reservation was established by Executive order dated June 22, 1892, under the act approved June 30, 1891 (25 Stat. 661). The boundary of the reservation was changed, without notice to the area, by presidential proclamation of December 10, 1906. On April 30, 1915, the president of the United States proclaimed the monument as a national monument under authority of the act of Congress approved June 30, 1906 (34 Stat. 225), and the National Park Service created by the act of Congress approved August 25, 1916 (39 Stat. 353). A resident custodian was appointed for the first time in the latter part of 1901. During the year ending June 30, 1918, a chartered company was made, effective April 1, Mr. Frank Pinkley being appointed vice Mr. James F. Bates.

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PETRIFIED FOREST NATIONAL MONUMENT.

WILLIAM NELSON, Custodian, Adair, Ariz.

The Petrified Forest has during the past year undergone no noticeable changes. The archeological work is proceeding wonderfully in the prehistoric forest. Some surface oxidization is going on, but this is not detrimental, as it generally changes the colors of the petrified wood into still brighter hues.

The washing away of the soil in some portions of the log-beam strata unearths still more sections and fragments of the petrified logs. Thus the small specimens carried away by tourists have in no way impaired the monument.

IMPROVEMENT DURING THE PAST FISCAL YEAR.

A substantial support has been provided for the Natural Bridge; a heavy, reinforced concrete beam now supports this petrified log against breaking and tumbling into the water below. The support is strong enough to last for a long period of years, but a waterproofing paint should be applied to prevent the concrete from becoming unsightly.

ROADS.

The roads leading to and connecting the different forests are fairly in need of repair. The north end of the Agate Bridge at Westmoreland has been repaired and signed. The bridge has now been made passable for the auto traffic of the auto tourists, which lately have increased considerably in number, will be able to see the Second Forest with its brilliant coloring and also the Natural Bridge, the most notable sight in the monument.

The Third Forest is made passable and comfortable for the auto traffic. The automobile road leading south from Gallup to El Morro or Inscription Rock, as it is most generally known, has been much improved, so that the trip can be made nicely in three to four hours by the way of Ramah, or in six hours by the way of Zuni, while an interesting time can be spent in seeing this famous terraced city of the Zuni Pueblos.

The Petrified Forests are seen by visitors every month in the year; the climate of this part of Arizona enables the tourist to make his visit to the forest a delightful outing at any time of the year.

Tourists traveling by rail will find at Adamana auto stages making daily trips to the most attractive and interesting points in the forests; a hotel furnishes accommodations. Auto traffic in the monument is steadily increasing. After the improvement of roads is effected the Petrified Forests of Arizona will be among the easiest accessible points of interest in the Southwest, and their scenic and geologic wonders justify an ever-increasing attendance of visitors.
They seem to have lived in a true stone age, no metal implements having yet been discovered which can be attributed to them. They had an architecture well adapted to the climate and country, had well-developed canal systems, and practiced agriculture on a fairly large scale. They visited the country around them in all directions for from 1 to 200 miles.

Like all desert races they were probably well acquainted with the stars and an interesting theory has been built on a study of the constellations. The theory was that the stars were the abode of the gods. Hence it was believed that by observing the stars a person could determine the length of time necessary for a journey, and the order of the gods was thereby established.

The visitor to this reservation, aside from gaining an idea of a people who by adapting themselves to their environment built up a thriving population and existed for centuries under what seem to-day almost impossible conditions, will take away some accurate information concerning the ancient life of the people of the southwestern desert. At present the tourist stopping over in Tucson or Phoenix can have splendid hotel service and is able to make the round trip to the Casa Grande by motor in a day, the ride being made across the floor of the desert which is dotted with mountain chains. It is an ideal trip for fall hunting, and to the stranger from the point of desert vegetation and desert life. It is estimated that there were 3,150 visitors to the reservation during the past season.

Since 1907-8, when the last appropriation was obtained for excavation by direct action of Congress, no funds have been available for excavation or repair work, and the only money expended aside from the custodian's salary was for some minor repairs on the house and the installation of a tank and pump at the well. No funds have been available so there have been no expenditures during the year ending June 30, 1918.

Since the change in the custodianship plans have been outlined looking to the betterment of conditions from the visitors' standpoint, and we hope during the next year to do some cleaning up, grading, and some inexpensive repair work, all lacking to the preservation and care of the ancient buildings; to get up signs on the desert roads, so that visitors may easily find their way; to provide pleasant parking places for automobile parties and to provide a rest house for the convenience and comfort of visitors. We will also try to gather a library along the lines of archaeology, ethnology, and the early history of the Southwest, so that the interested visitor may find the data at hand for extending his investigations should he consider it worth while.

We plan later to fence the reservation and develop a water supply sufficient to irrigate part of the grounds so we may be able to grow a good contour map of the reservation should be prepared and a final plan of the location of houses, outbuildings, and grounds should be laid out by a competent architect and landscape gardener, so that every improvement we may make, however small, might take its place in the complete plan.

ZION NATIONAL MONUMENT.

WALTER REICH, Custodian, Springdale, Utah.

The active service of the custodian of the monument dates from the 12th of August, 1918, hence a very full report of the conditions for the past year can not be expected. The climate of this locality is so mild that tourists were visiting the monument all winter. At least 100 cars, averaging three tourists each, visited the monument between the closing of the Wylie Camp, October 28, 1917, and the opening of the camp, June 8, 1918.

This season up to October 12, 469 visitors registered in the monument. Tourist travel was limited for the following reasons: First, due to war conditions, the Government Railroad Administration prevented the Los Angeles & Salt Lake Railroad, which fosters this enterprise, from advertising or encouraging tourist travel. This has reduced the patronage of the resort to persons traveling with their own cars. Second, the condition of the roads has not been encouraging. The road to the monument is now, the reservation being 20 miles off the automobile highway known as the Arrowhead Trail. An unusual amount of rain this season has added to the hindrance of travel. The roads will be better in the future because of age and the settling of the roadbed and the assurance of repair and new work.

The Government road within the monument is in excellent condition. Sufficient money has been available the present season to permit of surfacing the sandy portions of the road with hard material. Favorable comment is made by all visitors since this has been done.

The Wylie Camp is equipped for the comfortable care of a much larger patronage than has yet been afforded it. Guests are unanimous in their praise of the treatment and accommodations given them.

SCENIC BEAUTY OF THE MONUMENT.

All visitors are profuse in their praise of the beauties of the scenery of the canyon. Very favorable comparison is made with other national resorts. The shutting out of all stock from grazing or ranging in the monument the present season has added to the beauty of the resort. A very marked change in the appearance of the foliage is manifest to all.

GAME OR WILD ANIMALS.

Deer have been frequently seen in the valley this summer, and we believe that the increase in vegetation, the absence of domestic animals, and the prevention of the use of fire have resulted in increasing the number of wild animals, to such an extent as to make it possible for the visitor to see them much more frequently. This will doubtless become a favored winter resort for such animals.

TRAILS TO RIM OF CANYON.

When trails are completed to the east and west rims of the canyon, so that tourists may be able to view the wonderful walls from the top, great interest will be added to the visitors' stay in the monument. Such trails will be perfected in the near future. One already is in use to the summit of east wall.

AS A REST RESORT.

The excellent medicinal water with which the camp is supplied and the wonderfully quiet, restful atmosphere of the locality is going to make this a haven for persons afflicted with nervous troubles and for persons needing rest from any cause. May 1 and November 15 should mark the limit of the weather conditions ideal for recreation in this resort.

CAMPS WITH THEIR OWN OUTFITS.

Because of the soft, sandy soil everywhere present in the canyon, there should be grounds prepared by surfacing with hard material as camp sites for persons carrying their own camping equipment. This we hope to see accomplished before long.

DISTANCE FROM RAILROAD.

From Lund, the nearest station on the Salt Lake Route Railroad, to the Wylie Camp is 100 miles. This is covered by the stages of the National Park Transportation & Camping Co. in eight hours, including a stop at Cedar City en route for lunch. The auto-stage service is first class.

CLIFF DWELLINGS.

A horseback trip of one day takes visitors from the Wylie Camp to an ancient cliff-dwelling ruin located up the south branch of the Virgin River—the Paranuweap.

There are six rooms in this group. Many go to this interesting relic of a long-ago, little-known race of American inhabitants.

THE FENCE AT ENTRANCE.

Since the erection of the fence at entrance to the canyon there has been little trouble with stock, which had hitherto roamed at will in the monument. It is gratifying to notice with what cheerful willingness the owners of stock have conformed to these regulations. Near-by residents who formerly not only used the canyon for grazing but also for farming purposes have shown a commendable pride in doing all in their power to assist making Zion Canyon a popular and attractive tourist resort.
APPENDIX C.

STATISTICS.

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## Statistics.

**Visitors to Parks, 1905-1918.**

<table>
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<th>Name of Park</th>
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<td>11,645</td>
<td>13,231</td>
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<td>2,751</td>
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<td>3,216</td>
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<td>$25,000</td>
<td>$30,000</td>
<td>$35,000</td>
<td>$30,000</td>
<td>$30,000</td>
<td>$35,000</td>
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<td>$80</td>
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<td>250</td>
<td>206</td>
<td>290</td>
<td>290</td>
<td>502</td>
<td>663</td>
<td>1,083</td>
<td>2,223</td>
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<tr>
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<td>(1)</td>
<td>$80</td>
<td>165</td>
<td>250</td>
<td>206</td>
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<td>1,083</td>
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<td>(1)</td>
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<td>(1)</td>
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<td>(1)</td>
<td>(1)</td>
<td>$8,500</td>
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<td>$2,000</td>
<td>$2,000</td>
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<td>(1)</td>
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<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
</tr>
<tr>
<td>Mount McKinley National Park</td>
<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
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<td>(1)</td>
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<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
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<td>(1)</td>
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</table>

| Total                            | 140,054  | 39,569   | 61,335   | 69,018   | 86,989   | 198,606  | 224,407  | 229,534  | 252,153  | 249,193  | 335,299  | 358,006  | 490,705  | 454,841  |

¹ No record.
² Estimated.
³ By Presidential proclamation, Aug. 3, 1918, made a national monument.
Automobile and motorcycle licenses issued during seasons, 1914–1918.

<table>
<thead>
<tr>
<th>Name of park</th>
<th>1914</th>
<th>1915</th>
<th>1916</th>
<th>1917</th>
<th>1918</th>
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<tr>
<td>Yellowstone</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Sequoia 5</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
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<tr>
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<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
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<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Mount Rainier</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Crater Lake</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Glacier</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
</tbody>
</table>

Total: 7,000

1 All parks open to motorcycle season of 1918.
2 No license required for Wind Cave, Hot Springs, Platts, Hawaii, Lassen Volcanic, Sullys Hill, and Rocky Mountain National Parks. No roads in Mount McKinley Park.
3 Number of licenses formally reported to Washington, to and including Oct. 10, 1918.
4 Licenses only for Giant Forest Road.
5 By regulation of May 1, 1917, single-trip license abolished and all permits made good for entire season.
6 Total entered the national parks during seasons, 1916–1918.

Receipts collected from automobiles and motorcycles during seasons, 1914–1918.

<table>
<thead>
<tr>
<th>Name of park</th>
<th>1914</th>
<th>1915</th>
<th>1916</th>
<th>1917</th>
<th>1918</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellowstone</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Sequoia</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Yosemite</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>General Grant</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Mount Rainier</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Crater Lake</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Glacier</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
</tbody>
</table>

Total: 7,000

1 All parks open to motorcycle season of 1918.
2 No license required for Wind Cave, Hot Springs, Platts, Hawaii, Lassen Volcanic, Sullys Hill, and Rocky Mountain National Parks. No roads in Mount McKinley Park.
3 Number of licenses formally reported to Washington, to and including Oct. 10, 1918.
4 Licenses only for Giant Forest Road.
5 By regulation of May 1, 1917, single-trip license abolished and all permits made good for entire season.
6 Total entered the national parks during seasons, 1916–1918.

National park and monument areas administered by the National Park Service in relation to the States and Territories in which they are located.

<table>
<thead>
<tr>
<th>State or Territory</th>
<th>Area</th>
<th>Parks and monuments</th>
<th>Relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Arizona</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>California</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Colorado</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Hawaii</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Idaho</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Maine</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
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<tr>
<td>Montana</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>New Mexico</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
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<tr>
<td>North Dakota</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Oregon</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>South Dakota</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Utah</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
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<tr>
<td>Washington</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Wyoming</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
</tbody>
</table>

1 Area of the Islands of Hawaii and Maui on which are located the Hawaii National Park.

Private automobiles entering the national parks during seasons, 1916–1918.

<table>
<thead>
<tr>
<th>Name of park</th>
<th>1916</th>
<th>1917</th>
<th>1918</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellowstone</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Sequoia</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
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<tr>
<td>Yosemite</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
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<tr>
<td>General Grant</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Mount Rainier</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Crater Lake</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
</tbody>
</table>

Total: 7,000

1 Private automobiles entering with or without licenses, to and including Oct. 12, 1918.
2 By Presidential proclamation, Aug. 3, 1918, made a national monument. No license required.
3 No license required.
4 License required only for Giant Forest Road.
5 Estimated.
National park and monument areas administered by the National Park Service in relation to the national forests, including national monuments administered by the Forest Service.

<table>
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<tr>
<th>State or Territory</th>
<th>National forests</th>
<th>Parks and monuments</th>
<th>Relation</th>
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<tr>
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<tr>
<td>Wyoming</td>
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<tr>
<td>Total</td>
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</table>

Statement of appropriations made for, and received revenues from, the various national parks and national monuments, and expenditures made therefor during the fiscal years 1907-1919, inclusive; also appropriations for the fiscal year 1919.

<table>
<thead>
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<th>Name of the national park</th>
<th>Appropriations</th>
<th>Revenues</th>
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<td>Appropriated</td>
<td>Expended</td>
</tr>
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<td></td>
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<td>Expended</td>
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| General Grant:            |              |          |
| 1901:                     | 2,058.85     |          |
| 1902:                     | 2,000.00     |          |
| 1903:                     | 2,000.00     |          |
| 1904:                     | 2,000.00     |          |
| 1905:                     | 2,000.00     |          |
| 1906:                     | 2,000.00     |          |
| 1907:                     | 2,000.00     |          |
| 1908:                     | 2,000.00     |          |
| 1909:                     | 2,000.00     |          |
| 1910:                     | 2,000.00     |          |

Note: Figures not available.
* Proceeds from sale of Government lots (lot fund).
* Expenditures from lot fund.
* Includes $1,272.71 expended in making survey and preparation of plans, etc., for sewer system of city of Hot Springs.
* Contributions by city of Hot Springs on account of sewer system, $14.20 returned to city.
MAP OF WESTERN PORTION OF THE UNITED STATES, SHOWING RELATION OF THE NATIONAL PARK AND MONUMENT AREAS TO THE SEVERAL STATES, THE PUBLIC LANDS, AND THE NATIONAL FORESTS.
### Statement of appropriations made for, and received revenues from, the various national parks and national monuments, etc.—Continued.

<table>
<thead>
<tr>
<th>Name of the national park</th>
<th>Appropriations</th>
<th>Revenues</th>
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<th>Revenues</th>
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</table>

1 No appropriation made for Mount Rainier prior to 1897.
2 Figures not available.
3 No appropriation made for the Wind Cave National Park prior to 1914.
4 No appropriation made for the Glacier National Park prior to 1919.
5 Construction sanitary sewer, like amount being contributed by the city of Sulphur, Okla.: $7,300.00 returned to city.
6 Under the Smithsonian Institution.
7 Under the Department of the Interior.

### Report Director National Park Service.

<table>
<thead>
<tr>
<th>Name of the national park</th>
<th>Appropriations</th>
<th>Revenues</th>
<th>Appropriations</th>
<th>Revenues</th>
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</table>

1 No appropriation made for the Mesa Verde National Park prior to 1907.
2 No appropriation made for the Glacier National Park prior to 1919.
3 No appropriation made for the Rocky Mountain National Park prior to 1918.
4 No appropriation made for the Mesa Verde National Park prior to 1907.
5 Expended under direction of Smithsonian Institution.
6 Expended under direction of the Commissioner of the General Land Office, except $6,000 as noted under the Smilsonian Institution.
7 Expended under direction of Smilsonian Institution.

#### National Park Service

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
<th>Appropriation</th>
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<tbody>
<tr>
<td>1917</td>
<td>National Park Service in the District of Columbia, deficiency act of Apr. 17, 1917 (40 Stats., 2, 20)</td>
<td>$3,666.67</td>
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<td>National Park Service in the District of Columbia, sundry civil act of June 12, 1917 (40 Stats., 105, 151)</td>
<td>17,600.00</td>
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<td>1919</td>
<td>National Park Service in the District of Columbia, sundry civil act of July 1, 1918 (Public No. 181, 66th Cong.)</td>
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<td>Total</td>
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<td>40,466.67</td>
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</table>

1903. Purchase of buffalo and providing corral and feed, deficiency act of July 1, 1902 (32 Stats., 574) .................................................. $15,000.00
1904. Administration and protection (including $2,500 for maintenance of buffalo), sundry civil act of Mar. 1, 1904 (33 Stats., 1139) .................. 7,780.44
1905. Administration and protection (including $2,500 for maintenance of buffalo), sundry civil act of Apr. 28, 1904 (33 Stats., 487) ............... 7,500.00
1906. Administration and protection (including $2,500 for maintenance of buffalo), sundry civil act of June 30, 1906 (34 Stats., 743) ........... 1,140.30
1907. Administration and protection (including $2,500 for maintenance of buffalo), sundry civil act of Mar. 3, 1907 (34 Stats., 1188) ............... 7,500.00
1908. Administration and protection (including $2,500 for maintenance of buffalo), sundry civil act of Apr. 10, 1908 (35 Stats., 1179) ............ 8,000.00
1909. Administration and protection (including $2,500 for maintenance of buffalo, and $2,500 for surveying and marking unmonumented portions of park boundaries), sundry civil act of Mar. 3, 1909 (35 Stats., 1003) . 10,500.00
1910. Administration and protection (including $2,500 for maintenance of buffalo), sundry civil act of Mar. 10, 1910 (36 Stats., 800) .............. 8,000.00
1911. Administration and protection (including $5,000 for maintenance of buffalo), sundry civil act of June 21, 1911 (36 Stats., 745) .......... 8,500.00
1912. Administration and protection (including $5,000 for maintenance of buffalo), sundry civil act of Aug. 24, 1912 (37 Stats., 400) .......... 8,500.00
1913. Administration and protection (including $5,000 for maintenance of buffalo), sundry civil act of June 3, 1913 (38 Stats., 49) ............. 8,500.00
1914. Administration and protection (including $5,000 for maintenance of buffalo), sundry civil act of June 13, 1914 (38 Stats., 648) .......... 8,500.00
1915. Administration and protection (including $5,000 for maintenance of buffalo), sundry civil act of Aug. 1, 1915 (38 Stats., 802) ............ 8,500.00
1916. Administration and protection (including $3,000 for maintenance of buffalo), sundry civil act of July 1, 1916 (39 Stats., 297) ............. 8,500.00
1917. Administration and protection (including $5,000 for maintenance of buffalo), sundry civil act of June 12, 1917 (40 Stats., 105, 151) ........ 10,500.00
1918. Administration and protection (including $5,000 for maintenance of buffalo), sundry civil act of June 12, 1918 (40 Stats., 151) ........ 8,500.00
1919. Administration, protection, maintenance, and improvement (including $15,000 for maintenance of roads leading to park gateways through forest reserves east and south, $25,000 for repair of damage caused by flood waters to road leading through east forest reserve and park to Lake Hotel, $15,400 for widening approach roads, and $50,000 for a new road around the Gardiner Slide), sundry civil act of July 1, 1918 (Public No. 181, 65th Cong.) ............................................. 334,920.00

Total .................................................................................................................. 717,427.98

* Improvement appropriations of these years were expendable by the War Department.
1913. Maintenance and repair of improvements in park, sundry civil act of Aug. 24, 1912 (37 Stats., 442)

Widening and improving surface of roads for building bridges and culverts to make roads suitable and safe for animal-drawn and motor-propelled vehicles, sundry civil act of Aug. 24, 1912 (37 Stats., 442)

$100,000.00

1914. Maintenance and repair of improvements in park, sundry civil act of June 23, 1913 (38 Stats., 35)

Widening and improving surface of roads for building bridges and culverts to make roads suitable and safe for animal-drawn and motor-propelled vehicles, sundry civil act of June 23, 1913 (38 Stats., 35)

$75,000.00

1915. Maintenance and repair of improvements, sundry civil act of Aug. 1, 1914 (38 Stats., 632)

Widening to not exceeding 15 feet, and improving surface of roads, and for building bridges and culverts in the park to make such roads suitable and safe for animal-drawn and motor-propelled vehicles, sundry civil act of Aug. 1, 1914 (38 Stats., 632)

$100,000.00


Widening and improving surface of roads, for building bridges and culverts in the forest reserve leading out of the park from the east boundary to make such roads suitable and safe for animal-drawn and motor-propelled vehicles, sundry civil act of Mar. 3, 1915 (38 Stats., 463)

$30,000.00

1917. Maintenance and repair of improvements, sundry civil act of July 1, 1916 (39 Stats., 288)

For completing the widening to not exceeding 18 feet of roadway and improving the surface of roads and for building bridges and culverts in the forest reserve leading out of the park from the east boundary, and to make such roads suitable and safe for animal-drawn and motor-propelled vehicles, sundry civil act of July 1, 1916 (39 Stats., 288)

$102,500.00

1918. For maintenance and repair of improvements, sundry civil act of June 12, 1917 (40 Stats., 105, 138)

For resurfacing and for finishing the belt line with oil macadam, sundry civil act of June 12, 1917 (40 Stats., 105, 138)

$20,000.00

Total: $3,213,065.86

RECAPITULATION

Appropriations under the Interior Department, 1879 to 1919, inclusive: $717,427.98

Appropriations under the War Department, 1888 to 1918, inclusive: $3,213,065.86

Total: $3,930,523.84

REPORT DIRECTOR—NATIONAL PARK SERVICE,

YOSEMITE NATIONAL PARK, CAL.

[From Oct. 1, 1890, to July 1, 1891, no appropriations for the park were made by Congress.]

1899. For improvement, sundry civil act of July 1, 1898 (30 Stats., 624): $4,000.00

1900. For improvement, sundry civil act of Mar. 3, 1899 (30 Stats., 1100): $4,000.00

1901. Protection and improvement, sundry civil act of June 6, 1900 (31 Stats., 618): $4,000.00

1902. Protection and improvement, sundry civil act of Apr. 23, 1901 (31 Stats., 1162): $4,000.00

1903. Protection and improvement, sundry civil act of June 28, 1902 (32 Stats., 495): $6,000.00

1904. Protection and improvement, sundry civil act of Aug. 3, 1905 (32 Stats., 1119): $6,000.00

1905. Protection and improvement, sundry civil act of Apr. 28, 1904 (33 Stats., 457): $5,400.00

1906. Protection and improvement, sundry civil act of Mar. 3, 1905 (33 Stats., 1188): $5,400.00

1907. Management, protection, and improvement, joint resolution of Mar. 3, 1905 (33 Stats., 1286): $20,000.00

1908. Protection and improvement, sundry civil act of June 30, 1906 (34 Stats., 729): $5,750.00

1909. Protection and improvement, sundry civil act of Oct. 3, 1907 (34 Stats., 1397): $30,000.00

1910. Protection and improvement, sundry civil act of May 27, 1908 (35 Stats., 831): $30,000.00

1911. Protection and improvement, sundry civil act of Mar. 4, 1909 (36 Stats., 900): $30,000.00

1912. Protection and improvement, sundry civil act of June 25, 1910 (36 Stats., 745): $62,000.00

1913. For examination of water supply in the Yosemite National Park for the city of San Francisco, sundry civil act of June 25, 1910 (36 Stats., 745): $12,000.00

1914. Protection and improvement, construction and repair of bridges, fences, and trails, and improvement of roads other than toll roads, sundry civil act of Mar. 4, 1911 (36 Stats., 1420): $50,000.00

1915. Protection and improvement, construction and repair of bridges, fences, and trails, and improvement of roads other than toll roads, sundry civil act of Aug. 24, 1915 (37 Stats., 460): $80,000.00

1916. Protection and improvement, construction and repair of bridges, fences, and trails, and improvement of roads other than toll roads, sundry civil act of Aug. 1, 1914 (38 Stats., 649): $125,000.00

1917. Protection and improvement, construction and repair of bridges, fences, and trails, and improvement of roads other than toll roads, including not exceeding $2,700 for maintenance and repair of horse-drawn passenger carrying vehicles, sundry civil act of Mar. 3, 1915 (38 Stats., 865): $75,000.00

*Created by act of Oct. 1, 1890 (26 Stats., 650); boundaries changed by act of Feb. 7, 1905 (33 Stats., 702), and joint resolution of June 11, 1906 (34 Stats., 831), the latter accepting reception of Yosemite Valley from the State of California.
1916. To cover claim of Crane Co. for water system supplies as reported in House Document 1779, Sixty-third Congress, third session, deficiency act of Mar. 4, 1915 (38 Stats., 1137) $196.00

1917. Protection and improvement, construction and repair of bridges, fences, and trails, and improvement of roads other than toll roads, including not exceeding $500 for maintenance and repair of horse-drawn passenger-carrying vehicles, not exceeding $75,000 for grading in width not exceeding 20 feet El Portal-Yosemite road, and not exceeding $150,000 for installation of a hydroelectric power plant, sundry civil act of March 1, 1916 (38 Stats., 358) 250,000.00

1918. For protection and improvement, construction and repair of bridges, fences, and trails, and improvement of roads other than toll roads, including $8,000 for a bridge at the old Sentinel Bridge site, and not exceeding $75,000 for grading in width not exceeding 20 feet El Portal-Yosemite road; also not exceeding $50,000 for the completion of the installation of the hydroelectric power plant authorized by the sundry civil act for the fiscal year 1917, sundry civil act of June 12, 1917 (40 Stats., 166, 167) in all 235,000.00

1919. For protection and improvement, including $15,000 for a new bridge on Sentinel Bridge site and $75,000 for continuing reconstruction of El Portal-Yosemite Road, sundry civil act of July 1, 1918 (Public No. 181, 65th Cong.) 250,000.00

Total 1,389,790.05

**Specific appropriations by Congress from the revenue fund of Yosemite Park.**

1916. For administration and improvement, construction and repair of roads, trails, bridges, and telephone lines, including necessary repairs to the roads from Glacier Park station through the Blackfeet Indian Reservation to various points in the boundary line of the park, and for the purchase and maintenance of horse-drawn and motor-driven passenger-carrying vehicles for the use of the supervisor, and employees in connection with general park work, sundry civil act of June 12, 1917 (40 Stats., 165, 166) $115,000.00

1917. For administration and improvement, including necessary repairs to the roads from Glacier Park station through the Blackfeet Indian Reservation to various points in the boundary line of Glacier National Park, sundry civil act of July 1, 1918 (Public No. 181, 65th Cong.) 80,000.00

Total 295,000.00

**SEQUOIA NATIONAL PARK, CAL.**

[From Sept. 25, 1890, to June 6, 1900, no appropriations for the park were made by Congress.]

1901. Protection and improvement, sundry civil act of June 6, 1900 (31 Stats., 618) $10,000.00

1902. Protection and improvement, sundry civil act of March 3, 1903 (31 Stats., 1162) 10,000.00

1903. Protection and improvement, sundry civil act of June 28, 1904 (32 Stats., 496) 10,000.00

1904. Protection and improvement, sundry civil act of March 3, 1905 (32 Stats., 1119) 10,000.00

1905. Protection and improvement, sundry civil act of April 28, 1904 (33 Stats., 487) 10,000.00

1906. Protection and improvement, sundry civil act of March 3, 1905 (33 Stats., 1158) 10,000.00

1907. Protection and improvement, sundry civil act of June 30, 1906 (34 Stats., 729) 10,000.00

1908. Protection and improvement, sundry civil act of April 4, 1907 (34 Stats., 1307) 10,000.00

1909. Protection and improvement, sundry civil act of May 27, 1908 (35 Stats., 351) 15,550.00

1910. Protection and improvement, sundry civil act of April 25, 1909 (35 Stats., 609) 15,550.00

1911. Protection and improvement, sundry civil act of June 25, 1910 (36 Stats., 745) 15,550.00

1912. Protection and improvement, construction and repair of bridges, fences, and trails, sundry civil act of April 11, 1911 (36 Stats., 1421) 15,550.00

1913. Protection and improvement, construction and repair of bridges, fences, and trails, and improvement of roads other than toll roads, sundry civil act of August 24, 1912 (37 Stats., 469) 15,550.00

1914. Protection and improvement, construction and repair of bridges, fences, and trails, and improvement of roads other than toll roads, sundry civil act of June 23, 1913 (38 Stats., 499) 15,550.00

1915. Protection and improvement, construction and repair of bridges, fences, and trails, and improvement of roads other than toll roads, sundry civil act of August 24, 1914 (39 Stats., 882) 15,550.00

1916. Protection and improvement, construction and repair of bridges, fences, and trails, and improvement of roads other than toll roads, including the purchase of site for ranger station not to exceed $500, sundry civil act of March 3, 1915 (38 Stats., 883) 15,550.00

1 Created by acts of Sept. 25, 1890 (26 Stats., 478), and Oct. 1, 1899 (26 Stats., 650).
### REPORT DIRECTOR NATIONAL PARK SERVICE.

#### 1901. Protection and improvement, construction of fences and trails, and improvement of roads other than toll roads, sundry civil act of July 1, 1901 (32 Stats., 456) $2,500.00

#### 1902. Protection and improvement, sundry civil act of Mar. 3, 1902 (32 Stats., 507) $2,500.00

#### 1903. Protection and improvement, sundry civil act of June 28, 1902 (32 Stats., 550) $2,500.00

#### 1904. Protection and improvement, sundry civil act of Mar. 3, 1903 (32 Stats., 1119) $2,000.00

For survey of necessary trails, sundry civil act of June 12, 1917 (40 Stats., 152) 25,000.00

Total $337,849.69

### GENERAL GRANT NATIONAL PARK, CAL.

[From Oct. 1, 1890, to June 6, 1900, no appropriations for the park were made by Congress.]

1901. Improvement of park, sundry civil act of June 6, 1900 (31 Stats., 618) $2,500.00

1902. Protection and improvement, sundry civil act of Mar. 3, 1901 (31 Stats., 1162) 2,500.00

1903. Protection and improvement, sundry civil act of June 28, 1902 (32 Stats., 456) $2,500.00

1904. Protection and improvement, sundry civil act of Mar. 3, 1903 (32 Stats., 1119) $2,000.00

1905. Protection and improvement, sundry civil act of Apr. 28, 1904 (33 Stats., 457) $2,000.00

1906. Protection and improvement, sundry civil act of Mar. 3, 1905 (33 Stats., 1158) $2,000.00

1907. Protection and improvement, sundry civil act of June 30, 1906 (34 Stats., 729) $2,000.00

1908. Protection and improvement, sundry civil act of Mar. 4, 1907 (34 Stats., 1337) $2,000.00

1909. Protection and improvement, sundry civil act of May 27, 1908 (35 Stats., 331) $2,000.00

1910. Protection and improvement, sundry civil act of Apr. 28, 1909 (35 Stats., 900) $2,000.00

1911. Protection and improvement, sundry civil act of June 25, 1910 (36 Stats., 745) $2,000.00

1912. Protection and improvement, sundry civil act of Mar. 3, 1911 (36 Stats., 1421) $2,000.00

1913. Protection and improvement, construction of fences and trails, and repairing and extension of roads, sundry civil act of Mar. 4, 1912 (37 Stats., 450) $2,000.00

1914. Protection and improvement, construction of fences and trails, and repairing and extension of roads, sundry civil act of Aug. 24, 1912 (37 Stats., 460) $2,000.00

1915. Protection and improvement, construction of fences, and trails, and improvement of roads, sundry civil act of June 12, 1913 (38 Stats., 152) 10,000.00

1916. Protection and improvement, construction of bridges, fences, and trails, and improvement of roads, sundry civil act of Aug. 1, 1914 (38 Stats., 69) $51,000.00

1917. Protection and improvement, construction of bridges, fences, and trails, and improvement of roads, sundry civil act of Aug. 1, 1915 (38 Stats., 683) $30,000.00

1918. Protection and improvement, construction of bridges, fences, and trails, and improvement of roads, sundry civil act of July 1, 1916 (39 Stats., 308) $30,000.00

1919. Protection and improvement, construction of roads, bridges, fences, and trails, and improvement of roads, including not exceeding $1,250 for the purchase of a motor-driven vehicle and the maintenance and repair thereof, sundry civil act of June 12, 1917 (40 Stats., 152) 75,000.00

1920. For protection and improvement, construction of roads, bridges, fences, and trails, and improvement of roads, sundry civil act of July 1, 1918 (Public No. 181, 65th Cong.) $24,600.00

Total $278,500.00

#### UNDER INTERIOR DEPARTMENT.

1907. Protection and improvement, sundry civil act of June 30, 1906 (34 Stats., 729) $2,500.00

1908. Protection and improvement, sundry civil act of Mar. 4, 1907 (34 Stats., 1357) $3,000.00

1909. Protection and improvement, sundry civil act of June 25, 1908 (35 Stats., 331) $3,000.00

1910. Protection and improvement, sundry civil act of Mar. 4, 1909 (35 Stats., 901) $3,000.00

1911. Protection and improvement, sundry civil act of June 25, 1910 (36 Stats., 745) $3,000.00

1912. Protection and improvement, construction of bridges, fences, and trails, and improvement of roads, sundry civil act of June 28, 1912 (37 Stats., 450) $2,000.00

1913. Protection and improvement, construction of bridges, fences, and trails, and improvement of roads, sundry civil act of July 26, 1913 (38 Stats., 369) $13,400.00

1914. Protection and improvement, construction of bridges, fences, and trails, and improvement of roads, sundry civil act of June 28, 1914 (38 Stats., 69) $51,000.00

1915. Protection and improvement, construction of bridges, fences, and trails, and improvement of roads, sundry civil act of Aug. 1, 1915 (38 Stats., 683) $30,000.00

1916. Protection and improvement, construction of bridges, fences, and trails, and improvement of roads, sundry civil act of Mar. 3, 1915 (38 Stats., 803) $30,000.00

1917. Protection and improvement, construction of bridges, fences, and trails, and improvement of roads, including not exceeding $1,250 for the purchase of a motor-driven vehicle and the maintenance and repair thereof, sundry civil act of Aug. 24, 1912 (37 Stats., 450) $2,000.00

1918. For protection and improvement, construction of roads, bridges, fences, and trails, and improvement of roads, sundry civil act of July 1, 1918 (Public No. 181, 65th Cong.) $24,600.00

Total $278,500.00

#### UNDER WAR DEPARTMENT.

1903. Survey of most practicable route for wagon road into park and toward construction of said road after survey shall have been made, deficiency act of Mar. 3, 1903 (32 Stats., 1162) $10,000.00

### MOUNT RAINIER NATIONAL PARK, WASH.


2. By the act of Aug. 14, 1911 (37 Stats., 38), the above-mentioned appropriation was reduced to $5,000.
1904. Continuing construction wagon road, sundry civil act of Apr. 28, 1904 (33 Stats., 498) $30,000.00
1906. Continuing construction wagon road, sundry civil act of June 30, 1906 (34 Stats., 744) 50,000.00
1907. Continuing construction wagon road, sundry civil act of Mar. 4, 1907 (34 Stats., 1349) 50,000.00
1908. Continuing construction wagon road, sundry civil act of May 27, 1908 (35 Stats., 365) 50,000.00
1909. Completion of wagon road, sundry civil act of Mar. 4, 1909 (35 Stats., 1005) 25,000.00
1910. Additional work upon wagon road, sundry civil act of June 23, 1910 (36 Stats., 729) 25,000.00

Total 240,000.00

RECAPITULATION.

Appropriations under the Interior Department, 1907 to 1919, inclusive 273,500.00
Appropriations expended under the War Department, 1903 to 1910, inclusive 240,000.00

Total 513,500.00

CRATER LAKE NATIONAL PARK, OREG.

1902 and 1903. Protection and improvement, deficiency act of July 1, 1902 (32 Stats., 571) 2,000.00
1904. Protection and improvement, sundry civil act of Mar. 3, 1904 (32 Stats., 1119) 2,000.00
1905. Protection and improvement, sundry civil act of Apr. 28, 1905 (33 Stats., 487) 3,000.00
1906. Protection and improvement, sundry civil act of Mar. 3, 1906 (33 Stats., 1188) 3,000.00
1907. Protection and improvement, sundry civil act of June 30, 1907 (34 Stats., 729) 8,315.00
1908. Protection and improvement, sundry civil act of Mar. 4, 1907 (34 Stats., 1337) 7,315.00
1909. Protection and improvement, sundry civil act of May 27, 1909 (34 Stats., 251) 3,000.00
1910. Protection and improvement, sundry civil act of Mar. 4, 1910 (35 Stats., 991) 2,500.00
1911. Protection and improvement, sundry civil act of June 25, 1911 (36 Stats., 745) 3,000.00
1912. Protection and improvement, sundry civil act of Mar. 4, 1912 (37 Stats., 1421) 3,000.00
1913. Protection and improvement, sundry civil act of Aug. 24, 1913 (37 Stats., 490) 3,000.00
1914. Protection and improvement and repairing and extension of roads, sundry civil act of June 23, 1914 (38 Stats., 1119) 7,540.00
1915. Protection and improvement and repairing and extension of roads, sundry civil act of Aug. 1, 1915 (38 Stats., 649) 8,040.00
1916. Protection and improvement and repairing and extension of roads, sundry civil act of Mar. 3, 1915 (38 Stats., 507) 8,000.00
1917. Protection and improvement and repairing and extension of roads, sundry civil act of July 1, 1917 (39 Stats., 905) 8,000.00
1918. Protection and improvement and repairing and extension of roads, sundry civil act of June 12, 1918 (39 Stats., 1217) 15,000.00
1919. For protection and improvement and repairing and extension of roads, sundry civil act of July 1, 1919 (Pub. No. 181, 65th Cong.) 13,225.00

Total 55,120.00

* Created by act of May 22, 1902 (32 Stats., 202).
1911. Protection and improvement, sundry civil act of June 25, 1910 (36 Stats., 745) $2,500.00

1912. Management, improvement, and protection, sundry civil act of Mar. 4, 1911 (35 Stats., 1421) $2,500.00

1913. No appropriation made.

1914. Improvement and protection, sundry civil act of June 23, 1913 (38 Stats., 568) $2,500.00

1915. Protection and improvement, sundry civil act of Aug. 1, 1914 (38 Stats., 963) $2,500.00

1916. Protection and improvement, sundry civil act of Mar. 3, 1915 (38 Stats., 863) $2,500.00

1917. Protection and improvement, sundry civil act of July 1, 1915 (39 Stats., 268) $2,500.00

1918. For improvement and protection, sundry civil act of June 12, 1917 (40 Stats., 105, 152) $2,500.00

1919. For improvement and protection, sundry civil act of July 1, 1919 (Public No. 181, 65th Cong.) 4,000.00

Total.................................................. 40,900.00

UNDER DEPARTMENT OF AGRICULTURE.

1913. For the establishment of a national game preserve, to be known as the Wind Cave National Game Preserve, upon the land embraced within the boundaries of the Wind Cave National Park, in the State of South Dakota, for a permanent national range for a herd of buffalo to be presented to the United States by the American Bison Society, and for such other native American game animals as may be placed therein. The Secretary of Agriculture is authorized to acquire by purchase or condemnation such adjacent lands as may be necessary for the purpose of securing an adequate permanent water supply, and to inclose the said game preserve with a good and substantial fence and to erect thereon all necessary sheds and buildings for the proper care and maintenance of the said animals, to be available until expended, Agricultural act of August 10, 1912 (37 Stats., 293) $26,000.00

RECAPITULATION.

Appropriations under the Interior Department, 1904 to 1910, inclusive.................. 40,900.00
Appropriation expended under the Department of Agriculture, appropriated for the fiscal year 1913 and made available until expended................................. 26,000.00

Total.................................................. 66,900.00

MESA VERDE NATIONAL PARK, COLO.\*

1909. Protection and improvement, sundry civil act of Mar. 4, 1907 (34 Stats., 1337) $7,500.00

1909. Protection and improvement, sundry civil act of May 27, 1908 (35 Stats., 561) 7,300.00

1910. Protection and improvement, sundry civil act of Mar. 4, 1909 (35 Stats., 900) 7,500.00

1911. Protection and improvement, inclusive of $12,500 reserved within appropriation for construction of main wagon road through the park, sundry civil act of June 25, 1910 (36 Stats., 745) 20,000.00

For examination and leasing, etc., of coal lands in the park, deficiency act of June 25, 1910 (36 Stats., 796) 2,000.00

Total.................................................. 97,180.00

SULLYS HILL PARK, N. DAK.\*

Under the Department of the Interior.

[From July 1, 1902, to June 25, 1910, no appropriations for the park were made by Congress.]

1914. For examination of the land embraced in Sullys Hill Park to determine whether it contains valuable minerals, Indian appropriation act of June 30, 1913 (38 Stats., 92) $500.00

* Funds for the maintenance and further improvement of this game preserve are allotted each year from lump-sum appropriations for the Biological Survey, Department of Agriculture.

** Created by act of June 29, 1906, (34 Stats., 616).
1916. For the improvement of the game preserve in the park, Agricultural appropriation act of June 30, 1914 (38 Stats., 494) $5,000.00

1916. For the improvement of the game preserve in the park, including construction of fences, sheds, buildings, corrals, roads, and other structures which may be necessary, Agricultural appropriation act of Mar. 4, 1915 (38 Stats., 1135) 5,000.00

1917. For the improvement of the game preserve in the park, including construction of fences, sheds, buildings, corrals, roads, and other structures which may be necessary, Agricultural appropriation act of Aug. 11, 1916 (39 Stats., 467) 5,000.00

1918. For the maintenance and improvement of the game preserves in Sulphur Springs National Park, including the construction of all fences, sheds, buildings, corrals, roads, and other structures which may be necessary, in addition to the amount herefore appropriated, available until expended, Agricultural appropriation act of Mar. 4, 1917 (39 Stats., 1135) 5,000.00

Recapitulation:
Appropriations under the Interior Department, fiscal year 1914 500.00
Appropriations expended under the Department of Agriculture, 1914 to 1918, inclusive 20,000.00

Total 20,500.00

Rocky Mountain National Park:
1915. For protection and improvement, deficiency appropriation act of Mar. 4, 1915 (38 Stats., 1148) $3,000.00

1916. For protection and improvement, sundry civil act of Mar. 3, 1915 (38 Stats., 863) 8,000.00

1917. For protection and improvement, sundry civil act of July 1, 1916 (39 Stats., 1108) 10,000.00

1918. For protection and improvement, sundry civil act of June 12, 1917 (40 Stats., 165, 152) 10,000.00

1919. For protection and improvement, sundry civil act of July 1, 1918 (Public No. 181, 65th Cong.) 10,000.00

Total 41,000.00

Hot Springs Reservation, Ark.:
From Apr. 20, 1882, to Mar. 3, 1877, no appropriations were made by Congress.

Title: Protection and Improvement, Hot Springs Reservation.

Specific appropriations by Congress from revenue fund.

1893. Improvement of Whittington Lake Reserve from proceeds of sale of lots included in above fund, 1892, sundry civil act of Aug. 5, 1892 (27 Stats., 371) $300,000.00

1896. To repay expenditures upon a sewer, 1896, act May 1, 1896 (29 Stats., 110) $300,000.00

1 Created by act of Jan. 26, 1915 (38 Stats., 798).
2 Created by acts of Apr. 20, 1882 (4 Stats., 595); Mar. 8, 1877 (19 Stats., 377); and June 16, 1880 (21 Stats., 290).
3 Designations given on books of Treasury Department.
4 Listed on books of Treasury Department.
5 Without year.
**REPORT DIRECTOR NATIONAL PARK SERVICE.**

**TITLE: HOT SPRINGS RESERVATION.**

Specific appropriations by Congress from moneys in Treasury not otherwise appropriated.

<table>
<thead>
<tr>
<th>Year</th>
<th>Specific appropriation from revenue fund</th>
<th>Specific appropriation from Treasury</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1902</td>
<td>$33,744.78</td>
<td>$15,787.00</td>
<td>$49,531.78</td>
</tr>
<tr>
<td>1903</td>
<td>$26,385.45</td>
<td>$18,992.07</td>
<td>$45,377.52</td>
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<tr>
<td>1904</td>
<td>$28,715.90</td>
<td>$18,740.88</td>
<td>$47,456.78</td>
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<tr>
<td>1911</td>
<td>$17,981.75</td>
<td>$12,940.85</td>
<td>$30,922.60</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>$51,398.50</td>
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</tbody>
</table>

**Recapitulation of specific appropriations, 1877 to 1919, inclusive.**

<table>
<thead>
<tr>
<th>Titles of appropriations.</th>
<th>Specific appropriation from revenue fund</th>
<th>Specific appropriation from Treasury</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection and Improvement, Hot Springs Reservation</td>
<td>$95,009.00</td>
<td>$129,974.78</td>
<td>$225,038.98</td>
</tr>
<tr>
<td>Improvement, Hot Springs Reservation</td>
<td>$33,744.78</td>
<td>$15,787.00</td>
<td>$49,531.78</td>
</tr>
<tr>
<td>Salaries and expenses, Hot Springs Reservation</td>
<td>$26,385.45</td>
<td>$18,992.07</td>
<td>$45,377.52</td>
</tr>
<tr>
<td>Claims for condemnation of buildings, Hot Springs Reservation</td>
<td>$17,981.75</td>
<td>$12,940.85</td>
<td>$30,922.60</td>
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</tr>
<tr>
<td><strong>HAWAII NATIONAL PARK, HAWAI, 1917.</strong></td>
<td>$224,130.00</td>
<td>$350,179.30</td>
<td>$574,309.30</td>
</tr>
</tbody>
</table>

| For expenses incident to securing donations of patented lands and rights of way over patented lands in Hawaii National Park, sundry civil act of July 1, 1917 (Public No. 181, 65th Congress) | $750.00 |

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1 Designations given on books of Treasury Department.
2 Without year.
3 Limited to fiscal years.
4 Expenditure from revenue; see preceding page. Specific appropriations by Congress from revenue fund.
5 Created by act of Congress approved Aug. 1, 1916 (30 Stats., 422).
6 Specific appropriations from moneys in Treasury not otherwise appropriated.
### REPORT DIRECTOR NATIONAL PARK SERVICE.

<table>
<thead>
<tr>
<th>Year</th>
<th>Act Approved Date</th>
<th>Appropriation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1909</td>
<td>May 27, 1909 (35 Stats., 317, 348)</td>
<td>$900</td>
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<tr>
<td>1910</td>
<td>Mar. 4, 1909 (35 Stats., 943, 957)</td>
<td>900</td>
</tr>
<tr>
<td>1911</td>
<td>June 23, 1910 (36 Stats., 703, 741)</td>
<td>900</td>
</tr>
<tr>
<td>1912</td>
<td>Mar. 4, 1911 (36 Stats., 1363, 1417)</td>
<td>900</td>
</tr>
<tr>
<td>1913</td>
<td>Aug. 24, 1912 (37 Stats., 417, 457)</td>
<td>900</td>
</tr>
<tr>
<td>1914</td>
<td>June 23, 1913 (38 Stats., 4, 47)</td>
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<tr>
<td>1915</td>
<td>Aug. 1, 1914 (38 Stats., 609, 645)</td>
<td>900</td>
</tr>
<tr>
<td>1916</td>
<td>Mar. 3, 1915 (38 Stats., 822, 856)</td>
<td>900</td>
</tr>
<tr>
<td>1917</td>
<td>July 1, 1916 (39 Stats., 222, 231)</td>
<td>900</td>
</tr>
<tr>
<td>1918</td>
<td>June 12, 1917 (40 Stats., 105, 144)</td>
<td>900</td>
</tr>
<tr>
<td>1919</td>
<td>July 1, 1918 (Pub. No. 181, 65th Cong.)</td>
<td>900</td>
</tr>
</tbody>
</table>

**Total 24,282**

### UNDER THE SMITHSONIAN INSTITUTION.

Appropriations were made in sundry civil acts “For the protection of Casa Grande Ruin in Pinal County, near Florence, Ariz., and for excavation on the reservation, to be expended under the supervision of the secretary of the Smithsonian Institution,” as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Act Approved Date</th>
<th>Appropriation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1907</td>
<td>June 30, 1906 (34 Stats., 697, 729)</td>
<td>$3,000</td>
</tr>
<tr>
<td>1908</td>
<td>March 4, 1907 (34 Stats., 1205, 1010)</td>
<td>3,000</td>
</tr>
</tbody>
</table>

**Total 6,000**

### Recapitulation.

<table>
<thead>
<tr>
<th>Appropriations</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under the Interior Department, 1889 to 1919, inclusive.</td>
<td>$24,282</td>
</tr>
<tr>
<td>Under the Smithsonian Institution, 1907 and 1908</td>
<td>6,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30,282</strong></td>
</tr>
</tbody>
</table>

### APPENDIX D.

#### Legislation and Presidential Proclamations.

Legislation affecting the national parks, enacted by Congress since date of the first annual report.

Presidential proclamations relating to national monuments, issued since date of the first annual report.

Executive orders relating to proposed national parks, issued since date of the first annual report.

Senate and House of Representatives reports on pending legislation affecting the national parks made since date of the first annual report.

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### NAVAJO NATIONAL MONUMENT, ARIZ.

1917. For preservation and repair of prehistoric Pueblo ruins and cliff dwellings, under supervision of the Smithsonian Institution, Indian appropriation act approved May 18, 1916 (39 Stats., 132) | $3,000 |

### ZION (FORMERLY MUKUNTWEEP) NATIONAL MONUMENT, UTAH.

1917. For a proportionate share of the amount required to construct an interstate wagon road or highway through the monument, approximately 15 miles. Deficiency appropriation act approved Sept. 8, 1916 (39 Stats., 813) | $15,000 |

### SIEUR DE MONTS NATIONAL MONUMENT, MAINE.

1919. For protection and improvement, including not exceeding $1,400 for purchase, maintenance, operation, and repair of a motor-driven passenger-carrying vehicle for use of rangers in administration of the monument, sundry civil act approved July 1, 1918 (Pub. No. 181, 65th Cong.) | $10,000 |
LEGISLATION.
Excerpt from “An act making appropriations to supply urgent deficiencies in appropriations for the fiscal year ending June thirtieth, nineteen hundred and eighteen, and prior fiscal years, on account of war expenses, and for other purposes.”

DEPARTMENT OF THE INTERIOR.
NATIONAL PARKS.

The Secretary of the Interior is authorized to expend from the revenues derived from privileges in the Yosemite National Park not to exceed $3,500 in addition to appropriations heretofore made for the completion of the installation of the hydroelectric power plant authorized by the sundry civil appropriation act for the fiscal year nineteen hundred and seventeen.

Approved, March 28, 1918 (Public, No. 109, 65th Congress).

Excerpts from “An act making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, nineteen hundred and nineteen, and for other purposes.”

DEPARTMENT OF THE INTERIOR.
NATIONAL PARKS.

National Park Service: Director, $4,500; assistant director, $2,500; chief clerk, $2,000; draftsman, $1,800; clerks—two of class three, two of class two, two at $900 each; messenger, $600; in all, for park service in the District of Columbia, $19,200.

The limitation of cost upon the construction of any administration or other building in any national park without express authority of Congress, contained in the sundry civil appropriation act approved August twenty-fourth, nineteen hundred and twelve, is increased from $1,000 to $1,500.

Yellowstone National Park, Wyoming: For administration, protection, maintenance, and improvement, including not to exceed $7,500 for maintenance of the road in the forest reserve leading out of the park from the east boundary, not to exceed $7,500 for maintenance of the road in the forest reserve leading out of the park from the south boundary, for repairing roads in the park and in adjoining forest reserves from Lake Hotel to the Cody entrance, $25,000; not to exceed $7,600 for the purchase, operation, maintenance, and repair of motor-propelled passenger-carrying vehicles, and including feed for buffalo and other animals and salaries of buffalo keepers, $269,520, to be expended by and under the direction of the Secretary of the Interior: Provided, That not exceeding $2,000 may be expended for the removal of snow from any of the roads for the purpose of opening them in advance of the tourist season.

Hereafter road extensions and improvements shall be made in said park under and in harmony with the general plan of roads and improvements to be approved by the Secretary of the Interior.

For continuing the widening of not exceeding eighteen feet of roadway, improving the surface of roads, and for building bridges and culverts from the belt-line road to the western border, from the Thumb Station to the southern border, and from the Lake Hotel to the eastern border, all within Yellowstone National Park, to make such roads suitable and safe for animal-drawn and motor-propelled vehicles, $15,400.

For a new road around the Gardiner Slide, $50,000.

For resurfacing and for finishing the belt line with oil macadam, the expended balance of the appropriation for the fiscal year nineteen hundred and eighteen is made available for the fiscal year nineteen hundred and nineteen.

Glacier National Park, Montana: For administration and improvement, construction of roads, trails, bridges, and telephone lines and the repair thereof, including necessary repairs to the roads from Glacier Park Station through the Blackfeet Indian Reservation to various points in the boundary line of the
Glacier National Park, including not exceeding $1,200 for the maintenance, repair, and operation of one motor-driven and one horse-drawn passenger-carrying vehicle for the use of the superintendent and employees in connection with general park work, $80,000.

Yosemite National Park, California: For protection and improvement, construction and repair of bridges, fences, and trails, and improvement of roads other than toll roads; including not exceeding $1,000 for purchase, maintenance, operation, and repair of two motorcycles, not exceeding $800 for maintenance, operation, and repair of a motor-driven passenger-carrying vehicle for the use of the superintendent and employees in connection with general park work, not exceeding $15,000 for a bridge at the old Sentinel Bridge site, and not exceeding $75,000 for grading in width not exceeding twenty feet El Portal-Yosemite Road, $235,000.

Sequoia National Park, California: For protection and improvement, construction and repair of bridges, fences, and trails, improvement of roads other than toll roads, including not exceeding $1,200 for the purchase, maintenance, operation, and repair of a motor-driven passenger-carrying vehicle for the use of the superintendent and employees in connection with general park work, and for grading, $150,000 for a bridge at the old Marble Fork bridge site, $30,510.

General Grant National Park, California: For protection and improvement, construction of fences and trails, and repairing and extension of roads, $4,500.

National parks in House Doc. Three hundred and twenty-five of the Fourteenth Congress, second session, and for maintenance, repair, and operation of a motor-driven passenger-carrying vehicle for the use of the superintendent and employees in connection with general park work, $13,225.

Mesa Verde National Park, Colorado: For protection and improvement, including not exceeding $433 for maintenance, operation, and repair of horse-drawn passenger-carrying vehicle for use of the superintendent and employees, $18,000.

Rocky Mountain National Park, Colorado: For protection and improvement, $10,000.

Crater Lake National Park, Oregon: For protection and improvement, and repair of roads, including not exceeding $1,900 for purchase, maintenance, operation, and repair of a motor-driven passenger-carrying vehicle for the use of the superintendent and employees in connection with general park work, $13,225.

Wyoming Caves National Park, South Dakota: For improvement and protection, $4,000.

Platt National Park, Oklahoma: For improvement and protection, $7,500.

National Monuments: For the preservation, development, administration, and protection of the national monuments, to be expended under the direction of the Secretary of the Interior, $10,000.

Hawaii National Park: For expenses incident to securing donations of patented lands and rights of way over patented lands in Hawaii National Park, $750.

Lien de Monts National Monument, Maine: For protection and improvement, including not exceeding $1,400 for purchase, maintenance, operation, and repair of a motor-driven passenger-carrying vehicle for use of rangers in administration of the monument, $10,000.

Hot Springs Reservation, Arkansas: For labor, material, supervision, clearing site, and all other necessary expenses incident to the construction of a new administration and Government free bathhouse building, to cost not to exceed $130,000, there is appropriated $140,000, and in addition thereto $50,000 is authorized to be expended therefrom from the revenues received from the said reservation.

WAR DEPARTMENT.

ENGINEER DEPARTMENT.

Crater Lake National Park, Oregon: For construction and maintenance of a wagon road and the necessary bridges through the park, together with a system of tanks and water-supply pipes for sprinkling, in accordance with the recommendations in House Document Numbered Three hundred and twenty-three, Sixty-second Congress, second session, and for maintenance, repair, and operation of two horse-drawn passenger-carrying vehicles, to be expended under the direction of the Secretary of War, $50,000.

Approved July 1, 1918, [Public, No. 181, 65th Congress.]
CASA GRANDE NATIONAL MONUMENT, ARIZONA.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA,

A PROCLAMATION.

Whereas, by authority of the act of Congress approved March 2, 1889 (25 Stat., 61), there was set aside and reserved by Executive order dated June 22, 1892, certain land in the State of Arizona on which is located the prehistoric ruin known as Casa Grande; and it is in the public interest to preserve this national monument under authority of the act of Congress entitled "An act for the preservation of American antiquities," approved June 8, 1906 (34 Stat., 225); and in order that better provision may be made for the protection, preservation and care of the ruins of the ancient buildings and other objects of prehistoric interest thereon:

Now, therefore, I, Woodrow Wilson, President of the United States of America, by virtue of the power in me vested by section two of the act of Congress entitled "An act for the preservation of American antiquities," approved June 8, 1906 (34 Stat., 225), do proclaim as the Casa Grande National Monument the land heretofore reserved and set aside as aforesaid, to wit: The northwest quarter, the northeast quarter, the north half of the southwest quarter, and the north half of the southeast quarter of section sixteen, township five south, range eight east, Gila and Salt River meridians, State of Arizona, the boundaries of said national monument being as shown on diagram annexed to said proclamation of December 10, 1909 (35 Stat., 2504), which diagram is made a part hereof.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done in the District of Columbia this eighteenth day of March, in the year of our Lord one thousand nine hundred and eighteen, and of the independence of the United States of America the one hundred and forty-second.

[SEAL.]

By the President:
ROBERT LANSING,
Secretary of State.

[No. 1485.]

KATMAI NATIONAL MONUMENT, ALASKA.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA,

A PROCLAMATION.

Whereas there exists upon the southern coast of Alaska a belt of unusual volcanic activity which has during the last several years exhibited at various points energy of a violence which attracts the special attention of scientific watchers;

And whereas, Mount Katmai, one of the volcanoes in this belt, has proved upon investigation to have unusual size and character, and to be of importance in the study of volcanism, inasmuch as its eruption of June, 1912, was one of excessive violence, ranking in the first order of volcanic explosive eruptions and emitting several cubic miles of material during its first three days of activity.

And whereas the results of this eruption are still fresh, offering excellent opportunities for studying the causes of the catastrophe and its results and affording a conspicuous object lesson in volcanism to visitors interested in the operation of the great forces which have made and still are making America; and whereas the volcanic neighborhood is shown by the explorations of the National Geographic Society to contain many other striking features of an active volcanic belt produced so recently that they are still in the formative stage; and in particular the Valley of the Ten Thousand Smokes, a valley of hot springs in a condition of development toward a possible future geyser field, in distinction from the present dying geyser field of the Yellowstone;

And whereas this wonderland may become of popular scenic, as well as scientific, interest for generations to come, inasmuch as all its phenomena exist upon a scale of great magnitude, arousing emotions of wonder at the inspiring spectacles, thus affording inspiration to patriotism and to the study of nature:

Now, therefore, I, Woodrow Wilson, President of the United States of America, by virtue of the power and authority in me vested by section two of the act of Congress entitled "An act for the preservation of American antiquities," approved June 8, 1906 (34 Stat., 225), do proclaim that there are hereby reserved from all forms of appropriation under the public-land laws, and set apart as the Katmai National Monument, certain lands particularly described as follows, to wit: Beginning at the United States Coast and Geodetic Survey triangulation station, latitude 57° 52' 17.040", longitude 155° 05' 20.331" established in 1908 about one-half mile west of Katmai Bay on top of a hundred-foot bluff on the Alaska Peninsula, named Cape Kubugakli; thence north 40° 00' west to the intersection with longitude 155° 40'; thence due north to the intersection with latitude 58° 35'; thence due east to the intersection with a line bearing north 60° 00' west from Cape Gull; thence south following said line to the shore line at Cape Gull; thence west following the shore line of the coast to a point thirty-six miles south of the triangulation station, situated on the bluff at Cape Kubugakli; thence up the bluff to the said station, the point of beginning; embracing approximately 1,700 square miles of land, as shown upon the diagram hereto attached and made a part of this proclamation.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done in the District of Columbia this 3d day of August in the year of our Lord one thousand nine hundred and eighteen, and of the independence of the United States of America the one hundred and forty-third.

[SEAL.]

By the President:
FRANK L. POLK,
Acting Secretary of State.

[No. 1470.]

KATMAI NATIONAL MONUMENT, ALASKA.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA,

A PROCLAMATION.

Whereas there exists upon the southern coast of Alaska a belt of unusual volcanic activity which has during the last several years exhibited at various points energy of a violence which attracts the special attention of scientific watchers;

And whereas, Mount Katmai, one of the volcanoes in this belt, has proved upon investigation to have unusual size and character, and to be of importance in the study of volcanism, inasmuch as its eruption of June, 1912, was one of excessive violence, ranking in the first order of volcanic explosive eruptions and emitting several cubic miles of material during its first three days of activity.

And whereas all the results of this eruption are still fresh, offering excellent opportunities for studying the causes of the catastrophe and its results and affording a conspicuous object lesson in volcanism to visitors interested in the operation of the great forces which have made and still are making America; and whereas the volcanic neighborhood is shown by the explorations of the National Geographic Society to contain many other striking features of an active volcanic belt produced so recently that they are still in the formative stage; and in particular the Valley of the Ten Thousand Smokes, a valley of hot springs in a condition of development toward a possible future geyser field, in distinction from the present dying geyser field of the Yellowstone;

And whereas this wonderland may become of popular scenic, as well as scientific, interest for generations to come, inasmuch as all its phenomena exist upon a scale of great magnitude, arousing emotions of wonder at the inspiring spectacles, thus affording inspiration to patriotism and to the study of nature:

Now, therefore, I, Woodrow Wilson, President of the United States of America, by virtue of the power and authority in me vested by section two of the act of Congress entitled "An act for the preservation of American antiquities," approved June 8, 1906 (34 Stat., 225), do proclaim that there are hereby reserved from all forms of appropriation under the public-land laws, and set apart as the Katmai National Monument, certain lands particularly described as follows, to wit: Beginning at the United States Coast and Geodetic Survey triangulation station, latitude 57° 52' 17.040", longitude 155° 05' 20.331" established in 1908 about one-half mile west of Katmai Bay on top of a hundred-foot bluff on the Alaska Peninsula, named Cape Kubugakli; thence north 40° 00' west to the intersection with longitude 155° 40'; thence due north to the intersection with latitude 58° 35'; thence due east to the intersection with a line bearing north 60° 00' west from Cape Gull; thence south following said line to the shore line at Cape Gull; thence west following the shore line of the coast to a point thirty-six miles south of the triangulation station, situated on the bluff at Cape Kubugakli; thence up the bluff to the said station, the point of beginning; embracing approximately 1,700 square miles of land, as shown upon the diagram hereto attached and made a part of this proclamation.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done in the District of Columbia this 24th day of September in the year of our Lord one thousand nine hundred and十八, and of the independence of the United States of America the one hundred and forty-third.

[SEAL.]

By the President:
ROBERT LANSING,
Secretary of State.

[No. 1487.]

EXECUTIVE ORDERS.

EXECUTIVE ORDER.

CALIFORNIA.

Under authority of the act of Congress approved June 25, 1910 (36 Stat. 847), as amended by the act of August 24, 1912 (37 Stat., 497), it is hereby ordered that the public lands in the following described areas be temporarily withdrawn from settlement, location, sale or entry, subject to the provisions of...
the aforesaid acts in aid of pending legislation embodied in bills S. 2021 and H. R. 10629, Sixty-fifth Congress, to wit:

Beginning at a point on the east boundary line of the Sequoia National Park which is on the range line between ranges thirty-one and thirty-two east of the Mount Diablo meridian, in township eighteen south of the Mount Diablo base, California, where said range line intersects the hydrographic divide between Little Kern River and Soda Creek; then southeasterly along the hydrographic divide between Little Kern River and Soda Creek to the junction of Little Kern River and Quail Creek; thence easterly along the hydrographic divide between Quail Creek and Lion Creek to the summit of the Great Western Divide; thence northerly along the Great Western Divide (United States Geological Survey bench mark ten thousand nine hundred and nineteen feet); thence easterly along the hydrographic divide through sections thirty-one and thirty-two, townships eighteen south, range thirty-three east, and section forty, township eighteen south, range thirty-three east; thence northerly along the main divide south of Little Kern Lake and between Lake and Little Lake; thence easterly along the main divide south of Little Creek and between Golden Trout Creek and Cold Creek (tributaries of Kern River) to the summit of the Sierra Nevada Mountains; thence northerly and westerly along the west cress of the Sierra Nevada Mountains to Pine Creek Pass, at the head of a tributary of Plute Creek, which flows southwesterly through French Canyon; thence westerly along west bank of said Plute Creek continuing west bank of Plute Creek to the junction of the South Fork of San Joaquin River and Plute Creek; thence southerly along the main hydrographic divide to the summit of Mountain Peak (twelve thousand one hundred and ninety-seven feet); thence southerly along the said hydrographic divide between the drainage of the South Fork of San Joaquin River and the drainage of the North Fork of Kings River to the junction with Goddard Divide; thence southerly and westerly along the hydrographic divide between Goddard Divide and North Fork of Kings River to the junction with Crown Creek and Blue Canyon Creek, along Kettle Ridge to Kettle Dome; thence northerly along the hydrographic divide to the junction of Crown and Fawn Creeks; thence westerly along the hydrographic divide between Fawn Creek and Rodgers Creek to Obelisk Peak; thence westerly along the main hydrographic divide south of Rodgers Creek to Spanish Mountain (triangulation station, United States Geological Survey bench mark ten thousand and forty-four feet); thence southerly along the hydrographic divide (Deer Ridge to the junction of the North Forks of Kings River to approximately one-thousand feet; thence along the hydrographic divide between Ten-mile Creek and Lockwood Creek and along the Sequoia and Big Baldy Ridges to Big Baldy (triangulation station, United States Geological Survey, bench mark eight thousand two hundred and eleven feet); thence southerly along the hydrographic divide between Big Baldy Ridge to the northwest corner of the Sequoia National Park, which is approximately on or near said hydrographic divide, between townships fourteen and fifteen south, ranges twenty-eight and twenty-nine east; thence southeasterly along the northeast boundary of the Sequoia National Park; thence south along the east boundary to the point of beginning.

Beginning at that point on the west boundary line of the Sequoia National Park where it is intersected by the hydrographic divide formed by Redwood Creek and the North Fork Kaweah River; thence southerly along the said hydrographic divide to the junction of Redwood Creek and the North Fork Kaweah River; thence following down the west bank of the North Fork Kaweah River to the junction with Cactus Creek; thence southeasterly along the main hydrographic divide south of Cactus Creek to where it intersects the west boundary line of the said national park, township sixteen south, range twenty-eight east; thence north along the said west boundary to the point of beginning.

Beginning at that point on the west boundary line of the Sequoia National Park where it is intersected by the hydrographic divide west of Alder Creek, between townships sixteen and seventeen south, range twenty-nine east; thence southeasterly along said hydrographic divide to the junction of the Middle Fork Kaweah River; thence southeasterly along the hydrographic divide between the East Fork Kaweah River and Salt Creek, over Red Hill, to Case Mountain; thence southerly and easterly along the hydrographic divide (Salt Creek Ridge) between the South and East Forks Kaweah River to where it intersects the west boundary line of said national park, township eighteen south, ranges twenty-nine and thirty east; thence north and west along the said west boundary to the point of beginning.

Beginning at that point on the west boundary line of the Sequoia National Park, where it is intersected by the hydrographic divide east of Burnt Camp Creek (the aforesaid acts in aid of pending legislation embodied in bill H. R. 11881, Sixty-fifth Congress, to wit:

Beginning at a point on the present south boundary line of the Yellowstone National Park where it is intersected by the Idaho-Wyoming State line, thence south along the Idaho-Wyoming State line to its intersection with the hydrographic divide between Conant Creek and North Fork Pierre River; thence easterly along the said hydrographic divide and now between Conant and Birch Creeks to the main hydrographic divide formed by the Teton Mountains, and between the headwaters of Berry and Conant Creeks; thence south along said hydrographic divide and now between Birch and Owl Creeks, North Fork Pierre River and Webb Canyon, Badger Creek and Moran Canyon, Leigh Creek and Leigh Canyon, and Teton Canyon and Glacier Creek to a peak, elevation three thousand seven hundred feet, on the said hydrographic divide between the headwaters of Teton Canyon and Taggart Creek and a branch of Death Canyon waters, which enter said Death Canyon about one and one-half miles northwest of Phelps Lake; thence following easterly along the main hydrographic divide south of Taggart Creek and Taggart Lake to its intersection with the unsurveyed section line between, what will be when surveyed sections ten and fifteen, township forty-three north, range one hundred and fifteen west of the northeast corner of section thirty-five in unsurveyed township forty-three north, range one hundred and fifteen west of the northeast corner of section thirty-five in unsurveyed township forty-four north, range one hundred and sixteen west of the northeast corner of section thirty-five; thence north to the northeast corner of the northwest quarter of section twenty-six; thence east along the said section line and continuing east along the northeast line of the said national park; thence north to the northeast corner of the northwest quarter of section twenty-six; thence west to the northwest corner of the northwest quarter of section twenty-six; thence north to the northeast corner of the northwest quarter of section twenty-five; thence east to the southeast corner of the southeast quarter of the southwest quarter of section twenty-five; thence south to the southeast corner of the southeast quarter of the southwest quarter of section twenty-five; thence west to the southeast corner of the southeast quarter of the southwest quarter of section twenty-five; thence north to the northeast corner of the southwest quarter of the northeast quarter of section thirteen; thence west to the northwest corner of the south-
The bill was referred to the Department of the Interior, and the Secretary of the department furnished the committee with the following report thereon:

Washington, February 5, 1918.

MY DEAR SENATOR: I have your request for a report on S. 390, "A bill to establish the Grand Canyon National Park in the State of Arizona."

This measure is identical with S. 8250, Sixty-fourth Congress, which received the favorable consideration of your committee in February, 1917 (S. Rept. No. 1092, 64th Cong.). In inscribing S. 8250 and recommending its early passage I made the following observations which are, of course, equally applicable to the pending bill:

"The area proposed to be set aside and dedicated as a national park by this measure, embraces approximately 906 square miles of public land now constituting part of the Kaibab and Tusayan National Forests, in northern Arizona. A large part of it also lies within the Grand Canyon Game Refuge, established by the act of June 29, 1906 (34 Stat., 607), and the Grand Canyon National Monument set aside by presidential proclamation January 11, 1908, under the act of June 8, 1906 (34 Stat., 225), covers practically the entire area, thus constituting a third and part of reservation of these lands.

"It seems to be universally acknowledged that the Grand Canyon is the most stupendous natural phenomenon in the world. Certainly it is the finest example of the power and eccentricity of water erosion, and as a spectacle of sublimity it has no peer.

"I am informed that 106,000 tourists visited the south rim of the Grand Canyon during the calendar year 1915, but, due to lack of roads, trails, side-trip destination, etc., this vast throng found little opportunity to obtain a full measure of the marvelous grandeur of this region.

"The Colorado River, which flows through the gorge, drains a territory of

"It seems that the Grand Canyon, therefore, is entitled to the same status and to an equal degree of consideration by Congress as are enjoyed by Yellowstone, Yosemite, and the other great national parks which contain natural phenomena of the first order, and I heartily recommend immediate favorable action toward the enactment of this bill."

I have but one criticism to make of the text of the pending bill. Section 7 is not in harmony with the other general provisions of the measure, and should be changed to read as follows:

"Section 7. That, whenever consistent with the primary purposes of said park, the Secretary of the Interior is authorized to permit the utilization of areas herein which may be necessary for the development and maintenance of a Government reclamation project."
With this alteration the bill will be complete in every particular and will give this department ample authority to protect, improve, and administer the Grand Canyon and otherwise advance its interests along the lines now employed in the development of the other members of the park system.

In again urging the early enactment of this legislation I would reiterate and emphasize the fact that the Grand Canyon, while a great national asset whether viewed from the standpoint of scenery, recreation, or American business enterprise, is under the control of the Federal Government, and all that has been done to open this marvelous region to the people has been accomplished by private resources. It should now be given its rightful place in the Nation's splendid system of magnificent and distinctive natural parks and developed, after the war is over, in accordance with a reasonable and progressive policy which this department may formulate for submission to Congress at the proper time and through the proper channels. For the reason that such development is absolutely necessary I hope that your committee or the Congress will place no inhibition on the amount of public funds that the proper committees of the two Houses may annually recommend for appropriation without special authority of law.

It was 32 years ago on January 5, 1886, that the first bill to make the Grand Canyon a national park was introduced in the Senate by the late ex-President Benjamin Harrison, then a Senator from Indiana. This was in the Forty-ninth Congress. The project has been presented to the Congress from time to time since 1886, and it appears that there never has been a valid objection advanced against it. Nor can such an objection be urged, because the Grand Canyon belongs to the Federal Government and any attempt to thwart a change in its status, which would distinctly rebound to its advantage, must be made by some private interest.

I am so thoroughly convinced of the importance of this park project that I do not hesitate to urge its consideration in the present session of the Congress. Cordially yours,

FRANKLIN K. LANE, Secretary.

Hon. H. L. MEYERS, Chairman Committee on Public Lands, United States Senate.

The demand for the creation of this park has been very insistent for many years and in the bill as reported with amendments proposed by the committee due regard has been given to the rights of the citizens of Arizona and of the individual property owners within the park boundaries. The rights of Coconino County to collect tolls over the Bright Angel Trail have been specifically recognized. The committee, however, is inclined to the view that toll roads should not exist within a national park, and therefore an amendment is suggested looking toward arrangements for the acquisition of the trails in question.

This park under the proposed bill represents an area of approximately 950 square miles, a greater part of which is within the walls of the canyon. Sufficient land has been included back of the north and south rims to make possible an adequate road development and to take care of camping and hotel facilities.

The Grand Canyon has long been recognized as one of the greatest scenic regions of the world, and it is even quite generally regarded as a national park, although it has never been managed as a part of the park system and has never been the subject of development as such. It is eminently fitting and proper that this magnificent gorge should now take its place as a link in the national-park chain which already includes most of the Nation's wonderful and extraordinarily distinctive natural features.

A bill to establish the Mount Desert National Park in the State of Maine, having had the same under consideration, begs leave to report it back to the Senate with the recommendation that the bill do pass.

[Senate Report No. 503, Sixty-fifth Congress, second session.]

MOUNT DESERT NATIONAL PARK, ME.
June 14, 1918.—Ordered to be printed.

Mr. MYERS, from the Committee on Public Lands, submitted the following report (to accompany S. 4589):

The Committee on Public Lands, to which was referred the bill (S. 4589) to establish Mount Desert National Park in the State of Maine, having had the same under consideration, begs leave to report it back to the Senate with the recommendation that the bill do pass.

The bill was referred to the Department of the Interior, and the Secretary of the department furnished the committee with the following report thereon:

DEPARTMENT OF THE INTERIOR,
Washington, May 29, 1918.

MY DEAR MR. FERRIS: I have your request of May 6, 1918, for a report on H. R. 11935, "A bill to establish the Mount Desert National Park in the State of Maine."

While this measure proposes to create a new member of the national park system, its effect, if enacted into law, would be to merely change the name of the Sieur de Monts National Monument and promote this area to the national park status, at the same time adequately providing for its extension and development along well-defined lines. As this monument is already under the jurisdiction of this department, and immediately under the control of the National Park Service, by virtue of the act of August 25, 1916, the national park service act (39 Stat., 538), the only important question involved in this legislation is whether the monument lands are worthy of advancement to the national park class. I believe that the national park should be established for the following reasons:

First: Mount Desert Island has important historic value. It is the place where Chouan, the first land on this coast, and the French had a station here years before the landing of the Pilgrim Fathers.

Second: Scenically its impressive headlands give Mount Desert the distinction of combining sea and mountain. These headlands are by far the loftiest of our Atlantic coast. Their high, rounded summits, often craggy, and their splendid granite shelves form a background for a rugged shore line and an island-dotted harbor, which is one of the finest that even the Maine coast can present. Back of the shore is a mountain and lake wilderness which is typical in a remarkable degree of the range of Appalachian scenery.

Third: From the point of view of conservation, the value of the proposed park can hardly be overestimated. The forests are largely of pine, beeches, birches, maples, ashes, poplars, and many other deciduous trees of our eastern ranges, here found in full luxuriance, mingle with groves of pine and giant hemlock. The typical shrubs of northeastern America are in equal abundance. Wild flowers abound. There are few spots, if any, which can combine the variety and luxuriance of the eastern forests in such small compass.

The rocks have their distinction. This was the first part of the continent to emerge from the prehistoric sea. Archean granites in original exposure such as these, though common in eastern Canada, are rare in the United States. Worn by the ice sheets of the glacial period, eroded by the frosts and rains of the subsequent ages, carved by the sea, their surfaces painted by the mosses and lichens of to-day, they are exhibits of scientific interest as well as beauty.

Still another distinction is Mount Desert's wealth of bird life. All of the conditions for a bird sanctuary in the East seem to be here fulfilled. Once Mount Desert was the home of many deer, some of which are now returning from the mainland. Moose haunt it still occasionally. Once its streams abounded in beaver, and will again after a few of these animals are planted in its protected valleys.
Fourth. From a recreational standpoint, the Mount Desert Park would be capable of giving pleasure to the public reservations, was conveyed, by this corporation to the United States and accepted by me under the authority of the monuments act. Since the establishment of the reservation, additional tracts of land to the extent of 5,000 acres have been secured and tendered to the Government. I have indicated that I will accept these lands as soon as the deeds and other instruments of title have been examined and found satisfactory in all respects. The reservation, therefore, may be regarded as having a total area of approximately 10,000 acres. Ultimately this will be extended to 20,000 acres through the continued efforts of the public-spirited gentlemen who are devoting their time and personal funds to the development of this park enterprise.

I have no criticism to make of the form of the pending bill, and I hope that the committee may give it early and favorable consideration.

Cordially, yours,

FRANKLIN K. LANE,
Secretary.

Hon. SCOTT FERRIS,
Chairman Committee on the Public Lands,
House of Representatives.

[Senate Report No. 576, Sixty-fifth Congress, second session.]

OCTOBER 3, 1918.—Ordered to be printed.

LAFAYETTE NATIONAL PARK.

Mr. MYERS, from the Committee on Public Lands, submitted the following report (to accompany S. 4957):

The Committee on Public Lands, to which was referred the bill (S. 4957) to establish the Lafayette National Park in the State of Maine, having had the same under consideration, begs leave to report it back to the Senate with the recommendation that the bill do pass.

The bill was referred to the Department of the Interior, and the Secretary of the department furnished the committee with the following report thereon:

DEPARTMENT OF THE INTERIOR,
Washington, October 2, 1918.

My Dear Senator: I have your request of September 26 for report upon Senate bill 4957, the purpose of which is to establish the Lafayette National Park in the State of Maine. This bill is in all respects, except that of name, identical with a bill which has heretofore passed the Senate, during the present session, and I attach a copy of my report upon that bill.

The name of Lafayette is dear to the American people and it will be a gracious act toward France to commemorate his name by giving it to this new national park.

Cordially yours,

FRANKLIN K. LANE,
Secretary.

Hon. HENRY L. MYERS,
Chairman Committee on Public Lands,
United States Senate.

[House Report No. 374, Sixty-fifth Congress, second session.]

ROCKY MOUNTAIN NATIONAL PARK, COLO.

MARCH 12, 1918.—Referred to the House Calendar and ordered to be printed.

Mr. TIMBERLAKE, from the Committee on the Public Lands, submitted the following report (to accompany H. R. 171):

The Committee on the Public Lands, to whom was referred the bill (H. R. 171) to repeal the last proviso of section 4 of an act to establish the Rocky Mountain National Park, in the State of Colorado, and for other purposes, approved January 26, 1915, having had the same under consideration, begs to report the same back to the House with the recommendation that the name be amended as follows, to wit:

After the word "the," in line 11, insert the word "same," and that the bill as amended do pass.

The bill was referred to the Interior Department, and the Secretary of that department furnished the committee with the following report thereon:

DEPARTMENT OF THE INTERIOR,
Washington, February 16, 1918.

My Dear Mr. FERRIS: I have received your letter of February 14, 1918, requesting report on H. R. 171, "A bill to repeal the last proviso of section 4 of an act to establish the Rocky Mountain National Park, in the State of Colorado, and for other purposes, approved January 26, 1915."

The organic act establishing the Rocky Mountain National Park set apart from the public domain an area of 229,062 acres in a section of the Rocky Mountains which contains scenery of unsurpassed grandeur, and it has been recognized since its creation as one of the most important members of the national park system.

On account of the inhibition on the amount of the public funds that might be appropriated for this park without special authority of the Congress, which the bill under consideration proposes to repeal, not more than $10,000 has been available in the course of a fiscal year for the administration, protection, and improvement of this vast mountainous area. Practically all of the funds that have been appropriated have been expended, necessarily, in the administration and protection of the park, and it has been quite impossible to undertake more than minor improvements in the trails and telephone lines. We have never been able to allot funds for road work or for the construction of new trails. Only one small building has been erected since the park was established.

The act of February 14, 1917 (39 Stat., 916), extended the park boundaries eastward, adding 25,265 acres and bringing the total area to 254,327 acres. This enlargement of the park brought new problems of traffic control, camp supervision, sanitation, fire protection, and other important problems requiring an increase in the ranger force and the assumption of other financial burdens without proportionate increase in appropriations to meet these new obligations. We therefore find that our appropriation is now just sufficient for the administration and protection of the park, and it is doubtful if we can hereafter perform any maintenance work on the trails or other improvements until the inhibition governing the annual appropriations is removed.

It is also important to note that Rocky Mountain National Park enjoys a very large tourist patronage. During the past season over 117,000 people, coming from nearly every State in the Union, visited the park, and I see no reason why its popularity should not continue to grow. It is the most accessible of all of our great scenic national parks, because one may reach it from St. Louis or Chicago in 20 hours.

8262—18—16
From every standpoint this park merits the consideration of the Federal Government. The federal bill that will have been taken when the pending bill is enacted into law. It is my hope that such action may be taken by the Congress in its present session.

Cordially, yours,

FRANKLIN K. LANE,
Secretary.

Hon. Henry L. Myers,
Chairman Public Lands Committee, United States Senate.

[Senate Report No. 249, Sixty-fifth Congress, second session.]
The town of Yellowstone is located north of the right of way and station grounds in said section near the park and is occupied under permit from the Forest Service.

The records of the General Land Office show that the portion of township 13 south, range 5 east, not in the park, is surveyed and part of the Madison National Forest. The tract is the portion of the right of way of section 34 and the range of sections north of 34. This tract is described in the bill in the plat of the west half of the section not in the park. The tract described in the bill is public and joins the right of way for track, Y, and the station grounds granted the Yellowstone Park Railroad Co., now part of the Oregon Short Line, November 10, 1906, the location of track of the same section being shown upon a surveying diagram upon which the area described in the bill has also been indicated. It appears from correspondence received from the resident attorneys of the Oregon Short Line that the company proffers to erect a commodious and well-equipped hotel on lot 3, opposite its present station, and desires sufficient area for grounds, golf links, etc., and to admit of certain changes in its tracks.

From the information before me and in view of the demand for hotel facilities at this entrance for the accommodation of the increasing number of visitors to the park from the West, I think the company should be permitted to acquire that portion of the tract described in the bill needed in connection with its proposed hotel, and therefore recommend that the bill, if amended in the following particulars, be enacted. Certain railroad purposes are involved, such as additional terminal facilities, sidetracks, etc., and I would therefore suggest that the words "and other" be inserted after "hotel" in the title of the bill and also in line 7, page 1 thereof. Since it appears that the tract described is probably larger than is needed to effect the purposes contemplated, and also as I am informed that the company may find it advisable to move the existing tracks farther westward, I would suggest that that portion of the tract in the west half of the west half of the section be excluded, and that the right of way for the Y be not excepted from the NE 1/4 of the SW 1/4, and that, therefore, the description given in the bill be stricken out from "The " in line 11, page 1, through "acres" in line 8, page 2, and the following description be substituted therefor:

"Lot three and the northeast quarter of the southwest quarter of section thirty-four in township thirteen south, range five east, Montana Principal Meridian, being the area at present covered by the wye tracks of said Oregon Short Line Railroad Company; also all that portion of the northeast quarter of the northwest quarter of said section thirty-four lying south of the right of way and station grounds of said company, the entire tract above described being of eighty-eight and two one-hundredths acres, is hereby selected therein.

In order that this department may have the same jurisdiction over the management of a hotel on this tract as is exercised by the act of February 10, 1912 (37 Stat., 64), under which the site at Glacier Park, Mont., was acquired and the hotel thereon has been satisfactorily operated, I would suggest that the following proviso be added to the bill after "Forest," line 14, page 2:

"Provided, however, That any hotel erected on said lands shall be operated by the said Oregon Short Line Railroad Company, or its successors in interest, under such rules and regulations as the Secretary of the Interior may prescribe for the conduct and operation of hotels within the Yellowstone National Park."

The land is within the Madison National Forest, and I am informed that the Secretary of Agriculture has submitted a report on the bill.

Cordially yours,

FRANKLIN K. LANE,
Secretary.

HON. HENRY L. MYERS,
Chairman Committee on Public Lands, United States Senate.

DEAR SENATOR MYERS: Receipt is acknowledged of a copy of the bill S. 41 "To authorize the sale of certain lands at or near Yellowstone, Mont., for hotel purposes," with the request that your committee be sent certain suggestions as this department may see fit to offer.

The bill proposes that the Secretary of the Interior be authorized to sell to the Oregon Short Line Railroad Co., for hotel purposes, 126.51 acres of land within the Madison National Forest, at a price to be fixed by appraisement at not less than $25 per acre, and under such terms, conditions, and regulations as the Secretary of the Interior may prescribe. This land adjoins the Yellowstone National Park and is now traversed by railroad tracks of the Oregon Short Line which extend to this point. The principal object of this extension is to carry tourists and supplies to the Yellowstone National Park.

This department is in receipt of a letter from the Secretary of the Interior, in which he states that it will be in the interest of the Yellowstone National Park, which adjoins this land, to allow the railroad company to acquire title to the tracts described in the bill, the railroad company stating that the tracts are needed for any special purpose in the administrative management of the Madison National Forest. This department recognizes that the claim is in connection with the Yellowstone National Park, which is under the jurisdiction of the Department of the Interior. It, therefore, appears that that department's interest is dominant to any other interest of this department, although the land is now within the boundaries of a national forest.

For these reasons this department has no objection to the passage of the bill.

Very truly yours,

D. F. HOUSTON, Secretary.

[Senate Report No. 579, Sixty-fifth Congress, second session.] ROADS IN NATIONAL PARKS.

OCTOBER 7, 1918.—Ordered to be printed.

Mr. SHAFROTH, from the Committee on Public Lands, submitted the following report (to accompany S. 4472):

The Committee on Public Lands, to which was referred the bill (S. 4472) for the sale of public lands for the purpose of using the proceeds arising therefrom in the construction of roads and other permanent improvements in national parks, having had the same under consideration, begs leave to report it back to the Senate with amendments and, as amended, recommend that the bill do pass.

The bill was referred to the Department of the Interior, and the Secretary of the department furnished the committee with the report attached hereto.

The necessity for the passage of this bill arises from the fact that several bills establishing national parks which passed the Senate without a limitation as to the amount that could be appropriated for the maintenance of the same had a limitation of $10,000 placed by the House of Representatives upon the same, which in many instances is entirely inadequate to even police the park.

For instance, the Rocky Mountain Park of Colorado is one of the most beautiful and picturesque parks in the world. The Interior Department has recommended a number of times the appropriation of larger amounts out of the General Treasury for the maintenance and improvement of the same, but invariably points of order have been made against the appropriation on account of the limitation contained in the bill creating the park. The Senate has twice passed, as to the Rocky Mountain Park, a bill repealing that limitation of $10,000 in the act creating the park, but the House does not concur in the same. They evidently do not think the General Treasury ought to be used for the purpose of either improving or maintaining the park.

This bill provides that an amount of unappropriated, unreserved, nonmineral public lands on an equal to the total area of the national park within such State shall be selected and sold by the Secretary of the Interior in legal subdivisions of not exceeding 640 acres to each purchaser and the proceeds thereof be expended in aid of the construction, improvement, and maintenance of roads or other permanent improvements in and leading to the national park situate in such State.

While the Secretary of the Interior does not favor the sale of lands for such purposes, yet your committee believes that such policy should be determined by Congress and, therefore, recommends the passage of the bill with the following amendment:

After the word "sale," in line 12 of page 1, insert: "Shall be in legal subdivisions of not exceeding 640 acres to each purchaser and"; and in line 4, after the word "provided," insert: "Such sale shall not be for less than $25 per acre." And, as so amended, that the bill do pass.
REPORT DIRECTOR NATIONAL PARK SERVICE.

DEPARTMENT OF THE INTERIOR,
Washington, May 14, 1918.

Hon. Henry L. Myers,
Chairman Committee on Public Lands,
United States Senate.

MY DEAR SENATOR: I am in receipt of your request for report upon S. 4472, "A bill providing for the sale of public lands for the purpose of using the proceeds arising therefrom in the construction of roads and other permanent improvements in national parks."

The bill is similar in principle to Senate bill 2436 and Senate bill 3636, relating to a grant of lands to aid in the construction of roads in national forests, upon which bills I submitted adverse reports September 27, 1917, and February 26, 1918. For the information of the committee, I attach a table showing the areas in national parks by States and the unappropriated public lands in such States on July 1, 1917.

As stated in the reports mentioned dealing with the grant of public lands to aid in the construction of roads in national forests, Congress by the act of July 11, 1916, appropriated the sum of $75,000,000 for the construction of rural post roads, the several States to expend a sum equal to that contributed by the United States. Appropriation was made in the sundry civil act of June 12, 1917 (40 Stats., 151), for the administration and protection of the national parks and their improvement, and the construction of roads, trails, and bridges therein, are specifically mentioned in many instances. Should further appropriations be required for the improvement of these national parks, I believe it should be in the form of money appropriations from the Federal Treasury rather than by the devotion of areas of public lands to that purpose through the sale of the lands in a given State for the construction of roads in national parks in that State. It is quite likely that the method proposed in S. 4472 would not apportion the funds derived from the sale of the lands in the most desirable or equitable manner, as parks which might receive the largest benefits have in some instances been already more liberally provided for than parks which would receive a smaller contribution under the bill.

The demand for public lands for homes and farms has been and continues to be very large, and I do not believe the opportunity to thus secure homes upon the public domain should be taken from the people through a reversion to the sales system of disposing of lands, even though the proceeds be devoted to road building. Under existing law the revenue from public lands, with the exception of the 10 per cent which goes to the States for educational purposes, goes into the reclamation fund for the irrigation of arid lands in the West, and a sale of lands as proposed in this measure for the benefit of roads would diminish receipts into the reclamation fund, and thus impede further reclamation work.

Following the recommendation made in the case of the bills proposing sales of public lands for the construction of roads in national forests, I recommend that S. 4472 be not enacted and that if Congress is of the opinion that further appropriations should be made for the construction of roads and other improvements in national parks it be in the form of additional money appropriations or in some other manner than through a grant of public lands.

Cordially yours,

FRANKLIN K. LANE,
Secretary.

APPENDIX E.

BIBLIOGRAPHY.

Bibliography of Books and Magazine Articles on National Park Subjects.
October 1, 1917 to September 30, 1918.

<table>
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<th>State</th>
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AMERICAN BOY, THE.

AMERICAN FORESTRY.
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**Menacing Problem.**


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Vol. 15, No. 4 (April, 1918). “Meanderings on Maui.” By Woods Peters. (Haleakala, Hawaii National Park.)


Vol. 16, No. 4 (October, 1918). Art Section—Pictures of Kilauea and Haleakala.


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**Motor.**


Vol. 29, No. 5 (February, 1918), p. 65. “Over the Top to the Coast.” By Charles J. Belden. (Yosemite.)


Vol. 30, No. 3 (June, 1918), pp. 72-73. “America’s Oldest Continuously Inhabited City.” By A. L. Westgard.


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Vol. 1, No. 4 (June, 1918), p. 2. “Wild Game and the War.”

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MUNYEX.


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OUTDOOR LIFE.


Vol. 42, No. 1 (July, 1918). “A Study in Reflection.” (Pictorial.) (Mirror Lake, Yosemite.)


OUTSIDERS’ BOOK—RECREATION.

Vol. 34, No. 4 (October, 1917), pp. 261-265. “Rambles Recollections of an Old-Time Big Game Hunter.” By Cyrus Thompson. (Yellowstone.)

Outers' Book—Recreation—Continued.
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Vol. 72, No. 2 (August, 1918), pp. 105-112. "With the Zunis in New Mexico." (By George Wharton James. (El Morro.)
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Vol. 31, No. 4 (April, 1918), pp. 4-7. "Why is Kilauea?" By L. W. de Vis-Norton.
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Sierra Club Bulletin—Continued.
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Vol. 11, No. 2 (February, 1919), pp. 9-12. "($2.) Through the Red Rock Country." By William Hamilton Osborne and Phil Norton. (Fourth paper.)
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Vol. 12, No. 4 (April, 1920), pp. 57-60. "Sequoia National Park." (Continued.) (Fourth paper.)
APPENDIX F.

NATIONAL PARK PUBLICATIONS.

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NATIONAL PARK PUBLICATIONS.

[Ma,iled free of charge upon application to the Director of the National Park Service.]

Contains summary of the operation and development of the national parks for current year, photographs of more important improvements, reports of park superintendents, national park and monument statistics, etc.

Annual Report of the National Park Service for the year 1917. By Horace M. Albright, acting director. (Edition exhausted.)

Progress in the Development of the National Parks. By Stephen T. Mather, Director of the National Park Service. 1916. 39 pages.

Contains descriptions of the most important features of the principal national parks and the Grand Canyon of the Colorado.

General Information regarding the national monuments.
Contains descriptions of all national monuments administered by the Department of the Interior, the Department of Agriculture, and the War Department.

Contains description and maps of the sand dunes, the history of the project, and the hearings held in Chicago October 30, 1916.

Information circular containing data regarding hotels, camps, points of interest, books, magazine articles, maps, regulations, etc., about each of the following national parks:

- Yellowstone.
- Yosemite.
- Mount Rainier.
- Crater Lake.
- Mesa Verde.
- Sequoia and General Grant.
- Hot Springs.
- Glacier.
- Rocky Mountain.
- Wind Cave.
- Casa Grande Ruin.

Map showing all national parks and national monuments with railroad connections.

Automobile road and trail map of each of the following national parks:

- Yellowstone.
- Yosemite.
- Mount Rainier.
- Sequoia and General Grant.
- Crater Lake.
- Glacier.
- Rocky Mountain.

The following named publications relating to Sieur de Monts National Monument:

Announcement by the Government of the creation of the Sieur de Monts National Monument by Presidential Proclamation on July 8, 1916.

Addresses at meeting held at Bar Harbor on August 22, 1916, to commemorate the establishment of the Sieur de Monts National Monument.

The Sieur de Monts National Monument as a Bird Sanctuary.

The Coastal Setting, Rocks and Woods of the Sieur de Monts National Monument.

An Acadian Plant Sanctuary.


The Acadian Forest.

The Sieur de Monts National Monument as commemorating Acadia and early French influences of Race and Settlement in the United States.


Natural Bird Gardens on Mount Desert Island.

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REPORT DIRECTOR NATIONAL PARK SERVICE.


SOLD BY THE SUPERINTENDENT OF DOCUMENTS.

(Remittances for publications listed below should be by money order, payable to the Superintendent of Documents, Government Printing Office, Washington, D. C., or in cash. Checks and postage stamps can not be accepted.)

PA MPHYLETS.


Contains a general resume of the geologic forces that have been active in the Yellowstone National Park.

Geyser. By Walter Harvey Weed. 1912. 32 pages, including 23 illustrations. 10 cents.

In this pamphlet is a description of the forces which have produced the geyser.


Contains descriptions of the fossil forests of the Yellowstone National Park and an account of their origin.

Fishes of the Yellowstone National Park. By W. C. Kendall. (Bureau of Fisheries Document 818.) 1915. 28 pages, including 17 illustrations. 5 cents.

Contains descriptions of the species and lists of streams where found.


Contains a general account of the forces that have caused the development of the mountain ranges, the valleys, and lakes of Glacier National Park.

Glaciers of Glacier National Park. By W. C. Alden. 1914. 48 pages, including 30 illustrations. 15 cents.

Contains descriptions of the principal features of the larger glaciers in the park.


Contains a description of some of the principal lakes, with special reference to the possibility of stocking the lakes with fish.


Contains a general account of the geologic forces that have produced the lake and an account of the lakes of Glacier National Park.

Geologic History of Crater Lake. By J. S. Diller. 1912. 32 pages, including 28 illustrations. 15 cents.

Contains an account of the formation of Crater Lake.


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


Contains descriptions of the flowering trees, shrubs, and plants in the park.


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

Mount Rainier and Its Glaciers. By F. E. Matthes. 1914. 48 pages, including 26 illustrations. 15 cents.

Contains a general account of the glaciers of Mount Rainier, and of the development of the valleys and basins surrounding the peak.


Contains a description of the general features of the Sierra Nevada and the Yosemite National Park and an account of the origin of the Yosemite and Hetch Hetchy Valleys.

FORESTS OF YOSEMITE, SEQUOIA, AND GENERAL GRANT NATIONAL PARKS. By C. L. Hill. 1910. 40 pages, including 23 illustrations. 20 cents.

Contains a detailed description of the forest cover and of the principal species.

The Secret of the Big Trees—Yosemite, Sequoia, and General Grant National Parks. By Ellsworth Huntington. 1913. 24 pages, including 14 illustrations. 5 cents.

Contains an account of the geological changes that are indicated by the thickness of the growth rings in the big trees, and gives a comparative statement of the climatic conditions in California and Asia during a period of 3,000 years.

Antiquities of the Mesa Verde National Park; Spirit Tree House.1 By J. W. Fewkes. (Bull. 41, Bureau of American Ethnology.) 1900. 58 pages, 21 plates, 37 text figures. 40 cents.

Contains a detailed account of the structure and of the objects found in it.

Antiquities of Mesa Verde National Park; Cliff Palace.1 By J. W. Fewkes. (Bull. 51, Bureau of American Ethnology.) 1911. 82 pages, 85 plates, 4 text figures. 45 cents.

Contains a detailed account of the structure and of the objects found in it.

Excavation and Repair of Sun Temple. By J. W. Fewkes. 1916. 32 pages, including 18 illustrations. 15 cents.

Contains an account of a new ruin discovered in 1915.


Contains a discussion of national-park problems by officers of the Government and other persons.

Proceedings of the [Second] National Park Conference Held at Yosemite National Park, October 14, 15, and 16, 1912. 146 pages. 15 cents.

Contains a main account of the advisability of admitting automobiles to the national parks and relates the experiences of the conference.


Contains discussions of national-park problems by officers of the Government and others.


Contains discussions of national-park problems by officers of the Government and others.


Geologic Story of Rocky Mountain National Park. By Willis T. Lee, Ph. D. 1917. 80 pages, 45 plates, 6 text figures. 30 cents.

Contains a detailed description of the park and its various geologic and scenic features.


Contains a detailed account of the geologic and scenic features of Lassen Volcanic National Park.

PANORAMIC VIEWS.

(The panoramic views listed below are based on accurate surveys and give an excellent idea of the configuration of the different parts of the valleys and basins surrounding the peak.

Panoramic view of Crater Lake National Park. 16 x 18 inches, scale 1 mile to the inch. 25 cents.

Out of print, but new edition soon to be issued.)
Panoramic view of Yosemite National Park. 18¼ x 18 inches, scale 3 miles to the inch. 25 cents.

Panoramic view of Glacier National Park. 18½ x 21 inches, scale 3 miles to the inch. 25 cents.

Panoramic view of Mount Rainier National Park. 20 x 19 inches, scale 1 mile to the inch. 25 cents.

Panoramic view of Yellowstone National Park. 18 x 21 inches, scale 2 miles to the inch. 25 cents.

Panoramic view of Mesa Verde National Park. 22½ x 19 inches, scale three-fourths mile to the inch. 25 cents.

Panoramic view of Rocky Mountain National Park. 14 x 17¼ inches, scale 2 miles to the inch. 25 cents.

MAPS SOLD BY THE U. S. GEOLOGICAL SURVEY.

(The maps listed below may be purchased from the Director of the United States Geological Survey, Washington, D. C. Remittances should be by money order or in cash. No orders can be accepted. A discount of 40 per cent is allowed on all orders for maps amounting to $3 net or more.)

Crater Lake National Park, Oreg. Limiting parallels, 42° 48' and 43° 04'. Limiting meridians, 122° 00' 10" and 122° 16' 25". Size, 19 by 22 inches. Scale, 1:62,500, or about one-half mile to 1 inch. Contour interval, 50 feet. An illustrated description of the lake and the manner of its formation is given on the back of the sheet. Price, 10 cents.

Glacier National Park, Mont. Limiting parallels, 48° 14' 36" and 49° 07' 15". Limiting meridians, 113° 10' and 114° 30'. Size, 31 by 35 inches. Scale, 1:125,000, or about 2 miles to 1 inch. Contour interval, 100 feet. Price, 25 cents.


Mount Rainier National Park, Wash. Limiting parallels, 45° 43' 43" and 47° 00'. Limiting meridians, 121° 30' and 121° 55'. Size, 22 by 23 inches. Scale, 1:62,500, or about 1 mile to 1 inch. Contour interval, 100 feet. Price, 10 cents.

Yellowstone National Park, Wyo.-Mont.-Idaho. Limiting parallels, 44° 08' 17" and 45° 07' 55". Limiting meridians, 110° 05' and 111° 05' 53". Size, 32 by 38 inches. Scale, 1:125,000, or about 2 miles to 1 inch. Contour interval, 100 feet. Price, 25 cents.

General Grant National Park, Cal. Shown on the Tehipite map. Scale, 1:125,000, or about 2 miles to 1 inch. Contour interval, 100 feet. Also issued folded between covers; price, 40 cents. The Yosemite Valley is shown on a larger scale on the Yosemite Valley map.

Yosemite Valley, Cal. Shown on the Yosemite Valley map. Limiting parallels, 37° 42' and 37° 47' 05". Limiting meridians, 119° 30' and 119° 43' 40". Size, 17¼ x 22 inches. Scale, 1:125,000, or about 2 miles to 1 inch. Contour interval, 100 feet. (In course of publication.)

Panoramic view of the lake and the manner of its formation is given on the back of the sheet. Price, 10 cents.

Sequoia National Park, Cal. Shown on the Kaweah and Tehachip maps. Scale, 1:125,000, or about 2 miles to 1 inch. Contour interval, 100 feet. Price of each map, 10 cents.

Wind Cave National Park, S. Dak. Shown on the Harney Peak and Hermosa maps. Scale, 1:125,000, or about 2 miles to 1 inch. Contour interval, 100 feet. Price of each map, 10 cents.

RAILROAD GUIDEBOOKS.

(Ain the Geological Survey bulletins listed below are described the geography, geology, history, and natural resources of the regions traversed by the principal transcontinental routes. Every effort has been made to make the volumes interesting as well as accurate. Matter slightly more detailed or technical than that in the body of the texts has been presented in a footnoted, and a glossary has been added in the text to the maps of geologic and geographic logic terms as it was necessary to use. The more important sources of geologic information in the region are listed in the back, and a table showing the principal divisions of the system is given on the backs of the title pages.)


This volume deals with the country along the Northern Pacific Railway from St. Paul to Seattle and along the branch line to Yellowstone Park. It is the purpose of this volume to answer some of the questions which arise from the traveler, to tell what the rocks are and how they got there, to explain the effects of earth movements upon them, to show how that conspicuous element in scenery which we call topography is the result of a long succession of geologic events—in brief, to tell the story of the mountains, valleys, and plains. It does not stop there, however. It connects this record of the prehistoric past with the present march of western progress and development by showing the relation of geologic processes to present natural resources of various kinds; it describes the utilization of these resources and tells how man has turned them to account.


A manual for the traveler which deals not only with the geology but with the natural resources, history, and development of the country along the Union Pacific Route between Omaha and San Francisco. It shows how differences in scenery and climate depend upon past geologic events and dispels the monotony of the great plains by taking the traveler back to times when these regions supported a vegetation very different from their present scanty covering and were inhabited by animals of strange forms and large size. The scenery of the mountains acquires additional interest from the explanation of the earth movements and the resulting rock structures to which fundamentally the mountain forms are due.


This guide describes the country along the Atchison, Topeka & Santa Fe Railway from Kansas City to Los Angeles. Although the description of the rocks and their relations and the scenic features form a large proportion of the matter, nearly every page gives information as to notable historic events, industrial resources, plants, and animals. The story of the Indians, past and present, especially the characteristic Pueblo tribes, is told in some detail. Many of the facts regarding their geology are presented for the first time. The book is also of immense value to visitors and travelers, providing them with maps of prominent scenic features and pictures of restoration of some of the very remarkable animals whose bones are found in the clay.


A manual for the traveler between Seattle or Los Angeles and San Francisco, which describes in clear, simple language the geography, geology, history, and natural resources of the region visible from the car windows. Geology is made interesting to the reader by an avoidance of details and by the selection for treatment of the features which are likely to attract the eye. Care is taken to afford a connection between the story of the earth and the present human activity in the region. The book is divided into two parts, one dealing with the route from Seattle to San Francisco and one with the route from Los Angeles to San Francisco.

REPORT DIRECTOR NATIONAL PARK SERVICE.
APPENDIX G.

MISCELLANEOUS.

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Statement of the national park policy ....................................................... 273
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269
HONOR ROLL.

Washington office.

Beltzell, J. G., photographer, Photographic Department, Signal Corps, U. S. Army.

Glacier National Park.

Hoag, Henry, ranger, Field Artillery, U. S. Army.
Secord, Emanuel J., clerk-stenographer, seventh squadron, Spruce Production Division, U. S. Army.
Waterhouse, Wm. L., clerk-stenographer, Military Aeronautics, U. S. Army.

Hot Springs Reservation.

Lawrence, Richard L., manager, free bathhouse, lieutenant, Quartermaster Corps, U. S. Army.
St. Clair, John W., policeman, captain of infantry, U. S. Army.

Mount Rainier National Park.

Simms, Lester K., ranger, Cavalry, U. S. Army.

Rocky Mountain National Park.

Beehler, Howard G., ranger, One hundred and sixty-fourth Depot Brigade, U. S. Army.
Michel, Fred, ranger, Sixtieth Field Artillery, U. S. Army.
West, Clyde M., ranger, Camp Bowie, Texas, U. S. Army.

Sequoia National Park.

Carter, David D., Military Aeronautics, U. S. Army.
Hall, Ansel F., ranger, Engineer Corps, U. S. Army.

Wind Cave National Park.

Brazell, Roy, ranger, Military Detachment, Dunwoody Institute, U. S. Army.

Yellowstone National Park.

Dustman, George T., ranger, Fifty-first Infantry, U. S. Army.
Little, Raymond G., scout.
Mason, C. A. McKinley, switchboard operator.
Mattson, Donald F., ranger, One hundred and sixty-sixth Depot Brigade, U. S. Army.
McLennan, Edward W., chauffeur, One hundred and sixty-third Depot Brigade, U. S. Army.
Oster, Robert, assistant electrician, U. S. N. R. F.
Wiggins, William, plumber, Quartermaster Corps, U. S. Army.
Wiley, Alexander C., clerk.
Statement of National Park Policy.

DEPARTMENT OF THE INTERIOR,
Washington, May 13, 1918.

Dear Mr. Mather: The National Park Service has been established as a bureau of this department just one year. During this period our efforts have been chiefly directed toward the building of an effective organization while engaged in the performance of duties relating to the administration, protection, and improvement of the national parks and monuments, as required by law. This constructive work is now completed. The new Service is fully organized; its personnel has been carefully chosen; it has been conveniently and comfortably situated in the new Interior Department Building; and it has been splendidly equipped for the quick and effective transaction of its business.

For the information of the public an outline of the administrative policy to which the new Service will adhere may now be announced. This policy is based on three broad principles: "First, that the national parks must be maintained in absolutely unimpaired form for the use of future generations as well as those of our own time; second, that they are set apart for the use, observation, health, and pleasure of the people; and third, that the national interest must dictate all decisions affecting public or private enterprise in the parks."

Every activity of the Service is subordinate to the duties imposed upon it to faithfully preserve the parks for posterity in essentially their natural state. The commercial use of these reservations, except as specially authorized by law, or such as may be incidental to the accommodation and entertainment of visitors, will not be permitted under any circumstances.

In all of the national parks except Yellowstone you may permit the grazing of cattle in isolated regions not frequented by visitors, and where no injury to the natural features of the parks may result from such use. The grazing of sheep, however, must not be permitted in any national park.

In leasing lands for the operation of hotels, camps, transportation facilities, or other public service under strict Government control, concessioners should be confined to tracts no larger than absolutely necessary for the purposes of their business enterprises.

You should not permit the leasing of park lands for summer homes. It is conceivable, and even exceedingly probable, that within a few years under a policy of permitting the establishment of summer homes in national parks, these reservations might become so generally settled as to exclude the public from convenient access to their streams, lakes, and other natural features, and thus destroy the very basis upon which this national playground system is being constructed.
You should not permit the cutting of trees except where timber is needed in the construction of buildings or other improvements within the park and can be removed without injury to the forest or disfigurement of the landscape, where the thinning of forests or cutting of vistas will improve the scenic features of the parks, or where their destruction is necessary to eliminate insect infestations or diseases common to forests and shrubs.

In the construction of roads, trails, buildings, and other improvements, particular attention must be devoted always to the harmonizing of these improvements with the landscape. This is a most important item in our program of development and requires the employment of trained engineers who either possess a knowledge of landscape architecture or have a proper appreciation of the esthetic value of park lands. All improvements will be carried out in accordance with a preconceived plan developed with special reference to the preservation of the landscape, and comprehensive plans for future development of the national parks on an adequate scale will be prepared as funds are available for this purpose.

Wherever the Federal Government has exclusive jurisdiction over national parks it is clear that more effective measures for the protection of the parks can be taken. The Federal Government has exclusive jurisdiction over the national parks in the States of Arkansas, Oklahoma, Wyoming, Montana, Washington, and Oregon, and also in the Territories of Hawaii and Alaska. We should urge the cession of exclusive jurisdiction over the parks in the other States, and particularly in California and Colorado.

There are many private holdings in the national parks, and many of these seriously hamper the administration of these reservations. All of them should be eliminated as far as it is practicable to accomplish this purpose in the course of time, either through congressional appropriation or by acceptance of donations of these lands. Isolated tracts in important scenic areas should be given first consideration, of course, in the purchase of private property.

Every opportunity should be afforded the public, wherever possible, to enjoy the national parks in the manner that best satisfies the individual taste. Automobiles and motorcycles will be permitted in all of the national parks; in fact, the parks will be kept accessible by any means practicable.

All outdoor sports which may be maintained consistently with the observation of the safeguards thrown around the national parks by law will be heartily indorsed and aided wherever possible. Mountain climbing, horseback riding, walking, motoring, swimming, boating, and fishing will ever be the favorite sports. Winter sports will be developed in the parks that are accessible throughout the year. Hunting will not be permitted in any national park.

The educational, as well as the recreational, use of the national parks should be encouraged in every practicable way. University and high-school classes in science will find special facilities for their vacation-period studies. Museums containing specimens of wild flowers, shrubs, and trees, and mounted animals, birds, and fish native to the parks, and other exhibits of this character will be established as authorized.

Low-priced camps operated by concessioners should be maintained, as well as comfortable and even luxurious hotels wherever the volume of travel warrants the establishment of these classes of accommodations. In each reservation, as funds are available, a system of free camp sites will be cleared, and these grounds will be equipped with adequate water and sanitation facilities.

As concessions in the national parks represent in most instances a large investment, and as the obligation to render service satisfactory to the department at carefully regulated rates is imposed, these enterprises must be given a large measure of protection, and, generally speaking, competitive business should not be authorized where a concession is meeting our requirements, which, of course, will as nearly as possible coincide with the needs of the traveling public.

All concessions should yield revenue to the Federal Government, but the development of the revenues of the parks should not impose a burden upon the visitor.

Automobile fees in the parks should be reduced as the volume of motor travel increases.

For assistance in the solution of administrative problems in the parks relating both to their protection and use the scientific bureaus of the Government offer facilities of the highest worth and authority. In the protection of the public health, for instance, the destruction of insect pests in the forests, the care of wild animals, and the propagation and distribution of fish, you should utilize their hearty cooperation to the utmost.

You should utilize to the fullest extent the opportunity afforded by the Railroad Administration in appointing a committee of western interests to inform the traveling public how to comfortably reach the national parks; you should diligently extend and use the splendid cooperation developed during the last three years among chambers of commerce, tourist bureaus, and automobile highway associations for the purpose of spreading information about our national parks and facilitating their use and enjoyment; you should keep informed of park movements and park progress, municipal, county, and State, both at home and abroad, for the purpose of adapting, whenever practicable, the world's best thought to the needs of the national parks. You should encourage all movements looking to outdoor living. In particular, you should maintain close working relationship with the Dominion parks branch of the Canadian department of the interior and assist in the solution of park problems of an international character.

The department is often requested for reports on pending legislation proposing the establishment of new national parks or the addition of lands to existing parks. Complete data on such park projects should be obtained by the National Park Service and submitted to the department in tentative form of report to Congress.

In studying new park projects you should seek to find “scenery of supreme and distinctive quality or some natural feature so extraordinary or unique as to be of national interest and importance.” You should seek “distinguished examples of typical forms of world architecture,” such, for instance, as the Grand Canyon, as exemplifying the highest accomplishment of stream erosion, and the high, rugged portion of Mount Desert Island as exemplifying the oldest rock forms in America and the luxuriance of deciduous forests.
The national park system as now constituted should not be lowered in standard, dignity, and prestige by the inclusion of areas which express in less than the highest terms the particular class or kind of exhibit which they represent.

It is not necessary that a national park should have a large area. The element of size is of no importance as long as the park is susceptible of effective administration and control.

You should study existing national parks with the idea of improving them by the addition of adjacent areas which will complete their scenic purposes or facilitate administration. The addition of the Teton Mountains to the Yellowstone National Park, for instance, will supply Yellowstone's greatest need, which is an uplift of glacier-bearing peaks; and the addition to the Sequoia National Park of the Sierra summits and slopes to the north and east, as contemplated by pending legislation, will create a reservation unique in the world, because of its combination of gigantic trees, extraordinary canyons, and mountain masses.

In considering projects involving the establishment of new national parks or the extension of existing park areas by delimitation of national forests, you should observe what effect such delimitation would have on the administration of adjacent forest lands, and, wherever practicable, you should engage in an investigation of such park projects jointly with officers of the Forest Service, in order that questions of national park and national forest policy as they affect the lands involved may be thoroughly understood.

Cordially, yours,

Mr. Stephen T. Mather,
Director, National Park Service.

Franklin K. Lane,
Secretary.

ASSOCIATED MOUNTAINEERING CLUBS OF NORTH AMERICA.

American Alpine Club.

President, Charles E. Fay, Tufts College, Massachusetts.
Secretary, R. H. Chapman, 2029 Q Street, Washington, D. C.
Treasurer, B. F. Seaver, 14 Wall Street, New York.
Librarian, LeRoy Jeffers, 476 Fifth Avenue, New York.
Membership—Active, 70; life, 11; honorary, 12; total, 93.
Annual dues, $5; life, $50.
The club's collection of mountaineering books and photographs is deposited with that of the New York Public Library, 476 Fifth Avenue in room 225.

American Game Protective Association, 2271 Woolworth Building, New York.

President, John B. Burnham, 233 Broadway, New York.
Secretary-treasurer, G. M. Fayles, 233 Broadway, New York.
Dues—Member, $1 plus subscription to any one of several leading sportsmen's magazines which carry monthly a department of wild-life conservation propaganda furnished by the association; club member (for organizations), $5; associate member, $25; sustaining member, $100; life member, $250; patron, $1,000; founder, $5,000; benefactor, $25,000.
Annual meeting, first Monday and Tuesday in March.
Publication, bulletin (quarterly), edited by E. A. Quarles. Sent without charge to all members.
The National Park Service, through its officers, is also represented in this association.

American Museum of Natural History, Seventy-seventh Street and Central Park West, New York.

President, H. F. Osborn, Seventy-seventh Street and Central Park West, New York.
Director, F. A. Lucas, Seventy-seventh Street and Central Park West, New York.
Secretary, Adrian Iselin, Seventy-seventh Street and Central Park West, New York.
Treasurer, H. P. Davison, Seventy-seventh Street and Central Park West, New York.
Librarian, R. W. Tower, Seventy-seventh Street and Central Park West, New York.

Data assembled by Le Roy Jeffers, secretary, 476 Fifth Avenue, New York City.
Adirondack Camp and Trail Club, Lake Placid Club, New York.

President, Godfrey Dewey (acting president), Lake Placid Club, New York.

Vice president, E. A. Woods, Frick Building, Pittsburgh, Pa.

Secretary, Godfrey Dewey, Lake Placid Club, New York.

Treasurer, F. B. Guild, Lake Placid, N. Y.

Membership.—Active, 29; associate, 9; life, 1; honorary, 1; total, 31.

Annual dues.—Active, $10; associate, $5; life, $100.

Annual meeting, middle of August.

Alpine Club of Canada, Banff, Alberta, Canada.

President, J. D. Patterson, Woodstock, Ontario.

Vice Presidents, Col. C. H. Mitchell, Toronto, Ontario; Col. W. W. Foster, Victoria, British Columbia.

Director, A. O. Wheeler, Sidney, British Columbia.

Secretary-treasurer, S. H. Mitchell, Sidney, British Columbia.

Appalachian Mountain Club, 1050 Tremont Building, Boston, Mass.

President, F. S. Mason, 106 Corey Street, West Roxbury, Mass.

Vice presidents, C. G. Bullard, 88 Front Street, New York; W. E. Huntington, 647 Boylston Street, Boston, Mass.

Recording secretary, Harrie H. Whitney, 1050 Tremont Building, Boston.

Corresponding secretary, Ralph Lawson, 88 Washington Square, Salem, Mass.

Treasurer, W. O. Witherell, 1050 Tremont Building, Boston.

Library, Miss A. G. Higgins, 1050 Tremont Building, Boston.

Sections.

New York.—Chairman, C. E. Buckingham, 120 Broadway, New York; secretary, H. S. Stilling, 61 Broadway, New York.

Conducts Saturday walks and holiday excursions.

Snowshoe.—Chairman, Harrie H. Whitney, 1050 Tremont Building, Boston; secretary, G. F. Haskell, City Hall Annex, Boston.

Conducts winter excursions in New Hampshire.

Membership.—Annual, $1.50; life: $275; corresponding, $50; honorary, $25; total, 4,186.

Entrance fee and dues, $5.

Annual meeting, second Wednesday in January.

Publications, Appalachian (annually), and occasionally semiannually; edited by C. E. Fay, $0.50 a copy; Bulletin (10 issues a year) ; Register (annually) ; Reservations of the Appalachian Mountain Club, by H. W. Shepard, 1913.


The club's collection of books, photographs, and maps is located at the club rooms, 1050 Tremont Building, Boston.

Clubhouse and camp on Three Mile Island, Lake Winnipesaukee, N. H., is open from June 29 to September 4. Rhododendron cottage at Pittwell, N. H., is open by arrangement. Madison Spring Hut, Carter Notch Hut, and Lakes of the Clouds Hut in the White Mountains are open from July 1 to October 1. The club conducts frequent excursions of from two or three days to two weeks to the mountains of New Hampshire, Massachusetts, Maine, and New York. Regular Saturday walks are scheduled in the vicinity of Boston and New York, and Tuesday evening summer walks near Boston.

1918 field meeting, June 29 to July 4, at Templeton Inn, Templeton, Mass.

British Columbia Mountaineering Club, Vancouver, British Columbia, Canada.

President, Charles Chapman, 3636 Fourteenth Avenue West, Vancouver, British Columbia.

Vice presidents, C. J. Henney, 2329 Trafalgar Street, Vancouver; Miss E. B. Fowler, 1121 Melville Street, Vancouver.

Secretary, Mrs. H. E. Coulter, post-office box 1223, Vancouver, British Columbia.


Membership.—Active, 96; honorary, 2; total, 98.

Annual dues, $2.

Entrance fee and dues, $8.

Annual meeting, second Wednesday in January.

Annual dues, $4; life, $30.

Annual meeting, second Wednesday in January.


Club house, Banff, Alberta, Canada. Open June 15 to September 30. Rate, $2.50 a day.

1918 camp, July 16 to 31, in Paradise Valley, 12 miles from Laggan. Subsidiary camp in Consolation Valley.
Treasurer, R. B. Rockwell, 301 Railway Exchange Building, Denver.
Membership.—Regular, 163; qualified, 279; honorary, 2; total, 437.
Annual meeting, third Friday in January.
Publication, Trail and Timberland (monthly), edited by Miss Annette Badgley.

Field and Forest Club, Boston, Mass.
President, F. M. Brooks, 151 Franklin Street, Boston, Mass.
Vice presidents, A. H. Brown, 201 Clarendon Street, Boston, Mass.; F. L. Taylor, 45 Centre Street, Roxbury, Mass.
Recording secretary, Miss A. K. Drown, 299 Centre Street, Dorchester, Mass.
Corresponding secretary, Miss H. A. Lancaster, 803 Shawmut Avenue, Roxbury, Mass.
Treasurer, H. P. Nickerson, 37 Upton Street, Boston, Mass.
Membership, active, 685.

Fresh Air Club, New York, N. Y.
President, H. E. Buermeyer, Hotel St. George, Brooklyn.
Vice president, Brainard Kellogg, Mottstown, N. Y.
Secretary, Mortimer Bishop, 88 Nassau Street, New York.
Treasurer, A. F. Ormsbee, 133 Joralemon Street, Brooklyn.
Membership, active, 75.

Geographic Society of Chicago, Chicago, Ill.
President, F. T. West, 68 Division Street.
Recording secretary, Mrs. B. B. Bohn, 10680 Prospect Avenue, Chicago, Ill.
Domestic corresponding secretary, Mrs. L. R. Frazer, 814 South Michigan Avenue, Chicago, Ill.
Treasurer, O. M. Schmitz, 10 La Salle Street, Chicago.
Membership.—Resident, 631; life, 38; patrons, 3; nonresident, 16; honorary, 7; total, 693.

President, W. E. Lingelbach, 4304 Osage Avenue, Philadelphia.
Vice presidents, H. G. Bryant, 2013 Walnut Street, Philadelphia; L. W. Miller, 320 South Broad Street, Philadelphia.
Recording secretary, J. E. B. Buckenham, Municipal Hospital, Philadelphia.
Corresponding secretary, P. J. Sartain, 2006 Walnut Street, Philadelphia.
Treasurer, W. K. Haupt, 119 South Fourth Street, Philadelphia.
Membership.—Active, 890; nonresident, 32; life, 49; corresponding, 22; honorary, 15; total, 979.

Green Mountain Club, Inc., 85 Mead Block, Rutland, Vt.
President, C. P. Cooper, 300 West Street, Rutland, Vt.
Vice president, L. J. Paris, 324 South Union Street, Burlington, Vt.
Secretary, C. H. Willey; treasurer, Frank Dann, Port Angeles, Wash.
Annual meeting, second Wednesday in May.

Hawaiian Trail and Mountain Club, Honolulu, Hawaii.
President, W. F. Frear, Honolulu, Hawaii.
Vice president, J. S. Donagho, Honolulu, Hawaii.
Corresponding secretary, A. H. Ford, Honolulu, Hawaii.
Membership, active, 106.
Annual dues, $5.
The club constructs and maintains mountain trails, and conducts Sunday walks and climbing excursions on the various islands.

Klahhane Club, Port Angeles, Wash.
President, B. N. Phillips, Port Angeles, Wash.
Vice president, Miss Inez McLaughlin, Port Angeles, Wash.
Secretary, J. A. Baker, Port Angeles, Wash.
Treasurer, Frank Dann, Port Angeles, Wash.
Membership.—Active, 70; honorary, 19; total, 89.
Entrance fee and dues, $2.
Annual dues, $1.
Annual meeting, third Wednesday in January.
Publication, yearbook, edited by E. B. Webster, 50 cents a copy.
Lodge on slopes of Mount Angeles.
Conducts Saturday and Sunday walks.
1918 outing, July 6 to 14, on Mount Angeles, Wash.

Mazamas, 218 Northwestern Bank Building, Portland, Oreg.

President, R. W. Ayer, 620 Everett Street, Portland.
Vice president, W. P. Hardesty, 213 Northwestern Bank Building, Portland.
Recording secretary, Miss N. G. Richardson, 588 East Washington Street, Portland.
Corresponding secretary, A. F. Parker, 330 Northwestern Bank Building, Portland.
Treasurer, K. J. Davidson, 458 East Forty-ninth Street, North Portland.
Membership, Active, 686; life, $; honorary, $; total, 687.
Annual dues, $3; life, $50.
Annual meeting, first Monday in October.
Annual publication, Mazama, edited by A. F. Parker, 50 cents a copy.
Clubrooms and library, 213 Northwestern Bank Building, Portland.
The club conducts Saturday and Sunday walks and holiday excursions.
Annual Mount Hood outing, August 10 to 11.
1918 outing, July 13 to July 28, at Wallowa Mountains, Oregon.

Mountaineers, Central Building, Seattle, Wash.

President, E. S. Meany, 4025 Tenth Avenue NE, Seattle.
Vice president, G. E. Wright, 1227 Thirty-eighth Avenue N., Seattle.
Secretary, E. W. Allen, 402 Burke Building, Seattle.
Treasurer, F. G. Pugsley, care of County Clerk, County-City Building, Seattle.

BRANCHES.

Everett.—Chairman, H. B. Hinman, 2005 Baker Avenue; secretary, Miss Mabel McRae, 2322 Lombard Avenue. Conducts Sunday walks.
Membership, Active, 519; life, 2; honorary, 1; total, 522.
Entrance fee and dues, Active, residents of King County, $3; nonresidents, $4; Active, residents of King County, $3; nonresidents, $3; contributing, $10; life, $100.
Annual meeting, third Friday in October.
Clubrooms and library, Central Building, Seattle; Suquamish Lodge, near Rockdale, on C. M. S. P. R. (toboggan and ski course); Kitsap Cabin, Rho
dodendron Park, near Chico, Kitsap County, reached via boat from Madison Street, Seattle to Chico.
The club conducts Sunday walks and holiday excursions.
Annual midwinter outing in Mount Rainier National Park.
1918 outing, July 23 to August 14, in Monte Christo district, Washington.

National Association of Audubon Societies, 1914 Broadway, New York City.

President, William Dutcher, Plainfield, N. J.
Acting president, F. A. Lucas, American Museum of Natural History, New York City.
Chairman, C. J. Fox, 1443 Bellvue Avenue.
Secretary, P. S. Bernays, 318 West Third Street.
Conducts Saturday and Sunday walks and holiday excursions.
Membership.—Active, 1,807; life, 33; honorary, 15; total, 1,883.
Entrance fee and dues, $5.
Annual dues, $3; life, $50.
Annual meeting, first Saturday in May.
Annual publication, Sierra Club Bulletin, edited by W. F. Bade, 50 cents a copy.
Club rooms and library, 402 Mills Building, San Francisco.
Le Conte Memorial Lodge, Yosemite Valley. Parsons Memorial Lodge, Tuolumne Meadows, Yosemite National Park. Muir Lodge, Big Santa Anita Canyon, reached by interurban electric from Los Angeles to Sierra Madre.
Conducts Saturday and Sunday walks and holiday excursions. Winter sports outing in January.
1918 outing, July 6 to 28. Tuolumne Meadows via Yosemite Valley, was planned, but later abandoned on account of war conditions. However, many members availed themselves of the club's camping facilities in Yosemite Park.