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ZION NATIONAL PARK

Annual Report - 1937

General

This report of the administration of Zion National Park covers the fiscal year ended June 30, 1937, and the 19th year that Zion has been a national park.

Zion National Park became a national monument in 1909 and gained national park status in 1919. Enlargements since the original monument was established have brought it to a total area of 148 square miles, all of which is in federal ownership with the exception of 520 acres of privately owned land, and 307.71 acres of state school land. It is located near the southwestern corner of Utah. It is made accessible to visitors by an 18-mile road system, including the famous Zion Tunnal of more than a mile length, four trails from the valley to the rim, and a system of bridle and foot trails in the valley. Accommodations, of the lodge and housekeeping cabin types, and transportation service, are provided by Utah Parks Company, which also operates similar services in Bryce Canyon National Park, Cedar Breaks National Monument, and North Rim of Grand Canyon National Park. Two public auto camps, each supplied with running water, fuel wood, sanitary facilities and picnic tables, and one also having individual cooking fireplaces, are maintained by the Government.

Railroad connection to the park is provided by Utah Parks Company buses from Cedar City, on the Zion-North Rim of Grand Canyon-Bryce-Cedar Breaks loop tour, during the summer season, June 1 to September 30.

The lodge is open each summer from June 1 to September 30, and the housekeeping camp, with cafeteria in conjunction, is operated throughout the year, as is also the south entrance public campground. Roads within the park are kept open all winter, snow removal operations being performed when necessary.

Boundary Extensions

On January 22, 1937, the President signed a proclamation establishing Zion National Monument, adjoining Zion National Park on the north and west. The reservation includes an area of approximately 49,150 acres, including the spectacular Kolob Canyons.

Summary of the Season

Considerable widespread publicity was given to the southern Utah parks during the year, including several national hook-up radio broadcasts. On January 12, 1937, the superintendent delivered over KSL (Salt Lake) a 15-minute address entitled "The National Park Service in Recreation". On March 7, Zion, Bryce and Cedar Breaks were the subject of Carveth Wells' broadcast over C.B.S. on the Conoco program. These three areas were again featured on May 2, on the National Park Service series of N.B.C. red network broadcasts from airplanes flying over the park areas. Memorial Day services on May 30, planned to be held at the foot of the Great White Throne, but removed to the lodge and produced in the recreation room because of storms, was broadcast for one hour over the C.B.S. national network, the program consisting of selections by the famous Tabernacle Choir of Salt Lake City, and the Church of the Air, conducted by Haber J. Grant; and for an additional half hour over KSL only, consisting of vocal selections and speeches. A paper on National Park Service recreational developments in Utah was prepared by the park naturalist and read over KSL on June 30.

The annual Easter service in Zion Park was by far the most successful yet produced. A pageant consisting of dramatization of the last three chapters of the Book of Luke was presented by Cedar City public organizations. Registrations for the day totalled 4448, the largest single day in the history of the park, and this in spite of a stormy day preceded by a week of rain.

The year was by far the busiest in point of visitation in the park's history. Service to the 135,520 visitors taxed our small organization to the limit, but long hours and heavy work were cheerfully endured.

Personnel

The permanent administrative organization consists of a superintendent, assistant superintendent-engineer, chief ranger, chief clerk, park naturalist, chief ranger, two park rangers, foreman of laborers, general mechanic, storekeeper-costkeeper, and clerk-stenographer. This force is supplemented during the summer season by four temporary rangers and three ranger-naturalists. Construction and maintenance labor is recruited from neighboring communities as needed. The administrative staff is also supplemented by the assignment of architects, engineers, etc., from the respective branches of the Service.

The office also administers Bryce Canyon National Park, and Cedar Breaks, Lehman Caves, Timpanogos Cave, and Zion National Monuments.

Charles A. Gerrard, Storekeeper-Costkeeper in Zion for four years, died on July 5 at his residence in Zion Park. Claude B. Conley of Grand Canyon was transferred to fill the vacant storekeeper position, but left Zion on November 7 to accept a position in the Santa Fe District Office. Thomas W. Foley was selected from Civil Service eligible list and appointed to the storekeeper position vacated by Conley. Mrs. Elsa F. Ruesch, clerk-stenographer in the Zion office for six years, resigned effective June 30.

Weather Conditions

Precipitation for the year was slightly above normal, due to extra heavy snows during the winter. Summer temperatures were about average, but winter temperatures were much lower than normal, and the minimum of -15 registered on January 21 was the lowest on record for the area. Snowfall was also considerably above normal. Storms beginning on December 26 blocked highways, stalling travelers and causing considerable hardship and a few deaths from exposure. Cattle and sheep on winter ranges were unable to get feed, and many ranchers and others in out-of-the-way places were threatened with food shortage. National Park Service equipment and personnel were loaned to various public agencies to assist in alleviating the hardships. When the blanket of snow on the floor of the valley melted, after laying for about two months, the grass was green and growing underneath, and the park put on its finest display of flowers in many years.

One cloudburst on July 9-10, 1936, brought the largest flood down the Virgin River since 1930. Large quantities of debris washed down the hillsides, filling gutters and flooding over the highways. The valley road was closed for 1½ hours. It was necessary to request \$5,000 emergency appropriation to reimburse the park for expenditures in repairing damage done by this storm.

The following is a detailed summary of weather conditions by months:

<u>Month</u>	<u>Mean Max.</u>	<u>Mean Min.</u>	<u>Mean</u>	<u>Max.</u>	<u>Min.</u>	<u>Prec.</u>	<u>Clear</u>	<u>P.O.</u>	<u>Cl.</u>	<u>Snow</u>
July 1936	97.19	69.39	83.29	105	51	1.53	6	8	17	
August	95.39	68.67	82.03	102	62	0.59	14	7	10	
Sept.	87.87	58.83	73.35	96	35	1.31	20	4	6	
Oct.	74.35	48.39	61.37	91	33	3.14	17	4	10	
Nov.	64.03	38.43	51.23	75	21	0.78	26	1	3	

<u>Month</u>	<u>Mean</u> <u>Max.</u>	<u>Mean</u> <u>Min.</u>	<u>Mean</u>	<u>Max.</u>	<u>Min.</u>	<u>Prec.</u>	<u>Clear</u>	<u>P.C.</u>	<u>Cl.</u>	<u>Snow</u>
Dec.	51.71	29.00	40.35	66	19	3.18	15	1	15	11.0"
Jan. 1937	35.00	14.55	24.77	47	-15	1.78	15	5	11	26.6"
Feb.	51.32	31.86	41.59	64	18	2.52	14	6	8	3.0"
March	60.10	38.55	49.32	72	26	3.18	13	8	10	
April	69.93	42.47	56.20	82	31	0.03	14	7	9	
May	86.58	57.29	71.93	96	42	0.41	15	11	5	
June	91.67	62.97	77.32	105	49	0.52	16	9	5	
Total	72.09	46.70	59.39	105	-15	18.97	185	71	109	30.6"

Travel

The total of 135,521 visitors for the year is an increase of 27,640 people or 25.62% over the 107,881 visitors in 1936, and established a new high record. Every month of the year except February and April showed increases over the corresponding month of last year, with August the largest travel month - 27,088 registrations. California led all states in registrations, showing 37,735; Utah followed with 36,199, and Arizona and Illinois ran a close race for third place, having 5,276 and 5,209 respectively. Foreign registrations totalled 1,197, with 896 of this number coming from Canada. The largest single day was March 28, Easter Sunday, with 4,448 registrations.

The Western Air Lines established their route between Los Angeles and Salt Lake over Zion Park early in the year.

Detailed summary of travel:

	<u>1937</u>		<u>1936</u>	
	<u>Private</u> <u>Autos</u>	<u>Total</u> <u>Visitors</u>	<u>Private</u> <u>Autos</u>	<u>Total</u> <u>Visitors</u>
July	7,707	26,849	6,186	21,084
August	7,871	27,088	6,300	21,412
September	5,717	17,575	4,015	12,504
October	2,502	7,056	1,950	5,408
November	821	2,454	622	1,983
December	450	1,342	452	1,309
January	585	1,611	418	1,081
February	370	978	469	1,376
March	1,722	6,919	682	2,343
April	1,652	5,167	2,194	8,457
May	4,225	14,612	3,264	10,363
June	7,400	23,870	6,486	20,561
Totals	41,022	135,521	33,038	107,881

Maintenance, Improvements, Construction

Maintenance

Routine maintenance activities for maintaining sanitary conditions at the campgrounds and park residences were continuous. Road and trail maintenance was handled by park forces until in December, when the exhausted condition of the regular maintenance funds made it necessary to set up an E.C.W. project for this work through the winter and spring.

Snow removal was necessary on park highways during the winter. All highways in the park were kept open, except the valley road above Cable Creek, and our snow removal equipment was loaned to the State Highway Department to assist in opening main highways.

Water was turned out, buildings locked, and the Grotto Campground closed for the winter on October 1; thereafter all campers were required to use the South Entrance campground, which remained open throughout the winter. The Grotto Campground was reopened for the season in March.

The cold winter weather necessitated considerable thawing of frozen pipes, and repairing of fixtures broken by freezing.

Improvements

The W.P.A. project on roadside improvement worked throughout the year; with an increase to double shift during May and June.

New Construction

Bids for completing the tunnel lining were opened in the Bureau of Public Roads Office in Ogden on September 22. Reynolds-Ely Construction Company of Springville, was the successful bidder, for \$228,425.95. The contractor moved on to the job in late October, and worked throughout the winter, completing the work and leaving the park on June 8.

Gravel production equipment for minor road surfacing under Roads and Trails appropriation was set up in May, and actual production of material started early in June.

Emergency Conservation Work

In the past the two CCC camps under supervision of this office have been operated as two distinct units, each with its own project

superintendent, but in September, 1936, the two camps were placed under general supervision of a senior project superintendent, Mr. Frank R. Rozelle, with a general foreman in each camp for immediate supervision. This consolidation of authority increased efficiency and effectiveness of the work.

Company 3238 moved from Camp NM-1, Cedar Breaks, to Zion Camp NP-2 on October 10 for winter assignment. On October 14 the company was disbanded, and on October 27 a new company, Nr. 4779, North Dakota, took its place in Camp NP-2. On June 1 this company was transferred from Zion National Park to Grand Teton National Park.

Company 962 moved from Bryce Camp NP-3 to Zion Camp NP-4 on October 30 for winter assignment, and returned to Bryce Camp NP-3 on June 1 for summer work. A small stub camp remained at Zion to furnish administrative assistants in the office, garage, warehouse and museum.

The more important work accomplished by the two camps while in Zion consisted of the following:

River protection - Construction of basket dams in the Virgin River to prevent erosion by flood waters; also, repair of existing dams, to prevent damage.

Eradication of tamarix - Cutting portion of the shrub which bears seeds that might mature, and girdling and spraying the bush with 127 diesel oil.

East Rim truck trail - Some work done, but project discontinued in favor of more urgent work.

Fine grading - the major project in the park; consisted of sloping cut banks and fills on the East Rim Road. A large quantity of material was removed, with the aid of a power shovel, operated by an enrollee.

Oak Creek Bridge - Construction of stone walls and abutments, and placing old bridge deck.

Highway maintenance - Removal of sloughing material from gutters; removal of slides; and snow removal. A large number of CCC man days was utilized in assisting the State Highway Department and other organizations with snow removal outside the park during the heavy storms of the winter.

Transplanted vegetation - New planting done at cafeteria and in road triangles; also, irrigation of all transplanted trees and shrubs during the summer.

Employees cabin - Construction of 3-room cabin, with basement.

Addition to administration building - Construction of a fireproof vault and furnace room. Building completed, but radiators and steam pipes not yet installed.

Approach and Feeder Highways

Revised recommendation for designation of the Cedar-Long Valley Approach Road was approved by the Secretary of the Interior on June 23, 1937. The Bureau of Public Roads has a survey crew on the project at present, making notes for preparation of plans.

The bridge across the Virgin River near Hurricane on the Hurricane Cut-off route was started in December, 1936, but not completed at the end of the report year.

Utah Parks Company

Patronage of Utah Parks Company facilities continued on the up-grade this year. Travel on the company buses showed an increase of 30% over last year. The housekeeping camp was often operated at capacity, and in June the construction of ten new cabins, with private bath, was started. Patronage during the winter months was light, as was to be expected with cold weather and blocked feeder highways.

The lodge closed for the season on October 1 and reopened in the spring on May 25. New water lines were installed in the lodge area to provide additional fire protection.

President Carl Gray of the Union Pacific Railroad, accompanied by his secretary, Mr. Blanchard, and E. C. Webster, Manager of Utah Parks Company, visited the park on September 10.

The Utah Parks Company purchased twelve new 18-passenger buses in the spring of 1937 for use on the loop tours.

Other Agencies

Dr. H. E. Gregory, U. S. Geological Survey, arrived for the 1936 season on July 11, and remained until early November, to continue his geological research in this region. At various times during the summer he was assisted by Dr. N. E. A. Hinds of the University of Cali-

fornia, V. W. Vandiver, and Donald K. Mackay, of the National Park Service.

The Bureau of Public Roads supervised the tunnel lining project, in progress under contract from October to June.

A member of the park ranger force operated the U. S. Weather Bureau station located at the south entrance of the park during the entire year.

The Utah Central Stage Lines operated passenger and express lines from St. George to Kanab, with special use permit granted by the National Park Service for the use of the through highway in Zion Park.

The park personnel cooperated with the Bureau of Public Roads and the State Road Commission in their state-wide highway planning survey. Our part in the survey consisted of making certain counts of automobiles passing into and out of the park past the checking stations.

Education

The naturalist program at Zion during the past year has consisted of museum and information service daily throughout the year, and an additional daily summer schedule (May 1 to September 30) of two nature hikes, two evening lectures, one reptile lecture at the museum, and service at the large window of the Zion-Mt. Carmel Tunnel. Additional trips and lectures were frequently given for educational and other special groups, and 29 lectures were given during the winter to schools and service clubs, chiefly in Utah.

The most outstanding feature of the past twelve months of ranger-naturalist work has been the steadily increasing interest in natural sciences. The traveling public is demanding more than ever before to know the how and why of the scenic wonders of our parks; so much so that we believe it indicative of a pronounced national trend toward more profitable use of leisure time.

In Zion, during the previous year, we had thought that our educational developments had been so perfected that future increases in educational contacts would be no more than travel increases; but this year, with the same educational program as previously, we experienced an increase of 32.6% in contacts as against a travel increase of 25.5%, as shown below:

	<u>1936</u>	<u>1937</u>	<u>Increase</u>
Educational contacts	98,527	130,814	32.6%
Park travel	107,881	135,521	25.5%

An analysis of the detailed statistics on the attached form shows that this is the first year in which museum attendance has exceeded attendance at lectures (47,555 at lectures; 56,073 at museum). This is due not only to improved museum location, but also to an apparent increase in public interest in museums.

Another notable use of improved facilities has been at the south entrance lecture circle, where we have this year been able to handle the greatly increased spring travel with ease and comfort. A total of 3,268 persons attended illustrated lectures there during the spring and fall months, whereas before the circle was constructed we had no means of thus contacting off-season visitors.

Valuable contacts outside the park were made during the winter by the park naturalist, who spoke to 3,900 persons in the schools and colleges of northern Utah; and by various members of the seasonal naturalist force, who spoke before a total of 4,800 persons in various parts of the United States.

A start toward more effective visual education at our evening lectures was made this year by exposing 500 feet of color film. This has been edited and used during June, 1937, to vary the usual lantern slide lectures. Reception by the public has been good, and more color film will be used as funds permit.

As in previous years we continue to receive many compliments on the friendly and helpful attitude displayed by our naturalists and rangers.

Development of the temporary museum, by installation of exhibits planned for eventual use in a permanent museum, has been nearly completed this year. The following units have been received from the museum laboratories at Berkeley: cactus diorama and case, archeology case, and 5 cases for history and geology exhibits.

Research has been carried on along three lines this year - geological, botanical, and zoological. The first has received major attention under the direction of Dr. H. E. Gregory, who spent four months in Zion directing the work of from two to five geological technicians employed under E.C.W. Resumption of field work this summer would have permitted completion of data and publication of a much needed paper on geology of Zion, Bryce, and Cedar Breaks, but a \$224¹/₂ cut in E.C.W. funds has caused indefinite delay, which is regrettable because public demand is greater for a geological paper than for any other.

Botanical work by our naturalist staff has resulted in publication this June of a 69-page lithoprinted pamphlet "Plants of Zion National Park", which is the first of a series of bulletins to be put out by the Zion-Bryce Natural History Association in lieu of the mimeographed "Nature Notes", now discontinued. Other botanical research has been carried on chiefly on grazing quadrates.

In zoology the park naturalist has been compiling data and specimens upon which to base a bulletin on mammals of Zion, Bryce, and Cedar Breaks, to be published this coming fall as the second bulletin in the series already mentioned. In this connection he spent several days searching the files and collections of the Biological Survey while he was on official duty in Washington, April 13 to May 13. Other zoological work has been done on the deer problem in Zion Canyon, for which we believe we have a satisfactory solution by declaration of special hunting season outside the park (through State cooperation); and on bird banding - a continuation of the work started in 1934.

Protection

The ranger force has consisted of a chief ranger and two permanent park rangers, supplemented during the season by four temporary rangers. The south entrance checking station is operated two shifts daily throughout the year, for registration of incoming cars and collection of entrance fees. The east entrance checking station is operated on two shifts throughout the summer season, on one shift for a month or so at each the beginning and close of the summer season, and is closed for the remainder of the season. One temporary ranger is assigned to traffic control, dispatching of entrance fees collected, and management of the Grotto Campground. Two seasonal rangers are held over until the close of the hunting season, for assisting on boundary patrol.

Park boundaries were patrolled during hunting season, Oct. 20 to 30, but no trespass was discovered.

Three gravel screens were stolen from the park gravel plant sometime between October 30 and November 3. The theft was reported to sheriffs of the surrounding counties, who made a search for them, but to date they have not been found. The gravel plant was burglarized on May 28, when gasoline and tools were taken from the temporary tool house constructed at the plant. The Federal Bureau of Investigations and local officers cooperated in apprehending the guilty parties.

Fire drills were held at frequent intervals throughout the year, in which all park personnel and the two CCC camps participated. Fire inspections of park facilities are made monthly. One small fire occurred in house No. 3 on January 17, when the wall beside the stove chimney caught fire. Damage amounted to about \$20.

Accidents

No major accidents occurred during the year. We have a record of 14 traffic accidents, 4 accidents caused by falling, 35 industrial accidents, and 7 of miscellaneous nature, all minor.

Forestry and Wildlife

The over-population of deer in Zion Canyon, which was reaching the stage where plans for reduction were under discussion, was somewhat relieved by the severe winter of 1936-37, which some of the less healthy animals were unable to survive.

Spraying activities for control of tent caterpillars on cottonwood and ash trees were carried on as usual during the spring of 1937.

A survey of certain small animals in southern Utah was made to determine bubonic plague carriers. Several cases were found in the region, but no collecting was done within the park boundaries.

Mountain sheep were seen frequently during the year, and the semi-tame mountain sheep was seen once at the upper tunnel, accompanied by a large ram.

There were no forest fires in the park during the year.

Official Visits and Inspections

- July - Supt. M. R. Fillotson, Grand Canyon National Park.
Congressman J. G. Scrugham, Nevada, Member of Interior Department Sub-Committee on Appropriations.
Assistant Secretary of Agriculture M. L. Wilson, accompanied by his assistant, D. C. Blaisdell, and Regional Forester R. H. Rutledge.
Assistant Director Harold O. Bryant and family.
F. W. Childs, ECW Coordinator of National Park Service, accompanied by Mrs. Childs.
- August - Mr. W. E. Mattingly, Assistant Director of Bureau of the Budget, accompanied by Mrs. Mattingly.
T. R. Goodwin, Resident Engineer, Death Valley National Monument, and family.
Regional Geologist Carroll H. Wegemann.
- September - Miss Isabelle F. Story, Editor-in-Chief, National Park Service.
Assistant Chief Engineer A. W. Burney, accompanied by Mrs. Burney.

Frank L. Ahern, Fire Protection Engineer.
 Neal A. Butterfield, Branch of Planning, Washington Office.
 Regional Officer Lawrence C. Merriam, accompanied by
 Assistant Regional Officer John S. McLaughlin.
 Earl A. Trager, Chief Geologist, and C. M. Bauer, Park
 Naturalist, Yellowstone.
 B. J. Finch, District Engineer, B.P.R., and L. M. Huggins,
 Bridge Engineer, B.P.R., Ogden.
 October - Supt. M. R. Tillotson, Merel S. Sager, and Jesse L. Nusbaum.
 November - Regional Landscape Architect Thos. E. Carpenter, accom-
 panied by Resident Landscape Architect H. B. Stephenson.
 Perry D. Edwards, to make audit of books.
 December - Supt. and Mrs. E. T. Scoyen and son, of Glacier Park.
 Senator James P. Pope of Idaho, accompanied by Mrs. Pope,
 their son, and Mr. Pope's secretary.
 January - Assistant Regional Officer McLaughlin, accompanied by
 Inspectors Thede and Whitworth.
 James Reddock, ECW Inspector from Director Fechner's office.
 Brigadier General Walter C. Sweeney, Fort Douglas.
 February - ECW Auditor L. P. Alexander.
 Bridge Engineer L. M. Huggins, B.P.R., Ogden.
 March - Supt. M. R. Tillotson, Grand Canyon.
 April - Ansel F. Hall, en route to Mesa Verde.
 Engineers Brighton and Mayo, San Francisco B.P.R., and
 District Engineer Finch, B.P.R., Ogden.
 May - Chief Engineer F. A. Kittredge.
 Regional Geologist J. V. Lewis.
 Assistant District Engineer Mitchell, B.P.R., Ogden.
 June - J. E. Strauser, Chief, Control Division, Washington Office,
 H. B. Hommon, Sanitary Engineer, Public Health Service.
 Assistant to Director Donald E. Lee, and Mrs. Lee.

Receipts and Revenues

Receipts

Auto entrance fees	\$36,336.00	
Sale of condemned property	216.00	
Other	5.67	\$36,557.67

Expenditures

Administration, protection and maintenance	\$38,834.04	
Equipment	815.96	\$39,650.00
Forest Protection and Fire Prevention		
Service	\$ 60.00	
Equipment	188.50	248.50
Emergency Reconstruction		5,000.00

Roads and Trails		
Sloping	\$ 1,500.00	
Surfacing	497.90	
Surfacing equipment	4,887.51	
Tunnel lining	<u>230,218.79</u>	\$237,104.20
Emergency Construction Fund		59,390.90



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UNITED STATES
DEPARTMENT OF THE INTERIOR
National Park Service
Washington

June 9, 1937.

MEMORANDUM FOR ALL FIELD OFFICERS:

You are hereby requested to transmit to this office not later than July 31 your Annual Report for the fiscal year ending June 30, 1937.

This report should cover important projects undertaken and completed during the year, including special educational and conservation programs, outstanding recreational features, unusual facilities installed for the accommodation of the public, and such other noteworthy accomplishments as may be used in the Director's Annual Report to the Secretary.

It will not be necessary to include travel figures in this report, but at the close of business on September 30, please wire the travel figures for the year October 1, 1936 to September 30, 1937, so that they may be available for the Service's comparative travel statistical tables.

PLEASE ACKNOWLEDGE THE RECEIPT OF THIS MEMORANDUM.

Acting Director.