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DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

Zion NATIONAL PARK

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1939

1939

Inspections, Branch of Forestry, Region IV  
(Administration)

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IMPORTANT

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ARNO B. CAMMERER,  
*Director.*



ZION NATIONAL PARK

Annual Report

1939

General

The following is the annual report for Zion National Park covering the fiscal year ending June 30, 1939.

This area of 148 square miles was made a national park in 1919 after having first attained national monument status in 1908. Located in the southwestern section of Utah, it is easily reached from U. S. highways 89 and 91, both paved, and by Union Pacific rail-head at Cedar City. A well developed system of trails and paved highways within the park serves to make points of interest accessible. The park is open and accommodations are available throughout the year.

Administration

General

The past fiscal year in Zion National Park has been an extremely busy one, and perhaps the outstanding feature from an administrative viewpoint has been the size and variety of emergency programs carried on. There have been large ERA, PWA, WPA and CCC programs undertaken in addition to major and minor roads and trails programs. While some difficulty was experienced by the park's small permanent organization in following the required procedure of emergency programs and keeping them segregated, on the whole much valuable work was accomplished that could not otherwise have been undertaken. The largest single construction item started during the year was the Birch Creek Water System and 200,000 gallon storage tank, a PWA job with CCC participation, for which the park received a net allotment of \$26,500.

Public use of the park showed substantial gains for the sixth successive year as reflected by a 6 percent increase in travel. This year it was particularly noticeable that motorists were traveling on more hurried schedules, making the Golden Gate Exposition at San Francisco their main objective.

The administration of Lehman Caves National Monument in Nevada was transferred, along with all records, to the Boulder National Recreational Area on December 23, 1938.

Effective January 1, 1939, Mr. Preston F. Patraw, who had served as Superintendent of Zion and other areas administered from this office since January, 1932, was transferred to the superintendency of Hot Springs National Park. On this same date Mr. Paul R. Franke assumed the duties as Superintendent of Zion, having been promoted from the position of Assistant Superintendent of Mesa Verde National Park.

Personnel

No new positions were established during the year, and other than the change of superintendents the permanent park organization remained the same. The following are the appointive positions in the Zion National Park organization:

- |                            |                   |
|----------------------------|-------------------|
| 1 superintendent           | 1 chief clerk     |
| 1 assistant superintendent | 1 senior clerk    |
| 1 chief ranger             | 2 clerks          |
| 2 permanent rangers        | 1 general foreman |
| 5 temporary rangers        | 1 junior foreman  |
| 1 park naturalist          | 1 mechanic        |
| 3 ranger-naturalists       |                   |

Technicians assigned from the regional office include 1 associate landscape architect, 1 assistant engineer, and 1 junior engineering aide.

✓ CCC personnel assigned to Bridge Mountain Camp NP-4, are 1 project superintendent, 5 foremen, 1 clerk, 1 mechanic.

✗ ERA appointed personnel include 1 senior foreman, 1 junior clerk and 1 junior clerk-stenographer.

✓ FWA personnel consists of 1 storekeeper.

✗ This makes a total of 36 regular and emergency program appointive positions assigned to this park.

Receipts

The receipts during the year were as follows:

Entrance fees . . . . .	\$35,015.00
Sale of National Park Service property . . . . .	77.50
Sale of CCC property . . . . .	82.39
Total . . . . .	<u>\$35,174.89</u>



No forest or brush fires occurred during the past year although favorable conditions created by low precipitation and dry weather prevailed throughout the summer months.

A new Chevrolet fire truck with 150 gallon water tank and booster pump was received on September 19, 1938. This truck is to be used for both building and forest fire suppression work.

Construction on the East Rim truck trail continued and was completed as far as Stove Springs.

A very effective and successful forest fire training school was held for park employees and CCC enrollees between May 12 and 15. Assistance in conducting this school was given by Regional Forester Burnett Sanford and Forester Jack Barrows.

#### Building Fire Protection

A leaking oil pipe on a furnace in the basement of the Superintendent's residence caused an explosion and fire the evening of April 15. The fire was quickly extinguished after damaging the furnace and house to the extent of \$200.

The park volunteer fire crew and truck responded to a midnight call on April 19 to a building fire in the neighboring community of Springdale. Water pumped by the truck from an irrigation ditch brought the fire under control and unquestionably prevented a \$4,000 residence from burning as no other means of protection was available.

#### Wildlife Control

In order to relieve an over-population of Rocky Mountain male deer along the floor of Zion Canyon and to prevent further damage to vegetation from heavy browsing, authorization was given for the removal of a number of these animals by trapping and shipping to areas outside the park. Trapping activities were started on October 13 and continued through February with a total of 114 trapped and shipped out of the park. In addition to this number, nine bucks were trapped but released as hunting season at that time was in progress outside the park. Three other deer were trapped but released when it was evident they could not be handled without seriously injuring them. Three deer died from fright or heart failure when caught in traps, and one broke its leg and had to be disposed of. All deer released carried with them a metal ear tag number and stamped with the wording "Wild Park Surplus". Complete and detailed records of all trapping activities were made. It was extremely fortunate that trapping activities were successful as drought conditions that prevailed throughout the spring and summer of 1939 resulted in a definite shortage of forage for these animals and many, no doubt, would have died from starvation.

Weather

During the year no unusual storms or floods occurred and weather was normal in every respect. Precipitation totaled 10.89 inches, which is about three inches below normal. The following is a detailed summary by months:

	<u>Mean</u>	<u>Maximum</u>	<u>Minimum</u>	<u>Precipitation</u>
July 1938	68.45	108	57	.09
August	83.26	108	62	1.17
September	78.5	96	55	.44
October	63.6	91	33	1.16
November	43.9	65	18	.80
December	42.57	67	19	1.18
January 1939	39.95	58	18	2.80
February	34.295	59	10	.50
March	51.85	81	16	1.33
April	61.46	87	34	1.20
May	69.51	97	39	0.22
June	79.41	103	49	0.

Serious drought conditions prevailed this summer. During June, July and August only .56" of rain fell, and the ground was so parched that little benefit resulted to the range; in fact, most of the precipitation evaporated in steam as it fell. Insufficient forage for wild life, especially deer, is manifested by pruning of trees and shrubbery.

Travel Summaries

There were 152,520 visitors who came to the park in private cars, 81 on motorcycles, 5,386 by rail-bus, and 76 by miscellaneous modes of transportation. This is an increase of 8,988, or six percent, over the 1938 season. Visitors attending the Zion Easter Pageant, which had the greatest travel of any single day, totaled 7,177, which was a decrease under Easter Sunday of 1938. July was the largest travel month, with 34,115 visitors and 9,883 vehicles.

Visitors from outside the State of Utah totaled 70 percent of all park travel. The following is a detailed summary of travel by months for the 1939 and 1938 seasons:

	<u>1939</u>	<u>1938</u>
October	7,467	6,426
November	2,663	2,655
December	1,097	1,580
January	1,921	1,602
February	1,286	1,414
March	3,170	1,356
April	12,886	6,508
May	12,242	11,729
June	27,762	25,277
July	34,115	31,560
August	33,749	29,893
September	18,705	18,405
	<u>152,083</u>	<u>148,075</u>

### Interpretational Activities

Expressions of appreciation continued to be received for services rendered visitors by this department. Such services included the year-round operation of the small park museum, one morning and one afternoon guided trail trip and evening lectures at the campground and Zion Lodge between May 1 and September 15.

### Physical Improvements and Plans

During the past year the exhibits in the Zion Museum were completely rearranged to present a brief synopsis of the five-chapter story of Zion National Park. The Pueblo II diorama, which had been under construction in the Berkeley office for some time, was received and installed in the museum. The portrait paintings and small cast figures of the early explorers and pioneers were unpacked and installed, a series of diagrammatic charts and drawings were prepared for the geology exhibit, and a LeRoy lettering set was secured and text labels were prepared for all the museum exhibits now in place.

The rearranged museum exhibits have been well received by the park visitors for our museum records show an increase of 8,283 persons, or 16%, over the previous year's attendance.

Plans were prepared and approved for the development of a trailside exhibit on the Narrows Trail just above the Temple of Sinawava. This exhibit is to serve as a guide or orientation for the Narrows Trail, thereby calling attention to the geological significance of the "Narrows" and also the remarkable abundance and variety of animal and plant life along this mile-long trail.

### Research and Collection

Very little time is available for research by either the permanent or temporary staff. The collections have been increased very slowly, but careful observations are being recorded from time to time. Dr. Herbert E. Gregory and his assistants have continued their geological work in the Zion region. It is hoped that the Geological Survey will see fit to publish this geological professional paper in the very near future.

### Publications and Sales of Books

The Geologic Sketch of Zion which was prepared by Dr. Herbert E. Gregory and was to be published as Museum Bulletin No. 3 has been held up for various reasons. Every effort will be made to get it published in time for our next travel year. A Geologic Sketch of Bryce has also been prepared and its publication will be considered as soon as funds permit. A somewhat popular booklet on the reptiles and amphibians of Zion and Bryce has also been planned for the future.

All book sales for the past year have been handled by the Zion-Bryce Natural History Association, and they report that returns from book sales show an increase over those of the previous year. The publication Plants of Zion has continued to be a popular bulletin, and another order of 500 copies was received late in 1938. Through the assistance of the Natural History Association several books and a number of magazines have been added to the Zion library.

SUMMARY OF EDUCATIONAL ACTIVITIES  
ZION NATIONAL PARK

July 1, 1938 to June 30, 1939

Month	Employees Pera. Temp.	Museum	Trail	Caravan	Lodge	Campfire	Outside Park	Total Contacts	Total Visitors	Percent Contacted
July '38	3	13,845	5,000		5,920	2,096		26,861	31,560	85%
Aug.	3	12,793	4,890		5,000	1,472		24,155	29,893	81%
Sept.	1	6,607	2,438		2,529	319		11,913	18,405	60%
Oct.	1	2,607		400			566	3,573	7,467	48%
Nov.	1	580						580	2,663	21%
Dec.	1	482					45	527	1,997	24%
Jan. '39	1	317						317	1,921	16%
Feb.	1	236						236	1,386	16%
March	1	726					65	791	3,170	24%
April	1	5,177					325	5,502	12,886	42%
May	1	4,667	122				50	4,839	12,242	39%
June	3	10,223	2,522		4,760	667		18,410	27,762	66%
				238						
		58,260	14,992	638	18,209	4,554	1,051	97,704	151,352	64.5%

Im. Pool

## Maintenance and New Construction

### Maintenance

Because of very limited maintenance funds available in the regular park appropriation, it was necessary to use CCC labor for this purpose. Only routine maintenance was performed, and all facilities in the park were kept in operating condition throughout the year. Outstanding maintenance jobs included the refinishing of floors and the papering and repainting of the interior of the Superintendent's residence; and the staining of all utility buildings and a number of residences. Only a small amount of work was accomplished on maintaining paved road surfaces, with most attention given to removing earth and rock slides and keeping drainages open. A 10,000 gallon tank was installed for the storage of road oil for future road and trail maintenance jobs. Only light snow removal was necessary during winter months.

### Emergency Activities

#### Civilian Conservation Corps

Bridge Mountain Camp NP-4 was operated in Zion National Park between October 7, 1938 and May 4, 1939. During part of this period a side camp was furnished to Bryce Canyon National Park. When the main camp was located at Bryce, a side camp was operated at Zion National Park.

The average strength of the camp during the fiscal year was 172 men. The average number released to the Project Superintendent was 126 men. The camps at Bryce Canyon and Zion National Parks were in good condition and the enrollees, although the average was very young, on the whole were willing and capable workers.

The personnel at the beginning of the fiscal year consisted of project superintendent, one foreman, four junior foremen, one mechanic and one assistant clerk. One junior foreman resigned during September, 1938. One foreman entered on duty during May, 1939. Personnel at the end of the fiscal year consisted of project superintendent, two foremen, three junior foremen, one mechanic and one assistant clerk.

Personnel changes were frequent during the fiscal year 1939. Lt. Merwin Smith was replaced by Lt. John T. Hazzard as Commanding Officer during July, 1938; Lt. Hazzard was superseded by Lt. Victor E. Warner as Commanding Officer during November; and Lt. Edward R. Wahl replaced Lt. Warner as Commanding Officer in February, 1939.

The effects of safety training were very noticeable in the accident reports for the year. A total of ten accidents occurred which consisted of seven minor accidents and three lost time accidents, with a total of 33 days' lost time. There were five accident free months during the year.

The various jobs worked on at Zion during the past year include completion of a masonry protection dam for the Birch Creek Water System crossing of the Virgin River, a rock and wire revetment to protect abutment of the road bridge across the Virgin River at Rockville, underground power line in Grotto Campground, bank sloping on the Nevada Switchback, tent and ash caterpillar control, trapping and transplanting surplus deer, fire equipment shed construction, operation of rock crushing plant, construction of Birch Creek water line intake system and trench for pipe, and the various maintenance and overhead jobs in addition to a number of smaller jobs.

At the end of the fiscal year a special CCC allotment of \$3,000 was received with which materials were purchased for a 200,000 gallon storage tank to be used in conjunction with the new Birch Creek water system.

#### Public Works Administration

An allotment of \$30,000 was made for the construction of the Birch Creek water system, with CCC participation. Practically all funds allotted on this job are to be used for material purchases, and by the end of the fiscal year all water pipe had been ordered along with most other material. Construction of this job, using CCC labor and supervision almost exclusively, was well under way by June 30. When completed, the system as planned will deliver over 200,000 gallons of water per 24 hours for use of National Park Service utility, residential, campground and CCC camp areas and to the operator's cafeteria and cabin development.

#### Emergency Relief Administration

Approximately 60 ERA workers were used throughout the year, and by June 30 they had completed the installation of nearly 3,000 feet of sewer line, constructed three 3-stall garages, a masonry comfort station, two foot bridges, approximately 1,000 feet of basket dam, and had quarried and dressed a large stock-pile of building stone. Excellent results were obtained from these workers and from this type of emergency program.

#### Works Progress Administration

A bank sloping job was carried on most of the year with the National Park Service acting as sponsors. Because of a shortage of WPA funds, this job employing an average of 30 workers was closed down on May 5. Much valuable road bank stabilization work was completed under this program.

Park Approach Roads

Construction work on the Zion-Bryce Canyon National Parks Approach Road over Cedar Mountain, connecting U. S. highways 91 and 89 and making Cedar Breaks National Monument more accessible continued throughout the year except for a three months' shut-down during the winter months because of deep snow. At the end of the year Section A, grading, under contract to Reynolds-Ely Construction Company for a distance of 1.92 miles was 95% complete. Section B, grading, 4.9 miles, and Sections A and B, surfacing, 6.82 miles, under contract to McNatt Brothers, were about 50% complete. Engineering data to be used in advertising bids for section C, from the Cedar Breaks intersection east had been pretty well completed.

Park Operator

During the year Utah Parks Company Superintendent W. P. Rogers was promoted and placed in charge of the Union Pacific development in Sun Valley as well as national park and monument operations of this company in Utah and Arizona. Mr. Warren J. Larsen was made Superintendent of the Utah Parks Company, under Mr. Rogers, during the early spring of 1939.

The park operator did a normal business without any large increase or decrease. No outstanding improvements were made in its facilities, nor were any new services added. Zion Lodge was closed on September 30, 1938, and opened May 1, 1939. The Zion Cafeteria and cabins were operated throughout the year. No changes of importance were made in approved rates.

C. Marshall Finnan  
Superintendent

By *John M. Davis*  
John M. Davis  
Acting Superintendent

207-014  
COPY

September 20, 1939

Memorandum for Chief Clerk Strunk:

The annual reports for Zion and Bryce Canyon National Parks and Cedar Breaks, Timpanogos Cave, Capitol Reef and Zion National Monuments covering the period from July 1, 1938 to June 30, 1939, are due in Washington on October 1, 1939.

Your assistance in preparing the sections of these reports which directly concern your department is required. Please give this your immediate and careful attention so as to have this material in the Assistant Superintendent's office on September 27, prepared separately for each area and in such form that will permit its inclusion in the Superintendent's report with a minimum of editing.

You are assigned the following sections; however, if important information cannot be properly classified under such headings you may add what you consider necessary.

**Administration**

**Appropriations and Revenues**

All funds, including regular park, CCC, ERA and PMA that have been received during the fiscal year.

John M. Davis  
Assistant Superintendent



September 20, 1939

Memorandum for Park Naturalist Walker:

The annual reports for Zion and Bryce Canyon National Parks and Cedar Breaks, Timpanogos Cave, Capitol Reef and Zion National Monuments covering the period from July 1, 1938 to June 30, 1939, are due in Washington on October 1, 1939.

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#### Interpretational Activities

Guided trips

Evening Lectures

Museum

Research

Publications

John H. Davis  
Assistant Superintendent

 COPY

September 20, 1939

Memorandum for CCC Clerk Mahan:

The annual reports for Zion and Bryce Canyon National Parks and Cedar Breaks, Timpangos Cave, Capitol Reef and Zion National Monuments covering the period from July 1, 1938 to June 30, 1939, are due in Washington on October 1, 1939.

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You are assigned the following sections; however, if important information cannot be properly classified under such headings you may add what you consider necessary.

CCC Activities.

John M. Davis  
Assistant Superintendent

ZP-207-



COPY

September 20, 1939

Memorandum for Chief Ranger Jolley:

The annual reports for Zion and Bryce Canyon National Parks and Cedar Breaks, Timpanogos Cave, Capitol Reef and Zion National Monuments covering the period from July 1, 1938 to June 30, 1939, are due in Washington on October 1, 1939.

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You are assigned the following sections; however, if important information cannot be properly classified under such headings you may add what you consider necessary.

**Protection Activities**

General statement

Weather

Forest Protection

Wildlife Control

Law Enforcement

Accidents

Travel Summaries

Building Fire Protection.

John M. Davis  
Assistant Superintendent



ZION NATIONAL PARK

Briefed Annual Report

Fiscal Year 1939

Zion National Park completed a very successful travel year with an increase of 8,760 people over the previous year. The total revenue collected from automobile entrance fees amounted to \$35,015.

The superintendency of the park was changed on January 1, Superintendent F. S. Patraw being transferred to Hot Springs National Park, and Paul H. Francis becoming superintendent of Zion.

The administration of Lehman Caves National Monument was transferred on December 15 to Boulder Dam National Recreational Area.

The annual Easter Pageant was an outstanding event of the year and was witnessed by 7,175 people. Improved sound effects contributed to making this pageant the best thus far at Zion.

Deer became too numerous on the valley floor for the amount of forage available, so 130 of these animals were trapped and transported to outside areas where additional stock was needed.

There was a noticeable increase in the damage by tent caterpillars and ash tree defoliators, and spraying operations had to be double-shifted to prevent complete defoliation of deciduous trees.

The Zion museum was greatly improved by the installation of a fine diorama depicting Pueblo II culture as it existed in the Pariaucap section of the park.

Construction and surfacing of the Zion-Bryce Canyon National Parks approach road proceeded satisfactorily, and construction of section A was practically completed by the end of the year. Construction of section B and surfacing of sections A and B were forty percent complete on June 30.

A PWA project for the construction of the Birch-Creek-South Entrance Water System was started on December 15 and was twenty percent completed on June 30. The work is being rushed to relieve a water shortage caused by the extreme drought during the first half of 1939.

The WPA project of bank sloping along the Valley Highway progressed satisfactorily until May 5, when lack of Federal funds caused the project to be discontinued. ✓

The CCC camp remained at Zion from October 7 until May 4, and contributed many important projects toward park development, among which was the stone equipment shelter and the participation in the Birch Creek-South Entrance Water System. ✓

Probably the greatest factor in new construction during the year was the WPA program, which employed a daily average of 67 men and involved the following projects: quarrying and dressing building stone, extension of sewer and water lines and construction of garages, comfort stations, foot bridges and basket cases.

Paul R. Francis  
Superintendent