
THE SOUTHWESTERN MONUMENTS MONTHLY REPORT DECEMBER, 1934.

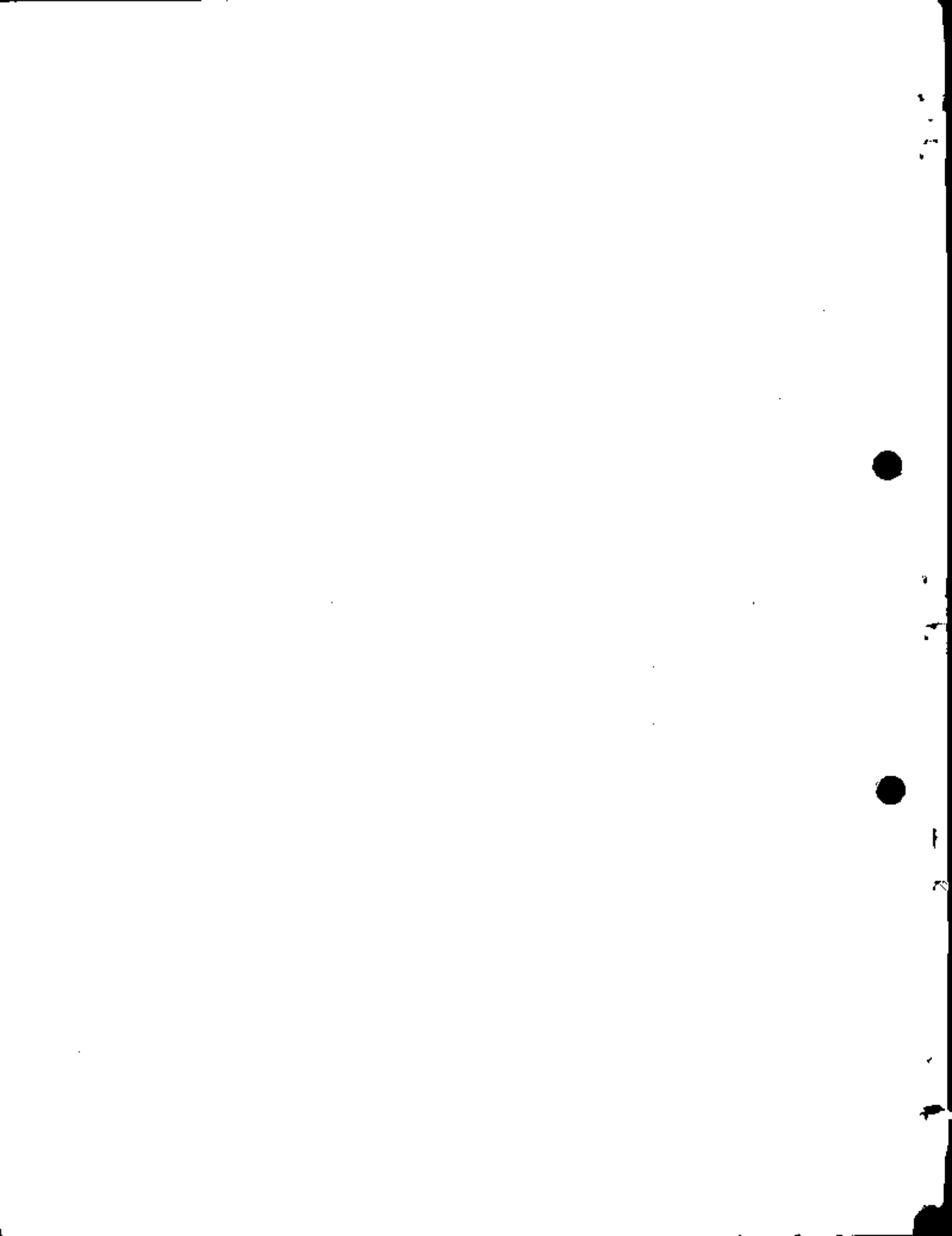
A NATIONAL MONUMENT is a reservation made by Presidential proclamation for its historic, prehistoric or scientific value. Its primary use should be educational, but it has secondary uses, both recreational and inspirational.

MONUMENT VISITORS act differently from park visitors by demanding explanations as soon as they arrive at your monument. Answering the questions of a visitor who is begging for information gets you at once into the educational field whether you call it that or not, and educational work takes more personnel per hundred thousand visitors than does simple protection.

WE LACK SUFFICIENT PERSONNEL to give simple protection to our 25 Southwestern Monuments, to say nothing of handling the educational problems which 295,000 visitors bring to our door.

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S O U T H W E S T E R N M O N U M E N T S
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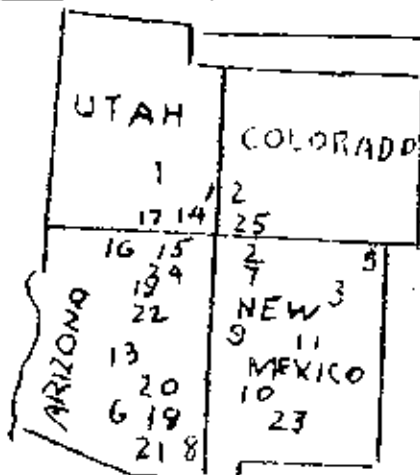
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LOCATION AND PERSONNEL OF SOUTHWESTERN MONUMENTS.

HEADQUARTERS*** Southwestern National Monuments, Office at Coolidge, Ariz.
 Frank Pinkley, Superintendent. Robert H. Rose, Acting Assistant
 Superintendent. Dale King, Junior Park Naturalist. Hugh M. Miller,
 Chief Clerk. Robert Cole, E.C.A. Clerk.

1. Arches ----Moab, Utah. J. J. Turnbow, Custodian.
2. Aztec Ruins ---Aztec, New Mexico. John Will Feris, Custodian.
3. Bandelier ----Box 669, Santa Fe, New Mex. Earl Jackson, Custodian.
4. Canyon de Chelly ---Chin Lee, Ariz. Robert R. Sudlong, Custodian.
5. Capulin Mountain ---Capulin, New Mex. Homer J. Farr, Custodian.
6. Casa Grande ----Coolidge, Arizona. Hilding E. Palmer, Custodian,
 Louis R. Caywood, Park Ranger.
7. Chaco Canyon ---Crownpoint, New Mex. Thomas C. Miller, Custodian.
8. Chiricahua ----No Custodian.
9. El Morro ----Ramah, New Mex. E. E. Vort, Custodian.
10. Gila Cliff Dwellings ---Cliff, New Mex. No Custodian.
11. Gran Quivira ---Gran Quivira, New Mexico. W.H. Smith, Custodian.
12. Hovenweep---Cortez, Colorado. No Custodian.
13. Montezuma Castle ---Camp Verde, Ariz. Martin L. Jackson, Custodian.
 Frank Fish, Park Ranger.
14. Natural Bridges ---Blanding, Utah. Zeko Johnson, Custodian.
15. Navajo---Keyenta, Arizona. John Bethcarrill, Custodian.
16. Pipe Spring---Mocassin, Ariz. Leonard Neaton, Acting Custodian.
17. Rainbow Bridge ---Keyenta, Ariz. No Custodian.
18. Saguaro---Tucson, Arizona. No Custodian.
19. Sunset Crater---Flagstaff, Ariz. J. W. Brewer in charge.
20. Tonto Cliff Dwellings---Roosevelt, Ariz. Charlie Steen in charge.
21. Tumacacori---Box 2025, Tucson, Ariz. George L. Bounday, Custodian.
 Martin C. Everssted, Park Ranger.
22. Walnut Canyon---Flagstaff Ariz. J. W. Brewer in charge.
23. White Sands---Alamogordo, New Mex. Tom Charles, Custodian.
24. Wupatki---Flagstaff, Ariz. J. W. Brewer in charge.
25. Yucca House---Cortez, Colorado. No Custodian.



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
SOUTHWESTERN MONUMENTS

Coolidge Arizona, January 1, 1935

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

We begin with a four page consolidated report for December 1934 covering activities for the month over the Southwestern Monuments district as a whole. The resume has been organized chiefly from the individual reports which will be found following this summary.

SOUTHWESTERN MONUMENTS GENERAL

WEATHER AND TRAVEL

Last month we reported the first real cold wave of the winter which brought with it some rain and considerable snow throughout the district. For December snow flurries with some snow and considerable rain together with intervals of clear, cold weather have been the rule in Arizona and New Mexico. While December's weather has taken on a decided wintery aspect to a much greater degree than did December of last year, the weather for the month as a whole has been generally milder than Decembers usually are taken over a period of years. Very little hindrance in the progress of ESW projects and other work has resulted from inclement weather.

The usual decline in travel for monuments in the northern part of our district has been noted. With approaching winter this is to be expected. However, in comparing December 1934 travel with that for the same period of the previous year and we find that the monuments as a whole are drawing more travel this winter than last. This is true despite reports that travel on Highway No. 66 and other main routes of travel is unusually light. We would therefore attribute some of this increased winter travel to the greater local and national interest that is being taken in the monuments.

Of course at the same time the travel curve begins to drop downward for monuments in the mountain and plateau regions of our district, travel figures for monuments located in the desert valleys to the south start to rise because of the influx of winter visitors into southern Arizona. This rise begins to be noticeable toward the latter part of November, gets into full swing in December and January and maintains a pretty even level until the latter part of April.

CONSTRUCTION

The Aztec Ruins Administration and Exhibits Building is the only

unfinished Public Works project in Southwestern Monuments. Last month we reported this project as about 50% complete. It is now reaching 75% of complete. Custodian Faris indicates that he will be able to report a practically finished job by the end of January.

Funds for some trails work at Wupatki were made available and this project was getting under way at the start of the holiday season.

ECW ACTIVITIES

Excellent reports on ECW activities in the district have been received from project superintendents Chase of Bandelier and Hammond of Chiricahua. These reports may be found by consulting the index. The field reports of Custodian Earl Jackson and of Associate Forester Cook, found in later pages, will also be of interest in this connection. Since the reports mentioned cover all important details on ECW activities in these two camps, we will here confine ourselves to a mere listing of the status of projects as reported in order to present a clear picture of ECW operations as a whole.

Chiricahua

Project Superintendent Hammond reports the following progress made by the CCC Camp located in Bonita Canyon:

1. The horse trail being constructed up Sugar Loaf Mountain has progressed 1,200 feet, much of which has involved working in solid rock.
2. Cleanup work on the Rhyolite Canyon Trail has been completed for a distance of 9,800 feet and considerable landscaping done.
3. Highway maintenance on the Bonita Canyon Road to Massai Point has continued throughout the month. This work consisted of operations with jack hammers and compressor, cleaning out drainage ditches and culvert head-basins, and grading with motor grader.
4. Roadside cleanup for a distance of 5 miles along Bonita Canyon and considerable burning of brush have been done.
5. A temporary comfort station has been built and installed at Massai Point.
6. The telephone line along Bonita Canyon has progressed 2 miles during the month and a temporary phone station has been set up on the Sugar Loaf Trail.
7. Landscaping, including completion of foot trails at Massai Point together with dressing of embankment on north side of Massai Point, have been performed.

The topographic survey at Chiricahua which was started by the U.S. Forest Service under Mr. Clark and which was resumed during November under National Park Service direction with the same Mr. Clark in immediate charge, has been in progress during December. Recent work has centered about the Massai Point locality. A topographic map at Chiricahua is a fundamental need and upon it depends much of detailed planning for the future.

Page 280, last paragraph, carries an account of the visits and inspections made in Chiricahua by field officers of the Forest Service and the National Park Service. These items will not be repeated here.

Bandelier

The following items taken principally from the report of Project Superintendent Chaso outlines the progress of work at Bandelier:

1. Burning of cleanup material on Canyon floor completed. This project required several days.
2. Three horse bridges across Frijoles Creek were completed and work was started on another. With one previously reported complete, this makes four of these bridges finished. Abutment excavations for a fifth are completed and the construction materials are on hand.
3. A vehicle bridge which will carry all campground and hotel traffic has been completed.
4. A carload of sewer tile was unloaded and delivered; the entire system included in the campground sewer system project, was laid and completed on the 18th; and excavations were finished for the placing of two septic tanks on which construction will begin next month.
5. Campground comfort station walls are approximately 50% complete. Progress was handicapped by freezing weather.
6. The Parking Area which is a part of the entrance road project, was started after some 60 days were spent quarrying rock for the curb. About 875 feet of curb are in place at this writing; the inside island has been filled, graded, and the whole is practically ready for grading and landscaping.
7. Planting has progressed steadily during the month with some 140 small trees already planted chiefly in the campground area. Also considerable transplanting of shrubs has been done on canyon floor following landscape recommendations.
8. Clearing and excavations were started on concessionaire's utility area together with removal of his old barns, chicken pens, etc. This is of course entailing cleanup work.
9. Two cattle guards on the detached portion of Bandelier and one in the main area, in the process of construction for the last six weeks, were completed during the month. Crates and forms are on the ground for another guard on the detached area.
10. Drift fences from cattle guards on detached area of Monument to the rim of the canyon have been constructed.

A type mapping project for Bandelier was completed by the Division of Forestry with the assistance of ECW Forestry Foreman James Fulton. See the report of L. F. Cook, Associate Forester, of the Berkeley Office, starting page 281, for a resume of activities related to progress and recommendations on erosion control, telephone lines, camp protection and other forestry matters.

PERSONNEL

Personnel status in permanent and temporary regular positions remained unchanged during the month.

HEADQUARTERS PERSONNEL FIELD TRIPS

Dr. C. P. Russell, Field Naturalist, was with us most of the month making special studies on the Kino Chain of Missions for the purpose of collecting necessary data for a Tumacacori Museum scheme. Between the dates of December 15th and 21st, inclusive, Bob Rose of our office worked with Dr. Russell on this project.

A research project being carried on at Tumacacori has progressed nicely during the month. A great deal of interesting data as to location of walls, foundations and other features adjacent to the Mission itself, is turning up. Engineer Attwell and his crew have made several field trips to Tumacacori and locality during the past month and have been keeping maps and plans on walls and other features being discovered there, up to the minute.

An engineering survey party completed surveys on the White Sands entrance road during the month preparatory to the initiation of grading and general maintenance. Assistant Engineer Gordon and others of the Engineering Crew have worked at Headquarters on maps and plans for pending projects under ECW, Emergency Roads and Trails, and other programs in progress and contemplated for the future.

MUSEUM AND EDUCATION

Museum and Field Trip guided services have been maintained as usual during the month. Casa Grande, particularly, experiences heaviest winter travel with Tumacacori showing some increase. Tonto, Montezuma Castle and White Sands also maintain good steady winter runs.

Architectural miniatures and a trash mound section exhibit prepared in Berkeley, were delivered to the Casa Grande Museum by Carl Russell. Later, when the new Aztec Museum is finished, these exhibits will be transferred to that Monument where they will comprise a part of the installations.

ECW Cameraman Paul Wilkerson reported to the office during the month. Chiricahua, Casa Grande and nearby places of interest were included in work he had not previously covered.

The most important item left to include in this report is our good wishes that all Park Service folk may have a happy and prosperous New Year. Tall buildings shook and Chandeliers swung to and fro in Phoenix, Tucson and localities on December 31. Arizonans, however, won't admit it was an earthquake but insist that it was just the slipping of an old "die hard" 1934 hating to give up his place forever to 1935.

REPORTS FROM THE MEN IN THE FIELD

GRAN QUIVIRA NATIONAL MONUMENT

By W. H. Smith, Custodian

Report time again is approaching. I will try to report some of the happenings of our Monument for the past month.

I find my register to be somewhat short this month compared to the same month last year. I have registered 188 visitors entering the Monument in 44 vehicles. These visitors had from seven states namely Arkansas, Illinois, Texas, Oklahoma, Colorado, Missouri, and New Mexico.

The future outlook for the Monument is some better at present as FERA projects in this locality are doing some work on the road between the Monument and Mountainair in Terrance County and there is also a project across the County line in Socorro County which will work from the County line south about 12 miles, then west toward Socorro. This will link us up with the main stems from two directions. This should increase travel by the Monument considerably over what it is at the present.

The past month generally speaking has been fair and cold although it has not been as bad as the average December here. It has been considerably worse than the same month last year. Due to some snow the latter part of last month and some local rains the last few days, the travel has been staying on the main highways the past month.

CANYON DE CHELLY NATIONAL MONUMENT

By Robert H. Sadlong, Custodian

This has been a most uneventful month. Visitors for the month numbered but three, and one of these was a resident of Chin Lee. All three visitors merely drove to the rim of the canyon, and did not descend the trail.

Travel in the canyons has been practically impossible, due to water from rains and melting snow. A few trips were made into the canyons in the government truck, but water came over the running boards, and on several occasions the truck became badly bogged-down for several hours at a time.

Weather has been cold, with a few snow flurries and some rain. Roads have been, for the most part, far worse than before, due to rain and snow, and for days at a time were scarcely passable. This would account for our lack of visitors. We have had much cloudy weather, and it has seriously interfered with my photographing of the completed trail, the ruins, etc. However, I have had fair success, in spite of the weather.

Mr. Robert E. Murphy, Instrumentman, under whose direction the last of the trail was completed, terminated his services with us the close of business, December 19th, his transfer to the Soil Erosion Service becoming effective the following day.

REPORTS FROM THE MEN IN THE FIELD
CANYON DE CHELLY NATIONAL MONUMENT (CONT.)

Western Monuments a most happy Christmas and a successful New Year.

BANDELIER NATIONAL MONUMENT

By Earl Jackson, Custodian

Visitors: The winter decline in travel is no longer a probability, it is an overwhelming fact. Visitors numbered 214, as against 110 for December of last year, coming from 15 states, and no foreign countries. The six highest states in order were: New Mexico--108; Ohio--17; Arizona--6; Wyoming--5; Massachusetts--5; California--5. Ohio was high because of a single family from there having 15 members. An USIS truck brought 21 Indian boys on a picnic from Santa Fe. The only Harvey Car party this month had 15 people.

Weather Conditions and Roads: The weather has been frisking around that old zero mark like a co-ed before her first date with the captain of the football team. E.C.W. work has lost no time, but the sky has been overcast half the time. Three or four snows have occurred, but the total was not over an inch. Roads are all passable, but still quite rough between the Detached Portion of the Monument and the Rio Grande. It never snows in this country in the winter, but we had a nice two-day drizzle recently.

Special Visitors: Theodore B. Blair, Forestry Technician, and wife arrived on the 4th for a two week's stay. On December 16, Mr. Fred C. Reger, Acting State Director of N.R.A., was in with his family for a very interested visit. On December 21, Mr. L.P. Cook, Associate Forester, and Mrs. Cook, in company with Mr. Donald De Leon, Entomological Technician, were in for a day's visit.

Improvements: Four foot bridges were completed, and one old vehicle bridge is being torn down for replacement by a foot bridge. Walls of the comfort station are 35% done. One new vehicle bridge is complete, and open for traffic; this connects the camp ground with the new Administration area. Sixty five percent of the parking area curbing is finished. About 120 trees were planted. The short drift fences on the main portion of the Monument were completed; these connect the cattle guard on top of the hill. The sewer line is completely installed and excavation completed for the septic tank. For the Freye Utility Area all footing excavation is done, forms in place, grading, and approach road for the area completed. In cleanup, the Freye chicken yard was dismantled, also the barn, and rubbish cleaned up. At the end of the last month shortly after the biggest snow of the winter, fire prevention cleanup was accomplished in the canyon by burning brush.

Fires: No fires this month, and none likely this winter.

Nature Notes: On December 11, I sat in on a meeting of the Espanola Valley Game Protective Association. Mr. Barker, Secretary of the New Mexico Fish and Game Commission, presided at this meeting. Here was discussed the sad condition of turkeys this winter in the event of approach of a heavy snow storm. They examined the crops of some turkeys to learn what they were eating, and then decided to buy a good quantity of corn for winter feeding. They were

sending me some corn, gratis, for our turkeys, but I will sound out the Wild Life Division before using it.

In the higher lands of northern New Mexico, mainly above 7,000 feet, there were enough acorns and piñon nuts to keep turkeys in fair condition; where there is a scarcity of the nuts, spruce buds seem to be popular, and I am told they make a fair food. But thruout Bandelier National Monument, practically all of which is below 7,000 feet elevation, there is mighty little of these food items. I see turkey tracks all over South Mesa, and Frijoles Canyon has countless tracks. This indicates the birds are covering a lot of territory to keep fed.

Before the snow, deer were rather scarce on the mesas of the reserve, but now their tracks are everywhere, and several have been seen. Mr. Pluir and I saw three ones the other day, and they almost stared us out of countenance before moving.

Between the roving crows and the inquisitive ~~wild~~ ravens one is seldom led to think of duffells and robins.

General: I greatly enjoyed the visit of the Pluir; learned a great deal, and walked a million miles by actual count. His function here was to make a type map of Bandelier National Monument, and he finished his work in good shape. While he did type map, served as flunky and took sample plots, and saw practically all the monument area. The map he had to use was a poor one; ~~the~~ on the detached portion of the reserve we found two mesas which had never been shown at all.

Mr. Cook inspected E.C.W. work the day he was here, accompanied by Mr. Chase and myself. Mr. De Leon, with Mr. Fulton, the forestry foreman, sized up the insect pest control problem and decided the forest is not in ~~the~~ bad condition at all; it is agreed, of course, that we shall have to get a power sprayer to handle tent caterpillars next summer. Pine borers, *Dendroctonus* by name, are after some of our Ponderosa Pine, but will require only normal control expedients.

Mr. Cook made some very good suggestions while here, and I believe was impressed with the functioning of N.M. & N., C.C.C. Company 815. Will look forward to the next visit of both these gentlemen.

Will sign off for this month, with the wish that all of the bunch may have a very Merry Christmas and a Happy New Year.

BANDELIER E.C.W. ACTIVITIES FOR DECEMBER

H.B. Chase, Project Sup't

During the last few days of November this job was visited by a wet, heavy snowstorm which enabled us to burn numerous piles of cleanup material left during the summer while cleaning the canyon floor. The entire personnel of the camp was used in this operation under the direction and supervision of Forestry Foreman Fulton, assisting him were the various foremen attached

to this supervisory personnel. The entire collection of debris was burned and disposed of in three days.

During this month we have completed three more of the horse bridges spanning the Rio de Las Trajes. This makes a total of four of such bridges completed. The material for a fifth bridge is at site of location and excavation for abutments have been started.

The vehicle bridge across the Trajes River was completed on the 19th. This is a portion of the main entrance road project and will carry all traffic going into the campground area and to the hotel.

A carload of sewer tile was unloaded and delivered to the job the first of the month and the entire sewer system included in the campground sewer system project was laid and completed the 18th. Still remaining in conjunction with this project is the construction of two septic tanks. Excavation for these septic tanks has been completed and construction will proceed this coming month.

A crew of 18 men have been working on the campground comfort station and to date all walls are approximately 80% completed. Progress on this building was somewhat handicapped this month by cold weather as it was necessary to utilize a portion of our time in firing heating equipment and covering the work for protection against freezing. However, our weather conditions during daytime have been very favorable, but rather low temperatures are reached almost every night.

The parking area which is a portion of the entrance road project was started after spending some 60 days previous quarrying rock for the curb. At this writing approximately 876 linear feet of curb is in place; the inside island has been filled, graded, and is practically ready for planting and landscape features.

Planting has proceeded uninterruptedly this month. Some 140 trees, ranging in size from three to six inches, have been planted principally in the campground area. The number of trees and large shrubs was increased during the month by addition of carrying equipment. In addition to this class of planting, the landscape crew has been increased at times when additional truck ~~equipment~~ equipment was available and a large number of smaller species of plants and shrubs were transplanted to the different areas in the canyon floor requiring same.

Clearing and excavation was started about the 6th of this month for the concessionaire's utility area. We have just completed setting forms for the footings and same will be constructed immediately after arrival of a concrete mixer which is due here any day. In conjunction with this project which included dismantling of the concessionaire's barns, chicken pens, etc., we are carrying on a cleanup project.

The three castle guards, two on the Detached Portion and one on the Principal Section of the Monument which have been in the progress of construction for the past six weeks were completed this month. There is yet

remaining one to be constructed on the Detached Section in accordance with our approved project. The gates for this cattle guard are on the ground and our original forms are still intact so this project should be completed item at the time of the next report. Drift fences connecting the cattle guard on the Principal Section of the Monument running to the rim of the canyon had also been completed with the cattle guard.

The type mapping project for this Monument was completed by the Forestry Department represented by Inspector Plier and assisted by Forestry Foreman Milton on December 18.

At this writing this closed the work of enrollees for this camp on the eve of Christmas vacation after which they return to work December 27.

TONIC NATIONAL MONUMENT

By Charlie Steen, Ranger

I am writing this a few days ahead of time as I wish to take Christmas Day off and celebrate the occasion with friends in the good old-fashioned way---turkey with all the trimmings---

December has been a very quiet month on the Apache Trail. Only 266 visitors have stopped to ask "How far do we have to walk?". Of these, 169 decided that perhaps the walk would be worthwhile and 26 felt strong enough to continue on to the upper ruin.

A greatly appreciated rain fell on the thirteenth and fourteenth. The ground is now covered with new green growth and for a week the Resurrection Plant formed a brilliant green carpet on the hills. Aside from these two days we have had clear warm days and very sharp nights, several with freezing temperatures.

Let me wish you and the gang at Coolidge a very Merry Christmas, and for my friends who may read this after publication "I hope you have had a fine Christmas."

** **

CHIRICAHUA NATIONAL MONUMENT B.C.W. ACTIVITIES By H.O. Humond, Project Sup't.

During the month of December considerable progress has been made on the Chiricahua Monument work projects by the Conservation Camp located in Bonita Canyon.

The horse trail being constructed up Sugar Leaf Mountain has progressed 1,200 feet, much of which has been cut through solid rock formation with the aid of the trail compressor and the jackhammer crews working two shifts per work day. The trail has an unique feature in the form of a short tunnel cutting through a steep projecting point of rock. An unsurpassed view of the rock formations comprising the Monument, Cochise Head, and the surrounding country for many miles will be had upon the completion of this trail.

Cleanup work on the Rhyolite Canyon Trail for 9,800 feet has been completed and a considerable amount of landscaping done. Pack mules have been employed for transporting the wood secured from the cleanup to the bottom of the trail where it has been placed in piles for distribution to the welfare agencies.

Highway maintenance on the Bonita Canyon Road to Missai Point has continued throughout the month with the large compressor and jackhammers; cleaning out culvert headbasins and drain ditches, and blading the lower section of the road with the motor grader. This latter was aided by some rainfall which gave the desired moisture.

Roadside cleanup along Bonita Canyon has progressed a distance of five miles and much brush and leaf material has been burned. About 100 truck loads of wood suitable for fuel has been cut into cordwood lengths and made available for distribution to local welfare organizations; Douglas and Alex having already hauled out many loads.

A temporary comfort station has been built and installed at Missai Point. The telephone line has progressed two miles during the month, along Bonita Canyon, and a temporary telephone station set up at the Sugar Leaf Trail. Landscaping work has ~~xxxxxxx~~ included the completion of fact trails on the north and east of the Amphitheater Area and the dressing of the embankment on the north side of the Missai Point turn-around.

Engineer Clark has continued his Topographic Survey of the general Monument with the most recent field work centering around the Rhyolite Canyon-Missai Point area.

A dance was held at the camp on December 7 and the orchestra of the 25th Infantry of Fort Huachuca furnished such excellent music that everyone had a most enjoyable time.

An additional recreational feature was provided through the courtesy of the Forest Service by sending Mr. McDowell to give a moving picture show on December 9. Six reels of comic and educational features were shown.

With the advent of rally cold weather the number of visitors to Chiricahua has gradually been used up but an occasional party arrives from time to time. Among our guests during the month have been: Dec. 6, Mr. Fred Winn, Forest Supervisor, and Mrs. Winn; Mr. Morris and Mr. Curtis, also Forest officials. Dec. 7-8: Gene Gordon, Asst. NFS Engineer on engineering matters connected with the present work projects, and Robert S. Harris arrived from the Coalinga Office to take over the duties of Engineer Foreman from J.H. Towner, who has been transferred to Coalinga with the engineering staff. Dec. 13-15: Paul Wilkerson from the Washington Office of the National Park Service, arrived for the purpose of taking a series of moving pictures as studies of the Monksland of Rocks. He was assisted in this work by Ed Riggs and a party of local residents on horseback. The weather conditions were such as to indicate some very beautiful cloud effects. Dec. 14: Mr. Pooder, Regional Forester from Albuquerque, accompanied by L.A. Brisbin from the Tucson Forest Office. Dec. 15: Louis S. Gates, President of Phelps Dodge

Corporation, accompanied by Harry Clark and Rex Rice, of Douglas, made a tour of the Monument.

NATURAL BRIDGES NATIONAL MONUMENT

By Zeke Johnson, Custodian

This is the time when we think of our friends and I am getting hungry to get a letter with your name written at the bottom. So I thought I would tell you that we are all OK and that I am still talking and working for the betterment of conditions at the Monument I represent.

I have been showing all of my best photos of the San Juan country with a very fine lantern furnished me by the President of the State Museum Committee. I have told the story to some very fine and interested groups of people.

I am also working hard with all the Powers that Be for the road west of Blanding to be made a State Road proposition---I feel sure that we will get some funds to improve and continue the road on west of the Natural Bridges. This proposed hookup seems to be in the air in this country now and is being talked of in every lobby. Hardly a day passes but someone calls me up or talks to me on the street about it. Looks like something will be doing some day.

Shall I make any plans for a little Custodian's quarters on the Monument this next season? I am hoping and praying for one. I have never had so many inquiries about the Bridges as I am getting now, and it looks to me that I will have all I can do and more next summer to try and take care of visitors.

I will be more than glad to hear from you, and Mrs. Johnson joins me in wishing you and yours all the joys of the season.

FORESTRY E.C.W. REPORT AT BANDELIER

By L.F. Cook, Associate Forester

I inspected the work being done under E.C.W. at Camp M-1-N at Bandelier National Monument on December 31. Very good work is being done and the whole area presents a fine appearance. Excellent cooperation is evidenced between Army and Park Service....(Resume of results published elsewhere in Report)

No work has yet been done on repairs to ruins in the Canyon.

Some very fine work is being done on landscaping (tree planting) in the public campgrounds and elsewhere in the canyon. Some large trees, up to 15 feet high, have been moved with apparently a very high percentage of survival, and an immediately improved appearance has resulted.

Under insect pest control all infested conifers near the road and canyon have been cut and cleaned up. The infestation has not been serious, but the few yellow pines dying have been removed to prevent an increase in the infestation.

RECOMMENDATIONS

Erosion Control work near the upper end of the truck trail into the canyon has been submitted as a supplemental project. This is needed for stabilizing a steep bank and the method was outlined by Forestry Inspector Plair while in the Monument, as done by the Kraebel method. I suggest that wheat be planted as well as the mechanical control by contour wattles. As this establishes a precedent of introducing exotics, a decision by Washington is advisable. The wheat will not spread and will undoubtedly die out in two years.

Camp Protection I went over the work that has been done in the public campgrounds along the line suggested by Dr. Meinecke with Mr. Chase and Landscape Technician Marsh, and suggested that the rock barriers around the parking spurs be revised. More barriers in key positions are needed to better define and protect the existing and planted trees and to prevent cars from being driven where not wanted. I also went over the proposed extension of the campgrounds and approve the location and plans.

Tree Planting Some very excellent results have been obtained in the planting of large trees, but I recommend that less water be used during the severe freezing weather due to the danger of frost heaving and cracking.

Guest Cabin Fireplace. During the third enrollment period, a fireplace was reconstructed in the government guest cabin near the ranger station. This fireplace has not been satisfactorily done and smokes. The bricks used are cracked and there is some fire hazard. It is recommended that a project be set up for reconstruction of this fireplace. It is also recommended that a kitchenette be added to this cabin since it is frequently needed for use by anyone living there.

Telephone Line from Monument to Santa Fe (10 mi.) has been proposed for the Fifth Period. I suggested to Custodian Jackson that a very careful study be given to all possible means of communication including possible improvements of the existing Forest Service line which is very unsatisfactory at present, service extension to the Monument by the Mountain States Telephone Co., and any other means. Undoubtedly improvement in existing communication is much needed.

All other Proposed Fifth Period projects were reviewed and I believe they are needed and will provide adequate work for the camp. I hope that the much needed trail development into the back country may receive priority since they are very essential for proper fire protection of the Monument.

Dr. De Leon, who accompanied me on this inspection, went over the insect situation with Forestry Technician Fulton and will make recommendations regarding control of the tent caterpillar situation, which is rather serious.

doing here either in work or travel. Our travel is as follows:

VISITORS	LOCAL TRAVEL
Utah.....5	Cars, trucks, horsemen.....264
Arizona....3	Plus visitors.....10
Calif.....2	Total for month..... 274
10	Last month..... 361
	Decrease of..... 87

I do not know why travel has kept falling off as it has, for we have not had bad weather to stop it. I believe our winter is better than last year so far, as there have been two good rains this month wetting the ground down about 15 inches, and the warm winds from the southwest have kept the ground from freezing.

In fact, since the rains there are some grasses and weeds starting to grow on the south sides of the hills and it will be a good thing for the livestock if such a winter continues until April. Report has come in that cattle are now dying, and on the 24th of this month there were about 500 head of poor stock sold to the government.

I have reported my trip to Junt Lake on November 26 to get a truck that the B.P.R. turned over to the Monument. I am having the Fredoni Garage do the repair work necessary to put it in running order.

I have most of the material here on the grounds to install the cattle guards---only material lacking is the "I" beams, etc., from the Ogden Iron Co. These are in Zion and I will have them out this week.

I am asking that an engineer be sent out from Zion this week to stake out the guards. Will start work as soon as this is done.

In closing I wish to extend the Season's Greetings to all the Southwestern Monuments Family and to those in the Park Service or out who might read our December report.

I have enjoyed my work the past year very much and hope that I will be with you next year as a member of the Southwestern Monuments Family.

WHITE SANDS NATIONAL MONUMENT

By Tom Charles, Custodian

Your "Custodian of Sands" hasn't had much time to count cars this month. It strikes me that it is an unfortunate thing, too, for I have a recollection that High Miller told me, early in my Park Service experience, that "the count" is closely associated with the available funds, and it is nearly time for Santa Claus. (Editor's Note: Technically, it would seem that this ~~would~~ should be the case; actually, there seem to be discrepancies in the system).

So this afternoon I rushed down to the White Sands road and counted the cars for 75 minutes. There are 84 cars that went through the monument. Sixteen of these had out-of-state licenses. This is quite an increase over the average for the 30 hours which I have counted at 23 times in the last three

months. The hourly average shows over a 60% increase.

Mrs. L.T. Graham of Pittsfield, Ill., walked into the office of the local White Sands artist this week and said, "I have driven all the way from Illinois to see the Great White Sands. I stood in the White Sand on the floor of the New Mexico Building at Chicago last fall and wondered if it could be true. I am here now to see for myself."

Mr. Alex J. Carson of Riverside, California, is a confirmed Globe Trotter. He has been around the world a half dozen times on trips of year's duration. He drove up to the office of the Custodian one day last week and said, "I came in to tell you that the White Sands is a world's wonder---nothing like them anywhere. The Park Service made a mistake when they did not see that the whole area was put in the Monument."

On Dec. 9 Gene Gordon, assistant to Wilt Attwell, and Mrs. Gordon visited the Sands for the first time. They brought an engineering crew consisting of Howard Leslie, Addison Pinkley, Harry Brown, and Ray Mitson, and began next morning setting grade stakes for completion of the eight miles of CWA road into the heart of the Sands.

Charlie Sutton, world war veteran with more than two years overseas, started working full time at the Sands on Dec. 5, with classification of Foreman-Truckdriver. His first official act was to launch that new Wehr pneuman tractor grader. It is a beautiful piece of machinery with closed-in cab and sausage tires.

We are very proud of the Sands right now. You would be proud of them yourself, Boss, if you could see them. Charlie has the broken-down tables, which the crowds wrecked by sitting on them at the big picnic last April, all made over into three fine new ones. He gathered up over three truck loads of picnic trash, hauled it off, and buried it. He has hauled off tons of the blackened sand where campfires have been built on the top of the snow-white mounds. He has raked down the black oily clods which were lying alongside the road, and covered them over with White Sand. The whole picture out there at the turn-around is as clean and pretty as a spring flower.

Mr. Sutton made a small registration booth of scrap lumber this week. It has a door which swings down and makes a table. The registration slips are fastened on the inside of this table, and above it will be a sheet of printed information and one or two "Don'ts." The outstanding "Don't" will be to refrain from building fires on top of the snow white hills. Another is regarding the destruction of Monument plants. There will be a few cellophane sacks of White Sand furnished by the local Chamber of Commerce for free distribution to the Monument visitors.

Wishing our fellow Custodians and the entire Southwestern Monuments' personnel a happy New Year, I am---Tom Charles.

We wouldn't like to place any flies in Tom's ointment, but from the reports of the engineers, he is missing a lot by not mentioning temperature. They say the Sands at present are snow white and snow cold.

Visitors for December, 1938.

Have never had more interested visitors ~~here~~ than during the past month, but they do not come in as large numbers as usual this time of year.

Everyone is much interested in the excavation that is being done here under the supervision of Paul Beaubien.

Dr. Russel of the Field Division of Education of the Park Service made Tumacacori his headquarters while making a study of the Kino missions in Mexico. Robert Rose of the Casa Grande staff accompanied Dr. Russel part of the time on his trips into Mexico. Engineer Attwell and Paul Beaubien also accompanied Dr. Russel on one trip.

Mr. Pinkley and Hugh Miller also visited Tumacacori during the month.

In driving to Nogales one evening we saw a mountain sheep grazing with a bunch of cattle. He was very frightened when he saw the car, jumped the fence, and made off up the mountain side.

One of our neighbors saw an antelope near the old Calabasis Mission a short time ago. A Forest Ranger says he sees quite a few antelope and sheep on the mountains between here and Sissibo. Deer are quite plentiful and there are lots of Javelina in the Tumacacori Range to the west.

EL MORRO NATIONAL MONUMENT

By E. Z. Vogt, Custodian

Weather and Roads During the past month we had a period of three days rain---a thing which has not occurred at this altitude within the memory of men who have lived here for at least 60 years. At 7,000 feet above the sea moisture comes in the form of snow.

This most unusual occurrence of steady rain had everyone baffled and most of all the medicine men of the Nivajos. Old Gurrizezo, who wields most power among the Nivajos living near here, camped one night in the timber back of our house and I visited his warm camp and numerous family one night when a drizzle was falling. He said that he did not know why the rain was falling in place of snow, but that we undoubtedly needed it. He said that he hoped that it was not indicative of any bad luck or change of policy at Washington. At least he hoped that there was nothing untoward in the winds like stopping the pension he gets for his services as a guide during the Apache wars.

The roads were very bad for a few days but warm sunny weather followed, to our surprise, drying them out so they did not freeze hard and rutty. Travel was stopped almost completely for a day or two.

The benefits of the rain in soaking up the parched ground can hardly

be estimated. In digging some postholes on fence repair I found that the moisture had penetrated a good six inches, and that provides a "cum", or bed, for desired snow, a thing so often spoken of by sheep herders who are fortunate to be able to live entirely under the stars where their observations of weather are very careful.

Grass is green at the roots, woods are starting, buds on trees are trying to make a mistake in coming out---due to the lovely weather. But we are not fooling ourselves about what is coming, for we know that winter has got hit us yet, and that we are due for plenty of blizzard and snow before the real awakening of spring.

CHRISTMAS VISITING AND SKATING---Owing to the mild weather there has been an unusual amount of travel and visiting. This added to our normal number of visitors at El Morro so that we had well over 150 people at our Monument in comparison with none at all some years at a comparable time.

Despite mildness, the nights have been cold so that the ice on the shady side of the Ranch Reservoir has frozen to a depth of about five inches. This has provided skating for the younger set. During the month I decided that since my wife is the leading woman skater in the region I had better step out. So I have gotten into a sport which I find uses muscles that have been unused for some 30 years.

INDIAN DANCES---The Snake Ceremony of the Zuni Indians occurred on the afternoon and night of December 10 and until afternoon of the eleventh.

The ceremony, which I have attended with but one exception for 18 years, was as colorful, as fervent, and as hard to understand as ever. Through study of Mrs. Stevenson's Bureau of Ethnology report on the Zunis, and Ruth Bunzel's work on Zuni ceremonialism, my son and I went somewhat prepared to interpret some of the prayers, dances, acts, and costumes of the very varied and involved ceremony which continues throught the night and goes on simultaneously in six different new houses, thus blessed by the dance.

I was delighted to find among the ~~xxxx~~ white spectators Mr. and Mrs. Smith and party from Petrified Forest National Monument.

During the night in another crowded house I found Park Naturalist Paul Franke, Ranger-Historian Don Witsen, Ruth Lucy, and Leona McGregor of the office force, Paul Duvie, Bob Brugh of the Emergency Force, and Mrs. Saunders, wife of Architect Saunders---all from Mesa Verde National Park.

The Park Service folks were real students of the ceremony, and when the first sharp rays of the sun slanted the red stone minarets of the south end of the Sacred Mountain of To-wa-yilone and shone on the snorting figures of the dancers, the only American party which beheld the grand finale was the Mesa Verde party and myself. Everyone else had left for Gallup, or gone to bed, or curled up exhausted in the warm, friendly corner of one of these immense Zuni fireplaces.

Almost 1,000 Navajos attended the ceremony, which is usual, and of

course the entire Juni tribe of some 2,300 Indians. What I had never seen before was the great number of Rio Grande Indians from the pueblos of Taos, San Domingo, San Felipe, Isleta---not to mention those from the far off Hopi towns and Jemez.

The amount of trading among the Indians was greater than I had ever seen it. I never have learned where the Santa Domingos get their turquoise, but it was certainly true that they brought great treasures of it in their bags and went home heavily loaded with Navajo rugs. Their trading incursions on the Navajos were most successful though they were willing to barter with all comers and took back much polished stone, silver rings, bracelets, etc.

Wild Life---The rabbits and birds are spending a happy winter at El Morro and larger wild animals show their tracks and work. During the month a rough and ready archaeologist in the form of a badger has been excavating our larger ruin. Right in the southwest corner of the ruin walls he has dug a hole as large as my hat clear down under the walls and out the other side. Burned corn cobs, broken pottery, bones, and even prehistoric beads are brought out in his efforts to fashion himself a good winter kogan with prehistoric trimmings.

Mountain lion gain have crossed through the country from range to range. One large male gave away his presence while killing a two year old steer. The bawling of the attacked animal was so loud that a Zuni sheep herder grazing his bucks in a nearby canyon was attracted. The lion showed no fear and stayed with his kill long enough for the Indian to go to his camp and bring back a .22 rifle which placed a bullet between the eyes of the lion and killed him. He measured well over 10 feet long.

With best wishes to all in the Service---

AZTEC RUINS NATIONAL MONUMENT

By John Will Faris, Custodian

Visitors for the month total 536, which is the largest December since 1929 for this Monument. This might be accounted for by all passes being open as yet and by the large number of people coming to see the Great Kiva. These numbers have been reasonably constant so that no trouble was encountered in the handling of the entire group.

Other than the regular routine of the Monument nothing of any interest has occurred other than our building program of the Lobby and Museum. This work has progressed very effectively under the supervision of Inspector Gebhardt of the San Francisco Office. He is very much interested in the work and takes every opportunity to see that it is being done with credit to the contractor and benefit to the Service. I am pleased to report that with the work as it is being carried on at the present time this project should be finished or nearly so by the time another report reaches your office.

It is with pleasure that I report the final touches given the Great Kiva and the effect is much finer than any of us expected. The colors fit in very nicely and it lends itself to the entire unit in a manner that is most pleasing.

As this is the last report that will be made during one of the most successful years of our existence, I want to thank you again for the aid and assistance you have given and without which all our work would have been impossible. The support that we receive from our colleagues and personnel of the various departments is certainly appreciated and we assure each of you our desire to cooperate in return.

That the year 1935 will be one of the most successful of all years for the entire Service and each of our Monuments especially is the earnest desire of the Aztec Ruins National Monument.

CAPULIN MOUNTAIN NATIONAL MONUMENT

By Homer Parr, Custodian

Less has happened at this Monument to report than for many months.

Weather---About three two-inch snows this month gave us some much needed moisture. In general, weather has been slightly colder than common for December. One below for the last day of November is a record for this community as far as I can ascertain.

Travel---Only about 400 visitors this month, although the roads in all directions from the Monument have been kept open. However, this Monument being more than 8,000 feet above sea level (even after Howard M. Stewart whittled 1,000 feet from the top) leaves a very cool atmosphere in December for most visitors.

General---Just received the best and most interesting Park Service Bulletin ever published. I'm telling you these boys and girls (editors and staff) knew exactly what we custodians in the Far Southwest want to read. It's a shame that neither Amos and Andy can not be found to advertise Good Old Tom Charles' newly discovered tooth paste for sheepmen.

I see a wonderfully good picture of our likeable Director on the first page of the December Park Bulletin. Here is wishing him great pleasure throughout the coming year in his much appreciated work. Together with a lovely Christmas and a pleasant New Year for our much cherished and good old solid Superintendent Pinkley, Atwell, Rose, Miller, and all of my fellow custodians. Capulin Mountain National Monument extends to you all a standing invitation to visit the most perfect extinct volcano in the United States.

WUPATKI RUINS NATIONAL MONUMENT

By James Brewer

Pardon my southern scribble---no ketchum typewriter. Find redemption in brevity. Wupatki OK. Too many rabbit hunters, too few visitors (42), two nice ruins, no more snow. Having a dandy Christmas and hope you are doing likewise. Trails look like scars. Hope you come and see us. Wishing you a very happy New Year....

SUNSET CRATER NATIONAL MONUMENT

By James Brewer.

Well, I squeezed Sunset Crater into my itinerary this trip. and I'm

glad I did because I always get a kick out of that huge pile of cinders with the perfect name. I've seen it in all angles of light and never has it appeared to look like it was without a setting sun. It is dark at the base and turns to red which in turn becomes yellow at the center giving the effect of sunset.

If all the 170 visitors enjoyed it as much as I always do we will have a lot of repeaters.

One hundred and seventy notes were written from October 25 to December 23. Of this number only 53 were visitors in December. That's quite a decline in view of the very mild weather but Christmas may have something to do with it.

Hope your stocking was well filled on that happy day. Sallie is limping around because she forgot to take an orange out of hers----

WALNUT CANYON NATIONAL MONUMENT

By James Brewer

I am pinch-hitting for Paul Beaubien, as suggested by Bob Rose, while Paul is away from this Monument. I drove out on the afternoon of the 23rd and found everything shipshape.

The ground was damp and just enough breeze to blow that sweet pine smell around. Made me feel like doing some setting-up or Swedish exercises.

I checked all the doors and windows in the cabin and found all were secure, then went out to the point and counted the registered visitors. To my surprise 122 people had signed between November 24 and December 23. This seems to be a good attendance for this time of year.

I will keep a close eye on the Monument in the future because I am afraid pothunters might try to grasp an opportunity. It is the first time in nearly 20 years that Walnut Canyon has not had a resident Ranger.

On my return trip I noticed a badly wrecked car at the railroad crossing of the Monument road and inquired about it in the barber chair. I learned it had been struck by the east-bound Chief a week ago. The crash awoke Ben Elridge and he rushed out and with the crew examined the wreckage. It looked mighty bad so they phoned Flagstaff for a Coroner's Jury. They went back for a better look only to find Pete Salzburg, the only occupant, was still living and able to ask for his pipe. After getting his pipe going they extracted him from the wreckage and rushed him to the Flagstaff hospital where he is still mending a broken leg and some cracked ribs.

The engineers' now proposed road crosses the railroad where an overpass can be provided very simply, I heard tell, so let's hope there'll soon be no more wrecks to users of this highway.

MONTEZUMA CASTLE NATIONAL MONUMENT

By Martin L. Jackson, Cust.

Have had 775 visitors for the month and for some reason am not able to get my jinks on the December report for last year for comparison as to number of visitors. And it may be that it is just as well that I don't find it for I have a feeling we are off in number. (Et. Note: Montezuma visitors, December, 1933, 1,045).

Have had quite a lot of stormy weather during the month and no doubt visitors have been reluctant to leave the highway, and we told that travel on Highway 66 is quite light.

Louis Caywood, Ranger at Casa Grande, drove up during the first part of the month. He brought some lantern slides and a projector and while here gave an illustrated talk to the boys in the CCC camp at Sedona. The talk must have been well received as they have since requested that we come back and give them another talk.

Ranger Fish and myself have since talked to the other three nearby camps: Beaver Creek, Clear Creek, and Mayer. Needless to say, we found the boys quite interested and courteous. The Educational Department at these CCC camps seem to think that these illustrated talks on the National Parks and Monuments fit in very nicely with their educational program.

Earl Jackson, Custodian of Bendelier National Monument, is spending the holidays with us. He has talked so much about Bendelier and what it has to offer the visitor that I have almost reached the point of expecting Charlie Steen of Tonto National Monument, or Rob Baclong of Canyon de Chelly to write and tell me that Montezuma Castle has no standing at all as a cliff dwelling.

So far this Christmas we have not had a single drunk or even a near-drunk. Ordinarily during the holidays we have some who have imbibed too freely of the drink known as long life bitters. This is not an argument in favor of the repeal of the Eighteenth Amendment.

CASA GRANDE NATIONAL MONUMENT

By Hilting Palmer, Custodian

Travel for December showed a slight increase over both last month and the same month last year. Inclement weather the last three days slowed traffic considerably.

The total visitors numbered 2,463 as compared to 2,343 for December last year and 2,389 for last month. These visitors came in 748 cars from 41 states, Alaska, Hawaii, District of Columbia, Canada, Mexico, Italy, and Uruguay.

They were contacted in 303 ruins trips and 275 museum trips. Besides ~~in~~ these visitors there were 243 persons who used some of the facilities of the Monument such as the picnic grounds, camp grounds, etc.

Mr. Paul Wilkerson, experimenter from the Washington Office, spent several

days photographing the Casa Grande Ruins. He was fortunate upon his arrival to get some very good light effects and cloud backgrounds for long shots of the ruins. A number of other shots were made by him showing a group of visitors going through the ruins.

Dr. C.P. Russel, Field Naturalist from the Berkeley Office, stopped at the Monument twice, once on his way to Tumacacori National Monument, and again on his return to Berkeley. Dr. Russel made the trip especially to study the chain of missions founded by Father Kino, but he also talked over some of our more important museum problems.

Weather conditions during the month were varied. Rain fell on four days with a total precipitation of 2.15 inches. The coldest night of the month came on the second with a temperature of 17 while the ~~max~~ warmest day, which was December 11, brought 77 degrees.

The Berkeley Office is making a model of a new type of cremation burial found by Mr. Carl Moesberg of the Agricultural Station, Tucson, Arizona. This addition, when completed, will make four types of cremation burials found in the Gila Valley. Undoubtedly many more will be found in further excavations.

When time permits, both Mr. Dale King, Junior Park Naturalist, and Mr. Louis R. Caywood, Park Ranger, make changes and additions to existing displays in the museum. Due to the great number of visitors at this time of year, it is hard to find extra time to devote to such work.

Prominent visitors included Count and Countess Gradenville of Rome, Italy, and Frances Giller, author of "Traders & the Navajos."

REPORT OF G. H. GORDON, ASSISTANT ENGINEER

Transmitted herewith is my report covering the activities of the field engineering crew, during the month of December, 1934.

- Dec. 1-2. At Coolidge, working up field notes.
- Dec. 3-5. At Flagstaff, inspecting field work in connection with entrance road location at Walnut Canyon National Monument, as well as Sunset Crater and Wupatki. This trip was made in company with Mr. Attwell and Mr. Langley.
- Dec. 6. At Coolidge.
- Dec. 7. At Chiricahua National Monument.
- Dec. 8-9. Enroute to White Sands National Monument.
- Dec. 10-20. At White Sands National Monument. Re-running of the Center Line and Cross-sectioning for further construction.
- Dec. 21. Enroute to Coolidge, Arizona.
- Dec. 22-30. At Coolidge.
- Dec. 31. At Tumacacori National Monument.

SOMETHING OF THE FUTURE

You may have noticed that we have had a good deal to say lately about museums at Bandelier, White Sands, etc. This is all part of a campaign to get the Southwestern Custodians museum-minded. We have a definite conviction that no historic or prehistoric National Monument is completely equipped for handling visitors until it has a museum. The first thing we need at these places is, of course, protection personnel; the next thing is housing and utility structures. After this first need is met, we need educational personnel and housing. Then comes the administration building and museum. We have reached the place in several of our monuments where the museum is a real necessity if proper service is to be given and at many other Monuments this phase is just around the corner, so we might as well get ready for it.

We are serving notice on the Custodians that we want them to get out plans and ideas on administration buildings which will include museum collections, reserve collections, and all the facilities for handling the public for the next six or eight years.

We want to work these plans and ideas up among ourselves and then get them over to the Educational Division and hammer them into such shape with that Division and the Branch of Plans and Designs that we may know what we are going to do and how we are going to do it. I would even like to have the working drawings of such plans made up while we have the forces to do the work.

Along the same line our Engineers are busy getting out maps and surveys so we may know where we are going far enough ahead to prevent most of the mistakes which arise from rushing things through at the last minute.

At this minute I want to go on record as a strong advocate of resident officials from the various Branches or Divisions at my headquarters. The Engineers were the first to try it out and I think we both went into it with more or less hesitation. I am frank to say that we have tried it long enough to admit that it works from our side of the arrangement to perfection. Our resident engineer is paid from San Francisco and reports there, but he is our man and understands the details of our problems very much more and better than could come from occasional visits. In the future I would like to see such an arrangement with some of the other divisions. The Educational Division furnished us one of their men during the past month, as is mentioned in these reports, to do some work on the King cabin of missions. We could keep such a man busy for a couple of years along his special line. Why not let him work out of this headquarters exactly as the resident engineer does?

We also plan, in the near future, to examine two or three spots in Arizona which are being considered for National Monuments. We have been waiting for a dull season which has, thus far, not arrived and we might as well go out and do it in the busy times and get it done!

THE
SOUTHWESTERN
MONUMENTS
SUPPLEMENT
TO THE
MONTHLY REPORT

BEING THE PAPER EQUIVALENT OF THE TAURIAN SESSIONS SO OFTEN HELD WHEN SOUTHWESTERN MONUMENT FOLK GET TOGETHER.

SHOP TALK, GOSSIP, AND OTHER INTERESTING THINGS ABOUT THIS AND THAT: THE WHOLE CONTAINING SOME INFORMATION AND NOT MUCH MISINFORMATION ABOUT WHAT GOES ON IN THE SOUTHWESTERN MONUMENTS.

THE NEW DEAL IN 1696.

We want to lift the following bodily out of the New Mexico Relief Bulletin; a mimeographed sheet put out by the New Mexico Relief Administration with Miss Margaret Reeves as State Relief Administrator. It is a bit of history interesting in itself and interesting to us because the late Mr. De Vargas ties into our Southwestern Monuments at El Morro.

"Who was it said there was nothing new under the sun?

"In 1696 Don Diego De Vargas Zapata Lujan Ponce de Leon, less formally known as De Vargas, the re-conqueror of the southwest who took the city of Santa Fe back from the Indians in 1693 and acted as Governor and Captain General of the Kingdom and province of New Mexico for several years, presented to Spain a petition submitted to him by a group of settlers which involved as clear a case of rural rehabilitation as any on the present records.

"One of the professional projects in Santa Fe County is the translating and transcribing of old Spanish documents which have been lying in the New Mexico State Museum archives for years. Recently there came to light a petition of the farmers in the New Villa of Santa Cruz asking to be moved from what was to them land which we would now call sub-marginal to the more desirable area of Alameda. The petition was accompanied by a document of presentation written by the great De Vargas himself and addressed to His Excellency, the Most Excellent Viceroy, Don Joseph Sarmiento Valladares, Count of Montezuma.

"The presentation document of General De Vargas, written in the involved terms and stilted phraseology of the time, discusses at length the condition of the petitioning villagers, the merits of the two locations, the danger from the Indians and various other phases of the situation. After many pages of discussion and polite explanation, the General finally says: '---and, if his Excellency should be pleased, that after they have left them, they might again improve them and better themselves and the residents of the New Villa of Santa Cruz by moving to the settlement of Alameda. The said settlement was found to be in much better condition in regard to having the same form of houses and other things, such as ditches, trenches, and water intakes, wood, pasturage and lands; and, if His Excellency would so give me the order, as soon as the wagons come from Parral, I shall order a sufficient amount of corn to be left there to feed the residents until the time of the crops; and those wagons that may come to this Villa, I shall order them to go to the new Villa of Santa Cruz and load them with the families, their furniture and the clothes that they might have, and will take the said population to the settlement of Alameda, where they will not have any other thing to ask or wish for, as they will have, in order to secure the raising of their stock, better conditions and better pasturing grounds, and where the snows will not fall or remain as long as in the said Villa. ----'

"There are no hostile Indians to menace settlers any more, and the

There are no hostile Indians to menace settlers, and the details of the old Spanish resettlement program are as different from the present day one as a lapse of 258 years would naturally make them. But the parallel is there, amazingly interesting in its clarity, and giving New Mexico a lead of more than two centuries in the land program relief experiment.

**

SCIENTISTS DISCOVER PRESERVATIVE FLUID

We doubt that anyone familiar with Southwestern Monument problems will deny that next to protection, the problem of preservation of ruins ranks very high. The problem isn't a theoretical one--it is downright serious. We have miles and miles of stone walls which are weakening and getting ready to fall. We have an enormous number of square feet of clay walls which are slowly (and sometimes swiftly) crumbling and melting away to nothing.

It is particularly with Adobe Conservation Research that Stanford University has been cooperating with Park Service engineers--the work having started early in 1934 under CMA funds.

After months of experimentation with adobe test bricks of Casa Grande caliche, the scientists have developed a preservative fluid which may prove to be the long-hoped-for solution for our problem. Not only does this fluid preserve adobe, but it also will retard erosion and deterioration of stone walls to a great extent.

The manner of testing is very interesting. Under the direction of Frederick P. Martius of Stanford University, 43 sets of test bricks of caliche were coated with various commercial weather-proofing materials and weighed accurately. The bricks were then frozen in a special refrigerator at 10 degrees F., heated in an oven at 140 degrees F., placed in a sand blasting machine, and then immersed in water and weighed again. The absorption of water indicated the deterioration of the waterproofing material. The cycle was then repeated. Each cycle produced wear equivalent to about one and one half years of exposure to ordinary weather conditions.

It was found that 10 of the light-colored commercial coatings penetrated deeply into the adobe, but had little waterproofing value because the bricks failed in the first immersion in water.

Six other materials, also light in color, were so damaged by the sand blast that they, too, immediately crumbled when placed in water. Several of the light colored materials, however, survived six cycles or about ten years of wear.

All other materials were of a dark color (unsuitable because they would change the color of ruins too greatly) and were of a syrupy liquid consistency. Their high specific gravity precluded much penetrative value. They were coatings, rather than penetrants, and formed a thin hard crust.

There was one commercial material, Number 10, which was only a little darker than the natural color of the adobe, which showed no absorption of water after six cycles of wear---in other words, the water was retained only in the outside crust, but not within the brick. It appeared, however, to change color under exposure to light, indicating deterioration.

Thus, as matters stood about August 10, only one commercial prepara-

tion showed any indication of being at all satisfactory. An enormous amount of painstaking work by Mr. Martius had eliminated all the common weatherproofing materials.

Martius then proved that Number 15 deteriorates and becomes porous when repeatedly exposed to ultra-violet rays from a Mercury Vapor lamp and ozonized air (wet atmosphere). The obvious next step was to develop an entirely different solution.

For preserving clay, limestones, sandstone and granite, glazed objects, painted inscriptions and plasters, archaeologists have been using a solution of celluloid dissolved in equal parts of acetone and amyl acetate. However, due to the rapid evaporation of the solvents such coatings could be used without glossing only as a one percent solution and, therefore, objects had to be coated with as many as six applications. Resinous materials in mineral spirits or in paraffin wax produced a dark color.

Consequently, Mr. Martius experimented with 2% and 3% solutions of celluloid in equal parts of Acetone, Cellosolve (Ethylene Glycol Monoethyl Ether Acetate), and Butanol (Normal Butyl Alcohol). These solutions, applied to adobe are colorless, do not gloss, are good penetrants and will withstand extreme cold, light, and heat. The 3% solutions appeared the most satisfactory.

This preparation, then, seems to solve the problem. It is effective not only on adobe, but on sandstone also. Preliminary estimates place its cost considerably below other conventional preparations. A gallon, costing about 40¢ to 50¢, will cover a proximately 100 square feet.

The outstanding characteristics of the fluid are:

Absolutely colorless and clear liquid.

Specific gravity .878 (higher than any other colorless material tested).

Excellent bonding qualities (adhesiveness).

Excellent penetrant for adobe.

Positively does not discolor adobe.

Solution may be made up in the field with unskilled labor.

This is heartening news. Armed with such a good preservative, our ruins preservation experts (when and if we get them) can make a bold stroke in the battle against erosion and decay of the hundreds of important ruins in the Southwestern National Monuments.

All due credit should be given to the Branch of Engineering which came to our aid so effectually in this matter. Protection work at any of the prehistoric ruins among the Southwestern Monuments is a great problem but the protection of the walls at Casa Grande has always been considered the hardest nut we have to crack. A rock-walled ruin makes at least a good base upon which to build your protecting layer, but the caliche walls of Casa Grande do not offer even that much. Being one of our rarest types of ruins in the Southwest, architecturally considered, makes its protection of the utmost importance.

A POSITIVE NEGATIVE

Chief, here is something too good to bury in the files.

One of the officials reports on a recent preliminary survey for a new road ~~approx~~ coming from transcontinental highway 66 over to Walnut Canyon. His report:

"This route is 95% on Forest Service land, is more direct than the existing road and crosses the railroad tracks with an overpass.

"I consider this route to be satisfactory as such but question the advisability of building five and one half miles of entirely new road as against improvement and minor relocation of the existing loop road which I recommended in my report dated March 28, 1934.

"The railroad crossings are an important item as there are two grade crossings on the old loop road which are eliminated on the proposed new road by the construction of an overpass but apart from this and the shorter distance I see no real advantage in the new road and favor the improvement of the old loop road."

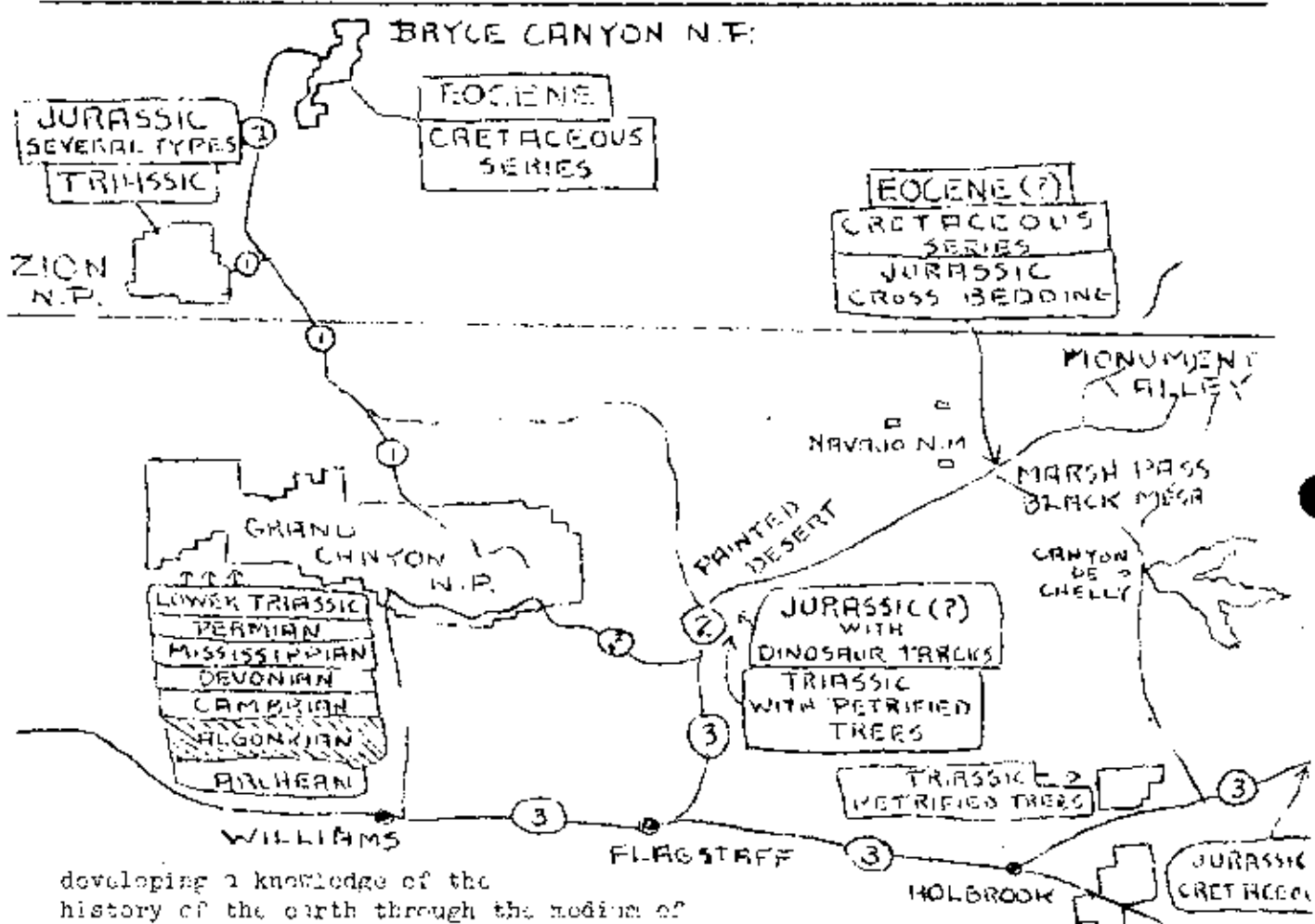
I guess we will just rest our argument for this road on these objections to it. All it does is shorten the road a few miles, eliminate two pretty bad grade crossings and a few right angles and sharp curves. Aside from this it doesn't open up any gold mines but it cuts annual maintenance on about 18 miles of loop road to about five miles on the new survey, but "aside from all this there is no real advantage in the new road and so he favors the improvement of the old loop road."

To tell you the truth, I believe he doesn't want to change from the old road.

MASTER MUSEUMS

We are in receipt of a "Plan for Telling a Unified Geological Story in the National Parks and Monuments of the Colorado Plateau Region." The plan is the work of Edwin E. McKee of Grand Canyon National Park, and his statement of facts makes some most interesting reading. We present the heart of his plan here for the information of the Washington Office and the men in the Southwestern Monuments field:

"If the history of the earth is to be skillfully and artfully presented to visitors of the Colorado Plateau region, emphasis must always be placed on original materials. Facts must be dealt with and presented in a way that will guide peoples' thoughts towards a realization of certain great principles. By way of illustration, let us consider the result of calling attention to sea shells in the rock some thousands of feet above the sea. In most cases a conception of crustal movement comes to the visitor, evolved through his own thinking and not because of a theory advanced to him by some scientist. Again consider the result of showing a visitor sea deposits, buried beneath continental deposits which, in turn, are beneath other marine deposits. Not only will he unconsciously develop a conception of earth movement but also one of geologic time. In brief, by



developing a knowledge of the history of the earth through the medium of outstanding examples in the Colorado Plateau area, the following great conceptions should be developed---1. Geologic time; 2. Crustal movement; 3. Evolution of life; 4. Processes of sedimentation; 5. Process of erosion; 6. Volcanism.

"If we admit that the independent development of the conceptions stated above is best obtained through a realization of what geologic history is, and if we consider the remarkable "open book" represented by the flat-lying strata of the Grand Canyon region as the best teacher of the orderly succession of geologic history, then it is a primary duty of the National Parks and Monuments of this area to make fullest use of their natural advantages in guiding and helping the thinking of the visitors. The following plan, therefore, is presented as one which should be practical in developing an unified ~~project~~ project.

"There are three principal routes which visitors to the region may use and in doing so obtain the geologic history as outlined. One of these is from Grand Canyon northward, taking in Zion and Bryce, another (which will probably be much used in a few years) is from Grand Canyon northeastward through Tuba, Kayenta, and Monument Valley, and the third from Grand Canyon eastward by way of Petrified Forest. Visitors traveling any of these routes from Grand Canyon, or taking them in reverse order, i.e., ending at Grand Canyon, should have the

advantage of apparatus and explanation to give them the story in orderly and appealing fashion as they travel. Wayside observation stations and sub-museums, markers for exhibits in place, and literature covering the routes should be available to give a unified story.

"At Grand Canyon is given the story of earth history through the first and oldest three eras or chapters. In traveling from there over any of these routes mentioned above, the story is supplemented by rock representatives of the last two eras or chapters so that one can grasp the scope of entire history. It is obvious, therefore, that at each place (Park or Monument) not only the local features of geology, especially sedimentation and paleontology, should be brought to notice as they appear in place, but also by means of charts and diagrams, the position which that particular unit holds in the general scheme of things should be emphasized.

In the accompanying diagrammatic drawing (see previous page) the principle involved in the proposed plan is set forth. Details of museum and exhibit development and of circulars needed to take people from one unit to another over these routes are not given in this general plan."

As far as this general idea of correlating the various geological stories of the Parks and Monuments goes, we recognize the value of it and have been preaching it to visitors for the last fifteen or more years, urging them to see the Grand Canyon, Zion and Bryce as the great chapters in the book of geology written by the Master's own hand in the Plateau region. We will be more than willing to play up this correlation idea in our geological Monuments among the Southwestern group.

Having agreed with the main idea, let us now set forth some thoughts which come to us as we forecast the future details of the plan which will be built on this foundation with which we agree.

It is pretty clear to us that the detailed plan will consist of a Master Museum at the Grand Canyon and sub-museums scattered elsewhere over the area; also why is the point played up that the Grand Canyon is the point of arrival and departure for the region? Do it understood that we have no objection to a geological museum of any size which may be determined upon at the Grand Canyon. That it ought to be the biggest geological museum in the southwestern group of reservations sounds very logical, although you will pardon us for pointing out that if you are building big museums for the greatest possible number of people to see, the Grand Canyon would not be the place among the southwestern reservations to put it. It would be built at one of the monuments. But we will let that point go and agree that the Grand Canyon probably has more geology than any other reservation and should therefore have the largest geology museum.

The next point, so far as we can forecast it in the future details of this plan, will be to argue that, since the Grand Canyon will have the largest geology museum, we must therefore play up the whole geological story there and, to save repetition, we will not play up the whole story any other place. The very word "Master Museum" connotes this and the word "Master

Museum", not mentioned at all in Mr. McKee's excellent foundation scheme, is plainly inferred by the word sub-museum. It is this angle of the detailed plan to which we wish to object as soon as it comes up. We fear there will be a tendency to strip our geological Monuments of some of their best stuff to build up your Master Museum. We fear there will be a tendency to tell our geological Monument museums, "No! No! You can't have this or that display because it would duplicate the idea we are playing up in the Master Museum!" We fear there will be a tendency, in general, to tie our monument museums one after another as a tail to the Master Museum kite and look at them through the Master Museum eyes. We fear that our monument museums might be put under the direction of a master museum curator who might be so interested in the master museum idea as to overlook the fact that the Monument museums were reaching by far the greatest number of interested visitors with far less cost and effort than his master museum.

If we considered this Master Museum idea a good one we would have advocated a Master Museum for the Southwestern Monuments some years back. Our first protest against the Master Museum idea was made in 1906 when the material was excavated and removed from the Casa Grande to the National ("Master") Museum in Washington, D.C. These folk who are arguing for Master Museums have a positive stopping place in the line of logic beyond which you cannot drive them. Tell them you are very much in favor of Master Museums, ---so much that you want to gather all the museum material from the Parks and Monuments (or any large part of it), into the National Master Museum at Washington and see how far they ride with you!

And this is all aside from the fact that there is a simple faith that we can outline a trip to ten or fifteen points on the Colorado Plateau, scattered hither and yon over ten thousand square miles, and any large percentage of the travelling public will follow the outline. For instance, I will forecast that the details of this general scheme will carry the idea that the travelling public must start its trip or close it at the Grand Canyon Master Museum. That the public won't do anything of the kind can be shown by the most cursory examination of the travel figures. If you don't believe our travel figures, give me a couple of men for a couple of months and I will compile some records on a few thousand visitors that may startle these folks who are willing to spend a hundred and fifty thousand dollars on the calm assumption that the public will go where it is told to go and in the order laid down for it.

This Master Museum idea originally broke out in the archaeological field along last spring and I, not realizing how serious it was, waxed facetious about it for which I afterward apologized to those at whom I poked some fun. I notice that Master Museum idea is still extant and from time to time the reports carry the approval of some museum personage who isn't acquainted with our southwestern work to any appreciable extent but believes in branch museums as a general benefit to big city museums, which, by the way, is an entirely different matter.

The Master Museum idea in the Southwest is a development along the wrong line. The idea of correlating the various areas through their museums is a splendid one and we hope it will be carried out. In doing so

it is not necessary to make the Southwestern Monuments a tail on the park dog and if you do so, it won't be ten years until your tail will be wagging your dog.

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WHY THEY WANT IT

Chief, not long ago we received a request from the Congressional Librarian for copies to complete his file of the old Epitaph of the Southwestern Monuments.

Since then we have received a request from the Library of the Field Artillery ~~SCHOOL~~ School at Fort Sill, Oklahoma, for a file of the Epitaph.

Also we have a protest from an archeology student in one of our universities that her name has, through some accident, been taken off our list and her copy of our Monthly Report has not been arriving on time.

We feel highly complimented that folks outside the Service think this shop talk of ours is worth reading and preserving, but, quite frankly, we are inclined to wonder why. The report, in the nature of the case, must be thrown together hastily by an undermanned force so there is no time for extended thought or fine writing. Any copy will show crudity of writing, press work, drawing, and everything else. We come and go, all raking a hand in getting it out. When time gets short we compose directly on the stencil, which doesn't make for good composition or good stencil cutting.

The only answer I can think of is that these people aren't interested in us or in fine writing but in the job we are doing. Of course we agree with them in thinking we have the most interesting work in the National Park Service, and, to tell the truth, we get a lot of fun out of the report ourselves----as well as a lot of hard work----

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FOLLOWING SPANISH TRAILS

Of extreme importance to the Headquarters Staff of the Southwestern Monuments and to those interested in early Spanish history in the Southwest, has been the renewed interest in the mission chain founded by Father Eusebio Francisco Kino, a Jesuit priest, between the years 1687 and 1711.

Dr. C.P. Russell, Field Naturalist from the Berkeley Office, used the old Tumacacori Mission as a base to trace out the routes followed by Kino and to visit the old chain of missions built by him.

In addition, excavation is being carried on at Tumacacori with WERA labor to trace out the walls of the old mission, dormitory, and other old structures. Mr. Paul Reubien, archeologist, is WERA foreman in charge of excavations with a crew of 18 men. His reports will appear in this publication from time to time. Exceedingly interesting finds are being made.

Robert Rose accompanied Dr. Russell into Mexico to visit the Kino chain. Leaving Nogales on December 15, they journeyed to Magdalena and Culiacan seeing as many of the old Missions as possible. The following were seen: San Ignacio, Pitiquito, Altur, Culiacan, Tubutama, Imauris, Cocopora, Arizpe, Tumacacori, San Xavier, Magdalena, and Culiacan.

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REPORT ON WILD LIFE TECHNICAL ACTIVITIES AT BANDELIER NATIONAL MONUMENT/
FROM NOVEMBER 5 TO 14, 1934. BY ADREY E. BORZEL.

The following extracts from the lengthy report are of general interest:

ECW PROJECTS---All seem to be desirable and satisfactory as regards wild life. Fencing the detached portion of the Monument will keep domestic stock out of the ruins and preserve the forage for wild life. Caution must be used in burning debris along new Frijoles Canyon trail. The ~~xxxxxxx~~ trail itself, Mr. Borzell believes, as a "nature" trail has few competitors in Western parks and Monuments.

WILD LIFE AND RANGE---Conditions are very good, only a few small areas showing effects of overgrazing. Monument should be fenced along the south, east, and west boundaries as soon as possible. Cattle now grazing at mouths of canyons usurp best winter range of deer.

PATROL---Essential that Custodian Jackson accompany visitors through ruins lest they deface them, yet patrols should be made over the Monument and detached section. Recent visitations: two Indians killed deer on Monument; Mexicans camped where is fire hazard; four new potholes in ruin; woodcutters tore down part of fence, admitting stock. A patrolling ranger, equipped with saddle horse, would protect game, the ruins, and reduce fire hazard. Boundaries should be plainly marked with signs.

BOUNDARY EXTENSION---"So far as I can learn Bandelier is the only Park or Monument in the Southwest which can boast the presence of the Merriam turkey." (Editor's Note: Wild turkeys reported on South Rim of Walnut Canyon National Monument). Turkeys nest in spring in higher parts of range off Bandelier National Monument. Effort should be made to enlarge the Monument to provide nesting range for turkeys. The proposed extension also provide summer range for mule deer, black bear, and possibly dusky grouse. A fine stream flows through the area, and residents claim that ptarmigan, dusky grouse, and beaver are also in the region.

DETACHED SECTION---Elevation and forage indicate a favorable wintering ground for deer, turkey, and possibly a home for scaled quail, but there is no permanent water within three miles of the area. Suggest construction of at least two reservoirs to catch run-off water.

BEAVER---Report that beaver had been planted in Rito de Los Frijoles unconfirmed. Saw no evidence of beaver on the Monument. Saw Muskrat, Abert Squirrel, and Chickaree.

DEER---Deer scarce due to former hunting and many mountain lions. Forage

could support far more deer. Saw tracks of mountain lion, bobcat, raccoon, coyote, and had definite evidence of black bear.

MERRIAM TURKEY---Very few piñon nuts and acorns this fall. Consequently, these rare birds should be helped through the winter by feeding. Harmful consequences probably will not follow.

TROUT---In Rito, and Valle Grande, but apparently not in Alamo Canyon, or in Cavalin below the Stone Lions. In Rito are small due to cold water and lack of large holes. The 30 remaining wooden dams are helping some, but experiment should be made with large boulders as dams to form holes.

Custodian Jackson agrees and feels that fencing, posting the boundary, and patrolling are essential. He is much in favor of the boundary extension.

A DARK EPISODE

Chief, we have a dumb buddy down here among the Southwestern Monuments, who, from time to time, pulls something good.

The latest thing he did was to drain a can of mimeograph ink on a cold morning and then, having a little Scotch in his makeup and hating to throw anything away, he set the can on the office stove to warm it up and squeeze the last drop of ink out of it.

Do you know what deeply ingrained human trait it is in a man that makes him drain the last drop out of a flask and then always cork the bottle tightly before he throws it away? Maybe you never thought of that, but did you ever see a man throw a bottle one way and cork the other? No, sir, he will always cork the bottle up and then throw it away.

Well, this dumb buddy just automatically screwed the cover down on this can before he set it down on the stove! At that it might have been all right and he might have thought of it in time but his desert gods were not with him that day and a bunch of company happening to get the boys in a jam, he stepped into the breach and went off and left his can on the stove, there, after sitting quietly for about so long a time, it blew up and scattered mimeograph ink over about nine square feet of the nearby wall and Gene's coat which he had hung over the back of a nearby chair.

There were no casualties and it came out of the coat and we can paint over the wall, but everybody around the outfit now claims the right to pull at least one grand honor without getting tripped because the dumb buddy happened to be myself.

Dear Boss:

Many of us here at Headquarters are a little puzzled over the actions of Custodian Jackson at Bandelier National Monument, lately.

Here they are in chronological order:

1. (December 10) An urgent appeal for an enlargement of living quarters.
2. (December 15) A request for a new cook stove.
3. (December 18) Order for redecorating interior of Custodian's residence.
4. (December 19) Notice of needed repairs to refrigerator.
5. (December 20) Request for leave of absence starting December 23.
6. (December 22) Arrangements for transportation to San Francisco, Calif.,
(Not government).
7. (December 28) It appears that Master Cupid is meddling with the administrative affairs at Bandelier and it might develop into a new H.C.W.P. (Honorary Custodian Without Pay).

THE COMMITTEES ON SAFETY OF CUSTODIANS.

CASA GRANDE DECEMBER TRIP CHART

On the opposite page are shown the guided trips made at Casa Grande National Monument during the month of December, 1934.

Each of the short horizontal lines represents a party and shows the time it started and ended.

Without any descriptive terms on it this chart would tell at a glance that it was made in winter when the days are short; the parties, with three exceptions, not arriving until nine o'clock in the morning and only one staying beyond six o'clock at night. Compare this with the July, August, and September trip charts on pages 132, 133, and 134 when the first parties started about eight o'clock and the last closed at seven to eight at night.

One thing that doesn't improve with the short days, however, is the overlapping of parties. Two men were not enough to handle the situation on 14 days and at two or three times on some of these days. Whenever three lines overlap, two men were unable to give complete service, and at the noon hour whenever two lines overlap the one man on duty cannot give complete service.

The worst feature about this bunching of parties is that we are thus far unable to find any rhythm in it and so cannot predict when it will occur.

If you will hold this chart at arm's length the bunching of the lines will be more evident, but while most of them occur between 10 and 12 in the morning and 3 and 5 in the afternoon, this is by no means an invariable time for the occurrence.

Since Sunday is the peak day of the week in attendance, you would

CASA GRANDE DECEMBER TRIP CHART

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expect bunching to occur on these days especially. The 2, 9, 16, 23 and 30 were Sundays in December. The 2nd and 9th were days clear of bunching; the 16th had one bad spot about between three and four o'clock; the 23rd bunched pretty badly three times; and the 30th had difficult spots twice. These days ran, respectively, 156, 121, 183, 165, and 108 visitors, and, within reasonable limits, the number of visitors doesn't seem to make or break bunching.

We are beginning to think it is the god of chance who picks the day and delivers the visitors at exactly the wrong time!

DISCUSSION OF FOLLOWING TRIP RECORDS

On the following four pages will be found the detailed trip records of guided trips at Casa Grande National Monument for the months of October, November and December as well as a total sheet also giving the comparative material including records on the three previous months.

Conclusions on the last three months, when compared with those for July, August, and September which were discussed on pages 137c and following, are remarkable for their similarity. Visitors come in bigger parties (an average of more than six persons to the party as compared to a former average of slightly more than four) but they stay just about the same amount of time.

During the first three months we guided a total of 47,591 minutes ---of which we were rather proud. Well, that figure for the second three months jumped to 53,102 minutes. More than 885 hours. More than 110 eight-hour days of actual guiding. This is rather an amazing total, and it is caused by the fact that our visitors come in small parties, and are given immediate service.

During the summer the average party stayed a little over 54 minutes. During the fall the average stay of a party rises slightly to almost 57 minutes---which must indicate the rather improved interest and quality of our cool-weather visitors. This increase is consistently caused by an increase in ruins averages from 32 minutes to 34.5 minutes, and an increase in museum averages from 24.8 minutes to 25.8 minutes. In other words, the very slight changes we have been able to make in the museum do not account for the increase. Visitors themselves must have more time or be more interested.

October's average stay was rather low, 53.7. There was a big jump in November to 59.4 minutes. Then December drops slightly to an average of 57.2 minutes. Just why these changes occur, we do not know. Particularly are we stumped by the December decrease under November. We started to blame it on a windy, rainy streak which, of course, shortened the ruins trips, but we suddenly realized that November also had a correspondingly bad stretch of weather.

All in all, we do not seem much changed in cooler weather as we expected, yet our season has not really started yet. January figures may change.

OCTOBER FINE CLOCK RECORDS

Day of week	Day of month	No. Parties	No. Visitors	RUINS		MUSEUM			Total Stay	Average Stay
				No. Parties	Av. Stay	No. Parties	Average Stay	Total Minutes		
Mon.	1	6	15	6		5		150	421	
Tue.	2	8	30	8		6		115	369	
Wed.	3	4	8	4		3		23	95	
Thur.	4	9	25	9		7		130	398	
Fri.	5	5	12	5		3		111	301	
Sat.	6	10	72	10		9		169	529	
Sun.	7	18	141	18		18		522	1203	
Mon.	8	6	26	6		6		134	270	
Tue.	9	10	38	10		10		230	607	
Wed.	10	5	17	5		5		140	268	
Thu.	11	10	36	10		8		135	416	
Fri.	12	14	39	14		10		209	677	
Sat.	13	13	88	13		10		213	647	
Sun.	14	16	141	16		13		321	904	
Mon.	15	10	41	10		8		141	407	
Tue.	16	8	40	8		7		253	586	
Wed.	17	10	39	10		8		197	539	
Thu.	18	10	37	10		9		208	570	
Fri.	19	12	67	12		12		230	573	
Sat.	20	9	29	9		8		144	384	
Sun.	21	17	128	17		15		444	1059	
Mon.	22	12	36	10		11		265	653	
Tue.	23	8	32	8		8		210	505	
Wed.	24	11	47	11		8		205	613	
Thu.	25	14	46	14		12		216	623	
Fri.	26	13	53	13		10		188	524	
Sat.	27	15	87	11		11		377	824	
Sun.	28	23	275	23		21		505	1283	
Mon.	29	11	29	11		9		305	764	
Tue.	30	6	15	6		6		137	352	
Wed.	31	7	20	7		6		158	383	
		355	1891	324	33.9	281	24.0	6765	17752	53.7

NOVEMBER TIME CLOCK RECORDS

Day of Week	Day of Month	RUINS				MUSEUM					
		Number of parties	Number of visitors	Number of parties	Av. Stay	Number of parties	Average Stay	Total Minutes	Total Stay	Average Stay	
Thur.	1	13	34	13		429	13	359	688		
Fri.	2	13	54	13		374	10	290	664		
Sat.	3	11	50	11		452	9	369	821		
Sun.	4	22	183	22		895	22	786	1681		
Mon.	5	6	21	6		188	4	93	281		
Tues.	6	9	38	9		301	9	308	609		
Wed.	7	7	37	7		200	6	157	357		
Thur.	8	7	43	7		259	7	202	461		
Fri.	9	9	39	9		197	9	197	394		
Sat.	10	9 ³	42	9		292	8	265	557		
Sun.	11	18	290	18		721	17	490	1211		
Mon.	12	15	128	15		636	15	418	1054		
Tue.	13	9	38	9		261	8	148	409		
Wed.	14	10	50	9		272	10	253	525		
Thu.	15	7	36	7		251	7	222	473		
Fri.	16	9	45	9		273	6	292	565		
Sat.	17	10	46	10		357	9	158	515		
Sun.	18	9	103	9		409	9	294	703		
Mon.	19	6	34	6		196	5	232	428		
Tues.	20	9	74	9		320	9	193	513		
Wed.	21	11	42	11		387	10	197	584		
Thur.	22	10	67	10		322	8	158	480		
Fri.	23	5	14	5		123	4	76	199		
Sat.	24	8	38	8		221	7	137	358		
Sun.	25	12	186	12		548	11	323	871		
Mon.	26	10	51	10		395	8	227	622		
Tue.	27	6	24	6		161	5	117	278		
Wed.	28	12	66	12		401	5	105	506		
Thu.	29	7	83	7		288	6	128	416		
Fri.	30	14	135	14		475	11	248	723		
		302	2099	301	35.2	10634	270	27.1	7342	17946	59.4

D E C E M B E R T I M E C L O C K R E C O R D S

Day of Week	Day of Month	Number of Parties	Number of visitors	RUINS			MUSEUM			Total Stay	Average Stay
				Number of visitors	Av. Stay	Total Minutes	Number of Parties	Average Stay	Total Minutes		
Sat.	1	12	74	12		558	12		423	981	
Sun.	2	13	156	12		409	10		270	685	
Mon.	3	8	61	8		290	7		161	451	
Tues.	4	12	40	12		332	11		286	618	
Wed.	5	9	33	9		278	9		209	487	
Thur.	6	6	28	6		190	6		152	342	
Fri.	7	6	27	6		184	5		111	295	
Sat.	8	10	74	10		468	9		267	735	
Sun.	9	8	121	9		322	9		225	553	
Mon.	10	8	38	8		218	8		205	423	
Tues.	11	6	15	6		172	5		98	270	
Wed.	12	6	29	6		157	6		87	244	
Thur.	13	6	21	6		150	6		121	271	
Fri.	14	6	54	6		273	7		180	453	
Sat.	15	9	37	9		221	9		171	392	
Sun.	16	12	163	12		528	9		269	797	
Mon.	17	8	40	8		328	6		118	446	
Tues.	18	12	55	11		275	12		248	523	
Wed.	19	9	45	9		327	7		147	474	
Thur.	20	9	44	9		243	7		166	409	
Fri.	21	8	26	8		292	7		180	472	
Sat.	22	10	42	10		279	8		181	460	
Sun.	23	17	165	17		728	17		480	1208	
Mon.	24	10	54	10		330	8		277	607	
Tues.	25	12	110	12		360	10		314	674	
Wed.	26	9	64	9		425	9		257	682	
Thur.	27	16	120	16		612	13		364	976	
Fri.	28	10	35	10		305	9		207	512	
Sat.	29	12	65	12		433	10		241	674	
Sun.	30	9	108	9		374	8		279	653	
Mon.	31	14	83	13		396	11		230	634	
		304	2047	302	34.6	10427	273	25.7	6941	17404	37.2

TOTAL SHEETS: TIME CLOCK RECORDS

Month	Number of Parties	Number of visitors	RUINS			MUSEUM			Total Stay	Average Stay
			No. of Parties	Average Stay	Total Minutes	No. of Parties	Av. Stay	Total Minutes		
July	263	1068	247	33.0	8,343	223	25.0	5679	14022	53.0
August	314	1328	312	34.0	10,815	297	24.0	7359	18174	57.0
September	303	1289	298	29.0	8,849	269	24.3	6546	15395	51.0
October	330	1691	324	33.9	10,987	281	24.0	6765	17752	53.7
Oct. 1-15	144	729	144	33.1	4,769	120	22.8	2743	7,512	52.1
1st 1,000 Parties	1024	4414	1001	32.7	32,776	909	24.5	22327	55103	53.8
Oct. 16-31	186	922	180	34.5	6,218	161	22.9	4022	10240	55.0
November	302	2089	301	35.2	10,604	270	27.1	7342	17946	59.4
December	304	2047	302	34.6	10,463	270	25.7	6941	17404	57.2
July-Aug.- Sept.	880	3685	857	32.6	28,007	789	24.8	19584	47591	54.0
Oct.-Nov.- Dec.	936	5827	927	34.5	32,054	821	25.6	21048	53102	56.7

SOME FACTS ABOUT TEN THOUSAND VISITORS*

Number in party-----	1	2	3	4	5	6	7
Number of parties-----	72	487	371	247	181	134	82
Percent of total time----	3.39	24.53	14.28	13.83	9.64	8.09	4.82
Number of persons-----	72	974	813	988	905	804	574
% of total persons-----	.85	10.19	8.51	10.34	9.47	8.41	6.00
Total stay in minutes----	3382	24441	14234	13782	9612	8068	4806
Average stay in minutes--	46.9	50.1	52.5	55.7	53.1	60.2	58.6
Number in party-----	8	9	10	11	12	13	14
Number of parties-----	58	45	30	38	29	18	12
Percent of total time----	3.34	2.94	2.0	2.42	1.83	1.19	.74
Number of persons-----	464	405	300	385	348	234	168
% of total persons-----	4.85	4.24	3.54	4.03	3.64	2.45	1.75
Stay in minutes-----	3335	2930	1999	3414	1824	1186	747
Average stay in minutes--	57.5	68.1	66.6	68.9	62.8	65.8	69.2
Number in party-----	15	16	17	18	19	20	21
Number of parties-----	14	14	12	11	4	3	1
Percent of total time----	.93	.93	.76	.72	.26	.26	.07
Number of persons-----	210	224	204	198	76	60	21
% of total persons-----	2.19	2.34	2.13	2.07	.79	.62	.21
Total stay in minutes----	930	928	758	720	265	264	74
Average stay in minutes--	66.4	66.2	63.1	65.0	66.2	88.0	74.0
Number in party-----	22	23	24	25	Misc.	<u>Totals</u>	
Number of parties-----	3	3	6	3	24	1799	
Percent of total time----	.21	.18	.24	.22	1.97	99 plus	
Number of persons-----	62	60	144	75	770	9551	
% of total persons-----	.69	.72	1.50	.78	8.06	99 plus	
Total stay in minutes----	213	182	343	226	1963	99626	
Average stay in minutes--	71	60.8	40.5	75.3	81.7	55.3	

*Covering July 1 to December 31, inclusive.

Do you know that if it takes 46.9 minutes to show one visitor around your shop and you add another one it will increase your time only 6.8%? A party of three will take 4.7% more time than two. A party of four takes 6.0% more time than a party of three. By this time you are probably saying that of course for each person you add you will get about so many more questions which will slow you down from 4 to 6 percent.

Then, since you know the answer so well, please tell me why, when you add the fifth person, you cut down the time of handling the party 4.6% as against a four-person party. Yes, we thought of that, too. By the time you get five, some of them get bashful and don't want to ask questions. Then please explain why when you make it a party of six your time goes from 53.1 minutes up to 60.2? About all we can say is that your explanation is wrong.

These are some of the interesting side lights on handling eighteen

hundred parties.

We can tell you that 46% of your visitors will come in parties of 2 to 6 inclusive and will take up 70% of your time, whereas if the same percentage came in parties of 23 they would take up only 10.5% of your time yet you could give them 20% more time to the party.

Given the same type of archaeological problems to put over and the same number of visitors at each monument, the answer is that the number of personnel depends inversely on the size of the parties. This is just common sense, of course. Thirty people in a caravan can be handled by one ranger in a certain time, but when they come in six parties of five at different times your service with one ranger promptly breaks down---when nearly half of the visitors (46%) come in parties of two to six you can see why we are continuously crying for more personnel for the Southwestern Monuments.

The first solution which comes to mind is to hold the parties as they arrive until you can bunch them and send them out twelve or fifteen at a time under one guide. The reply to this solution is that you can't hold them five minutes before they get restive and begin feeling that your service is faulty. We have tried it and we know. The psychology of the present day visitor is quite different from the same man when he was a visitor twenty years ago. He has increased his physical speed from 30 miles per hour to 60 and this has geared his nervous tension up to the point where any minute he is not doing ~~xxx~~ a couple of things at once seems like an eternity.

I am well aware that Tomales can hold a party for an hour without protest to make the start into the Caverns whereas the same party two days later will protest a wait of ten minutes at Casa Grande. The reason for this is the visitor knows there is risk in going into Carlstad unguided and he is therefore willing to wait, whereas at Casa Grande he knows there is no risk and doesn't realize he needs a guide for information and protection purposes so he is impatient at once if you make him wait for one.

Casa Grande is simply the laboratory we happen to be working in. The problem is just as acute at any of our Southwestern Monuments.

And so we come to the end of the month and the end of the year. Both have afforded us a lot of work and no small amount of fun. We close this six months volume of reports with this issue and inclose a fairly complete index of the volume which we hope will be of some use to those who might have filed the preceding issues.

Looking forward into the new year we have certain plans and hopes which we hope will work out into a better group of reports for the next six months which will give you a clearer picture of what is happening in the Southwestern Monuments.

John Bass
JTB:EPSS

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